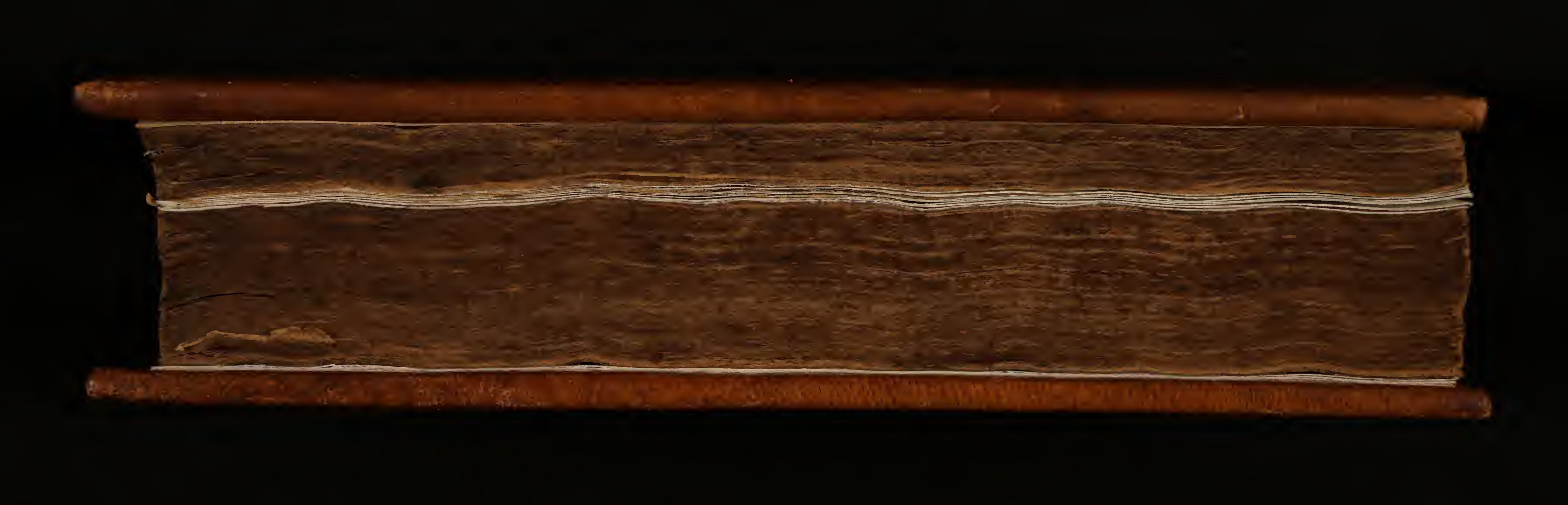
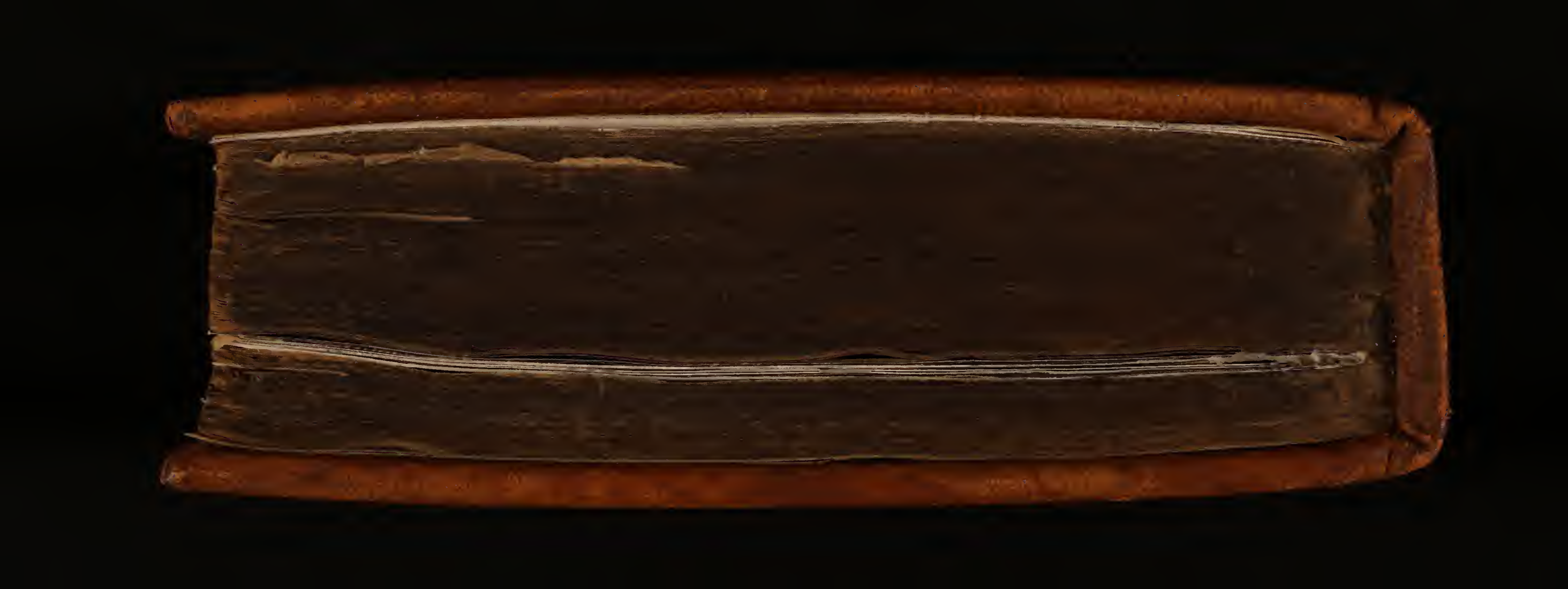
HERESBACH

MARKHAM

1614





THE WHOLE ART AND TRADE OF HVSBANDRY,

CONTAINED

In foure Bookes.

Viz:

I. Of Earable-ground, Tillage, and Pasture.

II. Of Gardens, Orchards, and VVoods

III. Of Feeding, Breeding, and Curing of all manner of Cattell.

IIII. Of Poultrie, Fowle, Fish, and Bees.

Enlarged by BARNABY GOOGE, *Esquire.*

GENESIS. 3. 19.

In the sweat of thy face shalt thou eate thy bread, till thou be turned againe into the ground, for out of it wast thou taken: yea, dust thou art, and to dust shalt thou returne.

LONDON:

Printed by *T. S.* for *Richard More*, and are to be sould at his Shop in S. Dunstanes Church-yard in Fleetstreet. 1614.

TO THE RIGHT VVorſhipfull, his very good friend, Sir *William Fitz-Williams*, Knight.

IF ſuch as haue painefully and faithfully of long time ſerued their Prince and Countrey abroad, doe moſt of all others deſerue, beſide their condigne reward, the benefit of a quiet and contented life at home, I know no man (good Sir William Fitz-Williams) *that of right may better challenge it; then your ſelfe: who for the long time of your painefull ſeruice, the truſtie diſcharging of the Treaſurerſhip of* Ireland, *and your worthie gouernement, while it pleaſed her moſt excellent Maieſtie to appoint you for the ſayd Realme her highneſſe Deputie) haue ſo behaued your ſelfe, as euen your very enemies (whereof I know you had good ſtore) haue beene forced to giue you, will they nill they, your iuſt deſerued commendation. I leaue to remember your ſundry and troubleſome trauailes, your Gentlemanly minde, alwayes vnwearied and vnmated with whatſoeuer perill or hazard happened: I paſſe ouer (becauſe I know you delight not in hearing your prayſes) that Honerable, and worthy for euer to be Chronicled, charge giuen vpon the* Oneale, *at* Monham, *in the reſcue of your miſerably diſtreſſed and ſlaughtered companions, and Countrymen, of which there be ſundry yet remaining, that will attribute the hauing of their liues,*

(next vnto God) to the prosperous successe of your valiant enterprise: neither hath this your loyall seruice to your Prince and Countrie at any time beene accompanied, without a feruent and zealous affection towards the Almightie, the chiefest and onely beautie of all mans actions. Since thus (as I sayd) you may iustly challenge for the good seruice you haue done in your youth, a place and time of rest and quietnesse in your greater yeeres, and that there is, in my fancie, no life so quiet, so acceptable to God, and pleasant to an honest minde, as is the life of the Countrie, where a man, withdrawing himselfe from the miseries, vanities, and vexations of this foolish and now too too much doting world, may giue himselfe to the sweet contemplation of God, and his workes, and the profit and reliefe of his poore distressed neighbour, to which two things we were chiefely created, I thought it good to send you here (as a token and a testimonie of my thankfull mind, for your sundry friendships and curtesies shewed vnto me) a rude draught of the order and manner of the said Countrie life, which you may vse (if it please you) for your recreation. And afterwards (if so you thinke it meet) publish vnder your protection, to the commoditie and benefit of others. Fare you well: from Kingstone.

Your assured louing friend,

BARNABY GOOGE.

The Epiſtle to the *Reader.*

I Haue thought it meet (good Reader) for thy further profit and pleaſure, to put into Engliſh, theſe foure Bookes of Husbandry, collected and ſet forth, by Maſter *Conrade Heresbatch*, a great and a learned Counceller of the Duke of *Cleues*: not thinking it reaſon, though I haue altered and increaſed his vvorke, with mine owne readings and obſeruations, ioyned with the experience of ſundry my friends, to take from him (as diuers in the like caſe haue done) the honour and glory of his owne trauaile: Neither is it my minde, that this either his doings, or mine, ſhould deface, or any wayes darken the good enterpriſe, or painfull trauailes of ſuch our Countrymen of England, as haue plentifully written of this matter: but alwayes haue, and do giue them the reuerence and honour due to ſo vertuous, and well diſpoſed Gentlemen, namely, Maſter *Fitzherbert*, and Maſter *Tuſſer*: vvhoſe vvorkes may, in my fancie, without any preſumption, compare with any, either *Varro*, *Columella*, or *Palladius* of *Rome*. You haue here ſet downe before you, not onely the rules and practiſes of the olde auncient husbands, as well Greekes as Latines, whoſe very orders (for the moſt part) at this day wee obſerue, and from whom (if we will confeſſe the truth) wee haue borrowed the beſt knowledge and skill, that our skilfulleſt husbands haue: but alſo haue ioyned heerewithall, the experience and husbandry of our owne husbands of England, as farre as eyther mine owne obſeruations, or the experience of ſundry my friends would ſuffer mee. And although I haue delt with many, both Graines, Plants, and Trees, that are yet ſtrangers, and vnknowen vnto vs, I doe no vvhit doubt, but that vvith good diligence and Husbandry,

they

they may in ſhort time ſo be denized and made acquainted with our ſoyle, as they will proſper as vvell as the old Inhabitants. It is not many ages agone, ſince both the Peach, the Piſtace, the Pine, the Cypreſſe, the Walnut, the Almond, the Chery, the Figge, the Abricock, the Muske Roſe, and a great ſort of others, both Trees and Plants, being ſome Perſians, ſome Scythians, ſome Armenians, ſome Italians, ſome French, all ſtrangers and aliants, were brought in as nouelties amongſt vs, that doe now moſt of them as vvell, yea, and ſome of them better, being planted amongſt vs in England, then if they vvere at home. I haue alſo beene carefull about the planting and ordering of the Vine, (though ſome of my friends would haue had it omitted, as altogether impertinent to our countrie: becauſe I am fully perſwaded if diligence, and good huſbandrie might be vſed) wee might haue a reaſonable good Wine growing in many places of this Realme: as vndoubtedly we had immediately after the Conqueſt, till partly by ſlothfulneſſe, not liking any thing long that is painefull, partly by Ciuill diſcord long continuing it was left, and ſo with time loſt, as appeareth by a number of places in this Realme, that keepes ſtill the name of Vineyards: and vpon many Cliffes and Hilles, are yet to be ſeene the rootes, and olde remaines of Vines. There is beſides *Notingham* an auncient houſe called *Chilwell*, in vvhich houſe remaineth yet as an auncient monument in a great vvindow of glaſſe, the whole order of planting, proyning, ſtamping, and preſſing of Vines. Beſides, there is yet alſo growing an olde Vine, that yeelds a Grape ſufficient to make a right good Wine, as vvas lately proued by a Gentlewoman in the ſayd Houſe. There hath moreouer good experience of late yeeres beene made, by two Noble and Honourable Barons of this Realme, the Lord *Villiams* of *Tame*, and the Lord *Cobham*, vvho both had growing about their houſes as good Vines, as are in many places of France. And if they anſwere not in all points euery mans expectation, the fault is rather to be imputed to the malice & diſdaine peraduenture of the Frenchmen that kept them, then to any ill diſpoſition, or fault of the ſoyle. For vvhere haue you in any place better, or pleaſanter Wines, then about *Backrach*, *Colin*, & *Andernach*, and diuers other places of Germanie, that haue in manner the ſelfe-ſame latitude and diſpo-

ſition

ſition of the Heauens that we haue? Beſide, that the nearenesse to the South, is not altogether the cauſer of good Wines, appeareth in that you haue about Orleans, great ſtore of good and excellent Wine: whereas, if you goe to *Burges*, two dayes iourney farther to the South, you ſhall finde a Wine not worth the drinking. The like is (as I haue heard reported by Maſter *D. Date*, Embaſſadour for his Maieſtie in theſe parts) of *Paris*, and *Barleduke*, the Towne being Southward, vvith noughtie Wines: the other a great wayes farther to the North, vvith as good Wines as may be. But admit *England* would yeeld none ſo ſtrong and pleaſant Wines as are deſired (as I am fully perſwaded it would) yet is it worth the triall and trauaile to haue Wines of our owne, though they be the ſmaller: and therefore I thought it not meet to leaue out of my booke the ordering and trimming of Vines. It remaineth now (good Reader) that thou take in good part my trauaile and good vvill, vvhich vvere chiefely employed to the pleaſuring and benefiting of thee, and not to quarrell vvith mee, as is the manner of the moſt ſort, for euery fault and ouerſight that hath eſcaped my hands, nor to looke for any curious, or well meaſured ſtile, vvherewith I am not able to ſatisfie thee, and though I vvere, yet vvere it neither for the matter nor method neceſſary. And therefore I truſt thou wilt accept it as it is, ſpecially conſidering, that I neither had leiſure, nor quietneſſe at the doing of it, neither after the doing had euer any time to ouer looke it, but was driuen to deliuer it to the Printer, as I firſt wrote it: neither was I priuy to the printing, till ſuch time as it was finiſhed. And therefore (though there be faults, and great faults in it) I am not to be charged with them, that if time, or opportunitie had ſerued, would not haue ſuffered them.

Farewell.

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The Bible, and Doctors of the Church.

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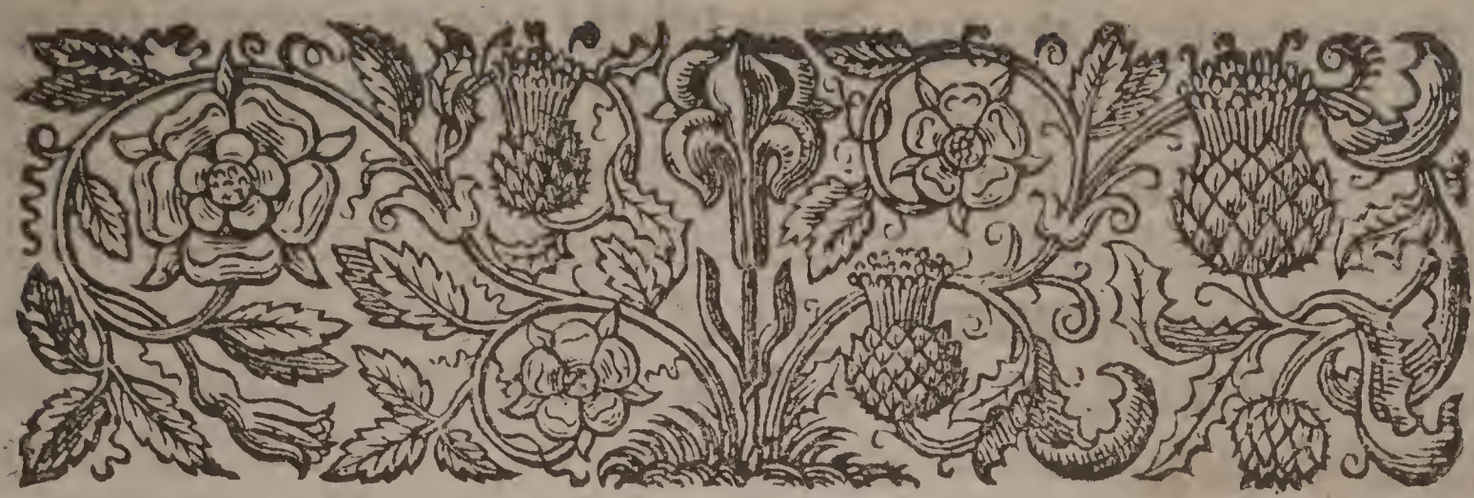
M. Cap. Bingham.
M. Iohn Somer.
M. Nicaſ. Yetzwert.
M. Fitzherbert.
M. Will. Lambert.
M. Tuſſer.
M. Thom. Wherenhall.
M. Rich. Deering.
M. Hen. Brockhull.
M. Franklin.
H. King.
Richard Andrewes.
Henry Denys.
William Prat.
Iohn Hatche.
Phillip Partridge.
Kenworth Datforth.



The first Booke of Husbandry:

Entreating of Earable-ground, Tillage and Pasture.

Cono. Rigo. Metella. Hermes.

CONO.

METHINKETH I heare a neighing and trampling of Horses without, goe Hermes, go know what strangers there are.

HERMES. Sir, if my sight faile me not, it is Rigo, the principall Secretary.

METELLA. A godly matter, scarce you haue bëene two dayes at home, and now you must be sent for againe to the Court, perhaps to be sent abroad in some embassage.

CONO. God forbid: iudge the best, it may be he comes to sée me of curtesie and friendship.

RIGO. Ah master Cono, I am glad I haue found you in the midst of your country pleasures: surely you are a happy man, that shifting your selfe from the turmoiles of the Court, can picke out so quiet a life, and giuing ouer all, can secretly lie hid in the pleasant Countries, suffering vs in the meane time to be tost with the cares and businesse of the common weale.

CONO. Surely I must confesse I haue taken a happy way, if these gods of the Earth would suffer me to enioy such happinesse, that haue bequeathed the troublesome life of the Court

to the bottome of the sea. But what? doe you intend, to bring me againe to my old troubles, being thus happily discharged.

RIGO. Nothing lesse, though I would be very glad you should not so hastily forsake the Court, nor rid your selfe from the affaires of the Common-wealth. You know we are not borne to liue to our selues, nor at our owns pleasures: but for our country, our Common-weale, & state whereto we are called. There cannot be a worse thing then for a man to suffer his Country forsaken, to come into the hands of villanous persons, and to reioyce with himselfe, that being out of Gunshot, he hath left the hurly burly of gouernement. And though Cato had no néed of Rome, yet Rome and Cato his friends had néede of him.

CONO. I grant you, as long as yeres and strength will beare it, we are bound to serue in our vocation: but as you your selfe are driuen to confesse, there is sometime a reasonable cause of giuing ouer. Lucullus is highly commended, that while his body was strong & lusty, he applyed himselfe wholy to the seruice of his country, & that after his honorable seruice both abroad and at home, in the end he got himselfe quietly againe to his booke. And Scipio, who after he had conquered both Carthage & Numidia, was content rather to leaue of & rest himselfe, then to do as Marius did, who after so many victories and atchiued honours could not content himselfe when he was wel, but puft vp with vnmeasureable desire of glory & gouernment, would in his old age contend with yong men: whereby he brought himselfe at the length to most miserable miseris. Surely Cicero toke a better way by much, when after the ouerthrow of Catelins conspiracy, he rather contented himselfe to liue quietly at home, then by ambitious intermeddling with the contentions of the Common-wealth, to bring himself in danger of his life. The desire of bearing rule in a common-weale, is to be moderated with a bounded modestie, specially in this age of ours, when Courts are subiect to such enuies, hatreds, flatteries, slanders, couetous & ambitious desires, and where no place is left for vertuousnes & Christian simplicitie. These are the things that driue Socrates & Plato from their common-weales, & do likewise kéepe me, being now of good yeres and sickely, the Court forsaken, in this my poore cottage at home.

Lucullus.

Scipio.

Cicero.

RIGO.

RIGO. Yea, but age is no sufficient excuse for you to leaue the gouerning of your Country. You know, ἔργα νέων βουλὰ γερόντων, the labour of young men & the counsell of old men, and how those common-weales are safest alwayes guided, where old mens heads, and young mens armes are stirring. Father Nestor got great commendation for his counsell at the siege of Troy, where as Peleus and Laertes were despised and accompted for bench-whistlers at home. Nestor.

CONO. Some are tickled with glory: some with gaine, gifts, & rewards, retaine the cockrowen Courtiers, yea such as haue one of their feet already in the graue. Now if we would content our selues with this life, & giue our selues to the true & perfect life

In Princes Courts we should not gape nor gase,
Nor ill successe in sutes should vexe our minde:
No vaine nor fond deuise our eyes should dase,
Nor lewd affection should our fancie blinde.
All such things should be left and layd aside,
Now liues alas each out of order quite:
And to our shame the time away doth slide,
All seeke to liue, but none to liue vprighe.

As the Poet excellently well writeth in his Epigram, it were the part of a mad man, or a coxcombe, to run headlong without any profit into danger, when as he may liue godly & quietly at home without all trouble, as our olde fathers were wont to doe.

RIGO. It is very true: the Poet accompteth him blessed to whom this life can happen. But in the meane time you are alone, and lead your life with beasts, lowts of the Country, and trees, that haue spent all your time before among wise and honourable personages. Socrates affirmeth wisedome to be learned in Cities, and not among beasts and trees. Socrates.

CONO. Socrates his iudgement, though I will not gainesay, yet it appeareth by his disputations with Ischomachus in Xenophon, that he did not disalow the Country mans life. And as for my liuing alone, it almost happeth here to me, as Cicero reporteth Scipio to say, that he was neuer lesse alone, then when he was alone: for being alone, I haue continual conference with the grauest & wisest men: for either I apply my selfe wholy to the sacred

Oracles of the Prophets and Apostles, who teach the true wisdome, by which both Kings rule, and Princes gouerne, and by which our soules (which we chiefely ought to regard) are fed, which also shew vnto vs the perfect way to that euerlasting Court aboue: or when I list, I haue the company of the greatest Princes and Monarchies of the world, with whom I conferre of the doubtfull state & gouernment of Common weales, in reading the Histories and Chronicles of the world, travelling as it were, throughout all nations, or reading the workes of such as write in husbandrie, I occupie my minde in the beholding the wonderfull workemanship of God in Trees, Plants, and Beasts, whereby in the Creature, I acknowledge the Creator. And besides these dumbe companions, my friends come sometimes to see me, sometimes Gentlemen, sometime Noblemen, sometime the Prince himselfe vouchsafeth to visit mee: so that there is scarcely any day but that some come vnto me, some for their pleasure, some for good will, & some for their business: for to my friends and my neighbours, I neither deny my counsel, nor my travel. Therefore it is very expedient that good choise be made of Lawiers, & discreet men for the Countrie, alwayes prouided, they giue their counsell free & without wages. Many times beside, you from the Court send me hither processe and arbitrements to be tried before me. Thus haue I in the Countrie sweeter and pleasanter company then you haue, either in the Court or Citie.

The vse of a solitarie life.

RIGO. Tell me then I beseech you, how you bestow your time, and how you are occupied all the day, for I doubt not but you doe as much as in you lieth to spend the time as profitably as you may.

CONO. I will tell you throughly, and not dissemble with you, if you will giue me the hearing, and to begin, I will vse the words and verses of the foresaid Poet, though in other his writings scarce honest, yet in this speaking very graue & wise.

First serued on knees the Maiestie diuine,
My seruants next and ground I ouerlooke:
To euery man his taske I doe assigne,
When this is done, I get me to my booke.

I vse commonly to rise first of all myselfe, specially in Sommer, when we lose the healthfullest & sweetest time with sluggishnesse. Aristotle accounteth earely rising the best, both for health, wealth, & studie. In the winter if I be loath to rise, if eyther the vnseasonablenes of the weather, or sickenes cause me to keepe my bed, I commit all to my Steward, whose faith & diligence I am sure of, whom I haue so well instructed, that I may safely make him my deputie: I haue also Euriclia my maid, so skilfull in huswifery, that she may well be my wiues suffragan, these twaine we appoint to supply our places: but if the weather and time serue, I play the workemaster my selfe. And though I haue a baylife as skilfull as may be, yet remembring the old saying, that the best doung for the field is the Masters foot, & the best prouender for the horse the Masters eye, I play the ouerseer my selfe. That it is holsome to rise earely, I am perswaded both by the counsel of the most graue Philosophers, and by mine owne experience. When my seruants are all set to worke, and euery man as busie as may be, I get me into my closet to serue God, and to read the holy Scriptures: (for this order I alway keepe, to appoint my selfe euery day my taske, in reading some part either of the old Testament or of the New:) that done, I write or read such things as I thinke most needful, or dispatch what businesse so euer I haue in my house, or with suters abroad. A little before dinner I walke abroad, if it be faire, either in my garden, or in the fields, if it be foule, in my galery: when I come in, I find an egge, a chicke, a peece of kid, or a peece of veale, fish, butter, and such like, as my foldes, my yarde, or my dairy and fishponds will yeld: sometime a sallat, or such fruits as the garden or orchard doth beare: which victuals without any charges my wife prouideth me, wherwith I content my selfe as wel, as if I had the daintiest dish in Europe: I neuer lightly sit aboue one houre at my meat: after dinner I passe the time with talking with my wife, my seruants, or if I haue any, with my ghests: I rise & walke about my ground, where I view my worke men, my Pastures, my Pedolves, my Corne, and my Cattell. When I am in the Countrie, I goe euery day, if the weather be good, and no other great businesse, about my ground: if not euery day, at the least

The best doung for ground is the master foot.

once in two or three dayes: as often as I come to the Citie from the Countrie, I doe the like, to vnderstand how my ground is husbanded, and what is done, what vndone: neither do I euer go about it, but some good commeth of my trauaile. In the meane while I behold the wonderfull wisedome of Nature, and the incomprehensible working of the most mighty God in his creatures, which as Cicero truly affirmeth, is the delicatest food of the Soule, & the thing that maketh vs come nearest vnto God. Here waigh I with my selfe, the benefits and wonderfull workes of God, who bringeth forth grasse for the Cattell, & greene hearbe for the vse of man, that he may bring food out of the earth, according to the Psalme. Here he preacheth to me.

Academ. quest. lib 1.

Psal. 104.

The fruitfull Earth that tild in sundry wise,
vnto the eye her goodly fruits doth yeeld:
The Violets sweet that each where thicke doe rise,
and staine with purple die the pleasant field.
The field with hearbes, the hearbes with branches braue,
The glittering flowers that shine like starres of light,
And springing fast disclose the grace they haue,
Each hearbe with sundry flowre most sweet in sighe.

What workeman is there in the world, that is able to frame or counterfeit such heauenly works. Who could of a slender grasse make Wheat or Bread, and of a tender twigge bring forth so noble a licour as Wine? but only that mighty Lord that hath created al things visible & inuisible? With these sights do I recreate my minde, and giue thanks vnto God the Creator and conseruer of all things, for his great and exceeding goodnes, I sing the song, To thee, O Lord, belongeth praises in Sion, or, Praise thou the Lord O my soule, &c. beseeching God to blesse the gifts that hee hath giuen vs, through his bounteous liberalitie, to enrich the Fields, and to prosper the Corne and the Grasse, and that he wil crowne the yeere with his plenteousnesse, that we may enioy the fruits of the earth with thanksgiuing, to the honour of him, and the profit of our neighbour. Then returning home, I goe to writing or reading, or such other business as I haue: but with study, or inuention, I neuer meddle in three houres after I haue dined. I suppe with a small pittans, and after supper I eyther seldome

or neuer write or read, but rather passe the time seeing my sheepe come home from the Field, & my Oxen dragging home the plow with weary necks, in beholding the pleasant pastures sweetly smelling about my house, or my heards of cattell lowing hard by me: sometime I lie to rest me vnder an old Holme, sometime vpon ỳ greene grasse, in the meane time passeth by me the pleasant Riuer, the streames falling from the springs with a comfortable noise, or else walking by the Riuerside, or in my garden, or neerest pastures, I confer with my wife or seruants of husbandry, appointing what I will haue done: if my Bailiffe haue any thing to say, if any thing be to be bought or sold: for a good husband, as Cato saith, must rather be a sellar then a buyer. Somtimes (specially in winter) after supper, I make my Minister to tel somthing out of the holy Scripture, or else some pleasant story, so that it be honest & godly, and such as may edifie. Two or three houres after supper I get me to bed, and commonly, as I said before, the last in the house, except my Chambelaine and my Steward.

A good husband must rather be a sellar then a buyer.

RIGO. In the meane time being farre from the Church, neither can you heare the Sermons, nor be present with your wife and your household at seruice: for your owne part, though ye may supply the matter with reading, yet your wife and your seruants can not so doe.

CONO. For my part (without vaunt be it spoken, I haue seruice euery day at certaine appointed houres, where preacheth to me daily the Prophets, the Apostles. Basil, Chrysostome, Nazianzen, Cyril, Cyprian, Ambrose, Austen, and other excellent preachers, whom I am sure, I heare with greater profit, then if I should heare your sir Iohn lack-latines, and foolish fellowes in your Churches. My wife also being giuen to reading, readeth the Bible, & certaine Psalmes, translated into our owne tongue, if there be any thing too hard or darke for her, I make her to vnderstand it: besides, she hath priuate prayers of her owne that she vseth: in the meane time I haue one, that vpon the holy daies (if the weather or our busines be such as we can not go to church) readeth the Gospel, teacheth the Catechisme, and ministreth the Sacraments when time requires: but in the Sommer time, if the weather be not vnreasonable, we goe alwayes vpon the

Sundaies and festiuall dayes to our Parish Church, where we heare our Curate, and receaue the blessed Communion: as for my household, I bring them to this order, that they alwaies serue God before their going to worke, & at their comming to meales.

The saying of saint Anthony.

It is written of Anthonie the Ermite, that being demaunded of a certaine Philosopher how he could in the solitarie wilderness without any bookes, occupie himselfe in the studie of Diuinitie: he answered, that the whole world serued him for bookes, as a well furnished Library: in which he alwayes read the wonderfull workemanship of God, which in euery place stood before his eyes. In the like sort haue I my household seruants well instructed in the chiefe grounds of true Religion, who leaning to their vocation and innocencie of their life, not caried away with the vaine entisements and pleasures of Cities, do behold the Maiestie of God in his workes, and honor the Creatour in his Creatures, not onely vpon Sundayes, but euery day in the yeere, where they may also heare the little birds, and other creatures in their kindes, setting out the glory and Maiestie of God.

RIGO. You seeme to tell me of a Schoole of Diuinity, & not of a Husband-mans cottage: this was the very order of the Patriarkes, and the monasteries in the Primatiue Church.

Homil. 56. vpon the 16. of Mat. and in other places.

CONO. Indeede Chrysostome would haue all Christians, maried folkes and vnmaried, to lead their liues according to the rule and order of Monkes: but of such Monkes as liued in those dayes, not such good-fellowes as ours be now: for the profession of a Monke in that age, was no other but the life of the purest and perfectest Christians, which kinde of life the olde Patriarkes, as the Scripture doe witnesse, did lead.

RIGO. I oftentimes wondred, that hauing so godly a house and so well furnished in the citie as you haue, what you meant to desire rather to dwell in the Countrie: but now that I see the good order of your life, I leaue to wonder any longer.

CONO. It is naturall to me, and left me by my parents, to delight in husbandry: for my Father, my Grandfather, my great Grandfather, and as farre as I can fetch my petigree, all my Auncestours were occupiers of husbandry, and were all borne and died in this house that you see.

RIGO.

RIGO. I remember not long since, being in businesse with the Chauncellor Hypsographus, a sober man, your neighbour, and one that delights in husbandry, it was my chaunce to see your father, surely a man would haue taken him for old Laertes in Homer, or rather for Abraham, or Isaac, and as the Chancellor told me, he was foure-score and ten yeares olde: but so faire hee bare his age, as that I tooke him to be scarce fifteie, his memory and iudgement seemed to serue him wonderous well, he would talke of the orders of the Countrie, of the antiquities there abouts, of the stories of the Scripture, so sweetly and eloquently, as I was wonderfully in loue with him: hee had the Prophets and the Euangelists at his fingers ends, so that I saw the noble men had him in estimation, not without great cause.

CONO. Indeed he tooke such delight in the holy Scriptures, as no day passed him without reading some part of them: he vsed to goe commonly euery day to the next Parish Church, neither would he misse any Sermon that he could heare of, he brought both Preacher and Priest into order, and caused them to frame their liues according to the rule of the Gospell.

RIGO. You paint me here the patterne of a Bishop, or an ouerseer: indeed the most part of these Priests had need of such ouerseers to restraine their couetousnesse, the spring of all their abuses.

CONO. To returne to my quietnes, or my Husbandry, from whence I digressed: doe you yet maruaile how I can delight my selfe with this so honest and profitable a quietnes, then which in the iudgement of the holiest & wisest men, there is nothing more honest nor better, neither is there beside any trade of life more meet for a Gentleman, nor trauaile more acceptable to God, then is the tilling of the ground. The people in the old time (as Cato, a man of great wisedome, & a teacher of husbandry doth witnesse) as oft as they would giue a man the name of an honest man, they would call him a good husband comprehending in that name as much commendation, as they could giue him: besides most mightie Kings and Emperors were no whit ashamed to professe this trade, as Xenophon reporteth of king Cirus: the like writeth Quintus Curtius of Abdolominus. Numa the king of the Romans

The commendation of Husbandry.

Emperours and Kings, professors of Husbandry.

bare

bare a singular affection to husbandry, for that hee thought there was no kind of life so fit to maintaine either peace or warres, or for the prouision of a mans life, being rather a giuer of good life, then riches. Moreouer, Hiero, Philometor, Attalus, Archilaus, and a great number of Princes more, were delighted with the profession of husbandry: this knowledge is also highly commended by Homer, the very fountaine in his time of wisdome, whereas hee describeth Alcinus the king of the Pheaces, whose delight in the planting & pleasures of his orchards was wonderful. And Laertes the olde man, that with his continuall occupying of husbandry, brought his mind better to beare the absence of his son. Hesiodus in his worke τῶν ἔργων καὶ ἡμέρων giueth great praise to Astrea, that being banished the city, gaue himselfe to the life of the countrie: yea, the ground hath before time bin tilled by the hands of Emperors, the Earth in the meane time, reioycing to be torne with a victorers share, and to be plowed with the hands of a triumphant conquerer, either because they dealt with the like regard in their sèed, as in their warres, or vsed such diligence in the corne fields, as they did in the campe, or else because all things handled with honest and vertuous fingers prosper the better, being more carefully loked to. Serranus when he was called to honour, was found sowing of sèed. The Dictators office was brought by the purceuant to Cincinatus, being all naked & besmeared with sweat and dust. The purceuants had first their name of calling Senators and Gouernors out of the Countrie to the Citie. In like sort had this name at the first, the Fabij, the Pisons, the Curij, the Lentuli, the Ciceroes, the Pilumni, and other auncient houses. Horace telleth, that of husbandmen haue bene bred the valiantest and worthiest souldiers: affirming, that the hand that hath bene vsed to the spade, proueth often of greatest value in the field. Homer reporteth a great valiancie in Vlisses his neat heard, in the slaughter of those fellowes that would haue rauished his mistresse. Most certaine it is, that a great number of Emperours haue sprung from the plow. And to let others goe, it is knowne that the Emperors Galerius & Maximinus came both from poore Heardmen to the imperiall dignitie. The like is written of Iustine, Constantianus, Probus, and Aurelianus. The stories report,

Serranus.

Cincinatus

Husbandmen come to be Emperours.

that

that M. Curius the Emperour was found in his house boyling of a rape rote, when he refused the great sums of gold brought by the Samnits Embassadors. What should I speake of the antiquitie of it? the holy Scriptures declare husbandry to be the ancientest of all trades. And to begin with the very beginning of man, & that neither Osiris, nor Dionisius, were the first founders of this knowledge, as the Painims fable, but that the most mightie Lord himselfe did first ordaine it: for Adam and his sons were all husbandmen, Noe was a planter of vines, Abraham, Isaac, and Iacob, were shéepheards, Saul from his Asses, & Dauid from his shéep, were called to the crowne, Elius & Amos of shéepherds were made prophets. Ozias as we read, professed husbandry. Iesus the sonne of Syrach commending husbandry aboue the rest, saith, hée customably vsed himselfe to hold the plow to driue the cart, & to kéepe cattell: but what néed we more? Our Sauiour Christ himselfe glorieth to be the son of a husbandman, & frameth his parables of planting of vines, of shéepe & shéepheards: moreouer, as it is in Luke, our Lord séemeth to be a teacher of husbandry, where he sheweth, that trées are to be digged about & dunged, that they may prosper the better. For sith this knowledge is of all other most innocent, & without which it is most plaine we are not able to liue: the best men haue alwayes imbraced it, and the old Fathers haue euer counted it very Cosen-German to wisedome. Cicero calleth it the Mistris of Iustice, diligence, and thriftines: some others call it the mother and nurse of all other arts. For whereas we may liue without the other, without this we are not able to sustaine our life: besides, the gaine that hereof ariseth, is most godly, and least subject to enuy, for it hath to deale with the earth, that restoreth with gaine such things as is committed vnto her, specially if it be furthered with the blessing of God. The onely gentlemanly way of encreasing the house, is the trade of husbandry: and for this cause they were alwayes accounted the perfectest Gentlemen, that, content with the liuing their Auncestors left them, liued in the Countrie of their Lands, not meddling with figging, chopping, and changing, nor séeking their liuing by handicrafts. M. Varro in his time, sayth, there was great complaint made, that the Fathers forsaking the Plough and the Sickle, began to crépe into the Towne, and

The antiquitie of Husbandry.

The first planter of Vines.

Husbandry the mother & nurse of all other Arts.

The worthinesse of Husbandry.

and busied themselues rather with Pageants and Midsommer-games, then with the Vineyard of the Field, whereas the Gouernours of Rome so deuided the yeere, as they assigned onely the ninth day for businesse of the Citie, & the rest of the time for the tillage of the Countrie, whereby being hardened with labor in peace, they might the better be able to abide the trauaile of warres. Which countrie people were alwayes preferred before the people of the Citie, and more Nobility thought to be in them that till the ground abroad, then in those that liuing idely within the walles, spent their time vnder the shadow of the penthouse: except a man will, with the common sort, thinke it more honest to get his liuing with the blood and calamitie of poore soules, or not daring to deale with the sword, to make his gaine of marchandize, and being a creature of the land, contrary to his kinde, giue himselfe to the rage of the Seas, and the pleasure of the Windes, wandering like a bird, from shore to shore, and country to countrie, or to follow this godly profession of bawling at a barre, & for gaine to open his iawes at euery bench. Surely, as I said before, this onely hath bene euer counted the innocentest trade of life of all men, and in all ages. By husbandry were made rich the godly Fathers, Abraham, Lot, Iacob, and Ioab, and most certaine it is, that this profession & this gaine is most acceptable to God, when hee commanded Adam to till the ground, and to get his liuing with the sweat of his brows Thus is husbandry of such authority, as God with his open witnesse hath allowed it, and afterwards by his seruant Moses hath added his blessing vnto it, saying, I will giue the ground my blessing in the first yeere, and it shall bring forth the fruits of three yeeres. And againe, If you will keepe my commaundements, I will send you raine in due season, and the earth shall yeeld her increase, and your trees shall be loden with fruit, the threshing time shall lasse till the vintage, and the vintage shall endure till the sowing time, & you shall eat your bread with plentiousnes. What can there be now more pleasant to a Christian man, than to get his liuing by such meanes as he knoweth doth please God, and to play the Philosopher in the most sweet contemplation of the benefits of God, and to acknowledge and reuerence the wisdome & power of the

Genes. 3.

Husbandry pleasing to God.

Leuit. 26.

diuine

diuine Maiestie, and his bounteousnesse to mankinde, to giue thankes and praise for his goodnesse, the very hearbes and creatures in the field in the meane time preaching vnto vs.

RIGO. You frame me here of a husbandman a diuine, and almost bring mee in minde to become a husbandman, who alwaies hitherto with the common sort, accounted this husbandrie to be a beastly and beggarly occupation.

CONO. What diuinitie there is in it, and what a field of the acknowledged benefits of God, you haue heard. That the common sort doe thinke it a beastly and beggerly kinde of life, it is no maruell, sith the common people do neuer iudge a right. The common people doe wonder at the pompe of the Court, and iudge them for the happiest men that deckt with gold and purple, are in greatest fauour with Princes, and Officers, and Councellors to them, little knowing in the meane time what heapes of sorowes lies hid vnder that braue & glittering misery. The common sort preferreth shamefull and beastly delicatie, before honest & vertuous labour, ioying to consume the night in drunkennes, lechery, and villany, and the day in sleepe & pastime, thinking such happy as neither behold the rising nor setting of the Sunne. But those that are of sounder iudgement, account the husbandman most happy, if they knew their owne felicitie, to whom the Earth in a farre quieter maner doth minister a sufficient liuing.

And though with gorgeous gates the building high,
With earthly greetings alwayes doe not flow,
Nor seeling garnisht gay vvith imagrie,
Nor rich attire wee see, nor costly show:
Yet stedfast state and life vnskild of guile,
With wealth ynough and Pastures wide at will,
And people strong traind vp to paine and toile,
And youth with diet small contented still,
Where Godly zeale and vertues all did dwell,
When Iustice last did bid the world farewell.

As the Poet hath most grauely written in the praise of the husbandman. Aglus Sophidius was iudged happy by the Oracle of Apollo, because he occupied a small corner of Arcadia, but yet Georg. 2.

sufficient

sufficient for his liuelod, where he spent his life without euer comming abroad: whose order of life sheweth, that he was neither vexed with greedy desire, neither with any other trouble of minde, as Pliny witnesseth. But I holde you too long with commendation of that which of it selfe is sufficiently commended. Halo, wife, I pray you let vs goe to dinner.

METELLA. You shall sir by and by. God morrow master Rigo, I thought Xenoplutus had beene here, who vseth to fetch my husband away, he hath by chance bene now at home a weeke or twaine, which some misliking, prefer him to most painefull and troublesome busines, procuring him to be sent in embassage beyond the pillers of Hercules, and (which they should be loath to beare themselues) they cast all vpon his backe, as a common packhorse, who being now old, reason would he would be spared and suffered to be in quiet, that being at the last free from the turmoiles of the world, he might giue himselfe to his prayers, and prepare himselfe for heauen.

RIGO. It were more for the benefit of his Country, that master Cono came oftner to the court, but he is the seldomer there, because he taketh such pleasure in his husbandry: howbeit, I came for no such purpose, but onely to visite him, being my old friend.

CONO. You must beare with a womans babling.

RIGO. I pray you, since it is not yet dinner time, let vs walke about, that I may view your house till dinner be readie.

CONO. If it please you, I will shew you my house, where I haue appointed my kingdome.

RIGO, Now surely you haue as happy and as pleasant a kingdome as may be.

Who is happy.

CONO. Indeed I confesse my selfe happy in this, that contenting my self with my poore estate, I desire no more: for as he saith.

Horace.

The man that most doth heere possesse,
Thou canst not iustly happy name,
But he whom God with gifts doth blesse,
And well doth know to vse the same:
Him maiest thou rather rightly call,
A happy man aboue them all.

Surely I, in this my kingdom, or rather poore cottage, am more happy

happy then a great sort of kings & princes of the world, that are lords of many & large dominions. Riches are not to be measured by their multitude, but by the mind of the possessor. And as David saith, a little is better with the godly, then the great riches of the wicked. Cincinatus occupied only 4. acres of ground. Socrates hauing but 20. Markes in all the world, was counted a rich man. So I with Virgill doe commend great possessions, but had rather occupie little. Therefore loke not to see here the house of Lucullus or Hyrcius, which is said to be sold for 4000000. H S. such stately dwellings & marble floores, as Cicero saith, I despise.

Who is rich.

RIGO. Notwithstanding, here is all things faire, and as it appeareth commodiously built.

CONO. For my part, I build my house, as they say, according to my purse, agréable to my calling, & to my liuing. I will shew you in order how I haue cast it, following the aduise of Iscomachus in Xenophon, whom Cicero doth greatly commend. And first, the seat of my house hath mooued me to build it after this sort. Cato would haue a man long in determination to build, but to plant and sow out of hand. Our fathers héere before, obserued the same, and séemed to follow the councell of Cato and Columella, with whom agréeth also Plinie, that the owner build his house in good order, so as neither the house be too great for the land, nor the land too much for the house. And herein it is written, that L. Lucullus, and Qu. Scæuola, were both to blame: for one of them had a greater house then was answerable to his liuing: the other, which was Scæuola, built a smaller house then his liuing required, where both are vnprofitable to the master: for the great ruinous house, not only is more chargeable in building, but also asketh greater cost in the maintaining. Again, if the house be too litle, it will be a destruction & losse of your corne and fruit: therefore it is greatly to purpose, in what sort wée build & ordaine our house. Cato would haue the house so seated, as the ayre be good about it, and (if it may be) placed at the bottome of a hill, loking directly South, & in a wholesome corner. Varros minde is, to haue it placed toward the East, that it may haue the shadow in Summer, & the Sunne in Winter: with whom Columella agréeth, saying, that if abilities serue the seats

The order of building of a house for the Countrie.

The seat of a house.

is

is to be wished in a holesome place (for Cato, as shall hereafter be shewed, would haue healthy standing chiefely regarded) with a fruitful mould, some part of it champion, some hilly, lying East or South, well watered and wodded and standing not farre off from some hauen, or nauigable riuer, to the end he may cary and transport such things as him lisseth. Cornelius Tacitus writeth that the Germans were wont to build their houses, as the hill, the Riuer, the Wood, or the Lake, would best suffer them.

RIGO. Hereof I thinke sprang at the first so many surnames as are at this day deriued from Mountaines, Riuers, Lakes, and Woods.

CONO. It may be, yet others do counsaile, in no case to set your house nere a Marsh, or a great Riuer: for the Fens and Marshes, in the heat of the yere, do send forth pestilent and deadly dampes, and a great number of venomous creatures: which dying, for lacke of their olde moisture, infecteth the ayre, and bredeth sundry and strange diseases. Homer affirmeth very truly, that the ayre which in the morning commeth from the Riuer, is very vnholsome and dangerous: and therefore if the house must needs be built nere a Riuer, they would haue such hede taken, as the Riuer rather stand on the banckside of the house, then before it: and that the frunt of the house be turned from the hurtfull & vnholesome winds, and placed towards the healthiest quarters. Since all waters commonly with dampish vapours in Sommer, and stinking cold mists in Winter, except they be well purged with holesome Windes, do infect both man and beast with pestilence: best is it therefore in good & healthy places, to set the house toward the East, or the South, & in suspected aires to place them against the North. From the Sea it is good to be as far as may be, because the winds that blow from the sea, are vnholesome, and the space lying betwixt you and it, yelds alwayes a loathsome aire. You must beware besides, that you set not your house by any great hie-way, lest you be molested with passengers, and troubled oftentimes with more guests then you would haue.

Neighbourhood.

RIGO. As far as I remember, old fellowes did measure the goodnes of their dwelling, by the qualities of their neighbours.

CONO.

CONO. You say very well: indeed I had almost forgotten it, a froward knaue to a mans neighbour, is not one of the least mischiefes, as shalbe sayd in the end of this booke. I haue knowne sundry good men, desirous of quietnesse, that haue forsaken good dwellings, rather then they would abide the iniuries and troubles of such companions: wherefore Hesiodus had some reason in saying:

As great a mischiefe is a froward knaue,
As is the ioy a neighbour good to haue.

But you maruell what I meane by such a long preamble, surely I am the longer in this matter, because you should vnderstand the reason of building of my house. For whereas there are sundry purposes of building; some build for pleasure, some for wantonnesse, and some for necessitie, I thought it good to recite the minds of the old writers, concerning the building of a house. And when as euery one will not suffer such curiositie as they require in the placing of a house, some building vpon riuers, some without or within the Marsh wals, who cannot shun the neighborhood of the riuer or the sea, some in lakes, some in woods, & some building vpon mountaines, are driuen to supply the defect of nature with art & industrie: I my selfe, sith I can by no means auoid the nærenesse of the riuer, do séke as much as in me lies, to turne away the discommodities: and because I fæle the discommoditie of the rising of the floods, I haue set my house in this place without the banks, & mounted it as high as I could: and lest the rage of the water, and force of the ise should beare it away, I haue planted round about it great trées: and that I might shun the damps of the ground, and the blasts of vnwholsome winds, I haue turned my dores and my windowes to the wholsomest quarters.

RIGO. Surely, either you, or your ancestors haue both commodiously and handsomely placed this house; for the front is double, one part loking towards the East, the other towards the South, and so built with Galeries and Gables, as it both receiueth the Sunne in Winter, and the shadow in Summer: besides, you haue a faire Porch as you enter in, that kæpeth away the winde and the raine from the dore.

CONO. All the one side, if you marke it, where the front is,

lieth South, receiuing from the first corner, the rising of the sun in Winter, declining somewhat from the West, whereby it is warme in winter, and not troubled with ouer-great heat in sommer: for this kinde of building hath an equall medly of the winter windes & sommer windes, so that it receiueth the cole winds in sommer, and is not subiect to the bitter blasts in winter.

RIGO. Some part of the building, me thinketh, is after the Italian manner.

CONO. Some part of it being ruinous, I built after my fancie, and such as I found sound, I thought enough for mee to keepe in reparations.

RIGO. I pray you, proceed to describing of the rest. This base court seemes to be after the Italian fashion, with two gates.

CONO. This Court I thus deuised my selfe. Here was a kind of Court before, but not so commodious: therefore I made a square wall here with a great gate, for the bringing in of my carriages, & a lesser for people to passe in & out. In the void place here besides the porch, I haue made a litle walke, couered with a Vine, with diuers seats in it for shadow, where I many times walke & talke with such suters as I haue: I haue in it a table of stone to sup vpon when I am disposed. Ouer against the gate, as you see, at the south side of the Court, there is a Bake-house, & a Corne-mill, with Ouens for bread, & other baked meates, there is also a Brewhouse, with an Oast for drying of malt to make beere with.

RIGO. Surely, all very handsome, and in very good order.

CONO. These offices (for feare of fire) you see, are all seuered from the house: there is hereunto adioyning a faire Well, which besides the seruice here, doth also serue my Kitchin, and other houses of office: for within the house, I haue neither Well nor Fountaine, which is a great discommodity, such as I would giue a great deale of money to remedie, both for health & coolenes in sommer and for watering my Gardens & Orchards. Water is one of the principalest things to be cared for, as the greatest cause of health both in man & beast: but this want is supplied partly by a good Well without, & partly by Cisternes, receiuing the raine water that fals in certaine Conduits and Pipes, which water is most wholesome for the body: and beside, the riuer is not far off.

RIGO.

RIGO. Come on I pray you, let vs see this back-house, I heare that you haue a new fashioned Mill, of your owne deuise.

CONO. You shall see it. When as in a great house, there is great need of Corne milles, and the common Milles, being farre off, the way foule, and I at mine own libertie to grind at home, or where I list, thinking to make a Mill here at home, when neither place nor authoritie will serue mee to build either a water mill or a wind mill, and a Querne, or a hand mill, doth but a litle good: and to build a horse-mill were more troublesome. When I saw the wheeles that they vse to draw water with, turned with Asses or men, I thought in the like sort the wheele of a mil might be turned, & after this sort deuised I this engine, which a couple of Asses, guided by a boy, doe easily turne, and make very fine meale, sufficient for mine owne house, and most times for my neighbours, whom I suffer to grinde toll free.

RIGO. Surely I like well your deuice. What will not the diligence of man bring to passe?

CONO. I finde it profitable vnto me, but because it is not the speediest way of grinding, I haue beside a horse-mill, which if need require, is turned about with a Iade or two.

RIGO. Lo, here is a great lead placed handsomly in a brick furnace in the corner, which I thinke serueth to brew withall.

CONO. Indeed, to that end it is most occupied, but it serueth other turnes beside.

RIGO. There is a Hopper (me thinketh) ouer the top of the Dast: where to serueth it?

CONO. It serueth to conuey downe the Malt, after it is watered vnto the haircloth, where it is dryed.

RIGO. Wherefore serueth that great Tunne?

CONO. To water the Barley in, when need is, otherwise it serueth for a mash fat. Hereby is a bake-house, and a pastrie with two Ouens, one seruing for household bread, the other for manchet for mine owne table, and for tarts and fine bakemeats. Here are also troughs to keepe meale in, and troughs to lay leauen in, and there is a faire table to mould vpon.

RIGO. All is handsome: but what meanes this building about your Court?

CONO. These buildings seuered from the rest, do serue for guest chambers, with a chamber for my hot house: this side you see lieth against the setting of the Sunne in Summer, where the Sunne may lie from noone till night.

RIGO. But that little Ile moated about, and seuered from the court with a bridge, seemeth to be more gorgiously and sumptuously built, I take it to bee your owne lodging, where you, your wife, and your seruants, meane to lye safely.

CONO. It is euen so, and therefore it is built vpon a higher ground, both for the better ayre and fayrer prospect: beside, my Garden and my Orchard are adioyning to it, which with the sweet smell of the flowers, and the faire beautie of the trees, bringeth both health and pleasure. The windowes, for the most part open all East, and some North, very few West, except from such chambers or galleries Southward, where I dine and sup, to receiue the sunne in winter abundantly, and in summer very little: the Tower that you see serueth for my Doue-house.

RIGO. The great flights of this house must needs fill the Maisters purse, and serue the Kitchin well.

CONO. Indeed, if as that noble and passing well learned Varro affirmeth, they might be sold, as in some ages they haue beene, at eight pound a payre, or that a man might meet with such fools, as Columella writeth of, that haue giuen 40. pound for a paire: I graunt I could make a good handsome gaine of them, but as they be, they hardly serue mine owne table.

RIGO. What doth not the mad desire of delicate procure? euen in our daies of late, I haue heard, there was threescore Florens giuen for a payre.

CONO. I will keepe you no longer heere about mine owne lodging, you haue seene a great number of better houses, and peradauenture had rather ouerlooke my out-houses.

RIGO. I had so indeed: you haue, I see, deuided your house into three parts.

CONO. So I thought it best; one for my selfe, another for my husbandmen, and the third for graine and fruit.

RIGO. What meaneth this Cell here, so handsomely built at the entrance?

CONO.

CONO. This is, sir, my Bailiffes lodging, I lay him by the gate, that he may see who goeth in and out, and what is brought and goeth forth: from thence he may also loke into the Kitchin, and see, & heare what is there done: for beside the meate that is dressed, there are other things done there in the Winter mornings. Ouer my gate I haue laid my Steward, from whence he may loke into the Court, and to the gate, and ouersee his neighbour the Bailiffe.

RIGO. Marry sir, here is watch and ward indeede, this I thinke, you learned of Varro, for it is a part of his order.

CONO. Thus experience teacheth. Hereby is my storehouse.

RIGO. Mercifull God! what a sort of tooles haue you here?

CONO. Hesiodus would haue a husband haue all his furniture ready, and will not haue him borrow in any case.

Of others borrow not, lest they refuse to lend,
So thou shalt want, the time shall passe, and busines neuer end.

Therefore I haue so furnished my Bailiffe, as he hath of euery sort two. Marcus Varro diuideth his husbandry necessaries into three parts: vowels, where he puts his owne seruants, and such as he hireth: halfe vowels, where his working cattel be: & mutes, be these that you see, whereof the smaller sort be these, axes, hatchets, and sithes, of all sorts, corne sithes, grasse sithes, stubble sithes, handbils, sickles, kniues, peasehookes, spades, shouels, wedges, draghookes, great sawes, lesser sawes, hand sawes, timber sawes, pitchforkes, iron hookes, iron forkes, twybils, doungforkes, tonges, sheares, sysars, mattockes, files, cleauers, clasps, launcets, strings, cutting kniues, gelding tooles, clipping sheares, leauers, presses, rulers, garden-rakes, hammers, chippe-axes, winches, pulleyes, wheeles, rakes, single & double, yokes, collers, bridle reins, headstals, halters, traaces, cords, Haames, Baskets, Fannes, Whips, Flayles, Strikes, Spoakes, Drawing kniues, Sackes, Wallets, Bottels, Weedhookes, Brakes, Hempe betels, Distaues, Spindles, Wharls, Fireshouels, Firestones, Gredirons, Handbarrowes, Doung-Carts, Wheelbarrowes, Maunds, Hampers, Ropes, and Line, of all sorts.

The sorts and parts of Plowes and Waines, I will shew you when wee come into the Court, next the Haybarne, Hog-

sheds, Tunnes, & Vessels, for Wine, Beere, and Water, Pipes, Tunnels, and such like, shall likewise be shewed you, when you come to the Brewhouse, & Wincseller: with Colerakes, Siues, Sercers, Boulting-tubs, Boulters, that you shal see in the Backhouse, and instruments for all other purposes, laid vp euery one in his place, till they be to be occupied: for it is very necessary to haue of euery sort two, as the number of your seruants and necessitie requires, that if one be lost or broken, you be not driuen to goe a borrowing, or to leaue your worke, wherby your men shalbe idle, while your tooles be a seeking: for to runne euery day to get new, is not for a husbands profit. Beside in the mean time your seruants loiter, and lose more then the value of their tooles.

RIGO. Truely they be all placed in good order.

CONO. I place first by themselues, such as are most in vse, that they may be the readier, & next to them, such as be occupied once a moneth, or in a yere: I giue the keeping of them all by tale, to my steward or my bayliffe, that they may deliuer them out as need is, and lay them vp againe, and charge them in any case to looke to them euery moneth, that they may mend what is amisse in them.

RIGO. Order is a iolly fellow, and no goodlier a thing in a man, then to do euery thing orderly, and to lay vp euery thing in such order, as it may readily be found: of which, a singular example doth Iscomachus shew in Xenophon, in his Phinician barke, wherein a wonder it is to see what a deale of stuffe hee had bestowed in so small a vessell: he carried with him all the furniture that a man should need, and euery thing in such order placed, as they were at hand when need was, without any trouble.

CONO. I my selfe haue an inuentory of all my husbandry implements, and so hath my Baily and his wife: my Steward hath the key of the storehouse, and deliuers out and receiues as I told you, what euery man needs: for I willingly neither borrow nor lend: I haue a neighbor or twaine, of whom sometime I borow, and lend againe: but except them, to none, as Cato teacheth me.

RIGO. The same Cato also, as I remember, teacheth to know a mans husbandry by his tooles, & therfore by your great number of tooles, a man may guesse you haue a great deale of occupying.

CONO. The double number of them makes the muster the greater:

greater: otherwise, if there were but to serue the turne they would not seeme so many.

RIGO. I pray you goe forward with your description.

CONO. You see a voyd roome before the Kitchin, which is an entrie both to the Kitchin, to the Folkes chamber, and to the Dre-houses, so that if any misfortune happen to the cattell in the night, my men may speedily helpe them.

RIGO. The Kitchin is very well handled, in that you haue so well pargetted the roofe. The Kitchin.

CONO. It is because I haue a great number of seruants, which for lacke of other roome, doe dine and sup here: beside, the pargetting or seeling, is a good safetie against fire.

RIGO. Here is a good handsome roofe by the chimney, well stored with red Herring, Bacon, and Martilmas beefe, there is also a handsome Sincke by the Kitchin.

CONO. This lettised wall that you see, ioyneth to my Bayliffes chamber, so that hee may see what is done in the Kitchin, and about the house. Hereunto is also ioyned my Larder, a vault with three roomes, one seruing for Butter and Milke, the other for Beere and Wine, the third for to keepe Flesh in: here haue I no windowes to the South, nor to the West, but all to the North, and to the East, because these quarters are least subject to corruption, and will longest preserue any thing. Aboue in the loft ponder, doe I lay my corne, vpon a faire floore, closely fenced and seeled against Mise, receiuing the light by Lattisse windowes from the North. Hard by, is another loft very close, with like windowes toward the North, seruing for my fruit: for that quarter is cold, and not moyst, whereby it preserues best, both Meat, Corne, and Fruit. Now if you will goe through this doore, you may behold the back-side of my house: loe here a faire threshing floore, whereupon my corne is sundry times threshed, fanned, and winnowed, and many other things done, chiefly in the winter mornings, though I haue beside a threshing place in my barne. On each side are lodgings for my Seruants, and other romes and lofts for Straw and Fodder for my Cattell: and there by the Stables, are also Seruants lodgings on euery side, and my Maides chamber neere the Kitchin, Larder. Corneloft. Appleloft.

and the washing house. You sée this forestall closed round about, to the end that the cattell, when they be watred and put forth, while their houses be made cleane, may be in safety. And here I kéepe also Gées, Duckes, Peacockes, Turkicockes, & other poultrey. It is as you sée, so enclosed with stables, barnes, and other houses, that nothing can get out. Varro will in any case haue two Courts, an inner court with a little pond in it of standing water, or running water, in manner of a Fishpond, and there he would haue Horse and Oxen, comming from the field, or stable, to be watered and washed, & to serue likewise for Shéepe, Swine, and Gées. In the vtter Court would hee haue a lake to cast in wheeles, staues, and péeces of timber, for instruments of husbandry, that they might there be seasoned. This Court he would haue often strawed with straw, and chaffe, that being trampled with cattell, it may serue to lay vpon the ground. You sée in this court a double dounghill, one of them newly throwen out of the stables, an other old, and seruing for the field: for new doung is nothing so good as the old, for manuring of the ground.

RIGO. What meanes these twigges, bowes, and strawes, cast vpon the doung?

CONO. This preserues the doung, that the iuyce that the ground requires, be not sucked out of the sunne: and hither also runs the water from the Laundry to moist it the better. Varro would haue here also a lodging for seruants: But least we tarry too long among the dounghils, let vs goe sée the other buildings about the Court. These great roomes that you sée, be Barnes to lay Corne in: in some places they vse houses, in others againe, stackes, set vpon props, which they call mowes: but the houses are a great deale better. Next to the Barnes, are the Stables, standing arow round about the court. And because Virgil would haue the stable stand toward the South, and Vitruuius, néere the fire, I haue followed their order in building my stables. And first haue I set here my stable for my cart-horse. I haue another stable néere my owne lodging, for my horses of seruice, and hackneies.

Barnes.

Stables.

RIGO. That sémeth to be very handsomely built.

CONO. The next are houses for my shéepe, & next them for kine, calues, and heyfers. There is a hogstie with two roomes, one

for

for my farrowing sowes, the other for Hogs, and boares. There is also a third sties, not farre from the washhouse, for the fatting of my Porkes: euery kinde hath their keepers lying neere them, that they may be at hand whatsoeuer chaunceth. Last of all, there stands my Haybarne, which hath in the vpper roomes my Hay, & beneath, waines, carts, carres, waggons, coaches, harrows, sleds, plowes, rowlers, wheeles, naues, yokes, rakes, plowbeames, and such like, which are there safe from wet, and from pilferers.

RIGO. I pray you, who doth looke to all this geare, and keepeth euery man to his worke?

CONO. My Bailiffe, as I told you before, ouerseeth both my worke and my workemen: besides, I haue a Steward that looketh to the receauing of my reuenues and commodities.

RIGO. Your bailiffe had need to be a skilful and trusty man.

CONO. You say true, for as Xenophon saith, the choyse of a Bailiffe and a Phisition ought to be one: you must chose such a one, as being a very expert husbandman, may wel be able to take the charge, and not to be ignorant of those things himselfe, that he commandeth others to do, for nothing is well taught or learned, without example. For as Cato saith of a husband of the old stampe, it goeth ill with that master whom the Bayliffe must teach. As Iscomachus being demaunded of Socrates, whether hee would buye a Bayliffe, as he would hire a smith or rather teach him himselfe at home? He answered, he would haue him of his owne teaching.

The choise of a Bailiffe of husbandry

RIGO. But this is after the old world, wherein no man was vnskilfull: but it is a wonder, how you that haue alwayes beene brought vp in princes affaires, could in these dayes (when very few, except plowmen, and such as haue no other trade of life, haue any skill in it) apply your mind so vnto it, as a man would thinke you had neuer minded any other profession.

CONO. Surely, I think he shal neuer haue a good Bailiffe, that is not able himselfe to iudge skilfully of him: nor let him euer thinke to haue his worke well done, that knoweth not how, nor which way things ought to be done, but must be faine to learne of his man: for there is none can iudge of a worke, but a workeman. Therefore in the choyse of a Bailiffe, I would haue foure

things

What things ought to be in a Bailiffe of husbandry

things chiefly considered: that he be louing, diligent, meet to rule, and trustie, & if you will adde a fift, I am well contented, that is, that he be not giuen to drunkennesse: for a drunken man loseth with his memory, the regard of his dutie. I do not enquire whether hee haue bene brought vp ciuilly or daintely, but I would haue him a hard fellow, brought vp from his childhood to labour, and one that were throughly well skilled, of a meane age, that he be not vnwilling to worke for youth, nor vnable to trauaile for age. I would haue him haue some skill in carpentrie, that if there happen to be any thing broken about his Stables, his Carts, or any other his instruments, he might speedily mend them, & that he could mend Wals and Hedges. I would haue him also not vnskilfull in the diseases of Cattell: such a one as hath beene brought vp with skilfull husbands, will prowe meetest to haue charge. For there be a great number, that though they be skilfull enough in their profession, yet haue they not gouernment in them: but eyther vsing too much sharpenesse, or too much gentlenes towards such as be vnder them, doe hinder the profit of their master: and therefore I would haue a Bailiffe well tried before he be taken: neither is it onely to be sought, whether he be skilfull in this craft, but whether he be trustie and louing to his Master, without which, he is not worth a rush, though his skill be neuer so great. And chiefely he must be skilfull in this, to know what worke is meetest for euery man: for some works require strength more then skill, and others, otherwise. And therefore in appointing of these, he ought to haue great iudgement & good discretion, which hee cannot haue, except he haue good skill. Therefore a Bailiffe is as well to be taught, as a Smith, or a Carpenter: and the knowledge of husbandry is greater & of more difficultie: Wherefore I meruaile, that in this so necessary an occupation, there are found so few Masters and Prentices.

RIGO. Perhaps the tediousnesse and hardnesse thereof driueth them away.

CONO. Why? haue not Orators bene likewise driuen away? for, as Cicero saith, there hath bin no perfect Orator found.

RIGO. Of whom would you haue your Bailiffe to be taught?

CONO. Your question is good, I will shew you, though very

few.

few haue taught what belongeth to a husband in all things, neither shall you finde many skilfull in euery poynt. Therefore he that shall be a Bailiffe, must be taught by degrees, he must first begin when he is a childe, with keeping of Sheepe or Swine, and when he is elder, with droues of Cattell, and keeping of Horse: he must learne next to digge, to thresh, to set, to sowe, to hedge, to build, to mend such things as are broken, to play the butcher, to giue drinkes and medicines to sicke Cattell, and such other like things. And thus must he procede from one to another. The trayning of a Bailiffe.

RIGO. You shew mee wonderfull Philosophie.

CONO. As I said at the first, his best age is betwixt thirtie and threescore: for the flames of lusty youth beginning to abate, he will not be so hot in his woing: for whiles he followes that game, he will haue no minde but of his minion, neither shall any reward be so welcome vnto him, as the fruit of his fancie, nor any griefe so great to him, as the failing of his desire. If he once passe threescore, he waxeth slothfull & vnable to labour: for I had rather haue the worke of a painefull & diligent Bailiffe, then the seruice of a great number of slothfull lubbers: as he that had rather haue a Lion captaine ouer Harts, then a Hart captaine ouer Lions. This must chiefly be loked vnto (since earely going to worke is a great matter) that the Bailiffe be a good riser, & that, supplying his Masters place, he may be first vp in the morning, and the last that goeth to bed, & that he see the doores fast locked, and euery man in bed, that the cattell haue meat enough, & be well littered, that he set forward, according to the time of the yeere, such as do loyter in their labor, that he himselfe go lustily before, that he suffer no man, after it is day, to lag behind, but that they follow the Bailiffe lustily with a courage, as if he were their captaine in a skirmish: and that he vse sundry deuises to cheere them vp in their labor, sometime to helpe him that fainteth, to take his toole out of his hand, & labour lustily before him. And as a carefull Sheepheard, earely carrying out his sheepe, & bringing them home late, looketh that he leaue none of his flocke behinde him: so likewise ought a good Bailiffe to carry out his men, & to haue good regard ouer them. If any of them be hurt or sicke, let him looke to the dressing of them, and if they be very sicke, to carry

them

them to the sicke folkes lodging, & to see that they be well ordered: and to that vse haue I built yonder house that you see removed from the other buildings, that the sicke may be had thither & looked vnto, specially if their diseases be contagious, least other should be infected. It is the Maisters dutie to haue such regard of the health of his seruants, that their sickenes may be preuented by good medicines & good loking to: as to see that their meate and drinke be wholesome & good, and giuen in due season: beside, that the Bayliffe eate his meat with them, and not by himselfe, whereby it shall be the better ordered. And because Phisitians are not alwayes at hand in the country, it behoueth to vse such remedies, as experience hath taught, & such as haue holpen others of like diseases. Those that labour in the Sunne (because the Sunne hurteth the body & vaines) their diet must be the thinner, that they make not too great meales, but eate litle and often: this order keepeth them in health, & helpeth digestion. Some do vse to giue Wormewood-Wine, or pottage made of Wormewood. It is very necessary for them somtimes to recreate themselues, so that in the meane while they giue not themselues to naughtinesse. There must be heed taken, that they drinke not when they be hot, nor lye vpon the cold ground: if their water be not good, it must be well purified. It is very good also to let them drinke barley water. We must remember that seruants be men: besides, such good loking to, will breed a greater good will & dutie, and lightly they will serue the faithfuller and better when they haue their health, which haue had good cherrishing in their sicknesse: and besides (which is not well obserued in greater gouernors) the Bailiffe must beware that he deale not too cruelly, nor too gently with them, that he alwayes make much of those that be diligent & painefull, that he be not too hastie with the worser sort, that they may rather reuerence him for his seueritie, then hate him for his crueltie, which he shall easely bring to passe, if he rather beware that they offend not, then after their offence, too late, to punish them. For there is none so good a bridle for an euill desposed person, as to let him alwayes be occupied. So that Catoes saying heerein is most true, that men in doing nothing, learne to doe euill. Let them haue their allowance, and their

meat

meate in due season, let them alwayes feed together in one place, and the Bailiffe with them, that he may be an example to them of all thriftines. If he finde any of them to haue laboured painefully and truly, let him giue them a good countenance, and encourage them with rewards, to make them the willinger to doe their dutie: beside, let him looke that they bee rather well clothed, then curiously apparelled, that their garments may keepe them from the colde & the raine: let their wages be well paied them, that the want thereof be no excuse for them to loyter in their labour. And as meat and apparell is necessary for them, so likewise is correction. For the wise man saith, giue a Horse the whip, an Asse the snaffle, and a Foole the rod. And againe, hee that deales too gently with his seruants, shall make them in the end stubborne and froward. Aboue all things let him see that they feare God, let him in no wise suffer them to sweare, or to blaspheme, nor to vse filthy or vngodly speech: but let him prouide that they bee instructed in the Catechisme, that they vse prayer, that they goe to Sermons vpon the holy dayes, and receiue the Sacraments at times appointed, that they be not hunters of Alehouses or euill company. For, as the Poet sayth, it is lawfull to be well occupied, euen on the Festiuall daies. When they haue serued God, & dined, let them walke abroad in the ground, let them looke there be no Cattell in the Corne, and stop such gaps as they finde open, and looke that their Cattell be in safety abroad. To be short, the Bailiffe must in all these matters be, as it were a Bishop, or a Master of the workes, so shall euery man the better doe the worke that belongeth vnto him. The Bailiffe must neuer be from their heeles, least in his absence they fall to loytering, neither must hee suffer them any time to be idle: hee himselfe must not be giuen to drinking or gaming, nor to hunting or fishing, except for his masters profit: let him very seldome entertaine any guests, except they be of his masters retinew: let him not bestow his masters money about his owne merchandize, for such kinde of bargaining makes him the slacker in his dutie, and maketh his accompts seldome fall out iust. Aboue all things this is to be wished in the Bailiffe, that he do not thinke himselfe wiser then his master, or suppose himselfe to haue more skill then

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he hath, & that hée alwaies séeke to learne such things as he is ignorant of. For as it is very profitable to do any thing skilfully, so is it more hurtful to do it vntowardly. Columella had rather haue a Bailiffe that could neither read nor write, so that his memory be good: for such a Bailiffe (saith he) will oftner bring his Maister mony, then a booke: because (not able to write) he cannot so easily frame a false account. The Bayliffes wife must alwaies be with him, that she may kéep him from running at rouers, and may helpe him in his labours: her age must be such also, as we required in the Bayliffe before, she must be painful, healthy, carefull, & honest, she must not be too ill fauored, lest she be loathsome vnto him, nor too beautifull, lest hée doat too much vpon her, and kéepe home when he should be abroad. Shée must in the meane time loke to the Kitchin, and to other works at home, gouerne the Maides, and kéepe them at their worke, loke to their necessaries, and giue them their allowance.

The Bayliffes wife.

RIGO. You séeme to me here, to make the Bayliffe a Maister, and the Maister a Bayliffe.

CONO. This age of ours, quite corrupted with delicacie and daintines, litle regardeth the honest & profitable orders of our forefathers: for in those daies the Maisters themselues plaid the husbands, & thought it not to goe well with that Maister that must be taught by his Bayliffe, as Cato witnesseth, & Varro also complaineth, that the husbands in his daies had forsaken the plow & the sithe, & gotten themselues within the walls, and spent their time rather in maygames & midsummer sights, then with tilling the ground, or planting of Vines. Therefore Cato & the old writers, do attribute many things to the Maister, that we asigne to the Bailife. And I, though I séeme to put the charge of the houshold in the hands of my Bayliffe, yet wil I my selfe be ouerseer, and haue euery thing done as I appoint, entreating gently (as I taught the Baylife afore) both the Bailife & my labourers, regarding more their labour then my gaines. But I carry you about too long, being fasting, I pray you let vs goe to dinner: you shall not dine at Court to day, neither meant I to shew you, as you sée, the palace of Lucullus, but the poore cotage of Cincinatus, Abdolominus, or Laertes. Here you sée the roomes for my husbandmen,

seuered from mine owne house, but yet so, as I may easily see what they doe. Here I and my wife, with our household seruants lie.

RIGO. All very excellently well as may be, there is nothing wanting that is to be wished for. Mistrisse Metella, you trouble your selfe too much, like Martha, about the prouiding of your dinner.

METELLA. Not a whit Sir, you must be contented with Countrey fare, you shall neither haue red Deere, Marchpaine, nor Sturgion, nor any Courtiers fare: but an Egge, and a Sallet, a Pullet, or a peece of Lambe.

RIGO. This diet contenteth me aboue all other.

CONO. Fall to it then, and tell me how you like our countrey Wine.

RIGO. Surely it passeth either wine of Orleans, or Anjou: I did not thinke to haue found so good a cup of wine in these quarters.

CONO. The husbandry, and good season of the yeere doth yeeld the same.

RIGO. Well, we sit too long at dinner: the weather being so faire and so pleasant abroad, it is a shame to sit any longer, but to walke out and looke vpon your ground.

CONO. The weather being faire, you bring a horse to the field (as they say) when you speake to me of going abroad: for I my selfe, if the weather or businesse do not let me, am euery day, according to Catoes counsel, abroad in my ground: & if it please you, I will carry you abroad and shew you my ground. You must not look to see the great countries of Metellus, or Lucullus, but the possessions of a poore country man, that contented with his state would be as he is, & would not change liues with the Emperour.

RIGO. I pray you let me heare your opinion of the field and the tilture thereof: for I see you are a perfect husband, and nothing vnskilfull. I haue a great desire to heare some rules, and such as serue our turne best.

Of the tilling and husbanding of the ground.

CONO. If it bee a shame for an apprentise at the Law, and a pleader of causes, to be ignorant of the law wherein he dealeth, a greater shame is it for a professor of husbandry, to be vnskilfull in the ground whereon his whole trade lyeth. How is he able to iudge vprightly in husbandry, that knowes not which way to till

his

his land? The professors of all other arts, do commonly keepe to themselues, such things as be the chiefe mysteries of their knowledge. Contrariwise, the husbandman reioyceth to haue euery body made priuy to his skill, & being demaunded in what sort he doth this and that, he gladly declareth his whole dealing in euery point: such good natured men doth this knowledge make. I haue ordered my ground here, according to the diligence of the old Fathers, rather then for the wantonnes of these times. Therefore I will first shew you their opinions, and afterwards mine owne fancie. First, Cato appointed nine degrees of the land in Italy. The first, the Vineyard, that yeeldeth much and good wine: the next the well watered Garden: the third, the Willow Groue: the fourth, the Olive trees: the fift, for Meddow: the first, Corne ground: the seauenth, for Copie ground: the eight, for Timber trees: the last for Mast. But these degrees, as Varro sayth, are not generally allowed of, neither haue we the vse of them all in these countries: but make most account of such land, as serueth for Garden or Orchard ground, Corne, or Fishponds. Of Corne ground I will first entreat, and afterwards of Pasture, Medow, Wood-land, and Willow Groues.

The good nature of the husbandman.

The degrees and sorts of ground.

Of Corne ground.

RIGO. I pray you then take the paines to shew the nature of it, and which way the best ground may be knowen.

CONO. Cato counteth that the best ground, that lieth at the foote of a mountaine, being leuell, and lying toward the Sunne, as the whole countrie of Italie lieth. In colde and Northerly countries, it is good to haue the land lying East and South, least these two quarters, being bard off by any hill, the land be frozen with colde: but in hot countries it is better to haue the ground lye North, both for pleasure and health.

RIGO. They say it is needfull to know the conditions of euery ground.

CONO. It is so, and sooner shall you doe it, then the conditions of a man: for being well tilled, it will not deceiue you, but deale iustly with you. To know the nature of euery ground, Iscomacus in Xenophon, doth will you to marke well the plants and the yeeld of the Countrie, except you will loose your labour or fight with God. Varro counsels you to looke whether there

How to know the goodnesse of the ground.

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be in the land either Stone, Marble, Sand, Grauell, Kaddell, Chalke, Clay, Pebble, or Carbuncle, that is, ground ouer heated and parched with the sunne, which will burne the roots of whatsoeuer commeth in it. Also if it be wet or weeping ground, or subject vnto other inconueniences, and such ground also, according to the nature of the soile, is good or euill. In some Countries stonie ground is altogether barren, specially for Corne and Fruit: In other places againe, they vse stones in the manuring and bettering of their land, as in certaine places of Arden is to be seene. Theophrastus writeth, that the Corinths did cast away all the stones out of the fields of Sarragosa, & there by made the ground the worse, when, the stones being away, & the country hot, there was no succour left to defend the ground from the extreame heat of the sunne. In other places in stonie and hilly ground, Otes do prosper well. In like sort also, in all Countries we must regard the layre of the Countrie, and the nature of the seed that we sowe: for Grauell in some places, is cast vpon the ground in stead of dung, & some things prosper best in grauelly grounds. In Barbary (as Columella doth witnesse) the very rotten sands exceed any other ground in fruitfulnesse. It is also something to the purpose, whether the grauell be white, red, or yellow: besides, some ground doth deceiue both with colour and quality. In some Countries the blacke mould is onely esteemed: in others, the fat red mould is thought best. In England, the chalkie ground beareth good corne, and pastures very well. In some places the thicke and the clammie ground is most fruitfull. In all these it is to be learned, what is best for the hilly ground, what for the vally, what for the tilled, what for the lay ground, what the moist seggie ground requires, and what the dry and barren. Also in planting, what ground is best for Vines, what for other trees, what delights in drie ground, what in moist ground. Virgil commendeth a mellow ground that is fat, and will sone be resolued, for such ground is tilled with smallest charge and labour: the next, that which is fat and stiffe, which greatly recompenceth the husbandman his trauaile and charges: the worst is, that which is drye, leane, and stiffe: for both it is tilled with great labour: and beside, neither answereth in his crope the husbandmans trauaile, neither serueth it for good meddow or pasture any time after, and therefore such ground is

Signes of the goodnes of the ground.

not to be meddled withall. Also, the goodnesse of the ground is easily perceiued by perfect tokens: for a clod sprinkled with a little water, if in working with the hand it be clammy, and cleuing, and sticketh to the fingers like pitch, when it is handled, as the Poet sayth, and breaketh not in falling to the ground, this sheweth a naturall fatnesse and richnesse to be in it: besides, you may know the mould that is good for Corne, if it beare Bulrushes, Thistles, Threeleaued grasse, Danwort, Brambles, Blackethorne, and such like, as neuer grow but in good ground: as on the other side, lothsome and ill fauoured weedes, declare a leane and a bitter ground: Ferne, and withered plants, a cold ground, sad and heauie coloured, a moist and a wet ground: a raddel & a stony ground, is discerned by the eye, a stiffe and a tough clay, by the labour and toile of the Oxen. A good token is it also of good ground, where the Crowes & Pies follow in great number the Plow, scraping in the steps of the Plowman. The goodnesse is likewise knowen, if at the Sun-setting, after a Rainebow, and in a showre of raine, following a great drought, it yeeldeth a pleasant sauour: also in taste it will appeare: if tasting a clod that hath bene watered in an earthen vessell, you finde it sweet, it is a signe of rich ground, if bitter, a great token of barren ground, if it be saltish, it is to be shunned, and not to be vsed vpon the dounghill. You must remember also, that ground will sometimes change, and of fruitfull become barren, which hath bene seene, as Plinie reporteth, in the old time in Thessalie, and in our time, in sundry places of our Countrey. Beside, one kind of ground, though it be neuer so fertill, will not beare all things, as the Poet wisely noteth, Ne serues one ground for euery crop. Moreouer, the disposition of the Heauens is a great matter, all Countries haue not the weather and ayre alike: wherefore it is the part of a good husband to know the nature and propertie of his ground, and to marke the disposition of it for euery part of the yere: he must also consider what crop is best for euery layer. Some ground serueth for Corne, some for Vines, some for Oliues, some for Meddow, some for Pasture, neither may all things wel be sowen in rich ground, nor nothing in barren ground. Such things as need not much moisture, are best sowen in light ground, as the great Caluer, Sperie, Chich, and the other pulses that are pulled and not cut. Those that require more sustenance,

Ground will change.

The disposition of the heauens to be obserued.

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are sowne in richer ground, as Pot-hearbs, Wheat, Rye, Barly, Lin-seed. Some of them doe good to the ground the yeere following, as Lupines that are vsed to be sowen for the bettering of the ground. There is difference also to be put betwixt fruits for pleasure, and such as be for profit: as fruit trees and flowers, and such things as yeeld both pleasure and sustenance, and are also profitable to the ground. You must chose for Willowes, Osyres, and Reedes, a wet and a marrish ground, and contrary where you will haue Corne & Pulse, that delights in drie ground: Sperage and suchlike, must be sowen in shadowy places, and other ground for Quicksets, Timber, Mast, and Fewell: yea, such ground as is very grauelly and barren, hath his vse, where you may plant Birch, and such like, and watry grounds where you may set Alders, Broome, and Bulrushes.

RIGO. Surely the temperature of the ayre, doth much in the fruitfulnes of the ground, for I haue oftentimes marked, that one kind of ground is more fruitful in one Countrey then in another.

CONO. In Venefri, the graueil ground beares Oliues best, where as about Granado, they require the richest ground that may be. When in other places the Vine doth not prosper very well in stony grounds, about the Rhine the very ragged rockes doe yeeld as fruitfull Vines as may be seene. Plinie doth witnesse, that in some places the Vines doe grow euen in the Fennes and Marshes, such a secret force is there in nature. About Chalcia, an Iland about the Rodes, it is said there is a piece of ground so fruitfull, that they mow their barley being sowed in his season, and their Croppe, sow it againe, and gather it with their other graine. The Albanoyses receiue the fruit of their land ἄπαρτα καὶ ἄνυροτα, vntilled and vnsowen, and being once sowen, it yeeldeth his croppe three yeeres together. Homer calleth Phrigea ἀμπελοέασαν, & Argos πολύπυρον. Hedorotus writeth, that Babilon is so fruitfull, as the ground yeeldeth increase two hundred & three hundred fold. Plinie affirmeth, the increase in his time to be fiftie, & to good husbands an hundred fold. About Monte Gibello, it is reported by credible persons, to be an hundred fold. Italy is so fruitfull, that Varro calleth it the garden of the world, because it is so fertile & wel planted in euery place. Campania, being ful of corne: Apulia, plenteous with wine: and Venefri, abounding with Oyle.

Italy, the garden of the world.

RIGO. I haue heard say, that Germany & France haue not bene in times past very fertill, and that they haue bene altogether without Wines, & now we see no country more fruitfull, that yeelderth greater abundance of all things. Where can you finde better wines, then about Bauaer and the Rhine? I speake not of their great store of graine, Mines of gold, siluer, iron, and lead. In the countrie of Thurin in Germany, it is sayd, that after wheat once sowen, the ground will yeeld Rie of it selfe two yeeres together.

The fruitfulnesse of Germanie

CONO. Yea, and in our Countrie here, we haue ground that will beare Wheate euery yeere. Rape-seed being once sowen with vs, doth oftentimes yeeld his Crop two yeeres together, without sowing or labouring.

RIGO. Vnder the Northren Pole, it is reported, the ground is so fertill, as they sowe in the Morning, and reape at Noone. In Barbary, where the ground is low, they plant vnder the Date tree the Oliue, vnder the Oliue the Figge tree, vnder the Figge the Pomegranate, vnder it the Vine, vnder the Vine they sowe Wheat, and vnder wheat Pulse, all prospering one vnder the others shadow, and yeelding their fruit the same yeere.

The fruitfulnesse of Barbary.

CONO. That made me to say, that the ground followes the disposition of the heauens.

RIGO. But sith in all places the ground is not of like goodnesse, what if we chance vpon a leane and a barren ground, as heathy, bushy, and graueilly ground: may these be made fruitfull, and mended by Art?

CONO. Verely well, there is no countrey that the most gratious Lord hath left without sufficient yeeld, if labour and trauell be not refused.

RIGO. That skill I would gladly vnderstand.

Of dunging of ground.

CONO. It is brought to passe diuers wayes, principally by dounging and diligent labour: and to this end serue those heapes of doung that I lately shewed you.

RIGO. I pray you let me know what doung doth most enrich the ground.

The sorts of doung.

CONO. Varro and Columella his follower, appoynt three sorts of doungs: the first of Poultry, the next of Men, the third of Cattell. Of the first sort, the best is that which is had out of Doue-houses, the next is of Pulline, & all other fowle, except Geese and Duckes,

Duckes, which is hurtful. The people in the old age had such store of Poultry and Fowle, as the doung of them suffised for the manuring of their ground. The next to this, is mans ordure, if it be mixed with other rubbish of the house: for of it selfe it is too hot, and burnes the ground. Mans vrine, being fire moneths kept, and powred vpon the rootes of Apple trees and Vines, bringeth great fruitfulnesse to the trees, and giueth a pleasant taste to the fruit. In the third place is the doung of Cattell, whereof the best is the doung of Asses, because this beast doth chaw with most leasure, whereby his meate being well digested, is made the profitabler doung. Next to this, is the doung of Sheepe, next of Goates, then of Oxen, and Horses: the worst of all of Swine, very hurtfull to Corne, but vsed in some places for Gardens, for lacke of other doung, but is a great breeder of noysome weeds: yet Plinie seemeth to allow it, as the filth of a filthie creature. The doung of Horses likewise, where the Horses are fed with Barley, doth breed great store of weeds. The Lupine, before he beare his cod, is most commended, being turned vp with the Plow or Mattocke, and layd in bundels about the rootes of Trees or Vines. Where they haue no store of Cattell, they vse to mend their ground with straw and Ferne, & with the stalkes of Lupines, and the branches layd together in some Ditch: hereunto you may cast Ashes, the filth of sinkes and priuies, and straw, with dust and other things raked together: but in the midst, you must lay some sound matter against the breeding of Adders & Snakes: also Hemlockes, Wallwort, and the weeds growing about willow Trees and Ferne, with other such rotten weedes, you may gather and lay vnder your Sheepe. They that dwel in Grauelly and Heathy grounds, doe take the Turues of the Earth and the Heath, and laying them in heapes powdred with a little doung, suffer them to lye and rot, and after lay it vpon barren ground, but specially where they keepe great store of Sheepe, they cast into their folds such Turues pared from the ground. Columella counts them but euill husbands, that haue of euery one of the lesser kinde of Cattel, lesse then a Cartload of doung in 300. dayes, & each of the greater sort ten load, beside the filth and durt of the yard. This is also to be noted, that the dung that hath line a yeere, is best for Corne, for it both is of sufficient strength, and breedeth lesse weedes, but vpon Meddow and Pa-

Vrine.

Old dung best for Corne, and new doung for Meddow.

ture, you must lay the newest, because it brings most grasse, and this must be done in February, the Moone encreasing, for this is the best time to cause encrease of grasse. In the manuring of your ground, loke that you lay most doung vpon the top of the Hill, for the raine will beare it to the lower parts fast enough. He that minders to haue his ground beare Corne, if hee meane to sowe in the end of Summer, must turne in his doung in September: if in the Spring, he may lay it on at any time all the winter. What time soeuer it be done, you must loke that the wind be Westerly, and the Moone in the wayne. This obseruation helpeth greatly to the bettering of the ground. Beside, you must not forget to let the doung be drye before it bee layd vpon the ground. For though Columella do bid the contrary, our owne experience wills vs not to follow him: for doung while it is moist, doth more harme to the ground then good, as daily experience teacheth. Now as your land will waxe colde, if it be not dounged, so will it be dried or burnt, if it be manured yeerly, or too much. The watrie ground requireth more store of doung, and the drie ground the lesse.

The obseruing of the winde and the Moone, in mending of the ground.

Wet dung hurts the field.

RIGO. I remember, I haue yet this seene Earth taken out of the fields neere adioyning, and layd vpon the land, I therefore guesse the earth may be mended with earth.

CONO. The Germanes, besides sundry other sorts of enriching of their grounds, doe instead of doung, cast vpon it a kinde of pitch and fatnesse of the earth: (Plinie counts it to be first deuised in England and Fraunce) called Marga, as it were the fat of the earth: but I rather thinke it to be the inuention of the Germanes, with whom yet both the name and the vse is retayned: it is gotten in the deepe pits, but not alike in all soyles. That part of France that lies vpon the Maase, doth shew a sandy kind of Marle, differing from the fat Marle of Germanie, but of the same quality: which, caried vpon the Sea in vessels, is solde as a great marchandize. In some places the scowring of Ponds and Ditches, is vsed, to the great enriching of the ground, in the mountaine and barren grounds. In some Countries they make their land very fruitfull with laying on of Chalke, as Plinie testifieth of the Burgundians, and the Gascoynes, and in Germanie in our dayes, this manner of mending of ground is common. But long vse of it, in the end brings the ground to be starke nought, whereby the com-

Marle, a fat kinde of earth vsed commonly at this day in diuers parts of Sussex & Kent, for the enriching of land.

Chalke vsed for mending of ground

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mon people haue a speech, that ground enriched with Chalke, makes a rich Father, and a beggerly sonne. A little lower, not farre from the Maase, in the Countrie of Lyege, they mend their land with a kind of slate stone, which cast vpon the ground doth moulder away, and makes the ground fatter. In Lombardie they like so well the vse of ashes, as they esteeme it farre aboue any doung, thinking doung not meet to be vsed for the vnwholesomnesse thereof. Columella writeth, that his Vncle was wont to mend sandie and grauely grounds with Chalke, and chalkie and hard grounds with grauell and sand, whereby hee had alwayes godly Corne. So do I thinke, that Riuer-land by ouerflowings, and fast ground with mudde, mingled with sand and grauell, will be made much better.

Dunging with ashes

RIGO. You haue taught me sundry wayes of mending of ground, I would gladly now learne the right way of plowing and sowing.

CONO. In plowing, and orderly preparing ground for seed, consists the chiefest poynt of husbandry. Cato affirmeth the first poynt of husbandry to be to prepare the ground well: the second, to plow it well: and the third, to doung it well. Of plowing, and turning vp the ground, the fashion is diuers, according to the nature of euery soyle and countrie. All great fields are tilled with the Plow and Share, the lesser with the Spade. The Plowes are of sundry fashions, according to the diuersitie of Countries, some single, some double, some with wheeles, some without. The parts of the Plow, are the Taile, the Shelfe, the Beame, the Foote, the Coulter, the Share, the Wheeles, and the staffe. The Share, is that which first cuts the way for the Coulter, that afterwards turnes vp the Furrow. Where the ground is light, they vse onely a small share. In Liffland they haue for their Plow nothing but a Forke. In Syria, where they cannot goe very deepe, they vse (as Theophrastus writes) very little plowes. Plinie writeth, that wheeles for Plowes were deuised by the Frenchmen, and called Plugrat, a Germaine name, which corruptly is printed Planarati. In diuers places, where the ground is stiffe, they haue a little wing on the right side of the Coulter, which wing is to be remoued to which side you list: with the rod or staffe, well pointed, the Plowman maketh cleane his Coulter.

The manner of plowing.

The parts of the Plow.

When you worke, your Oxen must be yoked euen together, that they may draw more handsomly with their heads at libertie, and lesse hurt to their neckes. This kind of yoaking is better liked of many, then to be yoked by the hornes: for the Cattell shalbe able to draw better with the necke and the breast, then they shall with their heads: and this way they put to the force of their whole bodies, whereas the other way (being restrained by the yoke on their heads) they are so grieued, as they scarcely race the vpper part of the earth. Where horses may be vsed, their vse is more commodious for the Plow, and the fewer of them the better: for many horses draw too hastily, & make too large Furrowes, which is not good: whereby wee see the ground to be excellently well plowed in Gelderland, & about Coleyne, where they plow alwaies with two horses, going very softly. In Fraunce, and other places, where they plow with Oxen, they make their Furrowes rather deepe then broad. Where the ground is stiffe, the coulter must be the greater & the stronger, that it may goe the deeper: for if the crust of the earth be turned vp very broad it remaineth stil whole, whereby neither the weedes are killed, nor the ground can be wel harrowed. The Furrow ought not to exceed one hundred & twenty foot in length, for if it doe, as Columella saith, it is hurtfull to the beasts, because they are too much wearied withall: but this rule, where the fields are large, is not in many places regarded, as in the Countrie of Gulicke, where the fields are great, their Furrowes are drawne very long. You must not plow in wet weather, nor wet ground, nor when after a long drought a little raine falling hath but wet the vpper part, & not gone deepe. If it be too wet when it is plowed, it doth no good that yeere. You must therefore haue a regard to the temperature of your season, that it be neither too dry nor too wet: for, too much moisture maketh it too durtie, and too great dryness maketh that it will neuer worke well: for eyther the hardnes of the Earth resisteth the Plow, or if it do enter, it breakes it not small enough, but turneth vp great flakes, hurtfull to the next plowing. For though the land be as rich as may be, yet if you goe any depth, you shall haue it barren, which is turned vp in these great cloddes, whereby it happeneth that the badde mould, mixed with the good, yeeldeth the worser Corne.

This drawing with the head, is vsed in the vpper parts of Fraunce & Spaine.

The like is vsed with vs in Norfolke, and Lincolnshire.

Dead mould.

Where

Where you haue plowed in a dry season, it is good to haue some moisture in your second stirring, which moistning the ground, shall make your labour the lighter. Where the ground is rich, and hath long borne water, it is to be stirred again when the weather waxeth warme, and when the weedes are full growne, and haue their seedes in their toppe, which being plowed so thicke, as you can scarse see where the Coulter hath gone, vtterly killeth & destroyeth the weedes: besides, through many stirrings, your fallow is brought to so fine a mould, as it shal need very little or no harrowing at all when you sow it: for the old Romans, as Columella witnesseth, would say that the ground was ill husbanded, that after sowing had need of the harrow. Moreouer the good husband must trie whether it be well plowed or no, & not onely trust your eyes, which (the balks being couered with mould) may easily be deceiued, but trie it with your hand, (which is a certeiner proofe) by thrusting downe a rod into the furrow, which if it pierce alike in euery place, it sheweth that the ground is well plowed. If it be shallow in one place, & deepe in another, it declares the ground to be euil handled in the plowing. If you are to plow vpon a hill, you must plow ouerthwart, & not vp and downe: for thereby the inconuenience of the steepnes is met with, and the labour of both man and Cattell is lightned: But herein you must beware, that you plow not alwaies one way, but somtime higher, sometime lower, working aslope, as you shall see cause. Touching the season of your plowing; it must be chiefly in the spring, as the Poet wel teacheth: When as the pleasant spring, &c. For in Summer the ground is too hard and churlish, and in Winter too foule and dirtie: but in the Spring, the ground being mellow, is easily to be wrought, and the weedes are then best turned in, which both do good for the enriching of the ground, and plucked vp by the rootes before they haue seeded, will neuer spring againe. And therefore with vs, we vse to begin to plow about the middest of March: but in sandy and light ground they vse to plow in the middest of winter, if the season wil suffer. Plinie is of opinion, that stiffe ground also should then be stirred. A slender and leuell ground, subiect to water, would be first plowed in the end of August, & stirred againe in September, and prepared for sowing about the twelfth of March. The light hilly ground, is not to be broken vp in Summer, but about the

Triall of good plowing.

The plowing of a hill

The best time of plowing.

Kalends

Kalends of September: for if it be broken vp afore, being barren and without iuyce, it is burnt vp with the Sunne, and hath no goodnesse remayning in it. Wet ground, some would haue broken vp after the Ides of Aprill, which being plowed at that time, should be stirred againe about the tenth of June, and after againe, about the kalends of September, according to Columellaes minde. But those that are skilfull in husbandry, agree that after the tenth of June, without great store of raine, you shall not plow: for if the yeere be wet, there is nothing to the contrary but you may plow in July. In the meane time, beware that you deale not with ground ouer-wet, as I gaue you warning before.

RIGO. May I plow in the night, if I list?

Plowing in the Night.

CONO. Yea, very well, in Summer time, and in hot countries you may begin in the euening, and continue till the Sunne rise, that the moisture and fatnesse of the ground, may remaine shadowed vnder the clod: and that the Cattell through ouermuch heate of the Sunne, be not diseased nor hurt. How oft you shall plow the ground that you meane to sow, partly the nature of the soyle, and partly the condition of his seede will teach you, as when we come to it, I will tell you: for it is not needfull to stir a grauelly and a light ground, so often as the stiffe ground: yet we finde, that land, the oftner it is stirred, the better it beares. So that for some seede, you must not onely twyfallow, and thryefallow your ground, but also fourefallow it, as they vse in the fruitfullest places of Italy and Germanie. In Misnia and Austria they plow but twise. Stiffe ground, as they commonly doe in Italy, is best to be sowed vpon the first stirring: in Tuscan, vpon the ninth. Thus hath euery Countrie, both in this, and other matters, his fashion, according to the nature of the ground.

RIGO. But may I not sowe one peece of ground euery yeere without resting?

CONO. There are some grounds you may sow yeerely, as in Italy, and in Austria, & likewise in some parts here about the Riuer, that are fruitful either by nature, or by ouerflowing. In other places you must obserue the old saying of the husband, Take not too much of your ground. Virgill would haue ground rest euery other yeere: which if you haue store of ground, out of all doubt is best. Hereof had the ground that is sowed euery yeere, his name

in

in the old time: but commonly euen the best ground requireth rest the third, the fourth, or (at the farthest) the fift yeere. Varro writeth, that in Olynthia the land beareth euery yeere, and euery third yeere most plentifully. But if you will do well, you must let it lye euery other yeere, according to the nature of the soyle, or else sowe it with lighter seede, that soketh out lesse the substance of the ground, as Lupines & others, that we will shortly intreat of. It is also much to be considered, whether the ground that you plow be lay ground yeerely sowne, or fallow: If you break vp new ground, if it be rich, heauy, and prepared for seed, it sufficeth to plow it once, and to sow it immediately, and harrow it. If it be light & graueIly ground, you must thryfallow it, specially at the first breaking vp.

RIGO. Here you speake of diuers tearmes belonging to this trade, I pray you make me vnderstand them, before you proceede any farther.

CONO. This Art, (as likewise all other) hath certaine words peculiar, and belonging to it selfe: and because sundry men of good learning haue herein beene deceiued, lest my matter should bee marred with darke and strange tearmes, I will declare the words as playne as I can, digressing a while from my former speech. Diuers Latine words belonging to husbandry interpreted.

RIGO. I beseech you heartily.

CONO. We take Agrum, a Field in our speech, not for a Iurisdiction, a Diocesse, or a Shire, as the old lawiers take it, but with Iabolenus & Florentinus, we count it a parcell of ground, either earable or pasture. Ager, Aruus, or Aruum, we call earable ground that is to be plowed and sowne. Varro would rather haue it called Aratum, and not Satum. The Field that is called Restibilis, is that which is renued, and euery yeere sowne, called of the Greekes παλιμφυὴς, because his fruitfulnesse continueth to the next yeere, and yeeldeth his croppe euery yeere. Ager Noualis, is called of Varro, the ground that hath beene sowne and fallowed: of Plinie counted to bee sowne euery other yeere: with the Lawyers it is counted ground new plowed, that hath lyen a yeere: we according to the vulgar speech (for we must speak with the most, and Iudge with the fewest) doe call Nouale Agrum, that which is new broken vp, and hath not before beene plowed, whereof commeth Noualium Decimæ, the Tithes of new broken-vp land: yet I know there are some learned that count it that, which after his *Agri Vocab.*

crop

crop lies lay. Veruactum is of Varro taken for that ground, that in the spring time is turned vp, and hath bene for a while spared. Oftentimes is this also called Nouale, both the field that hath lien a yere, and that which is broken vp the first spring: for thus saith Varro: There is great difference whether you sow in vntilled ground, or in that which is yerely sowne, and is called Restibilis, or in that which hath lien awhile, and is broken vp in the spring. Moreouer, both Columella and Plinie do vse, not seldome, Veruactum, for ground new broken vp in the spring, taking their reason of the time. The field is said to be plowed, to bee stirred with the plow, when it is turned vp. It is broken vp when it is first plowed, lying in great clods. The second plowing is called Offringere Agrum, or Iterare, to plow againe: Tertiare, to thrifallow it. Ager iteratus, and tertiatus, be vsuall words with Columella and Plinie. Nouare, is to change the ground, well husbanded before, and to plow it and prepare it for the sowing. Occare, to harrow it as Varro saith, is so to breake it, as there remaine no clod. The harrow is an instrument crosse lettused, to breake the clods withall, and to couer the sedes. Cratire is likewise vsed in the same signification. Atrare is, when that which is sowne and come to some growth, is turned in with the plow. Plinie calleth Arararе, as it were Aratrare, to plow often that which is sowne. Sarrire, is to purge with the rake. Runcare, is to weede out of the ground noisome weeds, for which is also vsed Auerruncare, & Deruncare: and of Columella, Exherbare, Pastinare, and Repastinare, is to digge about the Vines. Pastinum, is a forked instrument vsed in the planting of Vines. Lirare and Occare, are almost one, where we plow, so as we leaue betwixt two Furrowes a Ridge, for the drie keeping of the graine, like a garden bed. And hereof is the space called Lira, a Ridge, which the husbandmen cal Porcas, because the place being raised high, defendeth the corne from the water, and Lira Hortensis, a bed in a garden. Scamnum, a balke, is the grosse earth that hath scaped the plow. Plinie willeth, that there be no balke made, nor great clods remaining, meaning the great turffe that is turned vp at the first plowing. Scamnatus ager, is called of Vibius Vrbicus, that land which runneth all in length from West to East, which if it be more of length then bredth, and lyeth vpon the North, is called Strigatus. The land it selfe is also

called

called grosse and raw, that is not well mellowed, which hath need to be seasoned with the heat of the Summer, and the cold of Winter, and to be plowed in the Spring. It is also called rich, fruitfull, fertill: and that which is nought, and yeelds not his fruit, is called leane, barren, hungry, or brinish: also salt, bitter, fennish, where the water still continues: Wet, that sometime lies drie: Carbunkled, that is burnt with the Sunne, rotten and mossie. It is also called pleasant ground, sweet, blacke, rotten, and mellowed, which are the signes of good ground: but hereof I thinke I haue now spoken sufficiently.

RIGO. That you may continue your speech, I pray you goe to your former matter againe.

CONO. When you haue broken vp your ground, if it be Novalis, as I said, and not tilled before, you may sowe it presently, and harrow it, and if neede bee, rake it. The ground that is yeerely sowne, and that hath lyen spare, is to be plowed thrise, according to the nature of the soyle, and the seede that you meane to sowe.

RIGO. Now you haue told me how to order my land for seede, I pray you let me vnderstand the sorts of seede, and in what sort they must be sowed.

CONO. That must I doe: The seede that commeth of that which the Latines call Fruges, as Pulse, and Corne, we here doe call Fruges, all sorts of harueft graine: which the Germans call γηία and αρχαίω, because they are gathered in their beautie, and their ripenesse. Iulian the Lawier, calleth Fruges, all things wherewith a man is fed. The ancient writers doe vnderstand it more largely, for all the fruits of the earth. Plinie deuides it into two kindes; into Corne that growes on eare, as Gallus the Lawier defines it: the other, that beareth cods, as all kinde of Pulse, or Pedware. Of the first kinde, is Wheate, Rie, Barley, Bigge, Dates, Beechwheat, or Buck, or if you will in Greeke φηγοπυρος, Rise, and Lenten Wheate, though all kindes grow not in all places, nor haue in euery place all one name. In some places you haue not Lenten Wheate, chiefly where there is plenty of Big. In other places they vse neyther Dates nor Bucke. Of the kinds of Pulse are these; Beanes, Pease, Lentiles, Chiches, Tares, Lintels, Lupines, and such like. And though there be sundry sorts of seede, and euery Country hath his kinde, and sowes such as best agrees

Of Seede, and their diuersity.

Old Seede not to be sowne.

agrées with their nature : yet generally this is to be regarded, that you sowe none that are old and dryed, but the newest: for old séed doth oftentimes, as they write, change their nature: as the séed of Colworts, that being sowne, turneth to Rapes; and Rape séed likewise into Colworts. The séed of the first yéere is best, of two yéere old worse, and of thrée, worst of all, the rest is barren and naught. The best séed also is that which is waytiest, and lyeth in the bottome, and such as is full, and being broken, hath a good colour: such as is wrinckled, and thin in the eare, is to be throwne away. There is also another necessary note, to haue the séed from strange ground, & from the worse to the better, and not the contrarie, nor from cold Countries into hot, nor from the forward to the slow, & to beware that it be not bitten with Birds, Mice, or Ants: and to prosper the better, sprinkle them before they be sown, with the iuyce of Houslécke. If you mingle with your graine the séed of Bearfoot, & sow it about your ground, you shal saue it from the annoyance of birds. You must sow your Ridges with an equall hand, and all alike in euery place, letting your foote (specially your right foot) and your hand goe together: Wheat, Rie, Barley, Otes, & other, chiefly such as bear eeds, as Melium & Panicum, must be sowne with a full hand, but Rape séed onely with thrée fingers.

The order of sowing. καὶ ὁμαλῶς

RIGO. A man must vse his hand I perceiue, as the Harper, doth, to make it perfect.

CONO. He must indéed. And as we put more water to stronger Wine, then we doe to small, and lay the greater burden vpon the stronger man, and some stomacke requires the stronger food, so some ground may beare much séed, and some away with lesse: neither can it be certainely appointed, how much séed is generally to be cast vpon an Acre: though I know the old writers appointed a certaine quantitie to euery Acre, which perhaps might serue with them: but we should foulely deceiue our selues, if we should obserue the like in euery place: First, because some ground requireth more séede then other, as the ground is of stiffenesse or lightnesse: for the stiffer ground (as in Holland néere the Rhine) requires much séede, where lighter ground requireth lesse. The timely sowing, the thinner: and the later, as Columella saith, the thicker. Secondly, their measures and Acres differ, as the thing that at this day is not throughly agréed vpon. But now

you

you shall heare what sede every ground requireth.

RIGO. That I long to heare.

CONO. After long rest, or the first dunging, eyther Barley or Wheate is to be sowne: but Wheate, though it require good ground, yet if the ground bee too rich where it is sowen, it will grow too ranke, and lye leadge vpon the ground. And therefore vpon such ground, it is best to sow your Wheat after a crop of Barley, Pease, or Bucke, and after your Wheat crop, to sowe it with Rie: and then againe (if the ground ware not poore) with Barley. In very rich ground, immediatly after the gathering of Rape sed, plow it presently for Bucke, whereby you may haue two croppes in one yeere. In the like manner Cabegged rape sowen after Rie, maketh two haruests in one yeere. Pease, Beanes, Tares, and Fitches, and almost all Pulse else, requireth rich ground, which afterwards may yeerely serue for Wheat, Milium, and Rape. Plinie would not haue Rapes sowen, but in very well dunged ground: but we finde by experience, that after a Crop of Rie, in meane ground, you shal haue the same yeere great Rapes. Sandie and gravelly ground, must rest every third yeere, for two or three yeeres, that being then well dounged, you may sowe Rie, or Buck, & after Dates. In good Pasture ground new broken vp, you may sowe Dates after the first plowing, after that, Rape sed, then Barley, after that Wheat, or Rie, and at last Dates, or Rie, if the nature of the Countrie be for it. When this is done, you must eyther doung it, or let it lye lay. If the ground be mellow after Barley, in some places they sowe Millet, then Radish, after that Barley, and Wheat, as in Campania: and such ground is sufficiently plowed, when it is sowen in some place where Lenten Wheate is sowne, it rests three moneths, & after is sowen with Beanes in the Spring, In no other wise may you charge indifferent ground. If after two seasons of Corne, you sow Pulse or Pedware, the barrener ground must rest three yeeres. Some will in no case haue you sowe wheat, or Barley, in ground that lies fallow. After yee haue thus sowen your sede in ground thrice plowed & well prepared, then must you straightwaies harrow it, which is done with a lettused instrument full of teeth, drawen vpon the ground, whereby the clods are broken, & the sed couered; in some places it is done with a bord tyed to the Plow, which

Harrowing.

Raking. which they call in latine Lirare. Sometime raking is needfull, which in the Spring, loseth the earth, made clunged with the cold of winter, and letteth in the fresh warmeth. It is best to rake Wheate, Barley, and Beanes twise. Moreouer, they breake

Rowling. asunder with the Rowler the greater and stiffer clods. Weeding is when the Corne is knotted, the noughtie weeds being plucked

The time for sowing vp, deliuereth the rootes of the Corne, and seuereth it. To speake of the season of Sowing, it is agreed vpon of all men, that there ought to be no sowing in Winter: for the Winter corne, when it is sowed before winter, appeareth aboue the ground sometimes within a seauen-night after, which if it bee sowed after winter is begun, it scarcely appeareth in forty dayes after. Some very fondly thinke it better to sowe in the Spring, then in Autumne. Plinie writeth that in Treuers the Haruest being in, they haue sowed in the coldest of winter, and raking their ground in the Spring, haue had an excellent good crop after. Amongst our haruest seedes, there are some harder, that are able to abide the winter, which are sowne in hot Countries, as Virgill saith, about the setting of the seauen starres, which Columella vnderstandeth to be about one and thirtie dayes after the Autumne Acquinoctiall, that is, the 9. Kalends of Nouember, and in France and Germanie in September, and the beginning of October, as Rape seed, Wheat, Rie, Winter Barley, that are nourished in the blade all Winter, and grow vp towards earing in the Spring. Some there be that will you to sowe before, onely in dry ground and hot Countries.

Some againe would haue you to sowe in cold Countries after

Late sowing alwaies fayleth. the Autumne Acquinoctiall, in hot Countries later, lest they should flourish before winter, and be destroyed of wormes, or blasted. Some on the other side make haste, saying, That soone sowing sometimes deceiues, but late sowing euer. It is good reason to sowe timely in wet grounds, that the seede rot not with ouermuch moisture: and later in dry grounds, lest lying long & not sprouting, it come to nought. Also, in timely sowing, to sowe thicker, because it is slow in rooting: and in later sowing thinner, lest with

Summer graine. the thicknesse it be choaked. Summer seedes, which are sowed before the rising of the seauen starres, & in the Spring, are Beanes, Pease, and such, Pulse, Millet, Panicum, Sesamum. Summer, Barley, Flaxe, Hempe, Oates, Bucke, Sporia, and such other,

are

are sowed in the Spring time. In Asia and Greece they sowe all, as they say, at the setting of the seauen starres. Now, although there be certaine precepts of the time of sowing, and how much sede is meete for euery quantity of ground, surely, they might as I haue said before, for their owne Countrey and nature of their ground, giue a kinde of guesse, but to determine any thing herein certainely, there is no man that can doe it, but the ground and euery mans owne practise is herein the best Master. One ancient generall rule of husbandry there is, wherein we are warned in cold Countries to sowe late, in temperate Countries sooner, and in one hote Regions soonest of all. Eratosthenes saith, that India is subiect to much raines in Summer, and that then they sow Flax, Sesamum, Rice, and Millet: and in Winter, Wheat, Barley, Pedware, and other fruits that we haue not. Hesiodus, the Prince in his time of husbandry, wils vs to sow according to the custome of Greece, his naturall Countrey. Virgil, Cato, Varro, Columella, and Plinie, appoint their rules for Italy, whose mindes if you will haue followed in all other places, you shall but seeke to couer euery pot with one couer. But to come to the matter, sith the sedes of sundry natures require sundry times of sowing, and diuers sorts of ordering, and that herein euery Countrey hath his guise, I will here (obseruing such customes as are most generall to them all) seuerally shew you of euery sede by himselfe, and so declare vnto you the order of their sowing. And first, amongst all the fruits and graine that the earth doth yeeld for our sustenance, the chiefest place is rightly giuen vnto wheat, called in Greeke πυρὸς in Italian Grano, in Spanish Trigo, in Dutch Weyss, in French Fourment, as a graine most needfull for a man, and therefore most fruitful, because God hath ordained it to nourish man withal. It is wonderfull what yeeld it hath beene of in some Countries. Augustus his Deputie sent him from Bisaice in Africa of one graine of wheat foure hundred branches. And Plinie witnesseth, that in the same place, one bushell hath yeelded a hundred and fiftie bushels.

A generall rule.

Wheate.

RIGO. There are that hold opinion, that this which the common people call Wheat, the Germaines Weyss, and the Hollanders Terue, is not the true Wheat, but a kinde of Rie, and that the true Wheat which the Italians call Grano, groweth onely in Italy and in Spaine.

CONO. That which growes in Italy and Cicill at this day, differeth not from ours in fashion, colour, nor flowre, though the graine there be somewhat great, and the flowre more clammie, which maketh it that it cannot be long kept, specially about Rome. And whereas our Wheate is either bearded or pollard, theirs is altogether pold: we call it pold or pollard that hath no Aanes vpon the eares. And that we call the Aane, which growe-eth out of the eare, like a long pricke or a Dart, whereby the eare is defended from the danger of Birds. With Virgill the Aane is vsed for the corne, as the parke for the wheat. Gluma is the huske of the corne, whose top is the Aane. Frit is the small graine, lesser then the corne that growes in the top of the ripe eare. To returne to the wheat, I graunt there are some that doubt of this wheat of ours, such hath bœne the iniury of the time (as all things almost forgotten) we scarsely know how to name the sorte that we daily sœde of. For my part, I will follow common vse, as a Mistris in speach. The old writers haue written of sundry sorts of wheate, whereof they haue thought that most nœdfull to be sowne, which they called Robus, as the fayrest and waightiest. The second called Siligo, they vsed in their finest cheate. The third, they called Trimestre, because it would be ripe in thrée moneths after the sowing. Though Columella alow no such kinde, yet was it most auncient with the Grœkes, and called Trimenon, growing onely in the cold countries. In Thracia, they haue a kinde that is ripe in two moneths, and is couered with a number of husks, against the extreame cold of the countrey. In our Countries also we haue Wheat and Rie, that we sow with our Summer graine, as we likewise doe Rape sœde, but to no great commoditie: for the winter sœdes to farre excœde them; and being nourished in the earth all winter, they prowe, as Theophrastus saith, of more substance and profit. Amongst all these sorts, Plinie recounteththe wheat of Italie to be the best, both for beautie and weight. Wée vse with vs onely two sorts, differing in this, that the one hath smoothe eares without any beards, the other with long beards or Aanes, very rough and sharpe, not much vnlike to Winter Barley: in all other properties they are both alike. It is sowne in September, the season being faire, the ground thrice plowed and well raked or harrowed, although you may sow it very well after

The time for Wheat sowing.

once:

once plowing vpon ground where Pease, Tares, or Bucke hath bëene newly had of, in a good soyle. Plinie & Columella would haue you sow of Wheat and Rie, fiue bushels vpon an acre: but as I said before, this measure is to be measured with reason. We at this day sow not so much wheat vpon an acre, as rie, nor so much rie, as barley. It is best, if the winter be like to be cold, to sow the sooner: if warme, the later. Wheat delighteth in a leuell, rich, warme, and a dry ground: a shadowed, wëedy, and a hilly ground, it loueth not, though Plinie say the hill yëeldeth harder wheat, but no great store. After it is sowne, it putteth out a great company of small rootes, and appeareth at the first wy or blade: it hath sundry stalks, but such as cannot branch all the winter, as other winter corne is, it is nourished in blade: when the Spring draweth on, it beginneth to spindle: vpon the third or fourth ioynt thereof, commeth out the eare, which first appeareth inclosed in the blade, it flowreth the fourth or fifth day after: if it grow too ranke at the first it is eaten downe with cattell, or in some place mowed: it is after wëeded: it flowres about the 10. of June, sooner or later, as the yëere falles out, euen at one time almost with the Vine: two noble flowres, with comfortable sauour flourishing at once. Varro affirmeth, that the wheat lyeth 15. dayes in the blade, flourisheth 15. and ripeth 15. After it hath flowred it waxeth greater, and as Theophrastus saith, is within fortie daies after full ripe, wherewith the latest they reape in the eight moneth. Other say in fire and thirtie daies, and reaped in the ninth moneth. It neuer eares, till all his ioynts or knots be growne. There are foure ioynts in wheat, as Plinie saith, and eight in barley: but in our country and our daies, both Wheat, Rie, Barley, & Otes, haue but foure, and not that alwaies. Before the full number of the ioynts, there is no appearing of the eare: which when it commeth, beginneth to flowre within foure or fiue dayes, and so many, or little more, it fadeth. When the flowre is gone, the graine begins to swell, and in foure or fiue dayes after, to ripe. The blade of the wheate is something like a Sedge, but narrower then the barley: the spindle, stalke, or strawe thereof, is smother and gentler, and not so brittle as Barley. It is closed in many coates. The stalke that beareth the eare is higher then that of barley: the eare groweth more vpright, and farther from the blade, the chaffe is softer,

sweeter, and more full of iuyce, the eare of wheate is out of order and vneuen, as well of the Pollard, as of the bearded, whereas Barley hath his eare of iust number, and in perfect order. In Bactria, it is said a graine of wheat is equall in quantitie to an eare of our wheat. In Babylon, the blades both of wheat and barley, as Herodotus reporteth, are foure inches broad. Wheat, as Columella writethafter the third sowing changeth to Rie, which hath beene knowne in Germanie, as I said before in many places. Of wheat is made Amyl, the making whereof, Cato and Dioscorides teacheth. After wheat we sow with vs rie. There are that thinke it to be that which the Greekes call ὄλυρα though Homer take ὄλυραν, for a kinde of food for horses: some others take it for a kinde of wheat. Herodotus saith, bread was made of it. Of Laurentius it is called Far. Of Gasa, Siligo. Diuers learned men call it Secale, and take it for Plinies farrago. The French men call it Segle. The Dutchmen Rock. The Italians, almost as the Latines, Sagala: the graine is something blacke, and maketh blackish bread. But to passe ouer all controuersies, I follow the Country speech, & take Siligo for our common Rie, which is sowed immediately after wheat, about the end of September, or in the beginning of October, in good ground: in sandy and grauelly ground, it is sowed in February, & called Summer wheat: it requireth the best ground, warme, & fast, and refuseth not light ground & grauelly, so it be helped with dung: it loueth wet ground as ill as wheate, then both require to be sowen in a deepe mould and a plaine soile: but Rie is sowed a little after wheat, in the sowing whereof, you must occupie a third part more then of Wheat: it prospereth lightly in any ground, and many times with the yeeld of a hundred for one. It must be sowed after the third plowing, as Wheat, and harrowed much after the same sort, the stalk or steale thereof, is smaller then the Wheate stalke, taller, and stronger, his eare hangeth downewards, and therefore more subject to blasting, because it receiueth and keepeth the water that fals while it flowreth, and suffereth the violence of mists and frosts: the straw thereof is gentle and flexible, seruing for [illegible]ies and couerings of houses. Now followeth

Barley. Barley, accounted in the olde generations among the worthiest sort of graine, and not of small estimation at this day. The Italians call it Beade or Beaue, or Orza: the Spaniards Ceuada:

the

the Dutch men Gerst: the French men Orge: the Grecians κριθὴ: and though it be vsed in Gréece and Italie, and such warme and fruitfull Countries for Cattels food, as Homer also witnesseth, yet in the Northerne Countries it supplies the place both of bread and wine. There are of it two sorts, Hexastichon and Polystichum, whose eares are thrée, foure, and sometimes five square, and diuers eares springing from one grayne, euery eare containing aboue fourescore graynes, so wonderfull are the gifts and blessings of God. The other sort is called Distichon, hauing in the eare but two rancks or orders onely. Againe, there is one kinde of it to be sowed in winter, another for summer. The winter Barley is of better yéeld, but it is soone hurt, specially with much wet & frosts following. There is nothing more hurtfull to winter Corne, specially Barley, Rape séede, and Rie, then the wet of winter, nipped with often frosts, and after a warme thaw, to be presently frozen againe: both the sorts of Barley require ground that is very rich. Winter Barley, after two or thrée plowings, is to be sowed in September: Summer Barley in March, or Aprill, after twise plowing; and many times, necessitie forcing, after once plowing: in the sowing, you must occupy more séede by halfe, then in sowing of wheate: it requireth a mellow and a fat ground, and therefore is best sowed, where the ground is most manured. The winter séede flowreth in May, and is ripe in June at the furthest. This kinde was not wont to be sowed in these parts, but great numbers, now moued by my example, do vse and receiue great gaines by it. The summer Barley in many Countries is ripe and ready in thrée moneths after the sowing. In Aragon, as Plinie writeth, it maketh double harueests euery yéere. The seuenth day after it is sowne, it commeth vp, and one end of the séede runneth downe in rote: the other, the sooner springeth, & commeth vp in blade: the greater end of the grayne maketh the rote, and the slenderer the flowre. In other grayne the rote and the blade spring both from one part, the blades of both kindes are rough. It must be gathered with more spéed then other graines, for the straw of it is very brittle. Of Barley is made, as Dioscorides writeth, both Béere & Ale.

RIGO. I like your Béere you haue excellently well, I pray you tell me in what sort you make it?

CONO. I will not hide my cunning in this matter. My Barly

is first steeped in a Cesterne of water a day or two, if it be winter sede it is harder hulled, and requireth the longer watring. The Summer graine is thinner, and requireth a lesser time. When it is watred, I dry it vpon a floze or a kéele, till it swell and breake, putting out as it were little berds or threds, if it be layd thin, it will in summer, specially in March, dry & breake of it selfe without any fire. You must take good héed, that in sprowting it open not too much and lose his flowre. This being done, I grinde it, and put the Meale into a Mash-Fat, whereunto I put my licour sodden, and after let it séethe three or foure times, adding vnto it, both for wholesomnes and taste, the flowre of the Hop: after this, I put on Yéest, and set it a working, and then cleanse it. The more it is cleansed, the wholsomer & clérer it is: that which commeth of the spurging, is kept both for Brewing and Baking: the drinke will bée the better, if you put to it a fourth part, or a sixt part of wheat: the more Corne you lay on, the pleasanter and better coloured will your Bére be. Your greatest care must bée to sée it well sodden, well cleansed, and well hopped, otherwise Malt of it selfe will sone corrupt. Obseruing this order, your drinke shall be both wholesome & pleasant: that endureth best and longest, that is brewed in March. There is made of Barley Alica, a reasonable good meat, and Ptisan. How they must be made, you may read in Plinie: Next to wheat and barley, followeth Zea, which the common people, both in Italy, Spaine, and Flanders, call Spelta, the French call it Espeitra, with Homer is greatly commended, ζείδωρος ἄρουρα, the fields that beareth the Zeam, being as Galen saith, the meane betwixt wheat and barley, for he hath the qualities of each of them, & is of two sorts, the one in stalke, joynt, and eare, like to wheat and carrieth in euery huske two sédes, and therefore is called δίκοκκος, the other hauing both stalke and eare shorter, and but one graine in euery huske, growing into rancks, & in the top resembling Barly with his sharpe Kanes. In Italie, specially about Mirandula and Concordia, it is vsed in prouender for Horses, it is not in these countries in vse. I would sow it here, sith the ground will serue for it, & that both bread & drinke might be made of it very well, but that it is something troublesome to grind, because of the double husks. It desireth a moist ground, rich and good, it is sowed after the same maner that wheat is sowed,

Zea.

in September or October: it flowreth in June, and is ripe in July, very meete for colde Countries, because it can abide frosts and stormes.

RIGO. There is (as I remember) a kinde of wheat called Far, auncient people called it Adoreum, that growreth in many Countries. Far, Adoreum.

CONO. You say true, for with the olde sort, Far was a generall name to all corne, as wheat Far, Barley Far, and Rie Far, and when mils were not yet deuised, they did beat their corne in morters, wherof came, that the meale was called Farina: yet after, was the name of Far onely giuen to Adoreum, though Columella called it alwaies Far Adoreum, making foure sundry sorts of it. The Frenchmen call it Brance, the Italians Sandala, the Spaniards Escandia, the most people of our Country call it Farro, the Dutch Keskorne, whose graine is very like wheate, but that it is shorter and thicker, and where wheat hath a clift, there hath it a rising. It is heauier then barly, & lighter then wheat, it yeeldeth more meale then any other Corne. The people of Rome as Plinie saith, liued with this Corne at the first three hundred yeeres, it growreth in Egypt without Aane, with a greater care and a waightier: it hath in the stalke seauen ioints, and cannot be cleansed except it be parched. France hath two sorts thereof, one of a reddish colour, which the people call red wheate, the other whiter, which they call white wheate: the care is three square, not vnlike to spelt. In Italie they make pottage of it for their labourers. Far or Adoreum, Virgil would haue sowne before the setting of the seauen starres, after the Aequinoctiall of Autumne: but in wet and cold barren grounds, it is best to sow it about the Kalends of October, that it may take deepe roote before the freezing and cold in winter. It is sowed in low ground, watrish, and chalky: after it is sowed it must be harrowed, raked, and weeded: the raking loseth in the spring, the heauy shactes of winter. In raking or harrowing, you must take heed, as I said before, that you hurt not the rootes: weeding when it is knotted, seuereth the Corne from all annoyances. The French men sow it in hollow furrowes, because it is very subject to blasting, thinking thereby to preserue it both from blast and mildew. To sow it in hie ground is discommended, though it prosper there well inough, because cattell cannot away with it, for the

sharpnesse and ruffnes of the eares, and because it requireth great labour in getting off the husks, which if it be not cleared of, is neither good for man nor beast: the vncleane chaffe doth hurt with the Cough, the Cattels lungs. Amongst the winter seedes, Rape seede doth challenge his place, which I take to be the seede of the Rape, which Plinie maketh for his third kinde, and wilde, whose rote, like the Radish, runneth in length, the leaues being ruffe, like the other kindes, and the stalke bushy and full of branches: the rote of it is good for nothing, but is onely sowed for the seede, whereof they make Oyle, seruing for poore mens Kitchins, fasts, and lights, specially in Germanie, where they want the Oyle of Oliues, whereby arriseth great gaines to the husbandman. In the hot Countries where they haue other Oyle inough, this seed is of no vse, but in feeding of Birds: it is sowed in the end of August, or the beginning of September: how be it, sometime it is sowne in March among the Summer seedes, but to nothing so great a profit: it is cast into very rich ground, or well manured, thrice plowed and well tilled, it must bee sowed very thin: for being a very small seed, it must not be sowed with the full hand, as wheat is, but onely with three fingers: it flowreth in March, or thereabouts, as the yeere is forward, and continueth his flowring a long time: the flowre is yellow, and very sweet, wherein Bees doe much delight: as sone as it hath left flowring, it is presently ripe: it groweth two cubits in height, bearing a plentifull seede in little small cods, it rendereth for one bushell, a hundred bushels of seede. Hitherto haue I spoken of Winter seedes, now must I tell you of such as are sowne towards Summer.

Rape.

RIGO. Will you speake nothing of the Rape rote, which is greatly occupied of the husbandman, and not to bee despised as a thing that groweth in great quantitie, and is meetely good meate both for man and beast?

CONO. The Rape is named of the Greekes γογγύλη, in Italian Rapo, in Spanish Nabo, in French Rauen. The ordering of which, though I take it to belong to the Garden, wherein you are able to say more then I, yet because you require it, & that sometime the husbandmen do plant them in their fields, I wil tell you as much as I know therein. There are 2. kinds of them, the first doth rote all in length like the Radish, which in many places of

Germanie

Germaine is vsed for a daintie meat: the other eyther groweth in great roundnesse, or else very flat: they are nourished with mists, frosts, and cold, three moneths together, and grow to an exceeding greatnesse. Plinie writeth, that hee hath seene Roots of them that haue weighed fortie pound. Some say, they haue seene of them that haue weighed an hundred pound. It is wonderfull, that of so little a seed should come so great a root. The Gresians make two kindes of them, the male & the female, both coming of one seed, the male when it is sowed thicke, and the female when it is sowed thin. There are two seasons for the sowing of it, eyther in March, which will be ripe about the tenth of June, or in July, or August, after the first plowing, commonly vpon the ground where Rie & winter Barley haue bene newly had of. It is thought they are the sweeter by lying in the ground all winter, when as the encrease is not in the leafe, but in the roote. They are also sowed (as Plinie writeth) in hot and moist Countries in the Spring, and will the better encrease if they be sowed with chaffe, who would also haue the sower naked, and in casting the seede, to wish good lucke to himselfe, and to his neighbours. They are preserued from the Caterpiller, which commonly consumeth the young leaues, by mingling the seed with Soote, or steeping them all a night in the iuyce of Houseleeke: Columella affirmeth, that he himselfe hath seene it proued.

RIGO. Now procede (I pray you) with your Sommer seeds.

CONO. The Sommer seedes are almost all such as are ripe within three moneths, or foure at the vttermost after they are sowen, and some of them sooner, if the ground and the weather be good. Among the Sommer seedes we will first talke of graine, and after of pulse. Of the graine, Dates are the first that are sowed, though Virgill count them barren, & Plinie counteth them rather weeds then corne, affirming, that Barley when it prosphereth not, will many times turne to Dates: yet the Frenchmen & the Germanes count (it at this day) the best prouender for Horses, and food for Cattell. Plinie also witnesseth, that the Germanes vsed to make pottage of Dates. And Dioscorides maketh mention of Daten pottage, πόλτος ἐκ βράμου γίνηται, pottage of gruell is made of Dates, it is called of the Greekes βρῶμος, in Italian Vena, in Spanish Auena, in French Auoine, in Dutch Hauer,

Oates.

Hauer, which though it grow not commonly in Italy, yet vpon Monte Ficelto, and in the kingdome of Naples about Siponto it is found. Wee haue amongst vs two kinds of them, one full and weightie, seruing in deere yeeres, to make bread and drinke of, specially if it be medled with a little Barley, and this kinde prosperetb in rich and new broken-vp ground exceedingly. The other kinde is lighter, which the common people call Gwen and Brumhauer, it is very light, and yeeldeth but little flowre nor fode: it groweth vpon sandy and barren grounds, and serueth well for Tattell and for Horse: both the kindes haue bushy tops, from whence hangeth the seede, in likewise resembling the grasse-hopper: the flowre of it is white, & from one graine, there springeth diuers stalkes: with Dioscoridos, Bromos, is a kinde of Oats that resembleth wheat in the stalke and the blade, & groweth like wilde wheat. Theophrastus calleth it ἀιγύλοπα. The Oat is not dangerous in the choyse of his ground, but groweth like a good-fellow in euery place, where no seede else will grow. Of the like disposition almost is Buck or Beechwheat, vnknowne to our old fathers. It is called φαγόπυρον Beechwheat, or μελάμπυρον, Blackwheat, though μελάμφερον signifieth another graine. I had rather call it Beechwheat, because the graine thereof is threecornerd, not vnlike the Beechmast both in colour & forme, differing only in the smalnesse. The stalke is very great, & straked like to the greater fearne: it hath many branches, with a bushy top, a great sort of white flowres in a knop, like the flowres of Elder: it flowreth long together, & after appeareth the graine, first white and greenish, in shape threecornerd: after they be ripe the colour chaungeth to blacke or brownish, like a Chestnut. This graine hath not long since bene brought from Russia & the Northren parts in Germanie: now it is become common, and vsed for fatting of Hogs, and serueth the common people in deare seasons, to make bread and drinke withal. It may be sowed in any ground, and is sowen in Aprill, May, and in June, after the reaping of Rape seed. You must sowe lesse of it vpon an Acre by a fourth part then of Wheat or Rie: it is much vsed to be sowed vpon the ground where Rapes grow, whereby the ground doth yeeld a double crop in one yeere. When it is sowen, it commeth vp, if it be moist weather, within foure or fiue dayes after, hauing two leaues at the first appearing,

Buck.

not much vnlike to Purslaine. Amongst the sommer sœdes is also receiued sommer Barley, which from the Sunnes entring into the Æquinoctiall, till the end of March & Apzill, is sowen, and is reaped againe foz the most part in thzée moneths, oz at the vttermost foure. It requireth (as winter Barley doth) a rich and a mellow ground, & to be sowed after twice plowing, though sometime foz necessitie it is sowed after the first plowing. And though it yœld not so good noz so perfect a graine as the winter Cozne doth, whose graine as Theophrastus writeth, is farre moze perfect and of stronger substance, bzinging greater straw and weighticr eares, yet because it is harder husked, and the Summer sœd moze fine and gentle, is therefoze of most men desired, and counted to yœld moze flowze then the winter graine: some againe pzeferre the other Millet, called in Latine, Millium, in Grœke κεγχρου, in Italian Milio, oz Miglio, hauing as it were, a thousand graines in a eare, as Festus sœmeth to auow, in Spanish Mijo, in French Millet, and in Dutch Hyers, where they make pottage of it and bzead. The Russians and Muscouians are chiefly nourished with this kinde of pottage, which they make with the flowze mingled with milke, and the blood that they let from their hozses. The men of Ind, as Plinie sayth, know no other graine but Barley and Millet, which grew in his time plentifullest in Campania, it is the best leauen that may be made, neither is there any graine comparable to it foz waight, that moze increaseth in baking: foz of one bushell hath bin dzawen thzéescoze pound of bzead, & a bushell of sodden meat, made of thzée quartes wet and vnsod. It is sowed at this day in euery place, though very little in the low Countries: it groweth with a stalke full of joynts, a cubit high, a leafe like a rœde, a round and a small sœde hanging downe in long rimmes with many tops: it groweth sometime seuen foote high, it delighteth in a watrish moozy ground, and in grauell, so it be now and then ouerflowne, it hateth dzie and chalkie grounds. Some giue counsell to sowe it first in a cold and wet ground, and then in a hot ground: befoze the Spzing you must not sowe it, foz it delighteth much in warmth. A little sœde of it, is sufficient foz a great deale of ground: if it be sowed thicke, it comes to nought: a great handfull will serue a whole Acre, wherefoze in raking, you must rake out what is moze

Sommer Barley.

Millet.

then

then needfull: an acre beareth fourtie bushels, if it be well sowed, euery seede yeeldeth about a pottell. It is forbidden to be sowne among Vines or fruit Trees, and must continually be weeded and raked. When the eare is full growne, it must be gathered with the hand, and dryed in the Sunne, lest the hot weather shatter the seedes. This graine may very long be preserued, for being well layd vp where the winde cannot come, it will well last an hundred yeere. There is another like graine that they call Indian Millet, with a great graine, and a blacke and big reedy stalke, which was first brought into Italie in the raigne of Nero, which (as Plinie saith) was called Loba, whereas Lobæ are rather the Cods of all Pulse, and Phobæ, the manes and toppes of Millet, as it appeareth by Theophrastus. Panicum is called of the Greeks

Pannicle. ἔλυμος, of the Dutch Pfennich, or Heidengreifis, of the Italians Pannacho, the Spaniards Panizo, the Frenchmen Paniz, so called of the little Pannicles, wherein the seed lieth. It commeth vp like Millet, with many leaues, and slippes, glittering with a reddish bushie top, full of seedes, like Mustard seede, some yellow, purple, blacke, and white: it must be ordered in all things almost as Millet: being sowed in Sommer, it is ripe in forty dayes after: in other places sowed in May in wet ground, it is to be gathered in September. The haruest, and the vse of it, is almost all one with Millet, neither can it, as Millet, be fined without parching: when it beginnes to spindle, it must be well weeded, least the weedes ouergrow it: being well dressed with Cheese and Milke, it maketh indifferent good meat: in bread it is not so much vsed as Millet, for the bread is very drie, and crumbleth like Sand or Ashes, being altogether without moisture or cleauing: but the common people remedying that with Larde or Oyle, do make a shift with it as well as they can. They that dwell about Pontus, are sayd to esteeme it aboue all other foode, as the people of Nauare doe at this day. In many countryes it is vsed onely to feede Pigeons withall.

Rise. Of the number of outlandish graine, is Rise, in shape as Theophrastus sayth, like Darnell, hauing a bushie toppe like Millet or Pannicle, but no eare: his grayne is like the kinde of Barley, called Zea, the leaues are thicke like the leaues of Leekes, but broader, the stalke a cubit high, the floure purple. This graine is

but

but geason in Fraunce and Germanie, but in Italie and Lombardie common, where it is called Elriso, and Menestro Delriso, the French men leauing the first letter, doe call it Rison, the Greekes ἔρυζα, the Spaniards call it Arros. Plinie supposeth it to be engendred of the water Sedge. There is made of it Furmentie, as Horace calles it, Rise Furmentie. It is sowen in March, as Millet and Pannicle is. The Indians (they say) doe bruse it before they sowe it, to make it the lighter of digestion. And as Strabo reporteth, they make drinke of it.

RIGO. What say you to Sesamum, that was greatly in vse in the olde time?

CONO. Sesamum is named with the Greekes σήσαμον, the Italians Sesamo, the Spaniards Aionioli, the Frenchmen Iugiolin. In times past, it hath beene more vsed and greatly commended, both of Columella and Plinie. At this day it is knowen to a very few, as a great sort of seedes else are, in so much as the very corne that we daily feed of, we scarcely know what it is. Some reckon it in the number of Graine, and some of Pulse: the stalke thereof is not like Millet or Pannicle, full of ioynts, but playne and smooth, like a reede, the leaues thereof ruddy, the seed white, not so bigge as Linseed, and is contained in little knops like Poppie: it is sowen before the rising of the seauen starres, after the manner of Italy. Columella sayth, that he hath seene it in Cilicia and Syria sowed in June & July, and reaped in Autumne. It requires a mellow blacke mould, though it will grow vpon good sandy ground, & forced ground, raine is hurtfull vnto it after it is sowed, where as it doth good to all other Graine: no great Cattell nor Vermine will meddle with it, it hurteth ground very much, because of the great quantitie and thickenesse of the stalke, and the number of the rootes. Plinie writeth, that it was brought out of India, and vsed both for meate and oyle. But to returne to such graine as wee are acquainted with. Amongst the sommer seedes is Miscelin to be reckoned. The husbandmen doe sometime make a medley of sundry sorts of seedes, and sowe them partly for Cattell, and partly for hope that though some of them faile, yet some will growe. But here must you beware, lest you mingle not winter Corne and sommer Corne together, for that were a great ouersight, and one of them must needes perish.

Sesamum.

Some

Some barley may well be mingled with Dates or Buck, as well for brewing, as for feeding of Cattell: and Tares or other like Pulse may be mingled with Dates, as very good for beasts. They are to be sowed in time and place as I haue tolde before, in my seuerall entreating of them.

RIGO. You haue well satisfied mee for Graine and Corne, you may now (if it please you) doe as much in Pulse.

Of Pulse. CONO. Pulse or Pedware, is called of the Greekes ὄσπρια, the other parts of the fruites of the ground: of these there are sundry sortes, as you haue seene of Corne: some put Millet, Pannicle, and Sesamum, to this kinde, because Columella sometimes puts them in the number of Graine, and sometime of Pulse: but I following Plinie herein, doe put them amongst the kindes of Graine, accounting those to be Pulse, whose seedes are contained in coddes, as Beanes, Pease, Lentiles, Tares, Chyches, Fitches, and such like, which all are to be sowen in the spring. Of all kinde of Pulse, the greatest honour is due to the Beane, as Plinie witnesseth, as to a Pulse that is most commodious for man and

Beanes. beast. In Greeke it is called κύαμος, in Italian and Latine Faba, in Spanish Haua, in French Feue, in Dutch Bonen. This amongst all other Pulse groweth in height without any stay, it hath a thicke leafe, a creasted flowre of diuers colours, spotted white and blacke, which Varro calles the lamentable letters: it hath a long codde, his fruit within broad, like the nayle of a man, of diuers colours, it appeareth at the first with many leaues like a Pease, and not with one alone, like Wheat. It is sowed first of all other Pulse in the spring time, as Virgill will haue it, and timely, because of Fabalia, which is the offall of the Beanes, for both the cods and the stalke, is a fode that cattell much delights in. Columella reporteth how he heard a skilfull husbandman say, that he had rather haue the offall of Beanes timely sowed, then the Crop of that which is ripe in three moneths, you must sowe them in the encrease of the Moone, and after once plowing. It is said, that if they bee enclosed in Goates doung and sowed, they will yeeld great encrease, and the parts that are eaten or gnawne, in the encrease of the Moone will fill vp againe. If they be sowed neere to the rootes of Trees, they will kill them. Some holde opinion, that if they be steeped in Capons blood, they will be safe from

all

all hurtfull weedes, & that layed in water a day or two before they be sowen, they will grow the sooner. The Beane delighteth in rich & well dunged ground, as all other Pulse doth: wet and low ground it doth not refuse, though all the rest desire drie ground, it waieth not weeding, being able to ouergrow them. Of all other Pulse it onely springeth with an vpright stalke full of knots, and hollow. And whereas al other Pulse are long in flowre, this flowreth longest, flowring fortie dayes together, one stalke beginning when others end, & not all at one time as wheat, they cod in sundry dayes, the lowest part of the stalke flowring first, & so vpward still in order. So fruitful are they in some places, as you shall find one stalke to beare a hundred beanes. The Beanes sticke close to their Cods: the blacke in their tops, the Latines call Hilum, the cods Valuuli, the wormes that breed in them, Mida. Lomentum is the meale which the people in olde time did vse for the smoothing of their skins. Fresa Faba was the beane that was but smally broken, and hulled in the Mill. Refrina was that which they vsed to offer in sacrifice for good lucke with their Corne. It is good to steep your Beanes in the water of Saltpeter, a day before you sow them, you shal keep them from Wyuels, as (Palladius saith) if you gather them in the wane of the Mone, & cherish them, & lay them vp before the encrease. Beanes, and all other Pulse doe mend the ground that they are sowen in. The next to beanes in worthines and sowing, is Pease, called in Greeke πίτος, in Italian Pise, and Piselle, in Spanish Aruera, in French Pese, in Dutch Errettem, a Pulse that groweth with hollow stalkes and full of branches, lying vpon the ground, many leaues and long, the cods round, containing in them round seedes and white: though Plinie write, that they be cornerd as Chych, of which sort we haue some at this day blewish, with flowres in shape like the Butterflie, purple coloured toward the midst. There are two sorts of pease, the one sort coueteth to climbe aloft, & runneth vp vpon sticks, which with little winders he bindeth himselfe, & is for the most part only sowen in gardens: the other sort groweth low, & creepeth vpon the ground: both kindes are very good to be eaten, specially when they be yong and tender, they must be sowne in warme ground, for they can in no wise away with cold, they are sowed eyther vpon fallowes, or rather in rich and yearely bearing ground once plowed, and as

Pease.

all

all other pulse, in a gentle and a mellow mould, the season being warme and moyst. Columella sayth, that ground is made very rich with them, if they be presently plowed, and the coulter turne in, and couer that which the Hoke hath newly left. They are sowed among summer Corne, commonly with the first. First Beanes, Pease, and Lentiles, then Tares and Dates, as is said before. Pease and Tares must be sowen in March and Aprill, and in the wane of the Mone, lest they grow too ranke, and flowre out of order, whereas the best sowing for all other pulse & graine, is in the encrease of the Mone. There are that count Pease to be the Pulse that the Grekes call ὄροβος, the Latines Eruum, the Italians Eruo, the Spaniards Yeruo, the Dutchmen Eruen, of which there are two kindes, the one white, the other red. The latter is wilde, and groweth in hedges and corne fields: it is a small plant, hauing his leaues narrow and slender, his flowre eyther white, or medled with purple, growing nere together like Pease, there is no great businesse about it: it delighteth in a leane barren ground, not moyst, for it will be spilt with too much rankenesse: it must be sowed before March, with which moneth it agreeth not, because it is then hurtfull vnto Cattell. Eruilia is a pulse like small beanes, some white, some blacke, and others speckled, it hath a stalke like pease, and climbeth like a Hoppe, the Coddes are smooth like Peascods. The leaues longer then the leaues of Beanes: the flowre is a pleasant food to Bees. In France and Lumbardie it is called Dora, or Dorella. Phaseolus in Latine, in Greeke σμιλαξ κηπαία, garden Smalax, some call it Fasiolum, & Dolichium, among the Italians some call it Fagiuoli, some Smilace, de glihorti, others Fagiuolo Turcheses, others Lasanio, the Spaniards call it Frisoles, the Frenchmen Fasioles, and Fales Pinccos, the Dutchmen Facelen, or wilde bonen. It is a kinde of Pulse, whereof there are white, redde, and yellow, and some speckled with blacke spots, the leaues are like Iuie leaues, but some thing tenderer, the stalke is slender, winding with claspes about such plants as are next him, running vp so high, as you may make Arbours vnder him: the coddes are longer then Fennigreeke, the Graines within diuers coloured, and fashioned like kidneyes: it prospereth in a fat and a yeerely bearing ground, in Gardens, or where you will: and because it climeth aloft,

there

there must be set by them poles or staues, from the running to the tops, it climbeth vpon trées, seruing well for the shadowing of Arbours and Sommer houses. It is sowen of diuers from the Ides of October to the Kalendes of Nouember in some places, and with vs in March, it flowreth in Sommer, the meat of them is but indifferent, the iuyce not very good, the cods and the grains are eaten together, or like Sperage. The Iewes sell them at Rome, preserued, to be eaten rawe. Lens and Lenticula, in Gréeke φακὶς and φακὴ, in Italian Lendi iæ bon mænastre, in Spanish Lenteza, in French Lentilla, in Dutch Linsen, is a pulse very thick and bushie, with leaues like the Tare, with thrée or foure very small graines in euery cod, of all Pulses the least, they are soft and flat. The white ones for their pleasantnesse are the best, and such as are aptest to séeth & consume most water in their boyling. Lyntles.

It is sowne with vs in Germanie, in March and in Aprill, the Moone encreasing, in mellow ground, being rich, and drye: yet Plinie would rather haue the ground leane then rich, and the season drie: it flowreth in July, at which time by ouermuch rancknes and moysture, it sone corrupteth. Therefore to cause it quickely to spring and well to prosper, it must be mingled with dry doung before it be sowen, and when it hath lyen so mingled foure or fiue dayes, it must be cast into the ground. It groweth high (as they say) when it is wet in warme water and saltpeter, before it be sowen, and will neuer corrupt being sprinckled with Wengwing and Wineger. Varro willeth, that you sow it from the fiue and twentie day of the Moone to the thirtieth, so shall it be safe from Snayles. And Columella affirmeth, that if it be mingled with ashes, it will be safe from all annoyance. Cicer in Latine, in Gréeke ἐρέβινθος, in Italian Ceci, Cicere Rosso, and Cicere biance, in Spanish Garuangos, in French Chiche, and in Dutch Cicererbs, is a bushie kinde of Pulse, hauing a round Cod, & therein a couple of thrée cornerd séedes, whereof there are that make thrée kindes, white, red, and black, differing onely in the colour of their flowre: the best kinde hath a stickie stalke, croked, little leaues indented, a white, a purple, or a blacke flowre. And whereas other pulse haue their Cods long and broad, according to their séede, this beareth them round: it delighteth in a black and a rich mould, it is a great spoyler of land, and therefore not good for new broken vp Ciche.

ground: it may be sowen at any time in March, in rainte weather, and in very rich ground: the seed must be steeped in water a day before it be sowen, to the end it may spring the sooner: it flowreth in June and July, and then falleth to seede: it flowreth a very long while, and is gathered the fourth day, being ripe in a very short time: when it is in flowre, of all other pulse it receiueth harme by raine: when it is ripe it must be gathered out of hand, for it scattereth very soone, and lieth hid when it is fallen. In the Chich there neuer breedeth any worme, contrary to all Pulse else: and because it driueth away Caterpillers, it is counted good to be set in gardens. Cicercula in Latine, in Greeke λοίθυρος, in Italian Cicerse, in Spanish Cizerche, it differeth from the Chich, only in that it is somewhat blacker, which Plinie accounteth to haue vneuen corners, as pease hath: and in many places about vs, they vse them in steed of Pease, esteeming them farre aboue peason: for they both yeeld more flowre then pease, & is lighter of digestion, and not so subiect to wormes. Columella counts it rather in the number of fodder for Cattell, then of pulse for man: in which number are these that follow. And first, Vicia in Latine, in Greeke βίκειον, in Dutch Wycken, in French Vessac, so called, as Varro thinks, of winding, because it hath tendrels or clasps, as the Vine hath, whereby it climbeth vpon such stalkes as grow next it: it growseth halfe a yard high, leaued like Tintare, saiuing that they be something narrower, the flowre like the flowre of Pease, having little blacke seedes in cods, not altogether round, but broad like the Lintell: it requireth a drye ground, though it will also grow well enough in shadowy places, or in any ground, with smal labour, being not troublesome to the husbandman: it requireth but once plowing, and loketh for neither harrowing nor dunging, but enricheth the land of it selfe, specially if the ground be plowed when the crop is of, so that the stalkes may be turned in: for otherwise the rootes and stalkes remaining, do sucke out the goodnesse of the ground: yet Cato would haue it sowen in grassie ground, not watrish, & in new broken-vp ground, after the deaw be gone, and the moisture dried vp with the Sunne & the winde. You must beware that you sowe no more, then you may well couer the same day: for the least deawe in the world doth spoyle it. Neither must you sow them before the Moone be twentie-foure dates olde,

Cicercula.

Tares and fodder for Cattell.

otherwise the Snaile will deuoure it: his time of sowing is, as Plinie writeth, at the setting of the starre, called the Berward, that it may serue to feed in December: the second sowing is in Januarie: the last in March. In Germanie they vse to sow them in March or Aprill, chiefely for fodder for their Cattell. To sow Tares, & as Plinie saith Beanes, in not broken vp ground without losse, is a great peece of husbandry: they flowre in June, at which time they are very good to scowre Horses: it is good to lay them vp in the cod, & to keepe them to serue cattell withall. Tares and Oates make a good meslin sowed together. Lupinus in Latine, in Lupines.
Greeke ἡεμὸς ἥμερος, in Italian & French, almost as in latine, in Spanish Altramuz, in Dutch Roomsche Boonen, is a Pulse having one onely stalke, the leafe iagged in fiue diuisions like a starre, the flowre white, the cods iagged, & indented about, hauing within them fiue or sixe seedes, hard, broad, & red, the leaues thereof do fall. This Pulse requireth least trouble, & is of small price, and yet most helpeth the ground of any thing that is sowne: for there can be no better manuring for barraine Vineyards & Corne fields then this, which either vpon barraine ground prospereth, or, kept in the Garner, endureth a wonderfull while: being sodden & laid in water, it feedeth Oxen in winter very well: & in time of dearth (as Columella saith) serueth men to asswage their hunger: it prospereth in sandy & grauelly grounds, in the worst land that may be: neither loueth it to haue any labour bestowed vpon it, nor waigheth the goodnes of the ground. So fruitfull it is, as if it be cast among Bushes & Briers, yet will it rote and prosper: it refuseth both harrowing and raking, & is not annoyed with weedes, but killeth the weedes about it. If dung be wanting to mend the ground withall, this serues the turne aboue all other; for being sowed, and turned in with the plow, it serueth the turne in stead of dunging: it is sowed timeliest of all other, and reaped last: it is sowed before all other Pulse, a little after Harvest: cover it how slenderly you will, it careth not (an excellent good seede for an euill husband) yet desireth it the warmth of Autumne, that it may be well rooted before winter come, for otherwise the cold is hurtfull vnto it. It flowreth thrise, first in May, then againe in June, and last in July: after euery flowring it beareth his codde. Before it flowreth, they vse to put in cattell: for where as they will feede

vpon all other grasse or weedes, onely this for the bitternes thereof while it is greene, they leaue vntouched. Being dried, it seruetb for sustenance both of man and beast, to cattell it is giuen medled with chaffe, and for bread for mans vse, it is mingled with wheat flowre, or barly flowre: it is very good to keepe it in a smoky loaft, for if it lye any thing moyst, it is eaten of little wormes, and thereby spoyled. The leafe keepeth a certaine course and turneth with the Sunne, whereby it sheweth euer to the husbandman euen in cloudy weather, what time of the day it is. Fenum grecum in Latine, in French Fenegres, and Fenigrent, in Italian Fænigræco, in Spanish Alholuas, in Dutch sometime by the Latine name, and commonly Rohorne, and Lockshorne: commeth vp with a small stalke, the leafe like a threeleaued grasse, it is sowed well in a slender barren ground, you must take heed you plow it thicke, and not very deepe, for if the seed be couered aboue foure fingers thicke, it will very hardly grow. Therefore the ground must be tild with small Plowes, and the seed presently couered with Rakes. There are two sorts of it, the one called of the common people Siliqua or Codde, which they sow for Fodder in September, the other in January, or the beginning of February: when they sow it for seede, it flowreth in June and July, when also it beareth his Codde, but the seede is not ripe till August: it is dressed to be eaten after the order of Lupins, with vineger, water, and salt, some put to a little oyle: it is vsed both for fodder, and diuers other vses. Furthermore, of Pulse called of Gellius, Legamenta, we haue these generall rules, that they all beare cods, & haue single rootes euery one, except the Beane, the Chich growing deepest. The stalke of the beane & the Lupine is also single, the others are all full of branches and slender slips, and all hollow. All Pulse for the most part, are to be sowed in the spring, and require very rich ground, except the Lupine, that cares not where he lies, they are all sowen in the encrease of the Moone, except Pease: if they be watered before their sowing, they prosper the better: they are speedily to be gathered when they be ripe, for they suddenly shotter, they will endure longest, being gathered in the change of the Moone. It is much to be regarded whether you will keepe or sell them, for the seeds in the encrease of the Moone doe ware greater, there are that preserue them in earthen vessels,

Fenugreek

strawing

strawing ashes vnder them, and sprinckling them with Vineger: some vse ashes alone, others vse to sprinckle them with Vergewin vineger, as I haue said of the Lentill. Moreouer, the Grékes haue willed to mingle with the dung a little saltpeter when you sow them, whereby they shall the better sœth and be the tenderer, and if they be not presently tender, they will to cast into the pot a little Mustard sœd, which will make them straightway well. Theophrastus addeth diuers things beside, which were too long to tell.

RIGO. Is it néedfull for euery husbandman to sow all these Graine and Pulse in his ground?

CONO. No: but as I sayd before, in speaking of ground and sœd, you must chiefely sow such as best agrée with the nature of your ground: howbeit, there are some of them that refuse no ground. There are certaine of them, as Varro sayth, that are not sowed for present necessitie, but for other afterturnes. And others againe that are of necessitie to be sowen, as Corne for man, and Fodder for Cattell: of which must speciall care be had, that there be no want of them, without which wee can not liue: as Rie, Dates, and Buck. Lupines, and certaine Pulse else, for fodder, refuse no ground, though it be neuer so barren. Besides, when as the husbandman must not onely haue a care of prouiding such as serue for the sustenance of man, but also for such as serue for the féeding of poore Cattell, without which the ground cannot be husbanded: therefore must he sowe Pulse for the vse of man and beast, and Fodder in more abundance for the sustenance of beasts. Amongst all sorts of Fodder, that is counted for the chicke and the best, which the people of olde time, & the Italians at this day call Medica, some call it Tréefoile, the Frenchmen call it Grandtrefle, the Spaniards Alfalfa others call it Burgundie-grasse, because it was brought in by the Burgundians, it is now also come into Germanie, and there called Welsholken. Plinie writeth that it was brought by the Romaues, out of Media into Italy, differing almost nothing from Tryfolly, or thréeleaued grasse: but that it is greater, higher, and ranker, for in stalke, leafe, and flowre it is all one: it groweth altogether bushing in leaues. In the toppe of the stalke it putteth forth short codes, writhen like hornes indented about, and hauing as it were, little prickles, wherein is the

Fodder for Cattell.

Medica.

sede shaped like a Moone, and growing to the Cod in bignes as the lentill, which being chawed, tasteth like Pease: euery cod hath his sede, it requireth a fat ground without stones, full of iuyce and rich: in many places it commeth not vp, in others it springeth very thicke. Varro giueth charge, that it be not sowed in too dry a ground or tickle, but in good and well seasoned. Plinie would haue the ground be drye and very rich. Columella biddeth, that the field, where this Medica shall be sowed, should be broken vp about October, and so to lie mellowing all the winter, and then to stirre it in February, & the stones cast out, to harrow it well, and after in March to order it garden-wise, casting it into beds, euery bed ten foote broad, and fiftie in length, so that they may be easily watred, and of euery side well weeded: then laying on good old doung, let it lie till Aprill, and at the end of Aprill sowe it in such proportion, as euery handfull of seed may occupie fiue foote in bredth, and ten in length, and couer the seed out of hand, raking them with wooden rakes, for the Sunne will soone burne them. After it is sowen, that it come vp an inch in height, you must beware you touch not the ground with any yron instrument, but eyther with your fingers, or with Rakes of wood: weede it well from all other noysome things, otherwise it will grow wilde and turne to pasture. Let the first harueste be long deferred, to the end he may somewhat shed his seedes: at other times you may mow it as soone as you will, and giue it to your Cattell. Such as are skilfull in husbandry, doe say, that if you mingle Dates with the seed of Medica, and sow them, they will cause them to stock very well: it is sowed in Aprill, or later, in May, to scape the frosts, and the seed is cast in like sorts as wheat is. When it beginneth to branch, all other weedes must be weeded away, and being thus ordered, you may mowe it fire times a yeere. It flowreth fire times, or at the least fiue times, so it be not cut. When you haue mowed it, water it well, & as it springeth, weede it againe. And thus as I sayd, you may mow it fire times a yeere, and it shall thus continue ten yeres together, it enricheth the ground, all poore and feeble Cattell are soone brought vp with it, it likewise healeth Cattell that are diseased, but when it first springeth, till cattel be acquainted with it, you must giue them but little at once, least the strangenesse of the foode hurt them, for it maketh them to swell, and breedeth

deth great abundance of blood. Columella writeth, that one acre of it will well finde three Horses a yeere. In some Countries this hearbe doth grow in great plentie in euery Meddow, eyther of the nature of the ground, or through the disposition of the Heauens, and sometime the relickes of that which hath beene long agoe sowen doth yeerely spring of the seede that falleth, & ouergrowen with Grasse and weedes, doth change into Meddow. I see no cause but that it may grow of it selfe, but that perhaps such Plantes as are brought out of strange Countries require sowing and dressing: it is best to be mowed when it beginneth to flowre, for it must not be suffered to seed, whereby the Fodder shall bee the better: which being well layd vp, will continue in goodnesse three yeeres, to the great profit of the grasier, for as I haue sayd before, there can be no better Fodder deuised for Cattell, wherewith they will better feede, and sooner rise. The next in goodnes to this Medica is Cytisus, wonderfully as Plinie writeth, commended of Aristomachus, and as Virgill sayth, a good fodder for Sheepe, and being drie, a delightfull food to Swine: it may bee mowed sundry times in the yeere, to the great commoditie of the husbandman: a little whereof doth soone fat vp cattell, neither is there any other grasse that yeeldeth eyther more abundance or better Milke, the most soueraigne medicine for the sickenesse of Cattell that may be: beside, the Philosophers promise, that Bees will neuer faile that haue this grasse growing neere them: therefore it is necessary to haue your ground stored with it, as the thing that best serueth for Poultrie and Cattell: the leaues and seedes are to be giuen to leane and drooping Pullen: some call it Telinen, some Trefoile, some great Melilot, the Romanes call it Trifolumaius, great trasse, it is a plant all hairy and whitish, as Rhamnus is, hauing branches halfe a yard long & more, whereupon groweth leaues like vnto Fenigreeke or Clauer, but something lesse, hauing a rising creest in the midst of them. This plant was first found in the Iland Cythno, and from thence spread throughout the Cyclads, and so to Greece, whereby the store of Theele came to be great: neither is there any countrey at this day, where they may not haue great plenty (as Columella saith) of this shrub. In Italy it groweth about the enclosiers of vineyards, it shrinketh neither for heat, cold, frost, nor snow: it requireth good ground, if the

Cytisus.

weather be very dry, it must be watred, and when it first springs well harrowed: after three yeeres, you may cut it downe, and giue it your Cattell. Varro would haue it sowen in well ordered ground, as the seede of Coleworts should be, and after remoued and set a foot and a halfe asunder, or else to be set of the slips. The time of sowing of Cytisus is either in Autumne, or in the spring, in ground well plowed and layd out in beds: if you want the seed, you may take the slipe, so that you set them foure foot asunder, and a bancke cast about them with earth well dounged: you may also set them before September, when they will very well grow and abide the colde in winter, it lasteth but three yeere. Columella hath two kindes of Cytisus, one wilde, the other of the garden. The wilde doth with his claspers feede very well: it windeth about, and kils his neighbours as the Iuie doth: it is found in Corne fields, specially amongst Barley, the flowre thereof is like the flowre of Pease, the leafe, if it be bruised, smelleth like rocket, and being champed in the mouth, it tasteth like Chiche, or Pease. There is an other kinde of Fodder among the plants, vnknowen to the olde writers, very good to feed both Cattell and Poultrie. I know not whether it be knowen in other Countries beside Germanie, the common people call it Spurie, or Sperie: it hath a stalke a foote in height or more, bushed forth in many branches, it hath a white flowre without any leafe: the flowre endeth in little knops as Flaxe hath, containing in them a very little seed like Rapeseed. They are much deceiued that take it for Cytisus, when that (as Dioscorides saith) hath leaues like Fenugreeke, and this is altogether without leaues: neither is the seed any thing like, though the vse be almost one. The best milke and butter in Germanie, commeth of this feeding: wherefore it is esteemed almost as good as Barley, or other graine: the straw is better then any Hey: the chaffe feedeth as well as any graines: the seed feedeth Pigeons and Poultrie in winter passing well: it is sowed in sandie and light grounds all the Sommer long, and some sowe it in Spring time with Oates for the feede sake: in Autumne and Harueſt time it is sowed to feede Cattell: it is profitable for Husbandmen that dwell in sandy and gravelly Countries, wherefore they should neuer bee without good store of it, for Hennes, Fox, Goates, Sheepe, Oxen, and all kinde of Cattell delight very much

Sperie.

in

much in it: now remaineth the sowing of Flaxe and Hempe.

RIGO. I loke for it.

CONO. These, although they be not to be receiued in the number of Corne nor Pulse, Fodder nor Hearbs, yet is there great account to be made of them with the husbandmans things, without which no house can be furnished, nor man well apparrelled: which being beaten to a softnesse, seruetb for webs of linnen, and twisting of Cords: and more, of this so little a seede doth spring that, which (as Plinie saith) carrieth the whole world hither and thether, that bringeth Egypt to Italy, & carrieth vs from Cales to Ostia in 7. daies. Linum in Latine: in Greeke, γινον in Italian and Spanish, Lino: in French Dulin: in Dutch almost like, sauing that they call the seed Lin. And the plant Flaxe, is a very common hearbe, wherewith women are set a worke: it hath a slender stalke, not much vnlike to Spery, but that it groweth higher a little, and bigger, with narrow leaues, and long blew flowres in the top, which falling away, leaueth behind them litle round knops as big as a pease, wherin are enclosed yellow seeds: it delighteth in rich ground, & somewhat moist: some sow it in barraine ground, after once plowing, it is sowed in the spring, and gathered in summer. In Gelderland and Gulicke, where there is great store of it: they sow it about the beginning of May: there are againe that obserue three seasons for sowing of it, as the weather shall fall out, for it requireth raine & moisture: the ripenesse of it is perceiued by the waxing yellow, & swelling of the knops that hold the seed, being then plucked vp, and made in litle bundles, it is dryed in the sunne, the rootes standing vpward, that the seede may fall out. Some vse againe to card off the knops with an yron combe & drying them in the sunne to gather the seed. The bundles afterwards are laid in water heated with the sunne, with some waight vpon them to keepe them downe, the rinde waxing lose, sheweth when they haue beene steeped enough. Then the bundles vnlosed and dryed in the sun, are beaten with beetles, when as the outer rinde is pilled off, and combed & hacked vpon an yron combe: the more wrong it suffereth, the better doth it proue: the towe is seuered from the flaxe, and appointed for his vse, so are they seuerally spun vpon the distaffe, made vp in bottomes, and sent to the weauers, whereof are wouen webs, to the great commoditie of all men.

Flaxe.

men. Last of all, the web is laid out in the hot Sunne, and sprinckled with water, whereby it is brought in a passing whitenesse. It may be remembred, that not long since the women of Germanie knew no costlier attyre. The best Flaxe that is at this day, is brought from Muscouia, Liuonia, and those Countries, far excelling ours in height and goodnesse, except there be great encrease of it, and plentie in the Countrey where you dwell. Columella would not haue you meddle with the sowing of it, for it is most hurtfull to the ground, as Virgill hath noted.

Flaxe, where it growes doth burne the Field.
The like doth Oates and Poppey yeeld.

And therefore (but that women must haue some things to occupy their hands withall) it were more profit to sow the ground with Corne, and to buy linnen abroad, especially if you waigh the hurt of your ground, & the charges of the making. Hempe, in latine is Cannabis, in Greeke κεννάβις ἥμερος, in Italian, Canabe, in Spanish Cannamo, in French Chamura, and in Dutch Haueph, is a plant of the Reedish kinde, hauing a very strong sauour: it growseth with a single stalk, & many times to such a height, that it matcheth with indifferent trees: it is of great necessitie for the vse of man, and serueth both for making of Canuas, & framing of ropes: the stalk hath many knots, out of which procedeth branches with narrow leaues indented & sharpe. Dioscorides describeth both the wilde Hempe, & the garden Hempe, to haue leaues like the Ashe, hollow stalks, a stinking sauour, & round seed. There are two kinds of it, the Male, that is without flowre, & beareth a seede of sundry colours: and the Female, that, to recompence her barrennesse, doth yeeld a white flowre. It is sowed in Gardens, Orchards, or other good ground, (as Plinie would haue it) after a Southwest winde, with vs it is sowne in the end of Aprill, for it cannot away with cold: some sow it at the rising of the star, called the Berward, which is at the end of February, or the beginning of March: it loueth rich ground, well dunged & watred, and deepe plowed: it is naughtie sowing of it in raynie weather, the thicker you sow it, the tenderer it will be, and therfore many times it is sowne thrise, though some there be that appoynt to euery foot square sixe seeds. The Female, or firble Hempe is first pulled vp, afterward the Male, or the carle, when his seede is ripe, is plucked vp, and

Hempe.

mads

made vp in bundels, layd in the Sunne for three or foure dayes, and after is cast into the water, with weight laide vpon him for eight or tenne dayes, till he be sufficiently watred, and as Flaxe, till the rinde ware lose: then taken out, it is dried with the Sun, and after broken in the brake, and then combed and hacked for Yarne and Ropes. Of Hemp, are made Cables, Cords, Nets, and Sailes for Shippes, garments for Labourers, Shirts, and Sheetes: the shales or stalkes serue for heating of Ouens, or kindling of fires.

RIGO. In the Countrey of Gulicke, and some parts of Fraunce, I remember an hearbe planted of the common people with great diligence, that serueth as they said for Diars.

CONO. You say true, that hearbe Cesar in his Commentaries of the warres of Fraunce, calleth Glastum, in Greeke ἰοάτις ἄμερος, in Italian Gnado, in Spanish Paste, in French Gudum, and Guesde, in Dutch Weyt: the Diars doe vse it, and with them it is greatly esteemed, & great gaine ariseth thereof vnto the people of Gelderland, Julies and Turin, & diuers Countries else: the leaues as Plinie writeth, are like vnto Dock leaues. Dioscorides writeth of two kindes, the wilde, and the Garden Woade, saying, that the Garden Woade which Diars vse, haue leaues like Plantine, but something thicker, and the wilde leaues like Lentill, with yellow flowers: with this hearbe Cesar, saith the people of England, were wont to paint their faces and bodies, to seeme more terrible to their enemies: it requireth like sowing and soile as Wheate doth: but it is a great soker of the ground, and much hurteth it: it would haue a very rich and a fat ground, and well digged: for the ground were better to be turned vp with spades then with Plowes for the sowing of this plant, & it must be very wel weeded. It is sowed in Gelderland in April, and after the common peoples rule, in Easter week: at the first fallowing they marle the ground, after sowe it: you must be very heedefull in the weeding of it. When it is growen a handfull hye and more, they suffer it not to flowre, but with an instrument for the purpose, they cut it close by the roote, wash it, and carry it to the Mill, and suffering it to grow againe, they cut it three or foure times, and so leaue it to seede. The greene hearbe they grinde in Milles like Apple Mils, pressing it til they get out al the iuice therof, then roule they it

Woade.

vp

vp with their hands in round balles, and so lay it vpon borded floores to be dryed.

RIGO. You haue greatly delighted me, in describing vnto me the order of sowing of seeds, without which, not onely the people of the Countrey, but also the Courtier and Citizen are not able to liue: my desire is now to vnderstand the order of harueſt, the Country mans long looked-for-time, & the reward of all his toyle.

Harueſt. CONO. I will proceede in the accomplishing of your requeſt. When the corne is ripe, before it be scorched with the great heat of the sunne (which is most extreame at the rising of the lesser dog) it is to be cut downe out of hand: for delay herein is dangerous. First, because that birds, and other vermine will deuoure it: and againe, both the Graine and the Eare, the toppe and the straw being brittle and ouer dry, will sone fall to the ground: if storme or tempest chance to arise, the greatest part therof wil to the ground, and therfore it must not be lingred, but when it doth looke yellow in euery place; and before that the Graine be thorow hard, when they come to looke reddish, you must then haue it in, that it may rather ware in the barne, then in the field. Experience teacheth, that if it be cut downe in due time, the seede will grow in fulnes as it lyeth in the barne: for the Mone increasing, the Corne growes greater: at the change you must gather such seede as you would should be least faultie. Varro saith, that the best time for Harueſt, is betwixt the Sunne stay, and the Dogge dayes: for the Corne they say, doth lie in the blade fiftéene daies, flowreth fiftéene dayes, and ripeth in fiftéene daies. Amongst Graine

Rape Harueſt. and Pulse, the first that is to be gathered, is Rape seede. And because the seede, when the cod beginneth to ware yellow, declareth ripenesse, it must be gathered out of hand: and sith the seede will easily scatter, it must be layd eyther in plaine smooth places in the Field, or vpon Canuasse: and if it be presently to be carried, the Wayne or Cart must be lined with sheetes, lest with iogging and trotting of the carriage, the seede fall thorow. You must take good héede as well héere, as in all other Pulse, that you preuent the rayne, for the rayne falling, the cods doe open. As sone as your Rape seede is off, if the ground be plowed, you may sow Bucke, or Branke, as they call it: so that of one peece of ground in one yéere, you may make two Harueſts. Next vnto Rape harueſt in

these

these Countries, followeth the harueſt of Winter Barley, which is to be diſpatched before the ſéede (the Eares being ouer-dried) do fall, for they haue not huſkes to containe them as Wheate hath, and the eares being brittell, will ſoone fall: yet ſome thinke it beſt to let the Barley lie a while in the field, whereby they thinke the Graine will ware the greater. Then followeth the Hempe harueſt. But firſt (as I ſaid before) the Fimble or the Female, is pulled, and is dried a while in the Sunne, then (bound vp in bundels) it is throwne into the water, and kept downe with ſome weight, that it ſwimme not aboue. After likewiſe the Male, the ſéede declaring his ripeneſſe is pulled vp, and the ſéede being threaſhed out, it is caſt into the water, till the ſtalke be ſoft: after, being dried in the Sunne, it is made vp in bundels to be knockt and ſhaled in Winter euenings. Rye is to be mowed in June or July, and after that, Wheate. No better rule, then before the Graine be hard, and when it hath changed colour. An old Prouerbe (as Plinie ſaith) it is better to haue in harueſt two dayes too ſoone, then three dayes too late. In Rie there is not ſuch feare in ſcattering as in Wheate, which as ſoone as it is ripe, will ſhed with euery winde. Wherefore good héede muſt be taken, that you linger not with Wheate after it is ripe: although Plinie affirmeth, that Wheat will haue greater yéeld when it ſtands long: but ſurely deferring of it is dangerous, as well for the deuouring of birds and vermine, as for ſhattering and falling of the ſéede through ſtorme and weather: as the proofe was ſéene in the great windes that were in the yéere of our redemption, 1567. Then followeth the harueſt of Peaſe, Beanes, Tares, and Lentils, according as they are timely ſowed, wherein you muſt take héede, as I warned you before in Rape ſéed, that they lie not abroad in the raine: for if they doe, they will open and loſe their ſéed. Laſt of all commeth the Harueſt of the other Summer ſéede, as of Barley, Pannicle, Millet, and Dates. It is found by experience, that raine is good for Dates after they be downe: for it cauſeth them to ſwell and to be fuller, and to that end they are left in the field many times two or three wéekes after they be downe.

Harueſt for Winter Barley.

Hemp harueſt.

Rie and VVheat harueſt.

The harueſt of all other corn and pulſe.

RIGO. What order haue you in your reaping?

CONO. There are diuers ſorts of reaping, according to the manner of every Country. Some with Sythes, which differ alſo

Diuers ſorts of reaping.

as

as the worke requires. In this Countrey we vse three sorts of corne Sithes, for either we haue a Sithe like a Sickle, which holden in the right hand, they cut the straw close by the ground, and haue in the left hand a long hooke, wherewith they pull together that that they haue cut, and lay it in heapes: and in this sort Wheat and Rie, and such Graine as hath the sturdiest straw, is reaped. In other places as in Iulis, where the ground being very rich, the Corne groweth higher and rancker, there they hold their left hand full of Corne, and with the right hand with toothed Sickles they cut it, leauing the straw vnder their hands long, to helpe the ground withall. In other places they vse a greater Sithe with a long Swath, and fenced with a crooked frame of sticks, wherewith with both their hands they cut downe the Corne, and lay it in Swathes as they doe Grasse when they mowe it, and with that they mow the higher sorts of Corne. Varro and Columella, and other, doe tell of sundry other sorts of reaping. Palladius teacheth, beside the labour of men, a shorter way to be done with an Oxe, that shall in short time cut downe all that groweth, which was wont to be vsed in Fraunce. The deuise was, a low kinde of Carre with a couple of wheeles, and the Frunt armed with sharpe sickles, which forced by the beast through the Corne, did cut downe all before it. This tricke might be vsed in leuell and champion Countries: but with vs it would make but ill-fauoured worke. In reaping, you must regard to goe with the winde: for if you worke against the winde, it will be hurtfull, as Xenophon saith, both to your eies and your hand. If the straw be but short, you must goe nearer the ground, if it be long, you may put your Sickles to the middest to dispatch it the sooner, & to make it thresh the better: and the stubble vpon the ground must either according to Virgils rule be burnt, or rot vpon the ground, for the bettering of the land. Some preserue that which is longest, to thatch Barns, Stables, & Countrey Cottages withall. And where Hay is scant, it seruеth for fodding of Cattell: for Barley straw is a food that Bullocks loue well, and beside, all kinde of straw is good to litter withall. When the Corne is downe, it is presently to be bound in sheaues: although Barley, Oates, and other Corne and Pulse is made vp in Cops and Kickes, but not without hurt and hazard. The Corne being cut, is not to be had into the Barne presently,

but

but to be let dry, according to the nature of euery Grayne and Pulse: for if it be carried in before it be through dry, it corrupteth and rotteth. Dates and Bucke, are longest left abroad, as also Lentiles, Pease and Pulse, because they are longest in drying. Wheat may soonest be carryed, if it be not mingled with too many weedes, that hinder the drying of it. When Harvest is in, the ground must out of hand be plowed, both to kill the weedes, and to make it the meeter for the next sowing. The Corne cut downe and drie, is to be laid either in Barnes, Houels, or Stacks: and after in Winter, to be trode out with Beasts, or threshed out with Flailes, and to be cleansed with Fannes. Plowing after Harvest.

RIGO. In Italy they vse to tread out their Corne with Cattell: the like reporteth Xenophon of the Greekes.

CONO. I haue seene it my selfe, where they rather take Horse then Oxen: and that time they also winnow their Corne, thinking the Southwest winde to bee best for that purpose: but to stay for that, Columella thinketh but the part of a small husband.

RIGO. I see you haue very large Barnes, what order obserue you in the building of them?

CONO. You must so set your Barne, that the Corne may be well brought into it, and see it be very close on euery side, leaving open a space for two doores, a fore doore, and a backe doore, but so, as neither of them open to the West, but rather North and East, and at both sides of the floore bestow your Corne in seuerall tasses and mows, so that you may easily come to euery one at your pleasure. And though the Corne be layd vpon battes in the floores, yet let there be a space left in the midst, that may be open to the very top, that you may fetch what sort you list to be threshed. In some places they haue a Pully in the midst, wherewith they hoyse vp the Corne to the very rafters of the house. In Holland they haue few close Barnes, but all Houels and Stacks, so placed with hanging roffes vpon postes, that with pinnes and winches, they may heighten it, or let it downe as they list. The Barne

RIGO. Those kinde of Barnes they say, are not so subiect to Mise and Rats, nor so chargeable as the other.

CONO. Howsoeuer the Barne be, you must place it as high as you may, lest the Corne be spoyled with moysture or damps,

vamps: some thinke it better for them to be thatched then tyled: the largenesse must bee according to the greatnes of your occupying. Some, to the end Cats and Weezels may the better come by, they do vault the floore with bricks, and laying rafters thereon, do lay on their Corne. The floore must bee fayre and smooth made, so as the Corne may be well threshed or troden out. Columella would haue the floore faire paued with flint or stone, whereby the Corne will the sooner be threshed, and the floore not hurt with beating and trampling of Oxen, and when it is fan'd or winnowed, it will not be full of grauell and durt, as the earthen floores yeeld. But we content our selues with our earthen floores, well made, and of good earth, mixed with a little Chaffe, and the grounds of Oyle; for this preserueth the Corne from Mise and Emets. You must make it very euen and leuell, and after it is mingled with Chaffe, let it be well troden, and so suffered to dry. You must keepe also from it Beastes, and Poultrie, which with trampling & scraping will make it rugged and vneuen. When the floore is dry, the Corne laid on it, is beaten out with Flayles, and cleansed with Fans, though in some place they rather like to tread it out with Oxen, and to winnow it after the old fashion, with the winde.

RIGO. Well Sir, when you haue thus threshed your Corne, what waies haue you to keepe it from Wiuels?

Garners. CONO. The Garners, or Corne Lofts, wherein your Corne thus threshed and cleansed shall be layd, must stand high, that they may be blowne through with the Easterne & Northerne winds, to which no moysture from the places adioyning must be suffered to come: for the quarters of the heauen that are coldest and dryest, doe both preserue Corne the longest. In Spaine and Apulia, being hot Countries, the winde is not onely let in on the sides, by windowes, but also at the bottome by grates. Some againe preserues it in vaults vnder the ground, where the dry earth doth cherish such fruites as shee hath brought forth, vsed as Varro saith, in Spaine and Carthage: and in our dayes wee vse to keepe both Wine and Graine in such vaults. In Countries that are wet and watrish, it is better to make them in Garrets, as high as may be, hauing good regard that it be well walled and floored. Moreouer, where as Corne is subiect to Wiuels and Vermine, except it be very safely layd vp, it will soone be consumed: there-

fore

fore you must make with Clay, mingled in stead of straw, with hayre, then ouercast it within and without with white Potters Clay: last of all, steepe the roots and leaues of wilde Cucumbers in water two dayes, and with that Water, and Lime, and Sand, make Plaister, and wash therewithall the walles within: albeit, Plinie counts Lime as hurtfull a thing as may be for Corne. Some mingle with Lime the Vrine of Cattell, as a thing that will destroy Wiuels, or the leaues of Houseleeke, or Wormewood, or Hoppes: but specially if you haue it, there is nothing so good to destroy all such Vermine, as the dregges and bottome of Oyle: some vse in the stead thereof, the pickle of Herrings. Hauing in this sort ordred their seelings, and their floores being drie, they suppose that no hurtfull worme shall annoy whatsoeuer Corne they lay in them. Some lay vnder their Corne, Fleeworr: others thinke it an assured remedy, if they be often fanned and winnowed, and thereby cooled: but Collumella thinkes it vntrue, and that by this meanes the Vermine shall not onely be not driuen out, but they shall be dispearsed throughout all the Corne, which if they otherwise be left alone, will meddle with no more then the outward parts, for a handbredth depth within, there neuer breedes any Wyuels, and therefore he thinks it better to let that alone that is already corrupted, and will goe no further, then with farther medling to marre all: for it is an easie matter, whensoeuer yee neede to occupy it, to take away that is tainted, and to vse the rest. But for all this, experience teacheth vs, that there is not so good a remedy to destroy the Wyuell, as is the often fanning and winnowing in Summer. After the first two yeeres, they hold opinion, they will not meddle with Corne: but I weary you with carrying you too much about, and if it please you, we will returne home. Against breeding of Wyuels.

RIGO. If it be for your ease so to do: otherwise there can be no greater pleasure to me, then walking abroad to heare you talke of husbandry. Are these that I see your Pastures, where your fat Oxen, and your Mares, and your Colts goe leaping. Of Pasture and Meddow.

CONO. They are so. I lay all my pastures seuerall, for euery kinde of Cattell to be by himselfe: in the hithermost that you see, are my Cattell that I fat: in the next are my Horses, my Mares, and my Colts: in the next are my young breede, Yeerelings, and

Twoyéerelings. The Meadowes that you sée in yonder Valley, lye all to be Mowed. Here next to my house, are my Ducklings, that are brought to their Dams to sucke thrise a day, and therefore ought to be néere: howbeit, such as féede farre off, must diligently and daily be looked to, for feare of diseases.

RIGO. Since I haue troubled you thus farre, I cannot leaue till I vnderstand all your orders.

CONO. No trouble at all to me; but rather as I said before, the recording hereof, is my great ioy: for in talking of these matters you bring me a bed.

RIGO. I pray you then take the paines to describe me the ordering of Pastures and Meadowes, when as there séemeth to be a great affinitie betwixt them and Corne ground, and because they are sometimes also to be plowed, me thinketh this part remaineth to be spoken of.

CONO. With all my heart; I will satisfie your desire in as much as I am able: and indéed, since I haue all this while spoken of Corne ground, it is not out of order to tel you my minde of Pasture: & although Cato in some places doth giue the preeminence to the Vineyard: yet other old writers doe most of all preferre Pastures, as the ground that requireth least to doe about it: and therefore they were called, as Varro saith, Prata, because they were Parata, alway in readines, & néeded neither great charge nor labour, nor are in danger of storme or tempests, as other kinde of ground is, except such parcels as lie néere Riuers & Ilands, which are sometimes ouerflowed: and that discommoditie is sufficiently recompenced with the fatnesse that the water leaues behinde it, which enricheth the ground, and makes it the better yéerely to yéeld his gaine eyther in Pasture or Meddow. The Pastures with vs doe commonly serue both for Pasture or Meddow when we list, specially in such places where the ground is rich and orse, which they had rather to employ to Pasture, because with dunging of Cattell, it waxeth alwaies the better, whereas with continuall bearing of Hay, it hath growne to be mossie and naught: but where the ground is alwaies wet and watrish, there it is better to let it lye for Meddow. Columella maketh two kinds of Pasture ground, whereof one is alwaies dry, the other ouerflowed. The good and rich ground hath no néede of ouerflowing,

the Hay being much better that groweth of the selfe goodnesse of the ground, then that which is forced by waters: which sometime notwithstanding is needfull, if the barrennesse of the ground requireth it: for in bad and naughty ground, good Meddow may be made, if it lie to be ouer-flowne: but then must the ground neither lie hollow, nor in hils, least the one of them keepe the waters vpon it too long, and the other presently let it forth againe. Therefore lyeth the ground best, that lieth leuellest, which suffereth not the water to remaine very long, nor auoideth it too soone. If in such ground it chaunce to stand ouer-long, it may be auoided with water streame at your pleasure: for both ouerplus, and the want of water are alike hurtfull vnto Meddowes. It is very handsome, where dry and barraine ground lieth so by the Riuer, as the water may be let in by trenches when you list: in fine, the occupying of Pasture grounds require more care then trauaile. First, that we suffer not Bushes, Thornes, nor great Weedes, to ouer-grow them, but to destroy some of them, as Brambles, Briers, Bulrushes, and Sedges in the end of Summer, and the other that be Summer weedes, as Sowthistell, and all other Thistels, in the Spring. You must take heede of Swine, that spoile and turne vp the ground ill-fauouredly, and all other Cattell: except it be in hard and dry weather, for otherwise they gulf and marre the ground with the deepe sincking of their feete treading in the Grasse, and breaking of the Rootes. The bad and barraine grounds are to be helped with dung in Winter, specially in Februarie, the Moone encreasing, and the stones, sticks, and such baggage as lye scattered abroad, are to be throwne out sooner, or later as the ground is. There are some Meddowes that with long lying, are ouer-growne with Mosse, which the old husbands were wont to remedy with casting of certaine seedes abroad, with laying on of dung, specially Pigeons dung: but nothing is so good for this purpose, as often to cast Ashes vpon it, for that destroyeth Mosse out of hand. Notwithstanding these are but troublesome remedies. The best and certainest is to Plowe it: for the ground after his long rest, will beare goodly Corne. But after you haue plowed it, it will scarse recouer his old estate again for Pasture & Meddow in three or foure yeeres. When you meane to let your ground lie againe for Meddow or Pasture,

your best is to sowe it with Oates, and to Harrow the ground euen and leuell, and to hurle out all the stones and such things as may hurt the Sythe: for Oates is a great breeder of grasse. Some doe cast Hay-seede, gathered from the Hay-loft or the Rackes, ouer the ground before they harrow it. Others againe, when their Meddowes haue lien long, sowe Beanes vpon them, or Rape seede, or Millet, and the yeere after Wheate: and the third yeere they let them lie againe for Meddow or Pasture. You must beware, that while the ground is lose and soft, you let not in the water, for the force of the water will wash away the earth from the rootes of the Grasse, and will not suffer them to grow together: neither must you (for the like danger) suffer Cattell to come vpon it, except in the second yeere Goates, or Sheepe, or such like, after you haue mowed it, and that if the season be very dry. The third yeere you may put on your greater sort of Cattell againe, and if the ground be hilly and barraine, you may dung the highest part of it in February, as I said before, casting on it some Hay seede, for the higher part being mended, the raine or water that comes to it, will carrie downe some part of the richnesse to the bottome, as I said before, when I spake of the manuring of earable ground. But if you will lay in new ground for Meddow, and that you may haue your choise, take such as is rich, dewy, leuell, or a little hanging, or chose such a valley, where the water can neither lye long, nor runne away to fast: neither is the ranke Grasse alwayes a signe of good ground: for what goodlier Grasse is there saith Plinie, then is in Germanie, and yet you shall there haue sand within a little of the vpper part. Neither is it alway a watry ground where the Grasse growes high, for the very Mountaines in Sycherland yeeld great and high grasse for Cattell. The Pastures that lies by the Lakes of Dumone in Austry and Hungarie are but slender, nor about the Rhine, specially at his falling into the Sea about Holland, as likewise in Froeseland and Flaunders. Cæsar Vopiscus, the Fields of Roscius were the principall of Italy, where the Grasse would so soone growe, as it would hide a staffe in a day. You may make good Meddowe of any ground, so it may be watred. Your Meddowes are to be purged in September and October, and to be rid of all bushes, brambles, and great foule Woods, and all things else

that

that annoy them, then after that it hath often bëene stirred, and with many times plowing made fine, the stones cast away, and the clods in euery place broken, you must dung it well with fresh dung, the Moone encreasing. Let them be kept from gulling and trampling of Cattell. The mouldhils and dunging of horse and bullocks, must with your spade be cast abroad, which if they remaine, would either be harbarours of Ants & such like Vermine, or else breeders of hurtfull & vnprofitable weeds, your Meddowes must be lays in towards March, and kept from Cattell, and made very cleane: if they be not rich, they must be mended with dung, which must be laid on, the Moone encreasing, and the newer the dung be, the better it is, and the more Grasse it makes: which must be laid vpon the top of the highest of the ground, that the gwdnes may runne to the bottome. The best hearbe for Pasture or Meddow, is the Trefoile or Clauer: the next is sweet Grasse: the worst as Plinie saith, is Rushes, Fearne, and Horsetaile.

RIGO. How shall I know when the Grasse is ripe, and ready to be cut?

CONO. The time of cutting of it, is when the Went beginneth to fade and waxe stiffe, and before it wither. Cato bids not to mow your Grasse with the latest, but before the seed be ripe. It is best cut downe before it wither, whereby you shal haue both more, and better Hey of it. Some, where they may ouerflow it, do water it a day before they cut it, it cutteth better after a dewie euening.

RIGO. Doe you cut grasse in the like sort as you doe Corne?

CONO. Almost in the like sort, some doe vse short Sithes, mowing it with one hand: but we here doe vse the common great Sith, mowing with both our hands, as I said before, that Oates, and Barly, and such other like Corne was mowed, which Sithes we vse to sharpe with Whetstones, or instruments of wood dressed with sand. The Grasse being cut, must be well tedded and turned in the Summer, and not cocked till it be dry: and if it chance to be wet with raine, it must not be turned, till the vpper part be dried. There is a measure to be vsed in making of it, that it be not had in too drie, nor too greene. The one sort, if the iuyce be dried vp, seruieth onely for litter: the other (too greene and moyst) if it be caried into the Loft, rotteth, and the vapour being ouer-heated, falleth on fire and burneth. And if so be the raine chance to fall

vpon the grasse that is new cut downe, if it be not stirred, it takes not so much harme: but if it be once turned, you must still be stirring of it, otherwise it will rot. Therefore the vppermost part before it be turned, must be well dried with the Sunne and the winde: when it is dried, we lay it in windrowes, and then make it vp in Cocks, and after that in Rowes, which must be sharpe and piked in the top, the better to defend it from the raine, which if it doe not fall, yet is it good so to doe, that they may sweat in the said Rowes, and digest whatsoeuer moisture is in it. And therefore good husbands doe not lay it vp in their lofts, till such time as it hath sweat in the Field. Grasse is commonly mowed thrise a yeere, in May or June, and againe after Harvest: the first mowing is counted the best. As soone as the Hay is off after the first mowing, it would be ouerflowed (if you may conuenently) to the end the after swath may be mowed in Autumne, which they call in Latine Cordum. In the Dukedome of Spoleto, it is said they mowe foure times a yeere, being drie ground, and diuers other places thrise a yeere. Medica may be cut fire times a yeere, if it be ordered as it ought to be. It is best mowed when it beginneth to flowre, for it must not growe to seede: being dried it is made vp in bundels, and kept good three yeeres, to the great comfort of poore Cattell: but because I haue tolde you of Medica before, it is but vaine to rehearse it againe.

RIGO. You haue spoken of a very large and great knowledge of husbandry, which out of doubt requireth in a man great trauaile and diligence.

CONO. It requireth indeede great diligence and trauaile, howbeit, it recompenceth the paines and the charges, not without great gaines, whereof Plinie bringeth for example Caius Cæsinus, who when vpon a little piece of ground he reaped more fruit and graines a great deale, then his neighbours did vpon their great occupiers, grew into great hatred amongst them, as though hee had bewitched their field: whereof being accused by Spurius Albinus, and fearing to be condemned, when the Quest should passe vpon him, he brings all his instruments of husbandry into the common place, and brought in therewithall his daughter, a iolly great Foile, his iron tooles perfectly well made, great Spades, mightie Coulters, and lustie Cattell: Loe heere

(quoth

(quoth he) mine enchauntments, neither can I bring before you my great and painefull labours, watchings, and sweat, whereupon hee was presently quit by the voyces of them all. But I keepe you too long about my husbandry, it is good time we leaue and goe home.

The diligence of Caius Cræsinus.

RIGO. With a good will, If I may obtayne one thing at your hands, which when you haue made an end with, I will trouble you no longer.

CONO. What is that?

RIGO. If a man would buy a Farme or a Manor, in what sort shall he best doe it? for I doubt not but you haue good skill in such matters.

CONO. Ischomachus in Xenophon, telleth, that his father taught him that he should neuer buy a peece of ground, that had beene sailfully or curiously husbanded before, but rather such ground as by the slothfulnesse and pouerty of the Maister, hath lyen vntilled and neglected, and yet seeme to be very good ground: as it is better to buy a leane Horse, so that he be not old, and that he haue the tokens of a good Horse, then a fatte Horse, and one that is curiously kept. A well ordered peece of land is held deere, and yelds no great encrease, and therefore is neyther so pleasant, nor so profitable, as that which by good husbandry may bee made better. Cato would haue two thinges to bee obserued in buying of land: The goodnesse of the ground, and the wholesomenesse of the aire: of which two, if either be lacking, whosoeuer doth buy it, he iudgeth him madde, and meete to be sent to Bedlam: for none that is well in his wittes, will bestow cost vpon barraine ground, nor hazard himselfe for a little rich ground, to be alwaies subiect to pestilentiall diseases: for where a man must deale with the Diuell, there is not onely his commoditie, but his life doubtfull, and rather his death then his gaine certaine. After these two principall notes, as Columella saith, Cato added of like weight these three that follow to be regarded: the Way, the Water, and the Neighbour. The goodnesse of the way is a great matter, for it both makes the Master haue a delight to goe about it, and it is commodious for carriage, which bringeth great gaine, and little charges. Of the commoditie of water who doubteth, without whose vse no man is able to liue? Of a mans neighbour,

bour, he would haue a man haue speciall regard. Hesiodus saith, πῆμα κακος λεκτρ, an euill neighbour is a great mischiefe. I haue knowne diuers, that for the troublesomnesse of their neighbour, haue forsaken good dwellings, and changed gold for copper, because they haue had false knaues to their neighbours, and quarrellers, that suffering their cattell to runne at large in euery mans ground to spoile their Corne and their Vines, would also cut downe wood, and take whatsoeuer they find, alwaies brabling about the bounds of their ground, that a man could neuer be in quiet for them: or else haue dwelt by some Caterpiller, Ruffian, or swash-buckler, that would leaue no kind of mischiefe vndone. Amongst all which commonly there is not so ill a neighbour, as the new vpstart, that takes vpon him the name of a Gentleman, who though you vse him neuer so well, will at one time or other giue you to vnderstand from whence he comes, and make you sing with Claudian.

Asperius nihil est humili cum surgit in altum.

A lewder wretch there liues not vnder skie.
Then Clowne that climes from base estate to hie.

As the Prouerbe in England is, set a Knaue on horseback, and you shall see him shoulder a Knight: for an Ape will be an Ape, though you cloath him in purple. Surely M. Portius would haue a man shunne the neighbourhood of such, as the pestilence. I for my part am happy in this point, that I haue no neighbour that I neede to feare.

RIGO. Perhaps they dare not for your authoritie to doe, as otherwise they would.

CONO. But since death and other casualties rids a man of them, the dwelling is not to be left, if it haue other good commodities, except it be places in the borders of sundry Countries that be subject to great sicknesses. Some commend the dwelling that hath faire waies about it, is neere some Riuer or good Market, whereby a man may carrie his Merchandize with lesse charges. The old fellowes would neuer haue a man place himselfe neere the high way, for pilfering of such as passe by, and troublesomnesse of guests, as I said before in speaking of the placing of an house.

The letting of a Farme.

In the letting of a Farme, these things are to be obserued that I spake of before, in describing of a Bailiffe of Husbandrie and his labour: that you let it to such, whose trauaile and good

behauiour

behauiour you may be assured of, and that you regard more their good ordering of the land then the rent, which is least hurtful, and most gainefull. For whereas the ground is well husbandred, you shall commonly haue gaine, & neuer losse, except by vnreasonablenesse of the weather, which the Ciuill Lawyer sayth, should not be any damage of the Tenant, or the inuasion of the enemie, where the Tenant cannot helpe it. Besides, the Lord must not deale with his Tenant so straightly in euery point, as by law he might, for his rent dayes, bargaines of wood, quit rents, or such, the rigour wherein is more troublesome, then beneficiall: neither ought wee to take euery aduantage, for law many times is right plaine wrong: neither must ye be too slacke on the other side, for too much gentlenesse many times makes a man the worse. And therefore it is good if the Farmer be slacke in his paiments, to make him to know it: but in no wise to be a raiser or enhaunser of rents, for that discomforts, and many times vndoeth the tenant. Moreouer, you must not lightly change the olde Farmer, both because of his deserts, and that hee is better acquainted with the ground then a new. L. Volusius would alwayes say, that hee was in best case for his Lands, that had alwayes his Tenants borne and bredde vp in them, whereby the long familiaritie should make them more louingly to vse themselues: for sure it is an euill vse often to change Tenants, and therefore I doe like well that order, where the land is let for the liues of the Tenant, his wife, and his childe, paying a yeerely rent, so that as long as he payes his rent, and keepes the reparations, it shall not be lawfull to deceiue him: for hereby the Tenant shall be prouoked to order the ground with more diligence, to repaire the house, and to looke to it in all points as to his owne, bestowing many times as much as he hath vpon it. This way of letting Land methinkes is best, where the ground is subiect to the Sea or the Riuer, or other danger, that the Tenant bee charged with the maintenance of it. And here be sure that you let it rather to one of habilitie, then to an vnthriftie man, that is not able to beare it, whereby you may lose both your Land and your rent. In such place as lies neere the Lord, hee may occupie it by his Baylifie, or to halues: but where it is far off, it is better to let it out for a yeerely rent vpon the foresaid couenants. For if you occupie it with your

seruants,

seruants, they will eyther loke ill to your cattell, or your ground, or suffer things to be stolne, or steale themselues, or make you be at more charges then needeth, and be careleſſe in euery thing. In letting of ground commonly it is couenanted, that the Tenant shall not let nor sell without leaue of the Lord, and that he shall not breake any pasture or meddow land, and what, and how much he shall sowe of euery kinde of graine, how much hee shall haue for Pasture, how much he shall let lie, and how much he shall mend. Here haue you almost as much as I am able to say in husbanding of the ground.

CONO. I thanke you, you haue greatly delighted me with the describing of your Pasture-ground and Earable.

The end of the first Booke.

The

The ſecond Booke:
Of Gardens, Orchards, and VVoods.

THRASYBVLVS. MARIVS. IVLIA.

BEcauſe of the aliance betwixt Yearbes, Trées, and Corne, and becauſe their husbandry is almoſt one, it is reaſon that next the firſt booke, written of Earable ground and Tillage, ſhould follow the deſcription of Orchards, Gardens, and their fruits. Virgill in writing of Husbandry, left this part vnwritten of: howbeit, diuers others both old & new writers haue not without ſome diligence written of this part, but yet by ſnatches (as it were) & not throughly: whoſe opinions ioyned with mine own experience, it ſeemeth good to me in this booke to declare. And ſince the vſe of Orchards & Gardens is great and ancient, & that Homer writeth, how Laertes the olde man, was wont with his trauaile in his Orchards, to driue from his minde the ſorrow hée tooke for the abſence of his ſonne. And Xenophon reporteth, that king Cyrus, as great a prince as he was, would plant with his owne hands, & ſet trées in his orchards, in ſuch order, as it ſeemed an earthly paradiſe. Q. Curtius writeth of Abdolominus, that for his great vertue, of a poore gardiner, came to be king of the Sidonians. And ſurely, not vnworthily is this part of husbandry eſtéemed, ſeeing it doth not alonely bring great pleaſure, but alſo is greatly profitable for the maintenance of houſeholde, and the ſparing of charges, miniſtring to the husband daily foode, and ſufficient ſuſtenance without coſt. For when (as Columella ſaith) in the olde time the people liued more temperately, and the poore at more libertie fed of fleſh & milke, and ſuch things as the ground & foldes yéelded, but in the latter age when ryot and daintines began to come in, and the wealthier ſort to eſtéeme no fare but coſtly, and farre fetched, not content with meane diet, but coueting ſuch things as were of greateſt price,

The vſe of Gardens of great antiquitie.

price, the poore people as not able to beare the charges, were banished from the costlier cates, and driuen to content themselues with the basest fode. And hereof sprang at the first the planting of Orchards, and making of Gardens, wherewith the poorest creature that was, might store his Kitchin, and haue his victuals alwayes at hand, the Orchard and Garden seruing for his Shambles, with a great deale more commendable and hurtlesse diet.

An euill Garden token of an ill huswife.

Herein were the olde husbands very carefull, and vsed, alwayes to iudge, that where they found the garden out of order, the wife of the house (for vnto her belonged the charge therof) was no good huswife, for they should be forced to haue their victuals from the Shambles or the Market, not making so great account of Colworts then, as they doe now, condemning them for the charges that were about them. As for flesh, it was rather lothed then vsed amongst them. Only Orchards and Gardens did chiefly please them, because the fruits that they yeeld, needed no fire for the dressing of them, but spared wood, being alwayes of themselues ready dressed, easie of digestion, and nothing burdensome to the stomacke: and some of them seruing also to pouder or preserue withall, as good marchandize at home, as Plinie sayth, not driuing men to seeke pepper as farre as Indie. Of Lucrin, I the Dyster not regard, as the Poet sayth. And therefore to make them of more worthinesse, and that for their common profite, they should not be the lesse regarded, there were diuers noble men of the house of

Or Lettusins.

Valerius, that tooke their surnames of Lettuse, and were not ashamed to be named Lettusmen. The old people had in great estimation the Gardens of the daughters of Atlas, and of the kings Adonis and Alcinoi, of whom Homer so much speaketh, as also the great vaulted Gardens, eyther built by Semiramis, or by Cyrus the king of Assiria. Epicure is reported to be the first that euer deuised garden in Athens, before his time it was not seene, that the pleasures of the Countrie were had in the Citie. Now when Thrasybulus trauailing in the affayres of his prince, chaunced to come to the house of Marius, & carried by him into a Garden that he had, which was very beautifull, being led about among the sweet smelling flowres, and vnder the pleasant Arbours, what a godly sight (quoth Thrasybulus) is heere? how excellently haue you garnished this paradise of yours with all kinde of pleasures?

Your Parlers, and your banketting houses both within and without, as all bedecked with pictures of beautifull Flowres & Trées, that you may not onely fede your eyes with the beholding of the true and liuely Flower, but also delight your selfe with the counterfait in the midst of winter, seeing in the one, the painted flower to contend in beautie with the very flower: in the other, the wonderfull worke of Nature, and in both, the passing goodnes of God. Moreouer, your pleasant Arbours to walke in, whose shaddowes keepe off the heate of the sunne, and if it fortune to raine, the cloisters are hard by. But specially this little Riuer, with most cléere water, encompassing the garden, doth wonderfully set it forth, and herewithall the greene and goodly quickset hedges, no chargeable kinde of enclosures, differeth it both from Man & Beast. I speake nothing of the well ordered quarters, whereas the Herbes and Trées are seuered euery sort in their due place, the Pot-herbes by themselues, the flowers in another place, the Trées & Impes in another quarter, all in iust square and proportion, with Alleis and walkes among them. Among these goodly sights, I pray you remember according to your promise (for so the time requireth) to shew mee some part of your great knowledge in garden matters, sith you haue vpon this condition heard me heretofore grabling, or rather wearying you with the declaiming of my poore skil in the tilling of the field.

MARIVS. Your memorie is herein a little too quicke, but what shall I doe? Promise must be kept, and since you will néeds force me, you shall heare me babble as well as I can, of my knowledge in Gardening: but not with the like pleasure that I heard you talking of your grayling and your ground.

THRA. Yes truly, with as great pleasure & desire as may be.

MARIVS. Come on then, let vs here sit downe in this Arbour, and we will now and then rise & walke, resting vs as oft as you will: in the meane time Iulia shall make ready our supper. And first, euen as you began with the chosing of a place (méet to set your house vpon, so must I with the choyse of a Plot méete for a Garden. The ordering of Gardens is diuers, for some are made by the Manor houses, some in the Suburbs, some in the Citie, where soeuer they be, if the place will suffer, they must be made as nére to the house as may be: but so, as they be as far from the

Barnes

Barnes as you can, for the Chaffe or dust blowing into them, and either subject to the Dounge heape, whereby it may be made rich, or else in some very good ground that hath some small Brooke running by it, or if it haue none such, some Well or Conduit, whereby it may be watered. An excellent plot for the purpose is, that which declineth a little, and hath certaine gutters of water running through diuers parts thereof: for gardens must alwaies be to be easily watered, if not with some running streame, some pumpe to be made, or kettle, Mill, or such like, as may serue the turne of a natural streame. Columella would haue you make your search for water, when the Sunne is in the latter part of Virgo, which is in September, before his entrance into the Winter Æquinoctiall, for then may you best vnderstand the strength or goodnesse of the springs, when after the great burning heat of the Sommer, the ground hath a long while continued without raine. If you cannot thus haue water, you must make some standing pond at the vpper part of the ground, that may receiue & containe such water as fals from aboue, wherewith yee may water your Garden in the extreame heat of Sommer: but where neither the nature of the soyle, nor conueyance by Conduit or Pumpe, or running streame is to be had, you haue no other helpe but the raine water of winter, which if you also haue not, then must you delue and lay your Garden three or foure foots deepe: which being so ordered, will well be able to abide whatsoeuer drought doe happen. This is also to be regarded, that in gardens that are destitute of water, you so order them into seuerall parts, that what part you will occupie in winter, may lie towards the South, & that which shall serue you for Sommer, may lie towards the North. In a Garden, as in the choyse of Corne ground, you must loke whether the goodnesse of the ground be not hindered by the vnskilfulnesse of him that hath occupied it. You must also make choyse of your waters, of which the best (as Plinie sayth) are the coldest, and such as be sweet to drinke: the worst that comes from Ponds, or is brought in by trenches, because they bring with them the seeds of grasse and weedes: but the ground doth most delight in raine water, which killeth wormes and baggage that breeds in it: but for some hearbs, salt water is needful, as the Raddish, Beete, Kelw, Saurell, to which al salt water they say, is a special helper, making

The time of searching for water.

them both pleasant and fruitfull: to all others, sweet water is only to be vsed. And because I haue begun to entreat of watering, I must giue this note, that the times of watring is not in the heat of the day but earely in the morning, & at night, least the water be heated with the Sunne: onely Basill you must water at none, the sæd something will come the sooner vp, if they be sprinckled at the first with hot water. You haue here heard, that the first néedfull thing for a Garden, is water. The next to that is enclosure, that it be wel enclosed, both from vnruly folks & théues, and likewise from beasts: lest lying in waite for your hearbs and your fruits, they may both bereaue you of your paines, and your pleasure: for if eyther they be bitten with beasts, or too often handled with men, it hinderth them both of their growth & séeding: and therefore it is of necessitie to haue the Garden well enclosed. Now for enclosures, there are sundry kindes, some making earth in mould doe counterfeit Brickwals: Others make them of lime & stones: some others of stones layd one vpon another in heapes, casting a Ditch for water round about them, which kinde Palladius forbids to follow, because it will draw out the moysture from the Garden, except it be in a marish ground. Other make their fence with the sæds and sets of Thorne: some make them of mudde walles, couered with straw or heath. Varro maketh mention of foure kindes of enclosure: the first naturall, the second wilde, the third souldierly, the fourth, of carpenters worke. The first & naturall is the quickset hedge, being set of young thornes, which once well growen, regardeth neither fire nor other hurt. The second is the common hedge made of dead wood, well staked and thicke plashed, or railde. The third the souldiours fortifying, is a déepe ditch with a rampier: but the ditch must be so made, as it may receiue all the water that comes from aboue, or fals into it, wherein the bamure must be so stéepe, that it may not easily be climed. This kinde of fence is to be made, where the ground lies néere the hye way, or buts vpon the Riuer, of which sort I shall haue occasion to speake more hereafter. The fourth fence made by the Carpenter or by the Mason, is commonly known: whereof there is foure sorts, either of Stones, of brickes, or Turfe, and earth, & little stones framed in moulde. Columella following the ancientest authors, preferreth the quickset hedge before the dead, both

The time of watering of Gardens.

Enclosing of Gardens.

because it is lesse chargeable, and also endureth the longer continuing a long time: which hedge of yong thornes, he teacheth to make in this sort. The place that you determine to enclose, must after the beginning of September, when the ground hath beene well soked with raine, be trenched about with two furrowes, a yard distant one from the other, the depth & breadth of every one of them must be two foot, which you must suffer to lye emptie all winter, prouiding in the meane time the seedes that you meane to sowe in them, which must be the berries of sharpe thornes, briers, holly, and wilde Eglantine, which the Greekes call dog brier. The berries of these you must gather as ripe as you may, and mingle them with the flowre or Meale of tares, which when it is sprinkled with water, must be put vpon old ropes of ships, or any other ropes, the ropes being thus handled and dried, must be layd vp in some borded floore. Afterward when winter is done, within forty dayes after, about the comming of the Swallow, if there be any water remaining in the Furrowes, it must be let out, & the mellowed earth, which was cast out of the furrowes in the ende of Summer, must now be cast in againe, till you haue filled them vp to the midst: then must you handsomely vnfolde the ropes, and lay them in length through both the furrowes, and so couer them, taking good heed that you throw not too much earth vpon them for hindering the spring, which commonly vseth to appeare within thirtie dayes after, and when they be growne to be of some height, they must be made to encline to the space betwixt the two furrowes: in which space you must haue a little walled hedge, to teach the springs of other furrowes to climbe by, which will be a

The making of a quick-set hedge.

Another newer and better way of making a quick-set hedge.

solly stay and a comfort to them. But I haue another and a more readier way of making of them, which I first practising in this Countrie, diuers others haue followed. I also do make a certaine Ditch, & gathering in the wood, the young springs of thornes, cutting off their tops, I set them on the bancke of the Ditch, so that they stand halfe a foot out of the ground, plucking vp all the weeds (specially the first Sommer) that grow about them and sucke away the iuyce that comforts the set. The rootes being this rid, I couer all the earth about them with straw, whereby both the deaw of the night is let into the rootes, and the poore plant is defended from the burning of the Sunne. The yeere after, I make

a little slender raile of plants, whereunto I lay vp the springs, weauing them in such sort as I will haue them to growe, which I yeerely make higher, according to the height that I would haue the Hedge to spring. Eight, or at the vttermost nine foote, is a sufficient height, and whatsoeuer spring aboue, must be plashed of one side or the other, to make the fence the stronger. When I haue thus done, I mat it thicker and thicker euery yeere, filling vp the places where I see it thinne, with such bowes as I see growe out of order: and thus is it wouen so thicke with yeerely bindings, that not so much as a small bird is able to passe thorow it, nor any man to looke through it. When it is thicke enough and bigge enough, the superfluous springs must euery yeere be cut. This hedge can neuer be destroyed, except it be plucked vp by the rootes: neither feareth it the hurt of fire, but will growe the better for it. And this is my way of enclosing a Garden, as the pleasantest, most profitable, and of least charges.

THRA. There is another way of making of a quick-set Hedge, which our Hedgers in the Countrey doe vse, which is something the stronger. For setting the young Sets, as you haue said before, when they be growne to some greatnesse, they cut the Thorne neere to the ground, and being halfe cut and broken a sunder, they bowe it along the Hedge, and plash it. From these cuts spring vp new plants, which still as they growe to any highnesse they cut them, and plash them againe: so doing continually, till the Hedge be come to his full height. This way the Hedge is made so strong, that neither Hogge nor other beast, is able to breake through it: but the other is a great deale more pleasant to the eye. But if I haue not Sets enough to serue, may I make an Impe Garden of their seede? Another sort of hedging.

MARIVS. Yea very well. Make your Thorne Garden or store plot in this sort. Take your Berries or stones, and mingle them with earth, lay them vp for the first yeere in some place meete for them, the next yeere sowe them as thicke as you can, and yee shall within a little time haue a whole Wood of thornes.

THRA. You haue now spoken of Water and enclosure, two principall points in a Garden: It now remaineth to speake of the ground meete for a Garden, and the order of dressing it.

MARIVS. Of the sundry sorts of ground, and of the discerning

of them, because you in your describing of Corne ground before haue sufficiently spoken, I do not think it needfull for me to repeat it. Againe, it is enough to me to adde onely this, that the ground ought not to be too rich, nor too leane, but fat and mellow, which bringeth forth a small kinde of Grasse like haires: such ground requires least labour, the stiffe and the rich ground asketh greater paines about it, but doth recompence it againe with his fruitfulnesse. The stiffe, leane, and cold ground, is not to be medled with, as Columella writeth in appointing good ground for Gardens.

The ground that giues the ripe and mellowed mould,
And doth in working crumble like the sands:
That of his owne good nature yeeldeth manifold,
Where Walwoort with his purple Berrie stands.
For neither doth the ground that still is dry,
Content my minde, nor yet the watrie soyle:
Whereas the Frogge continually doth cry,
While in the stinking Lakes he still doth moile.
I like the land that of it selfe doth yeeld,
The mighty Elme that branches broad doth beare,
And round about with Trees bedecks the field
With Trees, that wilde beares Apple, Plumme, and Peare,
But will no Bearefoot breed, nor stinking Gumme,
Nor Yewe, nor Plants, whence deadly poysons come.

What to be considered in the choise of garden ground. Ayre. Windes.

And thus much of the Garden ground, which as I said, is watred, or may be watred, and is enclosed either with a wall, a hedge, or some other safe enclosure. After this, it is needfull it lie well to the Sunne, and warme: for in ground that is very colde, the warmth of the Sunne will not much auaile it. And contrary, if it be a hot burning sand, the benefit of the Heauens can little helpe it. You must yet loke, that it lie not subiect to ill windes, that are dry and scorching, and bring frosts and mists. But now to the ordering of your Garden. First, you must be sure that the ground which you meane to sow in the Spring, be well digged in the fall of the leafe, about the Kalends of October: and that which you garden in the fall of the leafe, must be digged in May, that either by the colde of Winter, or the heate of Summer, both the clod may be mellowed, and the rootes of the weedes destroyed, nor much before this time must you dung it. And when the time of

The ordering of Gardens.

sowing

sowing is at hand a fiue dayes before, the weedes must be got out, and the dung layed on, and so often and diligently must it be digged, as the ground may be throughly medled with the mould.

Therefore the parts of the Gardens must be so ordered, as that which you meane to sowe in the end of Summer, may be digged in the Spring: and the part that you will sowe in the Spring, must be digged in the end of Summer: so shall both your fallowes be seasoned by the benefit of the colde and the Sunne. The beds are to be made narrow and long, as xij. foote in length, and fiue in breadth, that they may be the easier weeded: they must lie in wet and watrie ground two foot high, in dry ground a foote is sufficient. If your beds lye so dry, as they will suffer no water to tarry vpon them, you must make the spaces betwixt higher, that the water may be forced to lie and auoide when you will. Of the kindes & sorts of dunging being sufficiently entreated of by you, I will say nothing: onely, adding this that the dung of Asses is the best, because it breedeth fewest weedes: the next is Cattels dung, and Sheepes dung, if it haue lien a yeere. The ground as I said which we meane to sowe in the Spring, we must after the end of Summer let lye fallow, to be seasoned with the frost and the cold: for as the heate of Summer, so doth the cold of the Winter bake and season the ground. When winter is done, then must we begin to dung it: and about the fourteenth or fiftenth of January, we must dig it againe, deuiding it in quarters and beds. First must the weedes be plucked vp, and turffes of barraine ground must be layd in the Alleyes, which being well beaten with Beetles, and so trod vpon, that the grasse be worne away, so that it scarce appeare, it will after spring vp as fine as little hayre, and yeeld a pleasant sight to the eye, which will be very beautifull. When you haue seuered your flowres by themselues, your Phisicke hearbs by themselues, and your Pot-hearbs and Sallets in another place: the beds and the borders must be so cast, as the Weeders hands may reach to the midst of them, so shall they not neede in their labour to tread vpon the beddes, nor to hurt the hearbs. And this I thinke sufficient for the preparing of your ground before the sowing. Now will I speake of sowing, and what shall be sowed in euery season. To speake of all sorts of Hearbs and Flowres, were an endlesse labour, onely of those that

Beds.

Of digging and dunging of Gardens.

Of Sowing.

are most needfull, I meane to entreat. And first of hearbs, some are for the Pot, some for the sight, some for pleasure and sweet savour, and some for Phisicke. And againe, some are for Winter, some for Summer, and some betwixt both. The first time of sowing after Winter, is the moneth of March, April, and May, wherein we vse to sow Collworts, Radish, Rape, and after Beetes, Lettuse, Sorrel, Mustard-seede, Coriander, Dill, and Garden Cresses. The second season for sowing, is in the beginning of October, wherein they set Beetes, and sow Smallage in Nigella and Arreche. The third season, which they call the Summer season, in some place the Gardners beginne in January, wherein they set Cucumbers, Gourds, Spinnach, Basill, Purslaine, and Sauerie. Many things may be sowed betwixt these seasons, and yet doe very well. All Garden hearbs are commonly sowen before the tenth of June, such things as you would not haue seed, you may sow after this time.

Three seasons to sowe in,

Some things are sowed onely two times a yeere, in the Spring, and in the end of Summer. Others againe at sundry times, as Lettuse, Collworts, Rocket, Radish, Cresses, Coriander, Cheruill, and Dill. These are sowed about March, or about September, and Columella saith, doe come either of the seede, or of the slip: some of the root, some of the stalke, some of the leafe, some of the Clot, some of the Head, some of both: others of the Barke, others of the Pith, some both of the seede and the slippe, as Rew, wilde Maricrum, and Basill, this they cut off, when it comes to be a handfull high: Others growe both of the seede and the root, as Onions, Garlicke, and such like. And although all things will grow of their seeds, yet this they say, Rew will not doe: for it very seldome springs, therefore they rather set the slips. These that are set of the root, doe commonly last longer, and branch better, putting forth young slippes from his sides, as the Onion and Gith. The stalke being cut, they all doe spring againe for the most part, except such as haue speciall stalkes, called by Theophrastus ἀπολαυλα, that is, such as when the stalke is cut grow no more: Gasa interprets it Secaulia. The Rape and the Radish, their leaues being pulled away and couered with earth, doe grow and continue till Summer. The fruits of some is in the earth, some without, and some both within and without, some lie and grow, as the Cucumber and the Gourd, and sometimes hang, though of greater

Of seedes.

weight

weight by much then the fruits of Trées: some requires stayes and helpes to clime by, as Hops, Lupines, and Pease: some sæde groweth better, the newer they be, as Lékes, Nigella Romana, Cucumbers, and Gourdes, and therefore some vse to steepe their Cucumbers, in milke or water, to cause them to grow the spædlier. On the other side, of olde sæde better groweth the Bæte, Garden Cresses, Penirtall, great Marierum, and Coriander. In the Bæte this is onely obserued, that the sæde commeth not all vp in one yére, but part the second yére, and some the third: and therefore of a great deale of sæd, springeth but a little. Touching sæd, this is to be well séene to, that they be not too old and dry, that they be not mingled, or taken one for another: old sæd in some is of such force, as it changeth the nature: for of old Colwort sæde swringeth the Rape, and likewise of Rape sæde Colworts. Also that ye gather not your sædes too soone, nor too late. The very time, as Theophrastus writeth, is at the spring, the fall of the leafe, and the rising of the Dog: but not in all places and kindes alike. Of Sæds, the soonest that spring are these Basill, Arach, Rauen, Rocket, that commeth vp the third day after the sowing, Lettuse the fourth day, the Cucumber and the Gourd, the fift day, Purslin, longer ere it come, Dill, the fourth day, Cresses & Mustard-sæde the fift day, Bætes in summer the first day, in winter the tenth or the twelfth, Lékes the xix. day, sometime the xx. Coriander later: which if it be new, (except it be thrust together) it groweth not at all. Penirtall and great Marierum, come vp after xxx. dayes. Parsly, is of all other the longest before it come vp, appearing the fortieth day after, or many times the fiftieth. You must also consider, that the weather in sowing is of great force: for the season being faire & warme, they come vp the sooner. Some sorts sæd one yére, & neuer after come vp: some againe continue, as Parsly, Smalledge, Lékes, Nigella, that being once sowed, come vp euery yére. Such as continue but a yére, presently vpon their sæding die: other spring againe after the losse of their stalke, as Lékes, Nigella, Onions, and Garlicke: and commonly all such as put out from the side: and all these require dunging & watring. In sowing beside some think, you must haue regard to the Moone, and to sow and set in the encrease, and not in the wane. Some againe thinke it best from that she is foure dayes old, till she bée

What Seed spring soonest, and which slowly.

The weather for Sowing.

The Moone.

eighteene: some after the third, others from the tenth, till the twentieth: and best (as they all suppose) the Moone being aloft, and not set.

THRA. But now I pray you tell vs something of the ordering of the best Garden hearbs you haue.

MARIVS. Some deuide their Gardening time by the Moneths, as they doe their other husbandry.

THRA. I care not whether by Moneths or other wayes, but I would fayne know the ordering of your Garden here, for I know in hot Countries they Garden all the Winter long, but I am altogether for our Country, whose order we must here follow.

The time for Gardening.

MARIVS. In these parts they commonly begin their Gardening (if the weather be faire and seasonable) in the end of February. At this time therefore the Garden being dunged, digged, raked, and cleansed, they vse to plant Sperage, and Rewe.

Of pot-hearbs.

THRA. I pray you begin with Asparagus, or Sperage, and the other Pot-hearbs, euery one in his order: and afterward with Flowres and Physicke hearbs.

Asparagus.

MARIVS. Asparagus was wont to grow wilde, but now is brought into the Garden, it is called in Greeke, ἀσπάραγος, in Italian, Spanish and French, it is almost all one; the one call it Asparago, the other Asperge, the Dutchmen call it Sperages and Spirius, because it comes vp of it selfe: for the Garden Sperage they were not acquainted with. It is planted in two sorts, either of the seede, or the rote: they take of the seede as much as you may take vp with three fingers, and bestowing it in little holes, euery two or three seedes halfe a foote asunder: they set them in rich ground, in February, and couer the ground with dung. The weedes that grow, must bee well plucked away, after the fourtieth day they come vp as it were to one rote, and tangled together: the rotes haue sundry strong threeds, which they call the Sponge. In ground that is drie, the seedes are to be set deepe, and well tempered with dung. In wet grounds, on the other side, they are to be set shallow in the top of borders, left the moisture destroy them. The first yeere you must breake off the stalks that grow: for if you plucke them vp by the rotes, the whole sets will follow, which are to be preserued for two yere with dunging and weeding. All the yeeres after, you must not gather them in

the

the stalke, but pull them from the root, that the roots being opened, may the better spring, which except you doe, you hurt the Spring. Him that you meane to keepe for seed, you must in no wise meddle withall, after, burne vp the bushes, and in Winter dung well the rootes with dung and ashes, they are planted also of the rootes, which after two yeares you must remoue into a warme and well dunged ground. The trenches where you meane to set them, must stand a foot a sunder, and a shaft-man in depth, wherein you must so lay your Sponges (as being couered) they may best grow: but in the Spring before they come vp, you must loose the earth with a little Forke, to cause them the better to spring, and to make the roots the greater. Cato would haue you to rake them, but so, as you hurt not the roots, and after to pull the plant from the root: For if you otherwise breake it, the root will die, & come to nothing. But you may so long crop it, till you see it begin to grow to seede: in which yeare for the Winter time, you must according to Catoes minde, couer it with straw, or such like, least the cold doe kill them, and in the Spring open it againe, and dung it well. Some thinke, that the first yeare it is needlesse to doe any thing to the plant, but onely to weede it. From the roots, which they call the Sponges, there springeth first certaine buds with crumpled knops, very good and pleasant for Sallets: which if you suffer to grow, it straightway bustheth forth with branches like Fennel, and at length grow to be prickly: after it hath flowred, it beareth a Berry, first greene, and when it is ripe red. If you would haue Sallets of Alparagus all the yeare through: when you haue gathered the Berries, open the rootes that runne aloft by the ground with digging, and you shal haue the roots send forth new buds out of hand. It is thought, that if you breake to powder the horne of a Ram, and sowe it, watring it well, it will come to be good Sperage. In the Spring time they make a very good Sallet, being sodde in water, or fatte Broath, till they be tender: for if you seeth them too much, they will waste away. When they be sod, they dresse them with Vinegar, Oyle, Pepper and Salt, and so eate them: or as my friend William Prat, very skilfull in these matters, telleth me, they cut them in small peeces like Dice, and after they haue parboiled them, butter them with sweet Butter, a little Vinegar and Pepper.

THRA. You haue very well shewed me the ordering of Asparagus: I pray you goe forward to Rewe.

Rew. MARIVS. Rew, which the Greekes call πήλεφον, the Latines Rutam, the Italians Rutache, the Spaniards Ruda, the Frenchmen Rude de gardin, is planted at the end of Februarye, or in March, prospering best in drie and Sunnie grounds, it abhorreth both water and dung, which all other hearbs most delight in, it most delighteth in ashes: and where all other plants will spring of the seede, this they say will neuer doe it. The branches being slipped off, and set in the spring, will very well grow, but if you remoue the old root, it dieth: it delighteth in the shaddow of the Figge tree, and being stolne (as they say) it prospereth the better: it is sowed with cursing, as Cummin, and diuers other, and cannot abide the presence of an vncleane woman.

THRA. I see good Lettuse here, I pray you how doe you order it?

MARIVS. Lettuse is called in Dutch Lattich, in French Laictue, in Greeke θρύδαξ, in Italian Lactuca, and so in Latine, in Spanish Lechugas, whereof besides the wilde, there are three kinds, one crumpled, which Columella calleth Cæcilia, and Spanish Lettuse, of the Countries where it most groweth, and is greatest esteemed, in Dutch called Krauser Lattich, in French Crespue, the other Cabbedge Lettuse, in Dutch Knopf Lettice, in French Laictue testue, of Plinie called Laconica, and Sessilis, because it groweth round like an head, or an Apple. The third sort is called Rotunda, because it groweth in compasse vpon the ground?

THRA. But how come you to haue so good Lettuse, and how doe you order them?

Lettuse. MARIVS. At the end of Februarye, or in the beginning of March, we vse to sow it, that it may be remoued about Aprill or May. In hot Countries as Palladius telleth, they sow it in Januarie, or in December, with intent to remoue it in Februarye: but you may sow it at any time of the yeere, so the ground be good, well dunged, and watred. When you remoue them, the rootes must be pared and rubbed ouer with dung, and such as be already planted, their rootes must be pared and dunged: they loue a good ground, moist and well dunged, they spread the better (if you set by them the Rape) or when they begin to stalke, the stalke being tenderly

cloven,

clouen, you lay vpon it a clod or a Tileshard: they will be white, if you sprinckle them often with sand, or tie sand within the leaues, and both tender and white you shall haue them. If two daies before they be gathered, their tops be tyed vp, they wil be round and Cabbedged. If the rote being remoued when it is growne a hand broad in height, be pared and smered with fresh Cow dung, and earth cast about it, be well watred, and when it groweth high, the top be cut, a potshard laid vpon it, the swéter also they will be: the more you restraine the stalke from shoting vp, which must as I said, be kept downe with some stone or waight, that they may spread the better. If the Lettuse chaunce by reason of the badnesse of the soyle, the séede, or the season, to ware hard, the remouing of it will bring it againe to his tendernesse: it will haue sundry and diuers tasts, if taking a Treddle of Shéepe, or Goates dung, and hollowing it cunningly with an Awle or a Bodkin, you thrust into it the séede of Lettuse, Cresses, Basill, Rocket, Smallage, Percely, and Raddish, and after wrapping it in dung, you put it into very good ground & water it well. The Percely, or Smallage goeth to rote, the others grow in height, kéeping still the tast of euery one. Constantine affirmeth Lettuse to be a moyst and cold hearbe, a quencher of thirst, and causer of slépe: and that being boyled, it nourisheth most, and abateth Letcherie, for which the Pythagorians call it Eunuchion. Galen himselfe the Prince of Physitions doth greatly commend it, who in his youth did alwaies vse to eate it raw, and after in his elder yéeres boyled, whereby he kept his body in good temperature. Endiue, in Latine, Intubum, or Intubus, not vnlike to Lettuse, Endiue. some call it Garden Succorie, the Dutchmen, and common sort, Endiuiam, the Italians and the French, Cicoriam, the Spaniards, Endibia: it is sowne as other Garden hearbs in March, it loueth moysture and good earth, but you must make your beds when you sow it the flatter, lest the earth falling away, the rotes be bared: when it hath put forth leaues, you must remoue it into well dunged ground: that which is sowne before the Kalends of July, doth come to séede: but that which is sowne after, séedeth not. You must sow that which you would haue to serue you in winter, in October, in warme stonie places for Sallets in winter; they vse at this day when his leaues be out, to fold them

vp

vp together, and tie them round in the top with some small thing, couering them with some little earthen vessell, the rootes still remaining to nourish them withall: thus doing, they will grow to be white and tender, and to lose a great part of their bitternesse. It is said, that they will be white, if they be sprinkled a few daies abroad, and lying vpon sand, be washed with the raine: And thus is Endiue with his encrease preserued all Winter. Some there be, that contenting themselues with lesse charges and labour, doe only couer them with earth, others againe with straw: this order of wintering of it, is now in euery place growne to be common.

Colworts. THRA. I see also in this pleasant Garden Colwoorts, that we Countrey folkes be so well acquainted with.

MARIVS. It is meete my Garden should not want that, which as you know Cato preferreth before all other hearbes, in describing the wonderfull properties and vses thereof: and this place I onely appoint for such common Pot-hearbes, as Colwoorts Beetes, Endiue, Onions, Rapes, Nauenes, Leekes, Carrets, Raddish, Garlicke, and Parsneps: the worthier sort I place by themselues, and as the nature of euery one requireth. Colworts is commonly called in Latine Brassica, or Caulis, in Greeke κραμβή, in French Choux, in Italian Caule, in Spanish Verza, in Dutch Koil. The olde writers made diuers sorts of it, as at this day there be. One sort with great and broad leaues, a big stalke, and very fruitfull. This sort is commonly knowne, which being the pleasanter in Winter, when it is bitten with the frosts, is sod with Bacon, and vsed in Porredge. The tender part of the top being a little boyled, is serued for Sallets, dressed with oyle and salt. The second sort with the crumpled leafe, of the resemblance that it hath to Smallage, is called Selinoeis or Apiaria, of the common people crumpled Coll, or wrinckled Coll. The third sort which is properly called Crambe, hath a smaller stalke and leafe, smooth, tender, and not very full of iuyce. The fourth sort is the great Cabbedge, with broad leaues and a great head, called in Dutch Rappes, in French Cheuz Cabuz, of the olde writers Tritiana Brassica, and this kinde is onely most set by. In Germanie there is one kinde of them that they call Lumbardy Colwort, or Sauoy Colwort, sweeter then the other, and not able to endure the Winter: and another with very broad leaues crumpled, and

full

full of wrinckles, but a great deale blacker, which the Italians call Nigrecaules, and the Latines Nigra Brassica, of the number of those that they call commonly red Coll, of the olde writers Marucina Brassica. There are besides other sorts, taking their names of the Countrey where they grow, as Aricina and Cumana. The best time for setting and sowing of Collworts, is after the Ides of Aprill. In cold and raynie Countries, the oftner it is dunged and raked, the better a great deale will the Collworts be: some vse to sowe them about the Kalends of March, but the chiefest of it goeth out in leafe, and when it is once cut, maketh no good stalke for the Winter after: yet may you twise remoue your greatest Coll, and if you so doe, you shall haue both more seed, and greater yeeld: for it so aboundeth with seede, as it is sowed with no lesse aduantage then Rape seede. For the making of oyle, Collworts may be sowen all the yeere long, but chiefly in March after it is sowed, it appeareth within ten dayes, except your seedes be old and dry, for old seede will grow to Rapes, as old Rape seede will to Collworts. Some say it prospereth best in salt ground, and therefore they vse to cast vpon the ground Saltpeter or ashes, which also destroyeth the Caterpiller: it is remoued in June, chiefly when it hath put forth fiue leaues, and that when the weather is rainie, so that you couer the rote before with a little fresh dung, and wrap it in Seawreede, and so set it. More diligence is to be vsed about the Cabbedge: it must be sowen in March in the full of the Moone, that it may remaine in the ground two Moones, and in May you must take them vp, and set them againe two foote asunder. The ground must be well digged where you set them, and as fast as they grow, the earth must be raised about them: so that there appeare no more than the very tops of them: for to cause them to grow faire and great: you must as oft as you remoue them, banke them vp with earth about them, that nothing but the leaues appeare. And thus you must often doe to all the kinds of them, the hoare frosts make them haue the greater sweetnesse. The Vineyards (they say) where Collworts grow, doe yeeld the worser Vines, and the Coll corrupteth the Wine.

THRA. I pray you procéede with the rest of these pot-hearbs.

MARIVS. You see hereby Spinage, so tearmed (as you may know) of the prickly seedes, called in Latine Spinacia, and Spinage.

such

euen so in Italian, Spanish, French, and Dutch: it is sowne as those before, in March, Aprill, and so till September: if it may be well watred, it commeth vp in seauen dayes after the sowing, you shall not néede to remoue it. The séede must presently after the sowing be couered, and afterward well wéeded: it refuseth no kinde of ground, but prospereth in euery place: you must often cut it, for it continually groweth, it is to be boiled without any water, where in the boyling it doth yéeld great store of iuyce, and contenting itselfe with his owne liquour, it requireth none other. Afterward, being beaten and stirred with the Ladle, till the clammines be gone: it is made vp in little balles, the iuyce strained out, and boyled vpon a Chafyndish with Oyle or Butter, some adde thereunto Vergius, or the iuyce of sowre Grapes, to make the taste more tarte. I shew you in order as you sée, all my Kitchin hearbs: now followeth Sorrell, called in Latine, Acetosa, in Italian likewise, in Spanish, Romaza, in French, Oxella, in Dutch, Surick, of the sowrenes thereof. There are sundry sorts of it: we haue at this day two kinds, the garden Sorrell & the wilde, which are pleasant both in broth & Sallets, and of this hearbe, the wilde sorts are both sowre in taste, and smaller in leafe: it is sowed as all other pot-hearbs are, and it groweth of it selfe in Meddowes and Gardens. Cummin and Coriander require wel ordred ground: they are sowed in the spring, and must be well wéeded. Cummin is called in Latine, Cuminum, and almost like in all other Languages: it is sowed best (as they thinke) with cursing and execration, that it may prosper the better. Coriander is called in Latine Coriandrum, and is almost by the same name in al other tongues: it doth best prosper when it is sowed of séede that is oldest. Smalledge and Parsly, called in Latine, Apium Petroselinum, and Apium hortense, in Italian, Apto domestico, and Petrosello, in Spanish, Petersillie, or Peterlin: it is sowed at the Aequinoctiall, in the spring time, the séed beaten a little, and made vp in round pellets: we call it Aequinoctiall when the night and the dayes are of equall length ouer all the world: that is, when the Sunne, the Captaine and Authour of the other lights, the very soule of the world, doth enter into the signes of Aries and Libra. It is thought to prosper the better the older the séede is, & to spring the sooner: it commeth vp the fiftieth day, or at the soonest the fortieth day

Sorrell.

Cummin and Coriander

Smalledge or Parsley.

after

after it is sowne: when it is once sowne, it abideth a long time, it reioyceth in water or wet. Fenell, in Italian Fenochio, in Spanish Hinozo, in French Fenoil, in Dutch Fenchel, is sowed in the beginning of the Spring, in hot sunny places, stony ground, or any ground: being once sowne, it springeth euery yeere. Annise, in Latine Anisum, so knowne in most tongues, as Cummin and Coriander: requireth a ground well ordred and dressed. Dyll, in Latine Anethum, in French and Italian almost so, in Spanish Eneldo, in Dutch Dyll, endureth and abideth all kinde of weathers, but delights most in warme ground: if it be not well watred, it must be sowed thinner. Some neuer couer the seedes when they sow them, supposing that no Bird will meddle with it: it commeth vp also of it selfe as Fennell doth. Cheruill, in Latine Cerofolium, in Dutch Kerbell, in Italian Gingidia, in French Cerfucil, desireth a good ground, moyst, and well dunged: it is sowed with the rest in cold places. In this same Moneth they also sow Beetes, though you may sow them when you will at any other time of the yeere as Spinage, it is a common Countrey Hearbe: they call it in Italian Beitola, in Spanish Acelga, in Dutch Beeet, or Mangelt. No Garden hearbe hath greater leaues, so that with due ordring, it groweth like a young tree. It is called Beta, because when it seedeth, it is (as Columella affirmeth) to the likenesse of the Greeke letter β. There be two sorts of them, the white and the blacke, the ordring of them is after one sort: it is sowed as Collworts, Sorrell, and Radish are, in March, Aprill, or May. Some thinke the best time for sowing it is while the Pomegranate doth flowre: it may be sowed neuertheleſſe as Lettuse, Cols, and diuers others, at any time of the Summer. The seede, the older it is, the better it is to be sowne, as are the seedes of Smallage, Parsley, Garden Cresses, Sauerie, wilde Marierum, and Coriander, though in all other the newest be best. It commeth vp in Summer the first day, in winter the tenth after the sowing: it loueth a moyst, a rich, and a mellow ground: you may remoue it when it hath put forth fiue leaues, if your ground like well to be watred: if it be drie ground, it must be set in the end of the Summer, as I haue said of Collworts, though it make no great matter at what other time you doe it. When you remoue it, you must rubbe ouer the roote with new dung. This is

Fenell.

Annise.

Dyll.

Cheruile.

Beetes.

proper

proper to the Béete, that his séede come not all vp together, but some the yéere after, some the third yéere: and therefore of a great deale of séede, there is at the first but a little shew, it groweth the broader and the whiter, if when it is something growne, you lay vpon it Tile stones, or such like, to cause it to spread, as I spake before of Lettuse. Garden Cresses, in Italian Nasturtio, & Agretto, in Spanish Mestuerzo, in French Cresses de gardin, in Dutch Kers, are sowed both in the Spring, and at the Fall of the leafe, it commeth vp the first day after it is sowne, and drinketh away the moysture from such hearbs as grow néere him: mingled with other hearbs, he careth not what weather come, and therefore prospereth both as well in Winter as in Summer: if it be sowne with Lettuse, it commeth vp excédingly, it delighteth in moysture, which if it want, it will doe well enough: in watry places it groweth of his owne accord: as about Padelbor, a towne in Westphalia, it groweth in great abundance in the Riuer, and therefore is called of some Water Cresses: it was called in the old time Sisimbrium. The branches when they ware old, are netted together with white hayry rings. Garden Poppy, called in Latine Paupauer satiuum, is thought best to grow where olde stalks haue béene burnt: it is sowed in warme places, with other Pot hearbs. Mustard-seede, in Latine Sinapi, in Dutch Seneff, in Italian Senape, in Spanish Mostaza, in French Seneue, there are two kindes, white and blacke: it is best to be sowed in the end of Summer, and againe in March. Where it is once sowne, it is hard to ridde the ground of it againe, because the séede doth still grow as it falleth. It loueth to grow vpon dung-hils, and cast bancks.

Garden Cresses.

Garden poppy.

Mustard-seede.

THRA. I sée you haue very fayre Raddishes here.

MARIVS. Nothing so faire as I haue had them, for where as they delight in the Sunne, & in warme ground, my Gardners haue here set them in the shadow. The order of them is to be set in very good ground, and lying vpon the Sunne: some say, it doth not greatly care for dung, so it may haue chaffe strawed vpon it: when it is come to some growth, they must be couered with earth, for if it flourish once aboue the ground, the rootes will neuer bée good, but hard and full of pith. It is called Raddish, because it excédeth all other rootes in greatnesse. Plinie writeth, that hée

Raddish.

saw at Erford in Germanie, Raddish as bigge as the body of an Infant. It is sowed twise in the yeere, in February or March, the Moone being in the wane, lest it grow too much in leaues, foure fingers distant one from the other: and againe in August, which is the best season for them. Those that you set after the tenth of June, will neuer seede, the like is to be obserued in all other seeds: it commeth vp commonly the third day after it is sowen: in hot and Southerly Countries, the weather being faire, it groweth sone to stalke: and quickely seedes. The leaues as they grow, must still be trampled downe and troden vpon, whereby the rote shall grow the greater: otherwise it flourisheth with leaues and giueth encrease to the leafe, and not to the rote: the lesse and the smother the leafe is, the milder and the sweeter is the rote: colde as some say, doth further the goodnesse of them, they say they will be very pleasant, if the seede be steeped in Meedth, or in the iuyce of Ratzins: they ware sweet with colde as the Rape doth, and their bitternesse is taken away with vrine, and therefore some would haue Radishes watred & nourished with salt waters: being sodden they come to be very sweet, and serue the turne of Rapes: giuen fasting, they prouoke vomite, they are hurtfull to the veines and to the teeth. Raddish eaten at first, is a good preseruatiue against poyson: eaten before meate, it breaketh winde, and prouoketh vrine: & after meate it loseth the belly, it is called in Latine Raphanus, in Italian Raphano, in Spanish Rauano, in French Raue, in Dutch Retich.

THRA. There is another kinde of them, that the Dutchmen call Merrettich, I take it to be that which the Romanes called Armaracia, called commonly in Italy Ramaracia, the first letter misplaced.

MARIVS. You say well, but this is more full of braunches, greater in leaues, thinne in body: the leaues are not vnlike to the former Radish, but that they are a little sharper and longer, and the rote slenderer, and therefore there are some that denie it to be Armaracia: but here let the Philitions contend. Theophrastus maketh mention of sundry sorts of Radish: This kind of Radish hath a wonderfull byting taste, a great deale more then Mustard seed, and fetcheth teares from the eyes of them that eate it: it is set

and

and planted in this sort. The rote is cut in a great number of peces, whereof euery piece prospereth: for if you plucke vp this kinde of Raddish by the rotes you may cut off a good quantitie of the rote, and deuiding them into small peces, setting the olde rote againe by himselfe, and they will all grow and prosper very well.

THRA. Yea: haue you gotten the Rape? Hitherto I thought hee had onely belonged vnto vs, for we vse to sow them after the Sunne hath beene at the highest, and immediately after our other Corne, for the sustenance both of man and beast.

Rapes. MARIVS. You doe well, and we sow it now in May, and in watry ground sooner, and in some places in July. There are diuers sorts of them, some of them round, some grow all in length, and are most pleasant in taste, as at Bingæ, and in the Country of Bauar. Some againe of the quantitie of a mans head, and of a hundred pound weight: but the smallest sort is the sweetest. There is another kind of Rape that they vse to sowe, which carrieth his seede in little Cods, & is chiefly planted in Germanie for to make oyle of, the which you, the other day, spake of, it is called in Greeke γολγλες, in French Raue, in Italian Rapo, in Spanish Nabo, in Dutch Ruben. There is also another wilde kinde called Rapunculus, that groweth halfe a yard high, full of seed, and tender topped. This they gather in the Spring time, before the stalke be sprong vp, & pulling it vp by the rotes, do vse it in Sallets, supposing it to be a wilde kinde of Rape. The Nauens also called in Greeke γολμύλης, in Latine Napus, in French Nauet, in Italian Napo, in Spanish Nabicas, in Dutch Stockruben, may be counted in the number of Rapes, for Rapes in some ground change into Nauens, & in some ground, Nauens into Rapes. These also loue to grow in a well watred, mellow, and a rich ground: though such as grow in sandie and barren ground, proue often the sweetest in eating. They vse to sowe them in March, and in some places before, as also in August. Parsneppe in Greeke σαφελῖνος in Latin Pastinaca, in other tongues almost as in Latine, is very pleasant to be eaten, and requireth a fat and rich ground, and deepe digged, whereby the rote may haue roome enough to grow in: it is sowed and set in the spring, and in the end of Sommer.

The little Rape.

Nauens.

Parsneps.

Red and yealow Carrets. THRA. You haue here also in this Garden red Carrets.

MARIVS.

MARIVS. I haue so. Yellow Carrets is called in Latine Siser, in French Cheruille, in Italian Sisero, in Spanish Chirouias, in Dutch Querlin. I thinke you know it. Plinie writeth, that Tiberius was so in loue with this rote, that he caused Carrets to be yeerely brought him out of Germanie, from the Castell of Gelduba standing vpon the Rhine. It delighteth in colde places, and is sowed before the Kalends of March, and of some in September: but the third and the best kinde of sowing as some thinke, is in August. There is also wilde Carrets, a kinde of Parsnep, in Latine Daucus, in Italian Dauco, in French Carote sauage, in Dutch Woortzel, there are that suppose it to be the yellow rote, that is so common in Germanie, they are to be sowed in March. It is generall to Rapes, Radishes, Parsneps, Carrets, Onions, and Leekes, that they be well troden vpon, or kept cut, to the end the rotes may grow the greater. Of Leekes there are two sorts, the one called Capitatum, and the other Sectiuum, which they vse alwaies to cut close by the ground. The headed, or set Leeke, in Latine Capitatum, in Italian Porro capitato, in Spanish Puerro con Cabeza, in Dutch Lauch, in French Porreau, the other Leeke in Latine Sectile, in Dutch Schnitlauch, beside the often raking and dunging, must be watered as oft as you cut it downe. The seedes in hotte Countries, is sowed in Januarie or Februarie, and in colder places, in March: to cause it to growe the fairer and the better. They vse to knit vp a good deale of seede together in thinne Linnen cloathes, and so to lay them in the ground: but to make them greater headed, when it hath well taken rote, they vse to plucke it vp by the blades, and raise it so, that as it were hanging and borne vp by the earth, it is forced to fill the emptie place that lies vnder it: the blades and the rotes cut off, they vse to set the heads, vnderlaying them with a Tileshard, that when as they are not able to runne downe in length, they should be driuen to grow in bignesse and breadth. The Leeke delighteth in good ground, and hateth watry ground: sowed in the Spring, it must be remoued or set againe after Harueste, that they may be the greater, the earth must be continually loosed about it, and they must be pulled and rayled vp, as I said before: if when you remoue them, you make in the heads of euerie one a little hole with a peece of Reede, or any thing except

Leekes.

Iron, and thrust therein a Cucumber séede, they will grow to a wonderfull greatnesse: some vse in stead of Cucumber séede, to put in Rape séede. To haue very large and great Léekes, you must hollow a Treatle of Goates dung, and fill it full of Léeke séede, for the little sprout at the first restrained, will runne altogether in one, and so come forth of the ground: and this as Hieronimus Cardanus writeth, hath béene often tried to be true. They shall not sauour of Léekes or Onions, that haue eaten Cummin after. It commeth vp the tenth day after the sowing, and lasteth two yéere: the first yéere it contenteth it selfe onely with bearing of leaues, the next yéere it riseth in a long stalke hollow within, the top garnished with round knops of flowres. The Onion: in Latine Cepa, or Cepe, in Italian Cipella, in Spanish Cebolla, in French Oignon, the next neighbour to the Léeke: is also of two kindes, the one kinde called Capitatum, that growetb to head, the other Fissile, that without any head onely flourisheth in blades, and is often gathered as Léekes are, and therefore onely is sowne, and not set in Februarie or March in faire weather, and in the wane of the Moone: it delighteth in rich ground, well digged and dunged, and therefore Columella would haue the ground well fallowed, that it may be mellowed with the Winter frosts, and after dunged, after well digged againe, and the rootes and wéedes cast out, laid out in beds and sowed: it is called Fissile, because it is parted and diuided below, for in the Winter it is left with his top naked: in the Spring time the blades are pulled off, and others come vp in their places. The heads are set, and if you plucke away the tayles and the out-growings when you set them, they will grow to be very great. Twenty dayes before you set them, digge the ground well, and lay it dry, and so shall they prosper the better. The heads are set in Autumne, and grow to séed as other plants doe: if you meane to gather the séedes, when the stalke is growne, you must prop it vp with little sticks, that the windes shaking of the stalke, shatter not the séedes, nor breake the stalke: which séede you must gather before it be all blacke, for the blacknesse is a true signe of the full ripenesse: if you will not haue it séed but head, plucke off the blade still close by the ground, so shall all the maintenance goe to the roote. Among all other hearbs, onely the Onion is not subiect to the force of the Moone, but hath a contrarie

Onions.

Fissile.

Onions.

trary power, for it wayeth in the wane of the Mone, and decreaseth in the encrease of it: yet there are that hold opinion, that if you sow them in the wane, they will be the smaller, and sowzer; and in the encrease, they will be the greater, and the milder. The red Onyon, is more sharpe then the white, they are best preserued in Barley chaffe, if first you dip them in hot water, and after dry them in the Sunne, till they be through dry. They are of the common people thought to last longest, being hanged vp in the smoke: for the kindred it hath with the Onyon, I procéede to speake next of Garlicke, called in Latine Allium, in Italian Aglio, in Spanish Aio, in Dutch Knobloich, in French Aux, it groweth with a blade like the Onyon, but not hollow, the stalke round, and the flowres in the top in a round tuft where the séede lyeth. Garlicke groweth both of the head and the séede, as the Onyon and other of this kinde doth. It is commonly sowed in February or March, according to the disposition of the weather, as the Onyon is. It would be set in the vppermost part of little narrow ridges, the Cloues being distant foure or fiue inches one from the other, and not very déepe. After, when the Cloues haue put forth the little strings, or when their blades are come vp, they must be well raked, for the oftner yée doe so, the greater they will be: but if you will haue the heads the greater, before it grow to stalke, you shall winde and wreathe the gréene blades together, and tread them to the ground, for that continuall treading vpon them will make them the greater. In October the Cloues must be plucked asunder, & set in row vpon high borders, that they may scape the danger of the winter stormes. They say the scent of them will cease if you eate after them the rote of Béets tosted at the fire: thus saith Plinie out of Menander. Garlicke.

THRA. What hearbe is that yonder, that commeth vp so hie as a man may make a staffe of the stalke, the leaues large and round, the flowre in shape séeming to compare with the Rose?

MARIVS. It is Holioke, or Garden Mallow, in Latine Malua hortensis, in Dutch Peppel, in Italian and French almost as in Latine. Mallowes.

THRA. What, the same that Horace taketh to be so wholesome for the body? and which of Hesiodus and Martial is so highly commended?

MARIVS. The very same: and also which is more wonderfull in it, the leaues turne about with the Sunne, so that it may serue in stead of a Dyall, declaring by the turning of his leaues what time of the day it is, though the Sunne doe not shine, which the Philosophers thinke to be done, by the drawing of his moysture. In Affrica, as Plinie writeth, it commeth in seauen moneths to be like a young tree, and serues well for a walking staff. It is sowed in October, or in the end of the Summer, as also at other times, that by the comming on of winter, it may be restrayned of his high growth: it reioyceth in rich and moist ground, and must be remoued when it commeth to haue foure or fiue leaues, it groweth best when it is young: when it comes to be greater, it dies in the remouing. We vse it both for the pot and for sallets, the taste is better when it is not remoued: you must sowe it but thinne for growing too rancke, and in the midst of them, you must lay little clods or stones, it requireth continuall raking, and maketh better the ground where it growes.

THRA. I maruaile whether you sow Purcelaine, sith it groweth wilde abroad.

Purslaine. MARIVS. The Latines call it Portulacan, with the Italians it hath the same name, in Spanish Verdolaga, in French and Dutch Porchelle, it is sowed in Gardens, and well ordered doth grow the better, and spreadeth the farther, it hath a blacke seede growing in little greene cups.

Buglose. THRA. Buglose, that the Latines call Buglossum, the Dutchmen Ochsenzung, or Burretsth, the Frenchmen Borauge, the Italians Borache, the Spaniards Borae. Is not this it that I see here with the faire blew flowre, and a stalke a foot long, and full of branches?

MARIVS. Buglose is at this day with the Pothicaries called Borage, though they differ something in the flowre, and in very deede they are two sundry Hearbes: for some call the common Borage, the lesser Buglose, and the greater Buglose is thought to be that which Dioscorides calleth Circium, the true Buglose: the flowres of both sorts are vsed in Sallets and in Wine, because it maketh the heart merry, and therefore is called in Greeke ὑυφροσυνὴ, that is to say, gladnes: the leaues are also vsed in dressing of meates, it is sowen about March, & once sowen

it will neuer away, there is also a wilde kinde of it.

THRA. I pray you goe forward, and tell vs some thing of Strawberries, which here grow with great plenty and beauty, helped as it seemeth with good ordering.

MARIVS. They are so, for wee vse to bring rootes out of the woods, which being set and planted in the Garden, prosper exceedingly two or three yeares together: and after, wee eyther remoue them againe, because they waxe wilde, or set the wilde in their places: and so haue we them to yeld their fruit twise in a yeere, in the Spring, and in the end of Summer. And although it groweth of it selfe in shaddowy woods in great plenty, as if it delighted in shadow of Trees, yet being brought into the Garden, it delighteth in sunny places, and good ordering, yelding a great deale more and better fruit: it creepeth vpon the ground without a stalke with small strings comming from the roote, with a white flowre, and a leafe like a Trefoile, indented about. The berries, which is the fruit, are red, and taste very pleasantly: the Dutch men call them Erdbern, the Frenchmen Freses. There is another fruit that groweth something higher, whose berry is also like the Strawbery. Dioscorides seemeth to call it Rubus Idæus, the Briyer of Ida, because it groweth in great abundance vpon the Mountaine Ida. It is not full of prickles, as the other brambles are, but soft and tender, full of branches and whitish leaues, it beareth redde berries, something paler than the Strawbery, and very pleasant in taste. The Dutchmen call it Imberen, the Frenchmen Framboſas. Strawberies. Raspes.

THRA. What is that groweth yonder, a yard in height?

MARIVS. It is commonly called Liquerise, in Latine Dulcis Radix, in Italian Regolitia, in Spanish Regaliza, in French Reclisse, in Dutch Clarits, or Susthoits. Liquerise.

THRA. I did not thinke to haue found it here. I heare it groweth very plentifull about the Meine, I would be glad to heare how doe you order it, for it hath a roote for the sweetnesse thereof (whence it taketh his name) very commendable.

MARIVS. It is set of young springs of the roote: as the Hoppe is, in drie light ground and sunnie.

THRA. What say you to small Reazins, called in Latine Ribes, doe you thinke the olde writers knew this bush? Small Reazins.

MARIVS. That which we call at this day Ribes, and the Dutchmen Saint Iohns Pearle, because about Midsummer it is garnished with red and rich berries, hauing a tarte taste, quenching thirst, chiefly, the raging and extreame thirst of feuers, and cooling the stomacke, which the Apothecaries in Suger or Honie keep all the yere, it is thought it was vnknowen to the olde writers: but now a common bush vsed for enclosing of Gardens, and making of Borders and Arbours: it will easily grow, but that it is something troublesome, by reason of his sharpe prickles to be bent about Sommer-houses.

Hoppes. THRA. You spake euen now of Hops, doe you set in these your princely Paradises, that plant that is so common with the Countrey man about vs? they make great gaine of it.

MARIVS. Tell you therefore, I pray you, how they doe vse it.

Reade the perfect ordering hereof, in Master *Reynold Scots* booke of Hoppe-Gardens.

THRA. It is set of the yong shootes, as you tolde a little before of Liquerise, and that in the end of Sommer: or if they feare a hard winter, in March. The sets or shootes are cut from the olde roots, and are set in ground well couered with doung and good mould, and afterward hilled, and so suffered to remaine all Winter. In the spring, the earth is stirred with Rakes, and not with Spades, and the hilles raised, and the ground rid of all hurtfull weedes. About Maie, certaine powles are set vp, vpon which the Hoppe climbeth: all the spray that springeth aboue the flowre is commonly cut off. About September, or in the end of August, the flowres or bels are gathered and kept to make Beere with: when the Hoppes are gathered, the remaines are cut downe close to the ground, and the Hils being againe raised, are couered with dung. The tops, and the young buds that come first out in April, are vsed to be gathered for Sallets, and keepeth them from growing to ranke. But now I pray you goe on, and returne to the description of your Garden. O what excellent Melons, Pompens, Cucumbers, and Gourdes haue you here, I pray you tell in what sort you order them.

Cucumbers.

MARIVS. Melons (which some, because they are fashioned like Apples, call Pomes) are of like kinde of Cucumbers, and so are the Pepons, which the Frenchmen call Pompeons. The Cucumbers are called in Latine Cucumer, in Italian Cucumero

or

or Gedruolo, in French and Dutch Cocumbre. They change to Pompeons, and Muskemillions, from which they onely differ in shape and greatnesse: when they exceed in greatnesse, they become Pompeons, and when they grow round, they are Melonpompeons: all these kindes are called of some writers Melons. The Grecians call all the sorts, as well Cucumbers as Melonpompeons, by the name of Pompeons and Melons, though there are some that make a difference betweene Pompeons and Melons, neither doe the learned yet throughly agree vpon these names, nor can it be certainely said what kinde the olde writers meant by Pompeons, & Melonpompeons. Pompeons doe creepe along vpon the ground with rough leaues and yellow flowre, and are pleasant to be eaten when they are ripe. The sweetest sort of them they call Succrino, or Muskemillions. The Melonpompeons are supposed to spring first in Campania, being fashioned like a Quince. This kinde hangeth not, but growth round lying vpon the ground, and being ripe, doe leaue the stalke,

Some Cucumbers are called Citrini, of their yellownes when they be ripe, and also Citruli, or Citreoli, they grow all in length, and are spotted as the Citrons are: some be called Marin, and be called in Italian Cucussæ Marinæ, the seed whereof is to be eaten before they be ripe: they are cut in peeces, and porredge made of them, not much vnlike in fashion to the Melon. There is also another kinde of Cucumber of a huge compasse, almost as big as a bushell: the Mowers and Harvest folkes in Italie, vse to carry great peeces of them to the field with them to quench their thirst. You must set all these kindes in March, the seedes must bee set thinne, two foote one from another, in watrie ground well dounged and digged, specially sandie ground: you must lay them in Milke, or water and Honny three dayes: and after drie them and sowe them, so shall you haue them very pleasant. They will haue a very sweet sauour, if their seedes be kept many dayes among Rose-leaues. Your Cucumbers shall be long and tender, if you set vnder them water in a broad vessell, two handfuls vnder them. They delight in water so much as if they be cut off, they will yet bend toward it, and if they hang or haue any stay, they will grow crooked, as also if you set oile by them, which they greatly abhorre. The flowers being suffered to grow in pipes, do grow a

wonderfull length. They loue not the Winter no more then doth the Gourd, whereunto they are almost like in nature: for the flowers, the leaues, and the clasپers, are like of them both: but the Gourd is more busie in climbing, so that with hasty growth, it spreadeth quickly ouer the hearbs and Summer-houses, running vp by the walls, and mounting vp to the very Tiles of the houses, hauing a great fruit of a monstrous bignesse: hanging by a small stalke, in fashion like a Peare, and greene in colour, although when it hath flowred, it will grow in what fashion you will haue it: they say, there hath beene some of them nine foote in length. The round ones also grow to be vsed for great vessels: the rinde of the new ones, is soft and tender, but of the old ones hard, whereof when the meate is out, trauailers make great bottels to carrie drinke in. The Gourds that are vsed to be eaten in Summer, are sundry in shape, some are round, some long, some broad: and though the fashion be diuers, yet the nature is all one: for it is made by Art to grow in what shape you will, as in the forme of a creeping Dragon, or what you list, they are called in Italian Zuma, in Spanish Calabaz, in Dutch Kuirbisch, in French Vne courge. The seeds that the Gourd beareth next to the stalke (as Paladius saith) are longest, they in the middest round, and those that lie on the side, short, broade, and flat: if you set the sharpe end of the seede downeward, as Columella saith, you shall haue them both greater Gourds and Cucumbers. It delighteth in a moist, rich, well dunged, and well watred ground. That which growth without water, brings the pleasanter fruit: and that which hath water enough, needes the lesse looking to. The flowers where they be set, must be digged a foote and a halfe deepe, the third part whereof must be filled with straw, and then with good rich mould: it must be filled to the middest, then the seeds being set, must be watred, till they be sprung. and after, earth laid to them still as they growe, till the Furrow be filled. They must be set thinne, two foote a sunder, it commeth vp in fiue or seauen dayes after the setting. Those that are set in dry ground, must be verie well watered, therefore they vse to set by them earthen pots full of water, with ragges or cloutes in them to water them. When they be a little growen, they must haue helpes set by them to climbe vpon, the longer they be, the better the meate is.

Gourds

You

You must beware there come no woman nêere where you sette them, for their presence doth greatly hurt them. Those that you kêepe for sêede, you must suffer to remaine vpon the stalke till Winter, and then gather them, and drie them, either in the Sunne or in the smoake, for otherwise the sêede will rot and perish. They will long be preserued, and continue fresh, if after they be gathered, they be put into a close vessell with the Lêes of white wine, or hanged in a vessell of Vinegar, so that they touch not the Vinegar.

THRA. What meaneth that great Thistell that springeth there?

MARIVS. Did you neuer read in your Columella of the Hartichoch, specially in his verses that he wrote of Gardening, where he saith:

Goe set the brystled Hartichoch,
That well with wine agrees, &c.

Athenæus in his second booke Dipnosophus out of Sophoclus.

A Thistell is the Hartichoch that euery where doth grow. It is a kinde of Thistell, by the diligence of the Gardner, brought to be a good Garden Hearbe, and in great estimation at Noblemens tables: it is as you sêe, framed with a ground prickly head, hauing a great sort of Flakes set in order stêeplewise. The Latines call it Strobilum, because the fruit of it something resembleth the Pine-apple. The Frenchmen call it Alticocalum of the Arabicke atircle Al, and Cocalos a Pineapple, whereof it is corruptly called Artichault, in Italian and Spanish Cardo, in Dutch, sometime by the French name, sometime Strobrin. It is called of Columella Cinara, because in his growing, hee chiefely delighteth in Ashes. The sêed is best sowen in March, and the sets in November: if you will haue it yêeld fruit in the spring, you must bestow much ashes vpon it: it will hardly beare the first yêere that it is sowen. Beware that you set not the sêede with the wrong end vpward, for so shall your Artichoch proue very little and euill fauoured: It loueth good ground and well dunged, and prospereth best in fat ground. Palladius would haue you moreouer, to set the sêedes in well ordered beds, in the encrease of the Moone, halfe a foote a sunder, and not dêepe, but taking them in thrêe of your fingers, thrust them downe, till the earth come to the first ioints of your fingers,

Artichoch

fingers, then couer them tenderly, and water them often, specially toward Summer, so shall you haue the bigger fruit. When they grow vp, they must be continually weeded and dunged, as I said, with ashes. They say, they will lose their prickles, if the tops of the seede be made blunt vpon a stone before they be set: and sweet they will be, if the seede be laid in Milke. You must keepe them from Howles and Mise, with Cats or tame Weesels, as Ruellius teacheth you. Athenæus calleth the stalke of the Artichoch, κάκτος, that lieth vpon the ground, and that which standeth vpright, παρνίκα.

THRA. Well, what hearbe is yonder same that commeth vp as it were haires, with a blewish flower & pale, hauing in the midest of the belles, as it were, fierie yellow tongues?

Saffron. MARIVS. It is Saffron, in Greeke κρόκος, in Latine Crocus, in Italian and French, so in Spanish Aczafran.

THRA. What néede we care any more for either Coricum, Sicil, or Cyren, from whence wee fetch it with so great charges?

MARIVS. Yea, there groweth great plentie of it in Germanie about Spirs, and diuers other places, which may compare in goodnesse with any other place. It is set in March, of the head that it hath, round, and in Cloues as the Lyllie, the Leeke, and the Sea Onion. Constantine affirmeth, that it may be set of the rot, as soone as the flower is off. The rotes or the heads doe so encrease vnder the ground, that of one of them some yeere springeth eight or nine others. In many places they are remoued euery seauenth or eight yeere into bitter ground, whereby they come againe to be as good as at the first. In the Countries lying about the Rhine, they pluck them vp euery third yeere, & lay them a drying in the Sunne till August, and then pulling off the outer skin, they set them againe halfe a foote one from the other: the best heads are those that are fattest, and haue little haires, the worst looke rottenly and ill fauouredly, and haue an ill sauour: It delighteth to grow by high waies and neere springs, and to be troad and trampled on, prospering as it were by oppression: it groweth greene all the Winter, it is gathered in Autumne, when it is come to his colour, by plucking out the little yellow tongues from the bell, which are afterwards dried three or foure daies together,

and

and well picked and purged, and so made up in Boxes: some thinke it best to dry it in the shadow. It is craftily counterfeited by the Apothecaries, braying it in sod wine, which they besmeare, adding thereto the scum of siluer or lead to encrease the weight, the craft is perceiued by the dustinesse thereof, and by the sauour of the sod wine. The proofe of the good is, if it crackle betweene the hands as a brittle thing, which the counterfait doth not, or if in putting it to your mouth, it cause your eyes to water. Wherefore, the best is that which is new, and hath a pleasant smell, in colour like to Gold, and dieth the fingers in touching it. In March you must purge the ground where it groweth, and whether ye plucke it vp or not, notwithstanding, other hearbs may very well grow there vntill August: Purslaine, Parsley, or such like hearbs doe best grow there. And when the Saffron beginneth to flowre, you must rid away the other hearbs: for in Harvest time about September or October it flowreth.

THRA. Here is great store of Rosemarie, the chiefest beauty of Gardens, and not to be wanted in the Kitchin. Rosemary.

MARIVS. Of the ordering of Rosemarie, sith you will haue me, I will speake a little. There are which suppose it to be the same which the Greekes call λιβανότις, because it sauoureth like Frankencense, in Latine it is called Rosmarinus, and in all other tongues it keepeth the name, it serueth both for pleasure and profit. Theophrastus maketh two kindes of it, a barraine, and a fruitfull, and is set of small slips in Aprill: it is set by women for their pleasure, to grow in sundry proportions, as in the fashion of a Cart, a Peacoke, or such like thing as they fancie. It delighteth in stonie or rough ground, and in the tops is the seed enclosed in little huskes white and round. It flowreth twise a yeere, in the Spring, and in the end of Summer: it is gathered from May till September, and it is good to plucke off the flowre often, that it may not flowre too much. In the higher parts of Fraunce it groweth wilde in such plentie, that they vse almost no other fewell: it is in colde Countries in Winter set in Sellers and hot houses, and is brought againe in the Spring into the Garden. But here you must beware, that when you first bring it out, you keepe it from the March Sunne, setting it in the shadow, acquainting it by little and little with the ayre; some vse to house it

with

with Straw and Horse-dung, and so leaue it in the Garden.

Sage. Sage, in Latine Salua, and like in other Languages, is an Hearbe common in euery Garden: it is planted both of the sæde, and of the slip, in March, in any kinde of ground, it maketh no matter where: the Gardners vse to lay burning ashes about it, whereby it prospereth the better.

Mints. Next to Sage, is Mint, in Latine Menta, in Dutch Myntz, in Italian and French, after the Latine, in Spanish Yerua buena: it is planted and ordred in all things as Sage is: it prospereth both in dry and wet grounds, and groweth well by waters.

Pimpernel If you lacke sædes, you may take the sæde of the wilde Mint, and set them with the tops downward, whereby they shall leaue their rankneſſe; and being once sowne or set, groweth euery yeere. Pimpernell, in Latine Pimpinella, is vsed both in the Kitchin, and in Phisicke: and being once sowne, groweth euery yeere, both in sunnie places and in shadowy:

Hysop. it groweth in most places wilde. Hysope, in Latine Hissopus, and so called in most Tongues in Europe: a common Hearbe, knowne to euery Gardener: it desireth, though no sunny ground, yet good and rich ground, it is planted both of the sæde and of the slippe: when it hath once taken roote, it careth not for the sharpneſſe of

Sauorie. winter. Sauorie, in Latine Satureia, or, as Columella saith, Cunila, in Italian Coniella, Sauoreggia, Thymbre, in French, Sauoreie, in Dutch Kuuelzwibelhisop, groweth in barraine places, and is set and sowed as the plants before.

Basyll. The next is that which commonly is called basyll, in Latine Ocymum, in French, Italian, and Dutch, Basilica: an hearbe that is vsed to be set in the midst of knots, and in windowes, for the excellent sauour that it hath: it is also good for the pot: it is sowed in March & Aprill, and delighteth in sunny ground, you must put two sæds still together. Basill is best watred at noone, whereas all other hearbes are to be watred in the morning and in the euening, it may be remoued in May.

Marierum Theophrastus sayth, that it prospereth best, when it is sowed with curses. Marierum, in Latine Amaracus and Maiorana, is also in like sort vsed: the Dutch and the Italians call it after the Latine, the Spaniards Amoredux, the French Mariolaiene and Thyn in Greeke of Dioscorides & Paulus Ægineta συμποσιον: this also for the pleasant sauour it hath is set in pots and in Gardens: it is sowed in March three or foure sæds together, and halfe

a foote asunder, in May when it groweth to some height, as Basyll, it is remoued. Time, nere of kindred to these, in French, Italian, and Dutch like the Latine, in Spanish Tomillo, delighteth in stony, light, and sunnie ground: it springeth both of the sede and of the slippe, and also of the flowre, as Theophrastus saith, These three tender and delicate Yearbs, are to be sowed with great heede, either in earthen pots, or in Garden beds. Hitherto haue I described vnto you such Yearbs as serue for the Kitchin: and because the later sort are also estemed for the sauours, I will goe forward with the description of the rest that are set in Gardens for the pleasure of them, and for the sauour, doe garnish the said Gardens, and serue also for other purposes. Of Rosemarie I spake before, I will now procede with these that grow before my feete. Lauender, called in Latine Lauanda, or Lauendula, that groweth in borders about the beds, and keepeth the Latine name in other tongues, doth grow in wilde places and stonie: it is set of the slips, and remoued: it groweth to Spike in June, and in July is gathered and tyed in bundles for the sauour, the flowre is distilled for sweet waters. Flowre-gentle, in Latine Amaranthus, though it haue no sauour at all: yet hath it a delightfull beautie to the eye: the Frenchmen, for the faireneſſe of the colours, ercelling both Crimson and Purple in graine, doe call it Passeuelleurs, the Italians Fioruelluto, because it contendeth in colour with Crimson in graine: it loueth to be often gathered and plucked, whereby it springeth the better: the flowres after they be dead, with a little water come againe to their colour: it is called Amaranthus, because it dyeth not.

Time.

Lauender.

Flowre gentle.

THRA. Here followeth Lauender-cotten.

MARIVS. This Lauender-cotten: some call it Santonia, and female Southernewood, in Dutch it is called Cypressen, in French Cyprez: it groweth commonly in Gardens, springing euery yeere. Myrtell, in Latine Myrtus, in Italian Myrto, in Spanish Arabian, in French Meurte, in Dutch Welscheidelber, the leaues are not much vnlike the leaues of the Oliue tree, something smaller, with slender branches, and leaues growing in order one by another, as you see, with blacke berries, and leafed like the Pomegranate. It groweth alwaies greene: it is set and sowed both of the seede and slippe, and the stocke: but you must still

Lauender cotten.

Myrtell.

still raise vp the earth about it: till it be throughly rooted. Some sow the berries being a little beaten, and couered in Furrowes of earth: it delighteth in continuall weeding: so groweth it to a handsome height, meete to shadow Hearbs: it loueth to bee watred with the Vrine of men, or of sheepe. This onely is to be wondred at, that of the liquour thereof alone, may be made all sorts of Wine and Oyle: Cato teacheth to make Wine of the berries, being dryed, and put in water and hony sodden together: if they be not dryed, they come to Oyle: how the Wine of them is made, Dioscorides sufficiently declareth. Plinie reporteth, that Cato made three sorts of Myrtels, white, blacke, and a third kind, that he calleth Coniugale: it delighteth to grow by the Sea bankes, as Seruius saith, it groweth at this day commonly in Italy, along by the Sea coasts.

Geliflowrs THRA. Oh what sweete and goodly Geliflowres are heere! You may truely say, that Salomon in all his Princely pompe, was neuer able to attaine to this beautie: some of them glitter with a perfect Crimson dye, some with a deepe Purple, and some with a passing beautifull Carnation: I maruaile the old writers knew nothing of these in their time.

MARIVS. There are some that suppose it to be a kinde of Garden Betonie, which the Gardners fetching out of the field, and thrusting Cloues into the rootes of them, with diligent planting, haue brought to this excellency: others thinke it to be called Veronica of the Spaniards, who first found it. Some thinke it to be Oenanthe, because it flowreth with the Vine: it delighteth in warme sunnie ground: it is sowed seldome of seede, but commonly set of the slips, as I sayd of Rosemarie. The Gardners in the end of Summer, doe take the rootes and set them in Pannes, Pots, or Pailes, and when the frosts come, they carry them into their Sellers, and in fayre warme dayes bring them abroad againe, and suffer them to be now or then watred with the rayne. It hath beene often seene, that in such vaults or sellers they haue flowred all the Winter long, through warmenesse of the place: some set boughes about them, and couer them with straw and Horse-dung, to preserue them against the cold: it often happeneth that one roote beareth one yere white flowres and red, and the third speckled or Carnation.

THRA.

THRASIVS. Loe, yonder are Roses growing in Borders, and made in a maze: doe they grow of the seede, or of the set?

MARIVS. Roses, called in Latine Rosa, and in all other languages as in Latine, are diuersly planted, sometime of the rootes, sometime of the braunches, being cut in small sets, and planted a foote asunder. Some wreathe them in Garlands, and so set them to haue them smell the pleasanter. The vse of sowing of them is best: how be it, they will very well grow of the seede, though it be long ere they spring, and therefore they set them of sets a foote in length, it neither delighteth in rich nor moyst ground, but is well contented to grow amongst rubbish, and vnder walles. The places where they must grow must be digged deeper then Corne ground, and not so deepe as the Vineyard: the Rose is rather a Thorne then a plant, and groweth vpon the very brambles: it commeth first out in a little budde and long sharpe beard, which after they be opened, it discloseth it selfe and spreadeth abroad, with a yellow hairie tuske in the midst. Plinie maketh mention of sundry sorts of them: one sort he calleth Milesia, hauing an Orient and fiery colour, an other Alabandica, with white leaues, and Spermonia, the basest sort of all: the Damaske and the White, are vsed for sweet waters: they differ in roughnes, prickles, colour and smell. There are that haue but onely fiue leaues, and others with an hundred leaues, neither good in beauty nor in smell: the roughnes of the rinde (as Plinie sayth) is a signe of the sauour. There are some little pale ones, called Carnation and Prouincars, these doe wonderfully grow where they once are planted, and haue a most excellent sauour. Roses are vsed to be set in February, which is either done with the seed, or the set planted in little Furrowes. The seedes (as Paladius sayth) are not the little yellow things in the midst of the Rose, but the graines that grow within the red ripe Berry: the ripenes whereof is deemed by the swarthinesse and the softnesse of the berrie: where they once are planted, they continue long, and after they die, they send out new buds and springs. If you lacke sets, and would of a few haue a great number, take the braunches that begin as it were, to shew their buds, and cutting them in sundry sets, foure or fiue fingers in length, set them in good ground well dunged and watered:

Roses.

Muske Roses.

watered : and when they be of a yeares growth, take them vp, and set them a foote asunder, proine them and trimme them with often digging about them. Roses must still be cut, for the more you cut them, the thicker and the doubler they grow, otherwise they will waxe single and wilde, it will also doe them good some time to burne them : being remoued, it springeth very sone and well, being set of sets foure fingers long and more, after the setting of the seauen Starres, and after remoued in a Westerly winde, and set a foote asunder, and often digged. The old Rosyars must haue the earth losed about them in February, and the dead twigges cut off, and where they waxe thinne, they must be repayred with the young springes. To haue Roses of fiue sundry colours vpon one roote, make when they begin to burgen, a fine hole beneath in the stocke vnder the ioynt, & fill it with red colour made of Brasell sod in water, and thrust it in with a cloath, and in the like sort put into another part of the stocke greene colour, and in an other yellow, and what other colours you will, & couer the holes wel with Dre doung & Lome, or very good earth. If you will haue your Roses beare betimes, make a little trench of two hand bredths round about it, and powre in hot water twise a day, and thus doing, (as Democritus promiseth) you shall haue Roses in January. You may preserue Roses before they open, if making a slit in a Réede, you enclose the blossome, and when you would haue fresh Roses, take them out of the Réedes: others put them in Earthen Pots close couered, and set them abroad : the Roses continue alwaies fresh that are dipt in the Dregges of Oyle. If you will haue them at all times, you must set them euery moneth, and dung them, and so (as Didymus saith) you shall haue them continually. To cause them, or any other flowres to grow double, put two or thrée of the sédes in a Wheat straw, and so lay them in the ground. If you set Garlicke by your Roses, they will be the swéeter: the dryer the ground is where they grow, the swéeter they will be, as it appeareth by the season of the yéere, for some yéeres they are swéeter then others : the Rose will be white, that is smoaked with Brimstone, when it beginneth to open: amongst all Roses, those are most to be commended, that they call Carnations and Prouincials. The Oyle of Roses was greatly had in estimation euen in Homer his time, and at this day

the

the Vinegar of Roses is greatly vsed. Next vnto the Rose in worthinesse, for his sauour and beautifull whitenesse is the Lilly, called in Italian Giglio, in Spanish Tirio, in French Fleur de Lis, in Dutch Lilien. The Græcks hold opinion: that it sprang first of Iunos Milke sprinckled vpon the ground. In Februarie we begin to set Lillies, or if they grew before, to loose the earth about them with a rake, taking good heede that the young tender shootes about the roote be not hurt, nor the little head, which taken from the old roote, we set for new Lillies. As the Roses are, so are the Lillies, the sweeter, the dryer the ground is where they grow: Lillies and Roses being once set, continue both very long. There are red Lillies made so by Art, for they take the stalkes and rootes of the Lillie, and hang them in the smoake till they wither, and when the knots begin to vncouer, they are laid in March in the Lees of red wine, till they be coloured, and then set in the ground, with the Lees powred about them, so will they come to be purple. Violet in Græcke is Ιον, in Latine Viola, Violet black, and Violet purple, Ιον μέλαν, καὶ ἴον πορφυροῦν, in Italian it is called Viola porporia, in Spanish Violetta, in French Violets de Marts & Caresme, in Dutch Fiolen: these although they grow wilde about every Hedge and Wall: yet are they set in Gardens with other flowers. Lillies. Violets.

There are sundry sorts of Violets, both of kinde and colour, but the ordering of them is in a manner all one.

THRA. I haue now heard enough of Kitchin hearbes and flowres, therefore now, I pray you, let me heare you say something of the third sort, that is Phisicke hearbes. for me seemeth I see a great sort of healing hearbs here in your Garden.

MARIVS. Nature hath appointed remedies in a readinesse for all diseases, but the craft and subtiltie of man, for gaine, hath deuised Apothecaries shops, in which a mans life is to be sold and bought: where for a little byle, they fetch their medicines from Hierusalem, and out of Turkie, while in the meane time euery poore man hath the right remedies growing in his Garden: for if men would make their Gardens their Phisitians, the Phisitians craft would sone decay. You know what your olde friend Cato saith, and what a deale of Phisicke he fetched out of a poore Colwort. It is but the opinion of a Gardiner.

THRA. I doe remember it, and that he saith he was wont both to helpe himselfe, and his whole family with the hearbes of his Garden. But what hearbe is yonder with the long stalke, and the long blacke indented leaues on the top? If I be not deceiued it is Bearefoote, with whose rote we vse to heale our cattell when they be sicke.

Bearefoote or Setterwort.

MARIVS. It is so indéede, and is called in Latine Veratrum, there are two kindes of it, the blacke and the white: the White is that which the Dutchmen call Nyswurts Wranckraut, the Blacke they call Kristwurts, because it flowreth about Christmasse: the Italians, the Spaniards, and the Frenchmen keepe the Greéke name. The rote of the Bearefoot they thrust through the eare, or into the breast of the beast, that is either diseased in his lungs, or hath the Murren. Columella sémeth to call it Consigillo: it groweth not in Gardens, except it be sowed, it continueth long, and loueth colde and woddie ground. There stands, not farre from that, another very noble hearbe in Phisicke called

Angelica.

Angelica, it is supposed to be called in Greéke μύρρις, and whether it be Myrrhis with the Latines or no, I leaue that to the Phisitians to discusse: it is called with the Italians, Spaniards, Frenchmen, and Germanes Angelica. His rote, because it is a souerainge remedie against the plague, and hath diuers other good operations, it is cherished in our Gardens, and being once sowed, it commeth vp euery yéere: it groweth also wilde in the mountaine

Helicampana.

Countrey, and flowreth in July and August. Here is also Helicampana, in Latine Enula, in Italian Enela, in Spanish Enula campana, in French Aulne, in Dutch Alaut, this also is set in our Gardens for medicines sake, and we make much of it for the rot, it groweth wilde in the hilly Countries, and dry shaddowie places. In Summer the rote is taken out of the ground, and cut in small péces, and so dried: at this day it is called Enula campana: it hath a yellow flower, a leafe like Mullin, but white and hoarie at the one side. Wormewood, though it grow in euery place, yet this

Wormewood.

that you see here is Romane or Pontike. Wormewood, the Latines call it Cerephium or Absinthium Romanum the Dutchmen Romische wermut, the Italians Assenso, the Spaniards Ensænsos, the Frenchmen Aluine and Abslince, this kinde is set in our Gar-

Sauine.

dens, and thought to be the best. Sauine which we haue here

also

also in our Gardens, for diuers diseases of Cattell, is called in Latine Sabina, in Dutch Seuenboun, in Italian as in Latine, in Spanish likewise, in French Sauinier, it hath leaues like Juniper or Cypres, alwayes greene, there are two kindes of it, one like the Tamariske, the other like Cypres: it is a bush rather spreading in breadth, then growing in height: the Berries which he beareth, may be gathered in the end of Summer, or any other time.

THRA. But many times we see Gardens to be destroyed with wormes and vermine, what remedy haue you for this?

MARIVS. Of the faults of the ground, and the remedie thereof, as the amending of either to much moisture or drinesse: I spake in the beginning, touching Wormes, Flies, and other vermine that annoy the Gardens, which for the most part are these, Caterpillers, Snailes, Moles, Mice, Gnats, and Antes. There are that say, that if you mingle with your seedes sote, or the Iuice of Houseleeke, or Singreen, the Caterpillers will not meddle with the hearbe that springeth of such seede: and that they will doe no harme to your Trees, if you sprinckle them with the water wherein the ashes of Vines hath beene laid: moreouer the stalkes of Garlicke made in bundels, and burnt in Orchards or Gardens, destroyeth the Caterpillers. They will not breed (as they say) if you burne about the roots of your hearbes or Trees, quicke Brimstone and Lime: the same they report of Lie made of the Fig tree, Ants will not annoy your corne or hearbs, if you encompasse it round with Chalke, or put into their hils, the ashes of burnt Snailes, and if some of them be taken & burnt, the rest will not come neere the sauour: if Assa fœtida be laid in Oyle, and powred vpon their hills, it vtterly destroyeth them, they wil not touch the trees nor the hearbs, if you annoint the stalkes with bitter Lupines, or lime laid with oyle. You must shake off the Caterpillers in the morning, or late in the euening when they be numbed: also water wherein Dill hath beene sodden, cast about in the Orchard when it is colde, destroyeth them. It is written, that if you set Chiches about your Garden, Caterpillers wil not breed, and if they be already bred, you must seeth the iuyce of Wormewood, and cast among them. The dung of Bullocks burnt vpon the coales, destroyeth Gnats: the like also doth brimstone: a spunge wet with

Against Caterpillers.

Gnats.

vinegar and hanged vp, drawetb also swarmes of Gnates vnto it: also the maw of a Sheepe new killed, not washed nor made cleane, if it be laid in the place where Mothes, or other such vermine doe vse, and couered a little the vpper part, you shall after two dayes finde all the noysome Vermine crept into it: thus must you doe twise or thrise, till you thinke you haue destroyed them all. Of killing and driuing away Moles. Solion the Greeke writeth, that you must take a Nut, or any like fruit, and making it hollow within, fill it vp with Chaffe, Rosen, and Brimstone, afterward stoppe the vent holes that the Mole hath in euery place, that the smoake breake not out, onely leauing one open, where you shall lay the Nut, in such sort as it may receiue the winde on the backe part, that may driue the smoake into the Mines, there are also traps to be made, for the destroying of Moles: a frame is to be set vpon the new Hilles, with a piece of wood so hollow and framed, that it may receiue (as it were in a Sheath) an other peece of wood made in fashion like a Knife, to this is ioyned an other little sticke that lieth in the hole, and is fastned to a Catch without, that as sone as the Mole toucheth the sticke within, shee is taken presently, as it were, with a payre of Sheares. Mise are taken, if yee powre into a platter, the thickest mother of Dyle, and set in the house a night, as many as come at it are taken: also the rote of Bearefoot mingled with Cheese, Bread, flowre, or grease, killeth them. Tarte and very sharpe Vinegar mingled with the iuyce of Henbane, and sprinkled vpon the Hearbes, killeth the Fleas, or little blacke wormes that be in them. No kinde of vermine will annoy your Hearbes, if you take a good sort of Crefishes, and cast them in an earthen vessel with water, suffering them to worke abroad in the Sunne for the space of ten dayes, and after with their liquour sprinckle your Hearbes. But I keepe you long in this ill-fauoured Garden, if it please you wee will walke into the Orchard adioyning.

Moles.

Mysc.

Garden Fleas.

THRA. With a very good will, although the goodly fayre colour and sweet sauours of these Hearbes and flowres, beside the fayre hedges inclosing it, as it were, with a gorgeous greene tapestrie, make me that I could abide here euer.

MARIVS. Both the Garden and the Orchard are inclosed with seuerall hedges and ditches, whereby they are defended from

Of Orchards.

hurtfull

hurtfull beasts and vnruly folks (as I told you at the first) when I began to speake of the enclosing of Gardens and Orchards.

THRA. Euery thing liketh me passing well: God Lord what a pleasant ground, what a Paradise is this? me thinkes I see the Orchards of Alcinous, the Trees are set Checkerwise, and so catred, as looke which way you will, they lie leuell: King Cyrus himselfe neuer had better. If Lysander had euer seene this Orchard, he would haue wondred a great deale more, then he did at Cyrus his Orchard.

MARIVS. Such gorgeous Gardens and Orchards as Princes haue, I neither desire, nor meane to counterfeit: but vsing the diligence of a poore Countrey Gardner, I build (as they say) my walls according to my wealth. I framed the order, and set the most part of these Trees with mine owne hands, following herein, the Fathers of the old time, who delighted themselues chiefly with this kinde of Philosophie. So then (as I thinke) the Trees and Woods to be the greatest commoditie giuen to men: for besides the house pleasure that they minister vnto vs, the gracious Lord, that is the giuer of all good things, hath also giuen vs a number of other godly commodities by them, which at the first serued men for foode, couering, and clothing: which commodities, the very Ethnicks had in estimation. But vnto vs that know God, by whom we haue receiued our preheminence aboue all other creatures, which benefit we ought with thankes to acknowledge, the holy Scripture doth teach a more higher and mysticall consideration: for before that gracious Lord had framed man, willing to prouide him of foode and apparell, he caused all kinde of pleasant Trees bearing fruit to spring out of the earth, that they might serue for the sustenance of man: and in the midst he planted the Tree of life: and thereby, the Tree of knowledge of good and euill: to the end that Adam might haue an assured signe of his dutie and reuerence towards God, out of which the Lord (as in a Temple did speake vnto Adam) and Adam himselfe, if he had continued in his innocencie after his refection of the Tree of life, had with his posteritie preached God, and alwaies beene thankfull vnto him, for his authoritie giuen vnto him ouer all other creatures, as the Prophetical Psalmist singeth. This that through the bountifull liberalitie of God was

giuen vs to so good an end, the vngodly and wicked posteritie turned to Idolatrie, consecrating both Trées and Groues, to the Idols of the Heathen.

THRA. What? me thinks you begin to play the Preacher with me.

MARIVS. Surely, there is no better a place to preach in then here, to acknowledge the Creator in his creatures, and by these visible workes: to behold the Almightie and euerlasting power, blessednesse, bountifulnesse, and Godhead, of the incomprehensible workman, and alwaies to speake and preach of them: but I will say more hereafter. The planting of Trées doth out of all doubt (as I said) bring vnto vs both profit and pleasures: and therefore this part of husbandry, must not be neglected, for Columella accounts it one of the chiefest points of husbandry, which the Poet seemes to agrée vnto.

Of tyllage all this while, and of the starres,
We here haue talked.
And Bacchus now of thee I meane to sing,&c.

THRA. I pray you then declare vnto me, the order of planting and preseruing of Trées.

MARIVS. Let vs first sit downe vnder the shaddow of this faire Vine, that yéeldeth both pleasant Wine, and comfortable shaddow.

THRA. Agréed.

MARIVS. The sorts of Trées are diuers and manifold: some grow wilde, some come of the séede, some of the rote, as the selfe same Poet saith.

Some sorts there are, that of the seede are sowne.
And some that set of rootes, to seedes are growne.

Some doe grow and spring of themselues: a number of others againe are to be sowne. Those that grow wilde without the labour of man, doe beare their séedes each one according to his kinde: but those that are set and dressed, doe yéeld greater encrease. There are diuers againe that are alwaies grééne, and doe neuer lose their leafe, which are (as Constantine reporteth) these, the Date, the Orenge, the Lemon, the Cytron, the Bay, the Oliue, the Cypresse, the Pine, the Hollie, the Bore, Myrtill, Ceder, and Iuniper. As for strange Trées, and those that will growe no

where but at home, we will not meddle withall : we will therefore begin first with those that yéeld vs sustenance, and beare fruit, and those are diuided into thrée sorts : for either of the Sets they come to be Trées as the Olíue is, or else shrubs as the wilde Date, or neither Trée nor shrub as the Vine.

THRA. I desire to heare your opinion of euery sort, for I thinke it no small skill to plant such faire Gardens, Orchards, and Vineyards. Me thinkes you haue vsed a wonderfull good order, that amongst your Vines, you haue entermedled Olíue trées, Figge trées, Almonds, and Aprecots, and that you haue seuered your Orchard from your Garden, and your Vineyard from them both, with faire hedges and ditches.

MARIVS. It was néedefull so to doe, least my folkes labouring in some of them should come into the rest, contrarie to my pleasure. First, if you will, I will speake of those that bring vs fruit, and then of the wilde, and the order of setting and planting of Woods. First (as Columella saith) that ground that serueth for an Orchard, will serue for a Vineyard, as you sée it doth here: and if the ground be hilly, rugged, and vneuen, it is more méete for a Vineyard then for an Orchard. If therefore you will make an Orchard, you must chose such a ground as is méete for it : a rich ground, leuell, and lying vpon the Sunne, which when you haue found, you must well enclose it : as I taught you before in the enclosure of Gardens, that it may lie out of danger of Cattell and knaues : for although that the trampling, and dunging of Cattell, is not vnprofitable to the Trées, yet if they be either bruised or broken whiles they be young, they will sone come to nought. When you meane to dresse your Orchard place thus fenced, you shall make your furrowes a yére before you plant them, so shall they be well seasoned with the Sunne and the raine: and whatsoeuer you plant, shall the sooner take. But if you will nédes plant the same yére, that you make your furrowes, let the furrowes be made at least two moneths before : after fill them full of straw, and set it on fire. The broader and wider that you make your furrowes, the fairer and more fruitfull will your Trées be, and the fruit the better. Your furrowes must be made like an ouen, or furnace, wider at the bottome then aboue, that the rote may spread the better, and the colde in Winter, and the heate in

How to make an Orchard.

Summer, may the better bee kept from it, and also in steepe grounds, the earth shall not so easely be washed away. In setting of your fruit trees & Vines, you must place them in order, eyther Checkerwise, or Netwise: which needfull order of setting, is not onely profitable, by receiuing the ayre, but also very beautifull to the eye: when as which way soeuer you looke, you shall see them stand in ranke, and which also is to good purpose, for the Trees shall equally receiue their moysture from the ground.

THRA. I see the Gardners in euery place obserue this order, setting their Trees in such proportion, as which way soeuer you looke, your eye shall not beelet, but shall see the Trees stand straight in order.

MARIVS. I haue vsed two sortes of this catred order, one wherein my Trees stand foure square like the Chequer or Chessebord: the other not in square as the first, but Losing-wise or Diamond-wise, like the glasse windowes or Nets. You must frame it according to the nature of the trees, lest the lower sort be drowned of the higher. You must also set them a good distance asunder, that their branches may spread at pleasure, for if you set them too thicke, you shall be able to sow nothing betwixt them, and they will be the lesse fruitfull. Therefore Palladius would haue the space betwixt them, thirtie foote at the least: there is more profit in the generall disposing of them, entermedling the greater with the lesser, so as the great ones doe not annoy their vnderlings, either with their shadow or dropping, for that they grow not equall to them in strength or bignesse. Pomegranates and Myrtles must be sowed nearer together, as nine foote asunder, Apples nearer then they, and Peares nearer then them both: but of them there are sundry sorts. Almonds and Fig trees must also be set nearer. And because there is a naturall friendship and loue betwixt certaine Trees, you must set them the nearer together, as the Vine & the Olive, the Pomegranate and the Myrtell. On the other side, you must set farre asunder such as haue mutuall hatred among them, as the Vine with the Filbert & the Bay. There are some of them, that desire to stand, two and two together, as the Chestnut: the droppings also do great hurt of all sorts, but specially the droppings of Oakes, Pinetrees, & Hollholmes. Moreouer, the shadowes of diuers of them are hurtfull,

Dropping of Trees.

Friendship amongst Trees.

Shadowes of Trees.

as of the Walnut tree, whose shaddow is vnwholesome for men, and the Pine tree that killeth young springs: yet they both resist the winde, and therefore are best to be set in the outer sides of the Orchards, as hereafter shall be said. Of the place and the order, perhaps you thinke I haue sayd enough, and looke that I should proceed to the order of planting and setting.

THRA. What time is the best for planting and setting of Trees?

MARIVS. The chiefest time of planting (as Florentine sayth) is the end of Sommer, for then is nature most occupied about the root, as in the spring about the vpper parts: and therefore grafting is meetest in the spring, and setting in the end of Sommer: for the plants are watred all the Winter, & therefore it is best setting or planting, from the setting of the seauen Stars, vntill the twelfth of December. In the Spring time, you may set those things that you forgat before: at what season soeuer it be, looke that you set them in the afternoone, in a fayre westerly winde, and in the wane of the Moone. Plinie saith, that this note is of great importance for the encrease of the Tree, and goodnesse of the fruit. If the Tree be planted in the encrease of the Moone, it growseth to be very great: but if it be in the waine, it will be smaller, yet a great deale more lasting.

Time of planting.

Time for grafting.

The obseruation of the Moone.

THRA. But are there more wayes then one of Planting and setting?

MARIVS. A great sort: we plant eyther by Grafting, setting of the kernell, or the stone, setting the rootes, stockes, or slips, grafting betwixt the Barke and the Tree: some are planted in some of these sorts, others in all. In Babilon (as they say) onely the leafe set comes to be a tree: first I will speake of Grafting, and then of the rest. There are that appoint but three kinds of Grafting, betwixt the barke and the woode, in the stocke, and implastring, or inoculation. The first sort they call Grafting, the second imbranching, the third inoculation, or imbudding. Such Trees as haue thickest barkes, and draw most Sappe from the ground, are best grafted betwixt the barke and the wood, as the Figge, the Cherie, and the Olive: those that haue thin rindes, and content themselues with lesse moisture, as if the Sappe leauing the barke should gather it selfe to the heart, as the Orenge

The kinds of planting, and grafting of trees.

Three kindes of Grafting.

What trees are best to be grafted betwixt the barke and the wood.

tree,

What trees agree best together.

tree, the Apple tree, the Vine, and diuers others, in these it is best to open the stocke, and graffe in the woode. Some Trees are also best Grafted vpon other some, the Figge that prospereth best vpon the Mulbery stocks, and the Plaine tree: the Mulbery vpon the Chestnut, and the Beeche, the Apple, the Peare, the Elme, and the white Poplar, wherein if you graffe, you shall haue your Mulberies white: vpon the same stocke are grafted the Peare, the Quince, the Medler, and the Seruisse: the Peare vpon the Pomegranate, the Quince, the Mulberie, and the Almon. If you Graffe your Peare vpon a Mulbery, you shall haue red Pearcs: the Apple is Grafted vpon all Peare stockes, and Crab sets, Willow, and Poplar: being Grafted vpon the Quince, it bringeth forth the fruit which the Greekes call Melimella: it is also Grafted vpon the Plomtree, but being Grafted vpon the Plaine tree, it bringeth forth red Apples. The Medlar being Grafted vpon the Thorne, the Graffe groweth to great bignesse, but the stocke continues small: vpon the Pine-tree, it bringeth a sweet fruit, but not lasting. The Peach grafted in the Thorne, or the Beeche, groweth to be very faire, and great: the Almond and the Peach being ioyned together, and Grafted in the Plume tree, will beare a Peach with an Almond in the stone. The Filbert will onely be grafted in the Wilding, not agreeing with any other. The Pomegranate delighteth in diuers stockes, as in the Willow, the Bay, the Ache, the Damson, the Plome, and the Almond, vpon all which hee prospereth well. The Damson groweth very well vpon any kinde of wilde Peare, Quince, and Apple: the Chestnut liketh well the Walnut, and the Beech. The Cherrie refuseth not the companie of the Peach, nor the Turpentine, nor they his: the Quince will well be grafted vpon the Barberie: the Mirtle vpon the Sallow: the Plom vpon the Damson: the Almond vpon the Filbert: the Citron, because of his tender Tree, and thinne rinde, will scarcely beare any other graffe, and therefore contents himselfe with his owne braunch. The Vine that is grafted vpon the Cherie tree (Florentinus promiseth) will beare Grapes, and grafted vpon the Oliue, will bring forth a fruit that bearing the name of both his parents, is called Elæostaphilos. In fine, all young Trees that haue sap in the barke, may be Grafted: if it be greater, it is best Grafting nere

To haue red Peares & Apples.

A Peach with an Almond in it.

Oliue grape.

the

the rote, where both the barke and the wood, by the reason of the nearenesse of the ground are full of sappe. He then that will graft either in the stocke, or betwixt the stocke and the rinde, let him gather his Graffts from a fruitfull tender tree, and full of ioynts, and out of the new spring, except he meane to Graffe an old tree, when as, the sturdier Graffes be, the better they are, otherwise the last shootes of such trees as haue lately borne will be the best. You must gather them on that side the tree that lyeth vpon the North: others like better the East side then the shadowy. Virgill forbiddeth those that growetb on the top, thinking them better that growes out of the side. To be short, your Graffes must be full of buds, lately growne out, smoothe, the rinde smoothe, good, and readie to grow: they must be of the last yeares growth, which is knowne by the knots or ioynts, that declare euery yeares growth. Beside, Graffes of all trees are not to be gathered alike: For Vines and Figge trees are dryest in the middle parts, and take best of the top, and therefore from thence you must gather your Graffes. Oliues are fullest of sappe in the midst, and the outer parts dryest. Those best agree together, whose rindes are nearest of nature, and doe blossome, and beare both about a time. You must gather your Graffes in the wane of the Moone, tenne dayes before you Graffe them. Constantine addeth this reason, That it is neede the Graffe doe a little wither, that he may the better be receiued of the stocke. You must appoynt your Grafting time in the Spring, from March, when as the buds doe begin to burgen, but not come out (although you may Graffe the Peare when his leaues be out) vntill May: for Grafting in raine is profitable, but not for imbranching. The Oliue, whose springs doe longest bud, and haue much sappe vnder the barke, the abundance whereof doth hurt the Graffe, must be Grafted (as Florentine sayth) from May, till June. Columella would haue the Oliue Grafted from the twelfth of March, till the first, or the first of Aprill, and the time of Grafting to be the Moone encreasing, in the afternoone, when there blowetb no Southwinde. When you haue found a good Graffe, take your knife (being very sharpe) and pare it about a three fingers from the ioynt downeward, so much as shall be meete to be set in the stocke: that part that is vnder the ioynt (not perishing the pith) you must cut with your knife,

The choise of Grafting.

The knots

The time for Grafting.

The manner of Grafting.

as

as if you should make a pen, so as the wood with the wood, and the barke with the barke, may ioyne together, as iust as may be. Which being done, if you meane to graffe in the stock, you must first sawe it smooth, and then cleaue it in the midst with a sharpe knife, about three fingers: and to the end you may handsomely put in your Graffe, you must haue a little wedge of wood or Iron, (Plinie thinks it better of bone) which wedge (when you will graffe betweene the rinde and the stocke) must be made flatte on the one side, and round on the other, and the Graffe must be pared also flat on that side that must stand next the wood, taking alwaies good heede, that the pith be not perished: the other part must onely haue the rinde pulled off, which after you must set in the cleft, or betwixt the barke, till you see all parts agree together. Some doe cut the poynt of their Graffe threesquare, so as two sides are bare, and the other couered with his barke: and in that sort they vse to Graffe in a stocke one against another: but it is thought best to Graffe no more but one. When you haue thus set in your Graffe in the stocke, plucke out the wedge: but here is a great carefulnesse, and heede to be vsed: and therefore good Grafters, thinke it best to hold the Graffe euen with both hands, lest in the binding and pulling out of the wedge, the Graffe be hurt, or stand vneuen. For auoyding of which, some vse for to binde the stocke about, and after to put the wedge, the bands keeping it from opening too wide. The harder they be set in, the longer will they be ere they beare, but will indure the better: you must take heede therefore, that the cleft be not too slacke nor too straight. When you haue thus Grafted, binde the stocke with a twig, and couer it with loame, well tempered with chaffe, two fingers thicknesse, and (putting mosse round about it) tye it vp so, that there come no raine at it, nor be hurt with the Sunne or the winde. This is the order both in the old time, and at this day vsed: though in Columellas time (as it apeareth) they were not wont to Graffe, but onely betwixt the barke and the wood: for the old people (as Plinie writeth) durst not as yet meddle with cleauing of the stocke: at length they presumed to make holes, and Graffe in the pith, and so at last waxed bold to cleaue the stocke. Cato would haue the stocke couered with clay and chalke, mingled with sand and Oxe-dung, and so made in morter. Sometimes

time they Graffe with the top of the Graft downeward, and they doe it to make a little Tree spread in breadth. It is best Graffing next the ground, if the knots and the stocke will suffer: and Plinie would haue the Graffe grow forth not aboue fiue fingers. If you will Graffe a little Tree, cut it neere the ground, so as it be a foote and a halfe high. If you would carry your Grafts farre, they will longest keepe their sappe, if they be thrust into the rote of a Rape: and that they will be preserued, if they lye betwixt two little guts, running out of some Riuer or Fish pond, and be well couered with earth.

To keepe your Graffes.

THRA. I doe now greatly desire to heare you say something of Implastering, or Inoculation, that is, in Graffing with the bud or the leafe, which you call in Greeke ἐμφυλλεισμον, which kinde of Graffing, I see those that are giuen to new fashions delight much in.

Of Implastering and Inoculation.

MARIVS. This is no new manner of Graffing, but wee finde that it was vsed both of the Latines, and of the Greekes, when taking off a leafe or little bud, with some part of the rinde with him, we Graffe it into another braunch, from which we haue taken as much barke. This order (Columella saith) the husbands in his daies were wont to call Implastring, or Inoculation: and before Columellas daies, Theophrastus in his Booke De causis Plantarum, doth shew the reason of Inoculation. Plinie doth say it was first learned of Dawes, hiding of seeds in caues and holes of Trees. This kinde of Graffing, as Columella doth write, and our Gardners themselues confesse, is best to be vsed in Summer, about the twelfth of June: yet Didymus saith, he hath Graffed in this maner, and hath had good encrease with it in the spring time. And sith it is the daintiest kinde of Graffing, it is not to be vsed in all Trees, but onely in such as haue a strong, a moyst, and a sappy rinde, as the Oliue, the Peach and the Figge, which are full of milke, and haue a big barke. Of that Tree that you meane to Graffe, chose the youngest and the fairest branches you can, and in them take the bud that is likeliest to grow, and marke it round about two inches square, so as the bud stand euen in the midst, and then with a sharpe knife cut it round about, and saw of the rinde, taking good heede you hurt not the bud, and take out the peece. Afterwards, goe to the Tree that you meane to Graffe on,

and

and chose likewise the fairest braunch, and pare away the rind a little space, and ioyne in your budde so iust, as the rindes may agree together so close, as neither water nor winde may enter in. You must looke that you hurt not the Wood, and that the rindes be of one thickenesse. When you haue this done, binde it vp, so as you hurt not the bud: Then clay it ouer all, leauing libertie enough for the bud. Cut off all the spring that growes about it, that there be nothing left to draw away the Sappe, but that it may onely serue the Graffe: After one and twentie dayes, vnloose it, and take off your couering, and you shall see your bud incorporated in the branch of a strange tree. Columella speaketh of an other sort of Grafting, to bore a hole in a Tree with an Augur, either to the pithe, or the vttermost rinde, going something sloapewise downeward, and getting out all the chips cleane, take a Vine, or an arme of the best Vine, not cut from his olde mother, and paring away the ouer rinde, thrust it fast into the hole, being all moist and full of Sappe, leauing a bud or two onely vpon it: afterward, stoppe the hole well with Mosse and Clay, and commit it to the earth. In this sort may you Graffe Vines vpon Elmes, so shall the branch liue, being both nourished by his olde mother, and his new Father. Two yeere after, you shall cut off the new grafted branch, and the stocke wherein you grafted, you shall saue off a little aboue the boring, so shall the graffe become the chiefest part of the plant. The like do our Countrymen, taking a branch of a Beech a foote thicke: and when they haue cut it, and bored it, they set in it the branches of the best Peare or Apple that they can get, setting the same in a very wet ground in March, and in the same Moneth the yeere after, taking vp the Beech, they cut it a sunder with a saw betwixt the holes and the branches: and euery peece of stocke with his branch, they set in very rich & fruitfull ground. There are some that brag of another kind of grafting, not much vnlike to the former, whereof notwithstanding, African in Constantine maketh mention, as tried in a Peach. They will a man to take the branch of a Willow as big as your arme, and two Cubits in length, or more: this they would haue you to bore through the mids, and after slipping off the braunches of a Peach as he stands, leauing onely the top vntouched, they would haue you to make the Peach passe through the Willow batte, and

Wimble Grafting.

Another manner of Grafting.

that

that done, to bow the Willow like a Bowe, setting both his ends into the earth, and so to binde the hole vp with mosse, mozter and bands. The yeere after, when as the head of the Peach, hath ioyned himselfe with the pith of the Willow, that both the bodies are become one. You shall cut the Tree beneath, and remoue it, and raise vp the earth, so as you couer the Willow bow with the top of the Peach; and this shall bring you Peaches without stones. This kinde of Grafting must be done in moyst places, and the Willowes must be holpen with often watrings, that the nature of the Tree may be of force. The kinds and manners of propagation, are declared by Plinie, who telleth of two kinds: the first, wherein a branch of the Tree being bowed downe, and buried in a little furrow, and after two yeeres cut off, and the plant in the third yeere remoued: which if you intend to carry any far distance off, it is best for you to burie your branches in Baskets, or earthen vessels, in which you may aptlyest carry them. And another more delicater way he speaketh of, which is to get the rote out of the very Tree, laying the branches in Baskets of earth, and by that meanes, obtayning rotes betwixt the very fruit and the tops, (for by this meanes the rote is fetched from the very top, so farre they presume) and from thence fetch them, vsing it as before: in which sort you may also deale with Rosemarie and Sauine. Columella sheweth a way, how slippes of all manner of Trees may be Grafted in what Trees you list.

Propagation, and his kindnesse.

THRA. And some are also set of the slippes, or slittings: my selfe haue plucked a branch from a Mulberie Tree, and bruising the end a little with a Mallet, haue set it in the ground, and it hath growne to be a faire Tree. The like hath beene tryed (as they say) in Applesand Peares.

MARIVS. You say well, for Nature hath shewed vs, that they young siences, plucked from the rotes of the trees will grow: the youngest are best to be planted, and so to be pulled vp, as they may bring with them some part of their mothers bodie. In this sort you may plant Pomegranates, Filberts, Apples, Scruisses, Medlars, Plemes, Figges, but specially Vines, and sometimes Cherries, and Myrtilles. Of the stocke and the branches are also planted the Almond, the Peare, the Mulberie, the Orenge, the Oliue, the Quince, the Iuie, and the Turkish Plome: which

which the oftner you remoue them the better they proue. Plinie sayth, the branches cut from the Trée, were at the first onely vsed for Hedges, Elder, Quinches, and Briers medled together, afterwards for vse, as the Poplar, the Alder, and the Willow, at this day wee set them where we best like. Héede must be taken, that the stockes, or the sets be of a good kinde, not crooked, knottie, nor forked, nor slenderer then that a man may well gripe with his hand, nor lesse then a foote in length.

THRA. It remaineth now, that you speake of the setting of the fruit or kernell.

MARIVS. Nature (as Plinie sayth) hath taught vs to set the Kernell, by the sédes deuoured of Birds, and moistened with the warmth of their enthrales, and after voided in the boughes and rises of Trées: whereby wée finde many times a Plaine Trée growing out of a Baye, a Bay out of a Cherry, and a Cherry out of a Willow. Many Trées are set of the fruit kernell, or stone, which grow yérely of themselues, by reason of the falling of the fruit: as Chestnuts, Haselnuts, and Walenuts. Columella sayth, they are the fruitfuller Trées that spring of their fruite, then those that are set of the stocke, or the branch. Some delight to be set in Trées, and not in the ground: when they haue no soyle of their owne, they liue in a stranger. Of the fruit or kernell, are planted Nuts, Almonds, Pistaces, Chestnuts, Damsons, Plums, Pineapples, Dates, Cypresse, Bayes, Apples, Peares, Maples, Firtrées, Cherries, Peaches, and Abricocks: but set or planted, they proue to be the kindlier. Some of these doe grow in Graffing and other waies: for experience teacheth, that the Nut and the Terebinth are Grafted; and Demageron witnesseth as much: neither are all fruits, kernels, and stones set in like sort, as hereafter shall be séene. Some are layd in water before, others not: some lye thrée dayes in hony and water, and at the fall of the leafe are buried in the ground till March: and then set Nuts are onely layd in moyst dung a day before, and of some in water and hony onely a night, lest the sharpnesse of the hony destroy the sprout. Some are set with their toppes standing vpward, as the Chestnut: others downward, as the Almond, though this is not greatly to be regarded, sithe wée sée the fruite that falles from the Trée, or is

The keeping of plants.

set

let fall by Birdes, doth prosper best of any other.

THRA. I haue a wonderfull delight in the Impe Gardens of these Countries, I pray you tell me how they be ordered.

MARIVS. The ordering of an Impe Garden may not be passed ouer, wherein as in a Parke, the young Plants are nourished. And because the Nurse sometimes ought to be kinder, and tenderer then the Mother, a mete ground must be chosen for the purpose: that is, a ground drie, fat, and well laboured with the Mattocke, wherein the stranger may be well cherished, and very like vnto the soile, into which you meane to remoue them. The kernels, or Kones, must not be altogether naked, but little couered with some part of the fruit, so shall they afterward endure the longer. They must be set a foote, or there-abouts a sunder: After two yeares they must be remoued: and because their Rootes doe runne very deepe into the ground, they must be somewhat bent, or turned in, to the end they may spread abroad, and not runne downeward. Aboue all things, you must see it be free from stones and rubbish, well fenced against Poultrie, and not full of chinkes or clefts, that the Sunne burns not the tender rootes: they must be set a foote and a halfe a sunder, that they hurt not one the other with their nere growing. Among other euils, they will be full of Wormes, and therefore must be well raked and weeded: beside, growing ranke, they must be trimmed and proyned. Cato would haue them couered ouer with Lattuses vpon forkes, to let in the Sunne, and to keepe out the colde: Thus are the Kernels of Peares, Pine-apples, Nuts, Cypresse, and such others cherished. They must be gently watred for the first three dayes, at the going downe of the Sunne, that they equally receiuing the water, may open the sooner. Zizipha, or Turkey Plumbs, Nuttes, Wallnuts, and Chestnuts, Bayes, Cheries, Pistaces, Apples, Dates, Peares, Maples, Firres, Plumbs, and diuers others, are set of the stone, or kernels. In remouing of them, haue speciall regard, that they be set in the like soile, or in better, not from hot and forward grounds, into colde and backward, nor contrarie from these to the other. You must make your Furrowes so long before, if you can, that they be ouer-growne with good mould. Mago would haue them made a yeere before, that they may be well seasoned with the Sunne, and the weather: Or if you can-

Of Impe Gardens.

not so, you must kindle fires in the middest of them two moneths afore, and not to set them, but after a showre. The depth of their setting must be in stiffe clay or hard ground, thrée Cubites: and for Plumb Trées a handfull more. The Furrow must be made Furnace like, straight aboue, and broade in the bottome: and in blacke mould, two Cubites and a hand broade, being square cornered, neuer déeper than two foote and a halfe, nor broader then two foote broade, nor neuer of lesse depth, then a foote and a halfe, which in a wet ground will draw néere the water. Such as delight in the depth of the ground, are to be set the déeper, as the Ashe, and the Olive: these and such like, must be set foure foote déepe, the others it sufficeth if they stand thrée foote déepe. Some vse to set vnder their Rootes round little stones, both to containe, and conuay away the water: others lay grauell vnderneath them. The greater Trées are to be set toward the North and the West, the smaller toward the South and the East. Some will haue no Trée remoued vnder two yéere olde, or aboue thrée: and others when they be of a yéeres growth. Cato resisteth Virgils authoritie, that it is to great purpose to marke the standing of the Trée, as it grewe at the first, and to place it towards the same quarters of the heauen againe. Others obserue the contrarie in the Vine, and the Figge Trée, being of opinion that the leaues shall thereby be the thicker, and better defend the fruit, and not so soone fall: beside, the Figge Trée will be the better to be climbed vpon. Moreouer, you must beware that by long tarying, the Rootes be not withered, nor the winde in the North when yée remoue them, whereby many times they die, the husband not knowing the cause. Cato condemneth vtterly all manner of windes or stormes, in the remouing of Trées, and therefore it is to great good purpose to take them vp with the earth about them, and to couer the Rootes with a Turffe, and for this cause Cato would haue them to be carried in Baskets filled with earth vp to the toppe: the Trée must so be set, as it may stand in the middest of the Trench, and so great héede must be taken of the Rootes, that they may not be broken, nor mangled.

THRA. Let vs now goe forward with euery Trée in his order.

MARIVS. Among all Trées and Plants, the Vine by good right chalengeth the Soueraignetie, seeing there is no plant vsed in husbandrie more fruitfull and more commoditeus then it, not alonely for the beautifulnesse, and goodlinesse of the fruit, but also for the easinesse he hath in growing, whereby he refuseth not almost any kinde of Countrey in the whole world, except such as are too extreamely scorched with the burning heate of the Sunne, or else too extreamely frozen with the vehement colde, prospering also as well in the plaine and champion Countrey, as it doth vpon the hilly and Mountaine Countrey: Likewise as well in the stiffe and fast ground, as in the soft and mellow ground: And oftentimes in the Loamie and leane-ground as in the fat and foggie, and in the drie, as in the moist and mirie, yea, and in many places, in the very Rockes it groweth most aboundantly and most fruitfully, as is to be seene and proued at this day about the Riuer of Rhine in Germanie, and the Riuer of Mosell in France: and aboue all this, it best abideth and beareth the contrarie disposition of the heauens. The Vine.

THRA. No doubt it is the most excellent Plant: But whom doe you suppose to be the first Authour of the planting of it: The common sort doe attribute the first inuention of it to Bacchus.

MARIVS. We that are taught by Gods holy word, doe know that it was first found out by the Patriarke Noah, immediately after the drowning of the world: It may be, the Vine was before that time, though the planting and the vse thereof was not then knowne. The Heathen both most falsly and very fondly, as in many other things, doe giue the inuention of the same vnto the God Bacchus. But Noah liued many yeeres before either Bacchus, Saturnus, or Vranius were borne. The inuention of the Vine.

THRA. It is most likely so: But I would faine know whether the planting of Vines doth more enrich the husband then other husbandries doe.

MARIVS. About this question there is no little adoe among the Writers of old, where there are some that preferre Graffing, Tilling, and Woodsales farre aboue the Vines: and yet againe there wants not great and learned men, that affirme the Vine to be most gainefull: and declareth that olde fruitfulnesse of the

The Vineyard most gainefull.

Vines, mentioned by Cato, Varro, and Columella, which vpon euery Acre yelded seauen hundred Gallonds of Wine, and the Vineyards of Seneca, wherein he had yeerely vpon one Acre 1000. Gallonds: when as in Corne ground, Pasture, or Wood land, if a man doe get vpon one Acre xx. s. a yeere, it is thought a great matter.

Cornfields and Vineyards compared.

THRA. But the Vine asketh great charges, and great trauaile about it, and it is subiect to many mishaps, as the colde Frosts of Winter, the blastes and burning of Summer: and from the first appearing, till the third of May (which is the last decretorie day of the Vine) the hurt of the colde and Frost is feared. When it hath scaped this danger, then commeth a greater mischiefe, which lightly euery yeere doth great harme: for either with blastes in the Dogge daies, or for lacke of raine, the Grapes are withered and spoiled, or else with ouer-much raine they ware sowre, and not ripe. Sundry other mishaps there happen, that the Vine is subiect to.

MARIVS. I graunt: so is your Corne likewise, for both it asketh great charges, and such casualties oft-times vndoeth the poore Husbandman. For in all kinde of Husbandry, if there be not great diligence, and good skill imploied, there will be but small commoditie reaped. And especially the Vine requireth great husbandry about it, for it is tender, and some harmed, and therefore in choise of the Vineyard, there must be good heede, & both the nature of the Country, and the disposition of the heauens to well considered. Most men plant their Vines without any great care, or heede of them: and when they grow vp, vse little diligence in the trimming of them, by which negligence, many times they wither before they be ripe. Others againe thinke it makes no great matter, what ground they bestow about it, and most times lay out for this purpose, the worst ground they haue, as though it would serue for this Plant that will serue for no other thing. Some againe reape all the commodity they can the first yeeres, not prouiding for farther time, and so complaine that their gaines doth neither answere their trauaile nor their charges, whereas indeede their owne folly and negligence is the cause: for if there be diligence & paines bestowed vpon it, as Columella prouieth by many reasons, there is no husbandry so profitable, as the planting of Vines.

THRA. I doe not denie but that there is great profit in it, where the ground is more for Vines, and not so fit for Corne: otherwise I thinke the sowing of Corne to be an easier matter, and speedier way to enrich the husbandman.

MARIVS. Surely as touching the easinesse of the husbandrie, and the greatnesse of the gaine, the olde writers haue euer preferred the Vineyard afore the Corne-field: for as Columella reporteth, Siserna writeth, that the labour of one man is sufficient for eight acres of Vines, or at the least for seauen: of the increase I haue spoken before.

THRA. Marry sir, at this day one man thinkes three Acres too much for him: but not to trouble your talke, I pray you goe forward with the husbandry of your Vines.

MARIVS. The ordering of the Wine-bearing-Vines, as the sorts of Vines are sundry, neither can they be contained in certaine numbers, for there is as many sorts, as there is of ground. Homer giueth the chiefest prayse to the Wine of Maronia, and Pramnium. Virgill most commendeth Rhenish wine: others the wine of Aminia, Lamentana, Candy, and Corsega, but I meane to speake of those that are commonly in our dayes. In Italy at this day they make most account of wine of Corsega, Romani, and Meysina. In Spaine the best esteeme the wine of S. Martine, of Ribodari, and Giberalter. In France the greatest praise is giuen to the wine of Orleans, Aniuo, and Greues: Germanie began but of late to meddle with planting of Vines, for Varro writeth, that the Frenchmen and Germanes had in his time both Vines and Oliues: but at this day the Rhine, the Necker, the Mene, Mosel, and Danaw, may compare with any Countries, for goodnesse of their Vines.

THRA. I see that the Vines are diuersly dressed, otherwise in Italy, then in France, and otherwise in France then in Germany, euery Countrey vsing his seuerall fashion.

MARIVS. True: for as Plinie, after Columella, teacheth, the Vine may be planted fiue sundry wayes: for eyther his branches are suffered to runne in safetie vpon the ground, or else without any stay grow vpright, or hauing a stay or a prop set for them, they climbe vp by it, or else runne vp by a couple of stiffe props, called of Liuie a yoke, or else sustained with foure of those

poakes, which of the resemblance that they haue with the hollow gutters of a house, are sayd to be guttered: others againe suffered to runne vpon frames like Arbours, seruing to sit vnder, and are called Arbour Vines: others runne vp by the walles of houses. Moreouer, the poaked Vines, called in Greeke Επιξευμλωα, are tyed together, and ioyned with three or foure props, as if they were poaked: some doe let them runne vpon trees, as commonly in Lumbardy, they are suffered to climbe vpon Elmes, Willowes, and Ashes, where they greatly prosper: neyther doe they like all manner of trees, for they hate the Nut tree, the Bay, the Radish, and the Coll: as againe, they loue the Poplar, the Elme, the Willow, the Fig, & the Diuie tree. The Vines that are poaked, or stayed vp with props, receiue more ayre, and beare their fruit the higher, and ripe the better, but aske more trouble in the looking to: and these are so ordred, that they may be plowed, whereby they are the more fruitfull, because they may the oftner, and with the lesse charge be tilled. The Vines that creep vpon the ground, make much Wine, but not (as Columella saith) so good.

Trees which be friends or foes to the Vine.

THRA. Now to your ordring of them.

MARIVS. First, I will speake of the ground, and of the digging of it, and after of the planting and cutting of them. And first you must take for a speciall note, that euery Vine will not agree with euery place, nor yeeld his Wine in like goodnesse, of such force is the qualitie of the ayre, neyther will all kinde of ground serue: For Columella doth counsaile to set the Vine in a wilde ground, rather then where Corne or bushes haue growne: for as for old Vineyards, it is most certaine, they are the worst places of all other to set new in, because the ground is matted, and as it were netted with the remaines of the old rotes: neyther hath it lost the poyson of the rotten and old stincking Rotes, wherewith the soile (glutted as it were with venime) is benummed: and therefore the wilde and vntilled ground is chiefely to be chosen, which though it be ouer-growne with shrubbes and trees, may yet easily be ridde. If such wilde ground be not to be had, the best is the plaine champion land without trees: if neither such a ground, then the light and thinne bushie ground, or Olive ground. The last and worst (as I sayd) is the old rotten Vineyard, which if necessitie compell you to take, you must first rid the ground of all

The ordering of Vines.

What ground is best for the Vine.

the

the olde rotten rootes, and then couer it eyther with olde dung, or with the newest of any other kinde of mannuring: the rootes being thus digged vp, must be layd vp together, and burned. After must the ground be considered, whether it be mellow and gentle: It is thought to be good, that is something grëtie and grauelly, and full of small pëebles, so that it be mingled with fatte mould withall, which if it be not, is vtterly disalowed.

Dame *Ceres* ioyes in heauy ground, and *Bacchus* in the light.

You shall perceiue it to be massie and thicke, if being digged, and cast into the hole againe, it riseth ouer: if it scarsely fill the hole, it is a signe that it is light and thinne. The Flint, by the generall consent of Husbandmen, is counted a friend to the Vine, specially where it is well couered with good mould: for being cold and a këeper of moysture, it suffereth not the rootes to be scalded with the heate of Summer: so much, that Columella doth will men to lay certaine stones about the sides of the Vine trëes, so that they excëede not the weight of fiue pound a pëece: which as Virgill hath noted, këepes away the water in Winter, and the heate in Summer.

Hurle in the thirstie stone, or therein throw the nastie shelles.

So do we sëe the banks of the Rhine being full of these stones, to yëeld an excellent good Wine: but the stones that lye aboue ground, are to be cast away: for in the Summer, being heated with the Sunne, they burne the Vine, and in the Winter they hurt them with their coldnesse, contrarie to those that lye in the bottome. But the best of all is the foote of an hill, which receiueth the falling mould from the toppes, or the vally, that with ouerflowing of Riuers hath bëene made rich. Neyther is Chalkie ground to be refused, though the Chalke of it selfe that Potters vse, is hurtfull to the Vine. The hungry sandy ground, the salt, bitter, and thirstie ground, is not mëete for the Vine: yet the blacke and reddish sande, medled with some moyst earth, is of some allowed well enough. Moreouer, neither ground too hotte, or too colde, too dry, nor too moyst, too slender, nor too stiffe, that will not suffer the raine to sinke, as mëete is to be vsed for Vines, for it will easily gape and open, whereby the Sunne comming in at the craiuesses, doeth burne the Rootes:

That againe which is ouerthinne, letting in as it were, by vents the Raine, the Sunne, and the Winde, doth drie vp the moysture of the rootes: the thicke and stiffe ground is hardly to be laboured, the fat ground subject to too much rankenesse, the leane ground to barrennesse: wherefore there must be an euen temperature amongst these extreamities, as is required in our bodies, whose health is preserued by the equall medley of heate and colde, dryth and moysture, fulnesse and emptinesse, or thickenesse and thinnes: neither yet is this temperature in ground for Vines so iustly to be euened, but that there is required a more enclining to the one part, as that the earth be more hot then colde, more drye then moyst, more subtill then grosse, specially if the state of the Heauens agree: againe, what quarter thereof the Vineyard ought to lye, it is an olde controuersie, some like best the rising of the Sunne, some the West, some the North: Virgill misliketh the West: others againe thinke the best lying to be vpon the South. But in generall it is thought best in colde Countries, to haue it lye toward the South, in warme Countries vpon the East, in hot burning Countries, as Ægypt & Barbarie, vpon the North. Plinie would haue the Vine himselfe stand towards the North, and his spring, or shootes towards the South. A fit ground, and well lying, being found out, must be diligently digged, dounged, and weeded: all vnprofitable weeds must be pulled vp, and throwen away, left they should spring againe, and either corrupt the yong plants, or hinder the laborer.

What quarter of the heauen the Vine must lie against.

THRA. Before you come to trenching, I would gladly heare in what sort you plant your Vine, and what season is fittest for it.

MARIVS. I will first speake of the season, and afterwards of the planting. The Vine is planted according to Virgils rule, in the fall of the leafe, but better in the Spring, if the weather be raynie, or coide, or the ground be fat, champion, or a watrish valley: and best in the fall of the leafe, if the weather be drye and warme, the ground drie and light, a barren, or a rugged hill. The time of planting, in the Spring (as Columella sayth) endureth fortie dayes, from the Ides of February, vntill the Æquinoctial: and in the fall of the leafe, from the Ides of October, to the Kalends of December. Cassian in Constantine, being taught by

The time for planting of Vines.

experience,

experience, saith, in watrie grounds you should rather plant in Autumne, when the leaues are falne, and the plants after the Vintage deliuered of the burthen of their clusters, sound and strong, before they be nipped with the frosts, for then they best agree with the ground, nature applying her selfe wholly to the nourishing of the rote. The time of grafting Columella saith, is of some extended from the first of Nouember, to the first of June, till which time the shote or graffe may be preserued: but it is not well liked of him, who rather would haue it to be done in warmer weather, when the Winter is past, when both bud and rinde is naturally moued, and it safe from cold, that might annoy either the Graffe, or the Stocke: yet he granteth (when hast requireth) it may be done in the fall of the leafe, when as the temperature of the ayre, is not much vnlike to the Spring: for which purpose, you must chose a warme day, and no winde stirring. The Graffe must be round and sound, not full of pith, but of buds, and thicke of joynts, the Tenant whereof must not exceede three inches, and smooth, and euen cutte: the stocke and the cleft must be well closed with clay and mosse. Those that grow toward the South, must be marked, which Virgill obseruing, saith:

Graffing of Vines.

VVhat Graffes to be chosen.

But on the barke, they also note the quarter of the skie,
The order how it stood, and grew, and where the South did lie.

The like is to be done with all other Trees. Of planting of Vines, there is two wayes, the one of the Rote, the other of the branch, or spray: The Rote is counted a great deale better then the branch or set, by reason of the forwardnesse, and vantage that it hath, in that it hath alreadie taken rote. The Rote is set in stiffe ground, well digged and laboured, in a trench of three foote, the set or spray, in a gentle and mellow ground: in drie ground, it is neither good to set the Rote, nor the Branch in a dry season: it is best to plant in the fall of the leafe in a hot season, and in a colde and moyst, in the Spring: in much wet you must set them thinner, in great drieth, thicker: in what sort you shall make a store Garden for Vines Palladius teacheth you. The set requireth a time to rote, and being remoued will beare the better fruit. The rootes doe beare fruit the second yeere, or sooner: the Sets, or Branches, scarse in the third or fourth yeere, though in some places sooner.

Didymus

Didymus in Constantine teacheth an easie and a readie way of planting the Quickset, which is, to take of a strong and ten yeere Vine, the longest and fairest branch, that groweth lowest, a foote from the ground, and laying it long in a Trench of a foote depth, to couer it with earth the space of foure ioynts, so that remaine in the top, exceede not two or three ioynts: and if the branch be so long, as it will serue for two burnings, you may make thereof two rootes. You must not suffer two rootes to runne vp vpon one stay, but allow euery roote his supporter. The Branches, or Set that you meane to plant, you must cut from a very fruitfull and flourishing Vine, that hath borne ripe and perfect good fruit, full of ioynts, and not any wayes tainted, but whole and sound. Of such you must chose your Sets, and not of young Vines, that are weake and feeble, but such as are in their chiefe state. Moreouer, you must gather your Set, not of the highest, nor the lowest, but from the middest of the Vine: the Set must be round, smooth, full of knots and ioynts, and many little burgeons. Assoone as you haue cut it off, looke that you set it: for better doth it agree with the ground, and sooner grow. If you are driuen to keepe them, burie them in the ground either loose, or loosely bound: and if the time be long that you meane to keepe them, you must lay them in emptie barrels, strawing earth vnder them, and vpon them, that the earth may lie round about them: and the barrell you must stop closely with clay, that there enter neither winde nor aire, so shall you preserue them two moneths in their goodnesse. Such as are ouer drie, you must lay them in water foure and twentie houres afore you set them, and you must set two Sets together, that though the one faile, the other may take: and if they both grow, you may take vp the lesser of them: you must not make a medley of sundry sorts, specially white and blacke together: but as Columella saith, must sort them seuerally. You must beware that the Sets haue not put out their springs, and that you set not a withered Set. Constantine would haue the Set something crooked, affirming that it will the sooner take roote. You must lay about them three or foure stones, and then raise the earth, that it may equally with the dung be troden downe: for the stones keepeth the earth firme, and as I said before, coleth the Roote. Both the ends of the Set you must annoint with Dre

dung,

dung, for the killing of the wormes: as for the length, if it be full of ioynts, it may be the shorter, if it haue few ioynts, you must make it the longer, & yet not exceeding a foot in length, nor a shaftman in shortnesse, the one for being burnt with ouer drynesse in Sommer: the other, least being set too deepe, it be with great hardnesse taken vp, but this is for the leuell ground: for vpon hils, where the earth still falleth, you may haue them a foot and a hand bredth in length. Florentine would not haue the trench lesse then foure foote in depth: for being set shallow, they sooner decay, both for the want of sustenance, and great heat of the Sunne, which is thought to pierce foure foote into the ground: though some there bee that thinke three foote sufficient for the plant. The Trenches for Vines, Virgill would not haue very deepe: but deeper a great deale for Trees. Such Vines as you meane shall runne vpon trees, you must plant three cubits distant from the Tree: afterwards, when they be well growen, and need to bee ioyned with the Tree (which you shall perceiue by his thickenes) you shall lay it downe in length, & burie it, till it come within a foot of the Tree, suffering the remaine to goe at liberties, nipping off all the buds with your naile, except one or two, that it may the better prosper, which when it is growen vp, you must ioyne by little and little to the Tree, that it may rest vpon it: which part of the Tree must be diligently proyned, and the springs and sciences that grow out of the roote, must according to Florentinus, be cut cleane away. The trees, as much as may be, must be forced to the East and West, and both the Tree and the Vine, must haue the earth well digged, and dunged about them. In rich ground, you may suffer the Trees to growe in height, but in barren ground they must bee pulled at seauen or eyght foot, least all the substance of the Earth be soaked vp of the Tree. After your planting, you must digge the ground euery Moneth, and weede it, specially from the first of March, till the first of October: euery thirtieth day you must digge about the young plants, and plucke vp the weeds, specially the grasse, which except it be cleane pluckt vp and cast away, though it be neuer so well couered, will spring againe, and so burne the plants, as they will make them both foule and withered: the oftner you digge them, the more good you doe them.

The length of the sets.

The ordering of Vines after their planting.

Of digging and dunging of Vines.

When

Of digging and dunging of Vines.

When the Grape beginnes to alter, you must in hand with your third digging, and when it is ripe, before none when it waxeth hot, and after none when the heate decreaseth, you must digge it, and raise the dust, which doing, defendeth the Grape both from the Sunne and the Mist. According to Virgils minde, the Vine must be digged and weeded every Moneth: some would haue them digged all the Summer long, after euery deaw: others againe will not haue them digged as long as they bud or burgen, for hurting the springs, saying, that it is enough to digge them thrise in the yeere, from the entring of the Sunne into Aries, till the rising of the seauen Starres and the Dogge. Some againe would haue it done from the Vintage before Winter, and from the Ides of Aprill before it take, and then againe before it flowre, and likewise before the burning houres of the day. In some places when they haue digged them, they doe not straight-waies couer them, but suffer the trenches to lye open all the Winter: in wet and raynie places they couer them sooner, closing vp the roots with earth, and stopping all the passages of the water. Some make the trenches very deepe, and some not passing a foote deepe: and when they haue done, they couer them aloft with Ore-dung, Sheepes dung, or Hogges dung, or of other Cattell: Pidgions dung is the hottest, and such as causeth the Vine fastest to growe, but maketh the worser Wine. The dung must not be layd close to the Vine, but a little distant from it, whereby the roots that spread abroad, may haue some helpe of it, and the dung must not touch the roots, for breaking of them: if there be no dung at hand, the stalkes of Beanes and other Pulse, will well serue the turne, which both defendeth the Vine from frost and cold, and keepes them likewise from noysome wormes: the kernels, and the stalkes of the Grapes, doe likewise supplie the want of dung; but the best of all, is old stale Vrine. The plants of a yeere, or two yeere old, and so forth, till fiue yeeres, must be discretly digged, and dunged, according to their state: in sandy ground, the best dung is of Sheepe and Goates: and in such sort you must digge the ground, that the earth that lyeth highest, be cast to the bottome, and that which was at the bottome, be layd aloft: so shall that that was dry, by the moysture within, be helped, and that which was moyst and stiffe by the heate aboue, be loosened. You

What dung is best for Vines.

VVhere the dung must be layde.

Pisse, the best dung.

The order of digging or stirring the ground

must also see that there be no holes nor pits in the Vineyard, but that it lie euen. When you haue thus digged it, and that the Vines haue taken rote the first yeere, the rotes that grow about must be cut away with a sharpe knife: for the Vine, if it be suffered to rote euery way, it hindereth the deepe downe growing of the rote. The Vines that are now of two yeeres growth, we must digge and trench about two foote deepe, and three foote broad, according to the rule of Socion. Of those Vines that climbe vpon Trees, you must likewise cut off the springs that runne among the rootes of the Tree, lest the small rote tangling with the greater, be strangled: and therefore you must leaue some little space betwixt the Vine and the Tree. Often digging causeth great fruitfulnesse: good heed must be taken, that the plants be not hurt in the digging: also it must be digged before his flourishing, or shooting out of his leaues: for as immediately therewithall he beginneth to thrust out his fruit, so hee that diggeth after the comming foorth thereof, loseth much fruit with the violent shaking, and therefore must digge the timelier. Cutting and dressing of the rootes, you must begin in hand with at the Ides of October: so that they may be trimmed and dispatched afore Winter. After Winter digge about the rootes that you haue dressed: and before the Sunne enter the Æquinoctium, leuell the rootes that you haue trimmed. After the Ides of Aprill, raise vp the earth about your Vine: in Summer let the ground be oftentimes harrowed. After the Ides of October (as I haue said) before the colde come in, you must dresse the rootes of your Vines, which labour layeth open the Summer springs, which the good husbandman cutteth away with his knife: for if you suffer them to grow, the rotes that grow downe will perish, and it happeneth that the rootes spread all aboue, which will be subiect both to cold and heat: and therefore whatsoeuer is within a foot and a halfe, is to be cut off, but so, as you hurt not the principall. You must make this riddance of the rootes at euery fall of the leafe, for the first fiue yeeres, till the Vine be full growen: after, you must dresse them euery fourth yeere: such Vines as are toyned with Trees, for the vnhandsomnesse, cannot be thus handled. Vines and Trees, the sooner their Rootes bee thus dressed, the stronger and weightier they will bee; but such as

Dressing of Vines.

grow

grow vpon the sides of hills, must so be dressed, as the vpper roots neare to the stocke may spread largely, and vnderneath towards the foote of the hill the earth must be banked to keepe the water and the mould the better. The old Vine must not haue his roots medled withall for withering, nor be plowed, for breaking of them, but the earth a little loosed with a Mattocke, and when you haue thus dressed the roote, lay dung about it. After this ridding of the rootes, then followeth proyning, or cutting, whereby the whole Vine is brought to one twigge, and that also cut within two ioynts of the earth: which cutting must not be in the ioynt, but betwixt the ioynts, with a slope cut, for auoiding the water: neither must the cut bee on that side that the budde comes out of, but on the contrarie, lest with his bleeding hee kill the budde. Columella appointeth two seasons for the cutting of Vines, the spring, and the fall of the leafe, iudging in colde Countries the cutting in the Spring to be best, and in hot Countries where the Winters be milde, the fall of the leafe: at which time both Trees and Plants, by the diuine and euerlasting appointment of God, yield vp their fruit and their leafe. Yet must not your sets be too nearely cut, except they be very feeble: but the first yeere they be set they must be holpen with often digging, and pulling off the leaues monethly, while they beare, that they may grow the better. Phamphilus in Constantine, declareth the time of cutting, or proyning, to begin in February, or March, from the fiftéenth of February till the twentieth of March: some (he saith) thought good to cut them immediately after the gathering of the Grapes, lest by bleeding in the spring they loose their sustenance: though being cut in the fall of the leafe, it springeth the sooner in the spring, and if the colde of frost happen to come, it is spoyled. Therefore in colde Countries, it were better to proyne it a little, then to cut it throughly, that is, to suffer the principall springs and branches to grow. Againe, it is very necessary to cut them in the Spring: the cuts must be made with a very sharpe knife: that they may be smooth, and that the water may not stand in them, to the engendring of wormes, and corrupting of the Vine: you must cut them round, so will the cut be sooner growen out againe: but Plinie would haue them slope-wise, for the better auoyding of the water. The branches that be broad, old, crooked, or wrythen, cut

away,

away, and set yong and better in their place. You must make an end of your cutting with as much spéde as you may: from the Ides of December, till the Ides of January, you must not touch your Vines with a knife: for Columella witnesseth, that Vines in winter may not be cut. In cutting, remember well to cut it betwixt two ioynts, for if you cut it in the ioynt, you spill it: let the cut be alwaies downeward, so shall it be safe both from Sunne and weather. You must not cut them very earely, but when the Sun hath drunke vp the frost, or the deaw, & warmed the branch: the springs of the sets the first yeere, must be cut with good discretion, nor suffered to grow too ranke, nor cut too neare, but making the olde set to suffer a spring or two to grow out. Next vnto cutting, followeth the propping, or supporting of the Vine: and it is best for the yong and tender Vine not to be stayed vp with any strong stay, but with some small thing at the first, and while it is yong, it must be daintely tyed to the stay with smal twigs of Willow, Elme, Broome, Rushes, or Straw: this latter binding, is thought to be best, for the twigs when they ware drie doe pierce and hurt the rinde. There is an hearbe, which because of his aptnes for tying of Vines, the Sicillians call ἀμπελοδεσμὸν. The best stayes for Vines, as Plinie saith, are made of Willow, Oke, Réed, Juniper, Cypresse and Elder. And in another place, hee preferreth the Chestnut for this purpose, aboue all the rest. The best for the Vine, is the Réede, which well endureth fiue yéeres. Gelding of the leaues, & cutting the Vine, is almost in one manner: the gelding of the leaues, or braunches, must be done twise a yere, to the end that the superfluous springs & leaues may be plucked off. The first (as Pliny writeth) must be done within ten daies after the Ides of May, before the Vine begin to flowre: for about the tenth of June, both the Vine & the Wheat, the two noble fruits, do flowre. Of the second time, the opinions are sundry, for some suppose it best to plucke off the leaues & branches as soone as it hath left flowring: others, when the fruit is full ripe. The superfluous springs being yong & tender, are to be taken away, that the Vine may be more at libertie, and through blowen with the winde. This gelding, or cutting away the superfluous branches & leaues is as needful as the propping: for both the fruit doth prosper the better, & the propping the next yéere will be the handsommer,

Propping of Vines.

Gelding or plucking off of leaues.

and

and the Vine will be the lesse full of galles: for that which is cut being greene and tender, doth the sooner and the soundlier recouer himselfe, and the Grape ripeth the better. Ten daies before the Vine beginnes to flowre, see that you geld it in this sort: Cut off all the superfluous branches, both on the toppe, and on the sides, but meddle not where the clusters grow, strike off the tops of the branches for growing too ranke: such Grapes as grow towards the South, or the West, leaue them their branches to defend them from the heate of the Sunne: cut away most from the young Vine, for ouer burdening him. After the heate of the Sunne beginneth to fade, away with the leaues, for hindring the Grapes of their riping: and while the Grape is a flowring, busie your selfe with digging about it. Such Vines, as with thicknes of their leaues corrupteth their fruit, are to be rid of their superfluous branches and leaues a Moneth before the gathering of your Grapes, that the winde may blow the better through them: but the leaues that grow aloft in the very top, must not be meddled with, but left as a defence, and shadow against the heat of the Sunne: but if so be, the end of Summer be giuen to much raine, and that the Grapes swell in greatnesse, then hardly plucke off the leaues from the top also.

THRA. You haue told vs of a great deale of labour about Vines.

MARIVS. The Vine keeper must often go about his Vines, and set vp his props, and make euen his yoakes.

THRA. One thing I pray you, let me heare more, the signes and tokens of the ripenesse: for as I vnderstand, we may not be too busie in gathering them too soone, nor vse any lingring after they be ripe, without great harme.

MARIVS. You say true: for being gathered before they be ripe, they will make but small Wine, and not durable. And againe, if you suffer them too long, you shall not onely hurt the Vine with the ouer-long bearing of her burden, but also if hayle or frost happen to come, you put your Vine in great danger. Democritus writeth, that the Grape endureth in his ripenesse not aboue fiue dayes, and therfore the iudgement of his ripenesse, is not alonely to be giuen vpon the sight, but vpon his taste, though Columella thinketh there can be no certaine iudgement

giuen

giuen of the taste. But if the stones doe change their colour, and be no longer greene, but be almost blacke, it is a signe the Grape is ripe. Some againe do presse the Grape betwixt their fingers, & if they see the stone to slip out smooth, without any thing cleauing to it, they thinke them meete to be gathered; but if they come out with some part of the Grape cleauing to them, they count them not to be ripe. Others proue them in this sort: Out of a very thicke cluster they take a Grape, and as they behold the cluster well, wherein they see no change, they take it for a token of ripenesse. You must gather your Grapes, the Moone being in Cancer, Leo, Libra, Scorpius, Capricorne, or Aquari, and vnderneath the earth.

THRA. Is there no way to make the Grape ripe speedily?

MARIVS. Plinie teacheth, to rubbe ouer the Rootes with tart Vinegar, and very old Wine, and thus to be often digged, and couered.

THRA. What order haue you for preseruing of your Grapes when they be gathered?

MARIVS. Some keepe them hanged vp in the roofe of chambers, and some in earthen pots, close couered with wooden vessels. Palladius sheweth a way how to keepe them vpon the Vine, till the Spring.

THRA. I pray you procéede with the other fruit Trées of your Orchard.

MARIVS. Among other fruit trées next vnto the Vine (as Columella saith) the chiefe place is giuen to the Oliue, in Latine Olea. Of all other Plants it requireth least trauaile and charges, where as the Vine requireth most: and though it beare not euery yeere, but euery other yeere, yet is he to be borne withall, because he asketh neither cost nor labour: and if you bestow any vpon him, he recompenseth it throughly, with the abundance of his fruite. And since there is so great profit and commoditie in this tree, and that the vses of it are so many, and so needefull, it is good reason to be diligent and carefull about it: he loueth a ground neither too high, nor too low, but rather the side of a hill, such as is the most part of Italie and Spaine: for in such ground the extreame heate of the Sunne, is something mollified with the cold blasts of the winde: for in Oliue trées (as Plinie saith) the soyle and the clime is of great importance: it delighteth The Oliue

in a warme, and a drie ayre; and therefore in Barbary, Sicil, Andalusia, sundry parts of Italie, spectally Campania, it prospereth wonderfully: it liketh not too great heat, nor too much cold. And therefore in hot Countries, it ioyneth vpon the North side of the hilles, and in cold, vpon the South side. It is thought, that if it stand aboue threescore miles from the Sea, that it eyther dyeth, or proueth not fruitfull. The best ground is the graueliy ground, hauing aloft a little chalke mingled with sand: it is also good ground where the sand or grauell is medled with rich mould: yea, the stiffe ground, if it be rich and liuely, doth very well agree with this tree. Chalkie ground is vtterly to be refused, and watry and marish ground worst of all. The like is a barraine sand, and hungry sand: but you may set it well in Corne ground, where either the Wilding or Hasthelme hath growne: but betwixt the Oake and it there is great hatred; for if the Oake groweth neere, it flyeth away, and shrinketh towards the earth: and though you cut downe the Oake, yet the very rootes poysoneth and killeth the poore Oliue. The like some affirme of the Trees called Cerrus, and Esculus: for where they be pulled vp, if you set the Oliue, he dieth: so doth it (as Plinie saith) if it chaunce to be bruised of the Goate. On the other side, betwixt the Oliue and the Vine there is great friendship and loue: and it is said, that if you graffe the Oliue vpon the Vine, it will beare a fruit that shalbe halfe Grape, and halfe Oliue, called Vuolea, an Oliue-Grape. There are sundry wayes of planting of Oliues: some take the biggest branches from the Trees, and sawing off the youngest plants of two cubits in length, they set them orderly in the ground: some setteth the whole Tree together: some againe cutting off the tops, and all the branches, set the stocke about the rising of the Starre Arcturus. Many make them Impe Gardens in good ground and mellow, such as is commonly the blacke mould: herein they set the young branches the lowest, and the fayrest, two or three inches in thicknesse, and very fertill, which they gather not from the body of the Tree, but from the newest and latest boughes. These they cut into pretty Settes of a foote and a halfe in length, taking good heede that they hurt not the rinde, and paring the ends very smoothe with a sharpe Knife, and marking them with redde Oker, that they may know which way they stood afore,

and

and so setting the lowest part into the ground, and the highest towards the heauen, they put them in the ground, and so they grow the faster, & beare the better: for if you should set them with the lower end vpward, they would eyther hardly grow, or proue vnfruitfull: and therefore they haue a regard of the setting of them. You must beside, before you set them, rubbe ouer both the toppe and the foote with doung mingled with Ashes, and so set them deepe in the ground, couering them foure fingers thicke with rotten mould. You may chose whether you will sette them all vnder the ground, or set some part within the ground, and suffer the rest to appeare aboue the ground: those that be sette all within the ground, néede not to be marked, but such as shall stand with one part aboue the ground. Dydimus would haue them so set as they may appeare foure fingers aboue the ground, and then to make a little trench for the receiuing of the water: and this manner of planting with the boughs, is of Dydimus best liked. Where you mean to plant, you must purge the ground of all other plants, bushes and weedes: and the trenches must so be made, as with the winde, the sunne and raine, it may be mellowed & made crombling, that the plants may the sooner take rote. If your busines require haste, you must a moneth or two before, burne in the trenches either sticks or réede, or such things as will easilie take fire: and this you must do diuers daies together. Your trenches must be three cubits, or thereabout in depth, & 40. cubits asunder, whereby the trées may haue ayre enough: the first second, and the third yéere, the earth must be trimmed with often raking: the first two yéeres you must not meddle with propping: the third yéere, you must leaue vpon euery one a couple of branches, & often rake your Impe garden: the fourth yeer, you shal of the two branches cut away the weaker: being thus ordred, in the fift yeer they will be mét to be remoued: the stocke that is as big as a mans arme, is best to be remoued: let it stand but a little aboue the ground, so shal it prosper the better. Before you remoue it, marke the part that stood South with a péece of Oker, that you may set it in like maner againe. You must first dig the trenched ground with Mattocks, & after turne in stone-plowed earth, & sow it with Barley: if there be any water standing in them, you must let it out, and cast in a few small stones, and so setting your Settes,

cast in a little dung. After the tenth of June, when the ground gapes with the heate of the Sunne, you must take heede that the Sunne pierce not through the clefts to the roote. From the entring of the Sunne into Libra, you must ridde the rootes of all superfluous springs: and if the Trée grow vpon the edge of a hill, you must with little gutters draw away the muddy water. The dung must be cast on at the fall of the leafe, that being mingled in Winter with the mould, it may keepe the rootes of the trées warme. The mother of Oyle must be powred vpon the great ones, and the mosse must be cut off with an Iron Instrument, or else it will yéeld you no fruit. Also after certaine yéeres, you must cut and loppe your Oliue trées: for it is an old prouerbe, That who so ploweth his Oliue Garden, craueth fruit: who dungeth it, moweth fruit: who cutteth the trées, forceth fruit. In the Oliue Trée you shall sometime haue one branch more gallant then his fellowes, which if you cut not away, you discourage all the rest. The Oliue is also grafted in the wilde Oliue, specially betwixt the rinde and the wood, and by implastring: others graffe it in the roote, and when it hath taken, they pull vp a parcell of the roote withall, and remoue it as they doe other plants. Those Oliues that haue the thickest barks, are grafted in the barke. The time of Graffing them, is from the entring of the Sunne into Aries, and with some from the xxij. of May, till the first of June. The time of gathering of Oliues, is when the greater part of halfe the fruit waxeth black, and in fatre weather: the riper the Oliue is, the fatter will be the Oyle. In gathering of Oliues, there is more cunning in making Oyle, then in making Wine: the lesser Oliues serue for Oyle, the greater for meate. There is sundry sorts of Oyle made of an Oliue: the first of all is raw, and pleasantest in taste: the first streame that comes from the presse is best, and so in order. The best Oyle is about Venafri in Italie, & Licinia in Spaine: the next in goodnesse, in Prouence, except in the fruitfull parts of Barbary. The Oliues that you may come by with your hands, you must eyther vpon the ground, or with Ladders gather, and not beat them downe: for those that are beaten downe wither, and yéeld not so much Oyle as the other: and better is the Oliue that is gathered with the bare hand, then with gloues: there is an old law for Oliues, Bruise not the Oliue, nor beate him. Those that

passe the reach of the hand, must be rather beaten downe with Rœdes then Powles: the Oyle is increased from the rising of the Berward, to the xvi. of the kalends of October: after, the stone and the meat doe grow. Of Oyle, some part serueth for meat, and other for the sowpling of the body: and therefore, as Varro saith, it accompanieth his maister, not onely to the Bath, but also to the field, or wheresoeuer he goeth. The Oliue whereof you make your Oyle, must be taken from the ground: and if it be foule, must be washed: for the drying, thrée dayes is sufficient: if it be frosty weather, they must be pressed the fourth day: euery first heape must be put in earthen pots, and Oyle vessels, where with hard and rough stones they are grinded. The gathered Oliue, if it lye too long in heapes, putrifieth by reason of heat, & makes vnsauery Oyle. Mils are more handsome for the making of Oyle, then the trough and the fote: for the Mils may be handled with great discretion: the whole store may be rayled or let downe, according to the quantitie of the Berry, least the stone which would marre the taste of the Oyle should be broken. The Presses chiefely, and the Oyle houses ought to be warme, for the spédier running of the Oyle, which with cold would make the longer stay. And sith heat and warmth is so nédfull, you must prouide that your house lye toward the Sunne, so shall you néede neither flame nor fire, which with smoke or sote, may corrupt the tast of your Oyle. The lawes and order of gathering, and bestowing of Oliue, hath Cato described: the manner of preseruing them is declared by Columella, which were too much for me to speake at this time.

THRA. Goe on then, and let vs heare what you can say of Apple trées: whose vse is more commonly knowne vnto vs.

MARIVS. The Apple, called in Latine Pomum. There are that put this difference betwixt the Apple and the Nutte, that whatsoeuer fruit is to be eaten soft without, and hard within, is an Apple, and the contrarie a Nutte. Pomum generally spoken, is to be vnderstood of all that the Gréekes comprehended in the word, ὀπωρα, as Peaches, Quinces, and Peares, whereunto the Lawyer agreeth: but in this place I speake of Apples, according to the common phrase: as for Quinces, Pomegranates, and Turkie Plomes, I will speake of in their due places. There are such sundry sorts of Apples, differing both in shape and sauour, Apples.

as are scarcely to be numbred. In the olde time the chiefest Apples were Septians, very great and round, Martians, Claudians, Matians, and Appians, so called of their first founders: some againe toke their names of their Countries, as Camerians, and Grecians: so others of their colours, as red, sanguine, silken, and golden. We haue at this day that are chiefe in price the Pippen, the Komet, the Pomeroyall, the Marigold, with a great number of others that were too long to speake of. There is but one manner of planting and graffing of them all, sauing that the Peach, the Lemon, the Apricot, the Quince, and the Cytron, which are all, of Dioscorides, accounted in the number of Apples, require a little more diligent care, as shall be said hereafter, then the others, for they are all both planted and graffed: the manner of an Impe Garden Cato describeth. Apple trées are set either in February, or in March: or if the Countrey be hot and dry, in October and November. But all kindes of Apples doe better prosper by graffing, and inoculation, or imbudding, as I said before about March or Aprill, or what time so euer the sap be in the rinde. They are also graffed by implastring, about the tenth of June: though some (as they say) haue had good successe in doing it after the entrance of the Sunne into Aries, as I haue said before, where I spake of implastring and Graffing. The Apple is commonly Graffed vpon the Crab stocke, or vpon the Bramble, being first planted, and the yeere after cut off within a foote of the earth: vpon this stocke you may Graffe (as I said) the tender young Graffes of any Apples. Palladius saith, you may graffe the Apple vpon the Perrie, the Hawthorne, Plumb trée, Seruisse trée, Peach, Plane trée, Poplar, Willow, and Peare: but in such difference of Countries, we can set downe no certaine order for them all: and therefore as farre as mine owne experience, and the knowledge that I haue learned of others will stretch, I will gladly shew you. There are that according to the olde order, doe Graffe the Apple either vpon a wilde Perry, or vpon a Quince, whereof they haue a most excellent fruit, called of the olde Writers Melimela. If you Graffe vpon the Plane trée, you shall haue a red fruit: you may also well Graffe your Apple vpon the Damson trée, and if you Graffe vpon the Cytron, you shall haue them beare, as Diophanes saith, fruit almost all the

yeere

yéere long. The Apple loueth a fat, and a good ground, well watred rather by nature, then by industrie. In mountaine Countries, they must alwayes be set toward the South: it prospereth well enough, so it be something holpen with the Sunne, neither doe they refuse either rough or marrish grounds. A leane and a barraine soyle bringeth out wormeeaten, and falling fruit: the noysome Wormes are destroyed with Hogges dung, mingled with mans vrine, and powred vpon the rootes. And if the tréé be very full of Wormes, being scraped downe with a brasen scraper, they neuer come againe, if the place whence you scraped them, be rubbed ouer with Bullocks dung: some adde vnto vrine Goates dung, and powre vpon the rootes the Lées of olde wine. The tréé that is sicke, or prospereth not, is holpen being watred with Asse dung, and water fiue dayes: they must be often watered at the setting of the Sunne, till the Spring be come out. Plinie writeth, that the water wherein Lupines hath béene sod powred vpon the tréé, doth the fruit good. They say, if the tréé be much watred with vrine, the fruit will be red. Others againe set vnder their Tréés Roses, thinking thereby to haue their Apples red. Apple Tréés (as I said before) must be set euery sort by themselues, as Columella biddeth, least the small tréés be hurt of the great, because they be not all of one growth, or strength. Beside, you must set them very thin, that they may haue roome to shoot out their branches: For if you set them thick, they will neuer beare wel, & therefore you must set them forty, or at the least thirty foot a sunder: The Apple declareth his ripenes, by the blacknes of his kernels. They are gathered after the fourtéenth of September, or there about, according to their kinde, and not before the Moone be seauentéene dates old, in faire weather, and in the after noone: Those that fall from the tréé, must be laid by themselues: it is better to pull them, then to shake them, least they be bruised in their falling. They are kept in faire lofts, vaults, or cold places, with windowes opening toward the North, which in faire weather must be set wide open: & therfore Varro would haue all Apple lofts haue their windowes North, that they may receiue the North aire: the South winds must be shut out: The blasts of the North winde, doth make them wrinkled & rugged: they must be laid thin vpon Straw, Chaffe, or Mats. I had an Apple brought me out of

Against hurtfull wormes.

To keepe Apples.

Holland, that endured three yeares: I haue a tree of them here in this Orchard of his colour, called a Greening. You must lay euery sort by themselues, lest sundry sorts lying together, they sooner rotte. Some vse to lay them in Nut leaues, which both giueth them good colour, and good smell. They are also kept from rotting, if they be layd in Barley or Wheate. Palladius would haue them kept in earthen vessels close stopped, in Cesterns, or in Caues: Apuleius in Constantine, would haue euery Apple wrapped in Nut leaues, and so laid vp: a great sort of waies beside of keeping them, you shall read in diuers Authours. Some to auoide the hurt of the frost, vse to couer them with wette Linnen cloth, which being frozen, the fruit that lyeth vnder it, is preserued. Your Apples must be so layd vp as the stalkes stand downward: neither must you touch any, but such as you néede. Apples are hurtfull to bearing cattell, so as the sauour causeth them to tyre, as Lucian in his Asse witnesseth: the like is written of Peares: the remedy, they say, is to let them eate some of the fruit afore. Of Apples, with certaine Mils for the purpose, they make a drink called Cider, and a small drinke beside with water, and the refuse of the Apples strained, a good drinke to cole the thirst of the poore labourer. A kinde of Viniger also they make of Crabs, and sowre Apples, which lying in heape together three or foure daies, they afterwards put into a Pipe or Tunne, wherewith they mingle Spring water, or Rayne water, and so is it suffered to stand close couered thirtie daies, and after taking out what Vineger they néede, they put in againe as much water. The Peare, in Latine Pirus, challengeth the next place, & is one of the chiefest beauties of the Orchard. The Apple tree spreadeth in broad branches: the Peare tree riseth in height, & delighteth in a rich and a moist ground: it doth grow of the Kernell, and of the Pippen, but is a great while before it come to good: and when it is growne, it degenerateth from them his old good Nature, and therefore it is better to take the wilde plants, and to set them in their ground in Nouember, and when they be well rooted, you may graffe vpon them. It is said, that it so prospereth with often digging, and much moisture, as it neuer loseth his flowre. You shall doe great good vnto it, if euery other yeere you bestow some dung vpon it. Ore dung is thought to make great and mallis

The peare.

Peares:

Peares: some put to a little Ashes to make their taste the pleasanter. They are not alonely planted of the rootes, but also the very little twigs, being plucked from the roote, will grow. If you will set young plants, let them be thrée yéere old, or at the least two yéere old before you set them. Some againe take the fayrest branches they finde vpon the trée, and set them as they doe the Olive. The time of grafting the Peare, is March and Aprill: Plinie saith, you may well graffe it when the blossome is on it, which I my selfe haue tryed to be true. It is grafted vpon the Quince the Almond trée, the Pomegranate, the Apple, and the Mulberie trée: if you graffe vpon the Mulberie, your Peare shall be red. Virgill teacheth to graffe it vpon an Ashe, whereas indéede it will agrée with any stock: the Graffe must be the growth of a yéere, and afore it be grafted, cléered of all leaues and tender parts. And if you would haue the fruit pleasant, and the trée fruitfull, you shall boare a hole through the stocke close by the ground, and driuing in an Oken or a Béechen pinne, couer it vp with earth: if the trée prosper not, wash the rootes, and water them with the lées of old Wine fiftéene daies, so shall it beare the better and pleasanter fruit. It shall neuer be hurt with wormes, if when yé plant it, you doe annoint it with the Gaule of an Oxe: if the trée (whose rootes haue béene cut) séeme not to prosper, Palladius his remedy is, to pierce the roote thorow, and to driue in a pinne, made either of Oake or Plumtrée. If your Peares be stonie, and choake Peares, dig vp the earth from the rootes, cleanse them of stones, and sift in good new mould againe in the place: let your Peare trées stand thirtie foote asunder, or little lesse: your Apple trée farther, as I haue said. They are kept preserued sundry waies, some dipping the stalks in boyling Pitch, doe afterwards hang them vp, and so kéepe them: others kéepe them in new boyled Wine, or else in a close vessell: others in sand, some in flocks, and some againe couered with wheate, or chaffe: some are of opinion, there is no kinde of fruit, but may be preserued in honey. Of Peares Palladius teacheth, as of Apples, to make both drinke and sauce, the iuyce being prest out with the presse: women haue a pretty dish made of Peares for their religious fasts, called Castimoniale. Next in order, after Apples and Peares, cometh the Quince, which was first by Cato called Cotoneum, the Greekes

To keepe peares.

The Quince.

Greeks call it, ευδωνιον, of the Citie Cydon, from whence it was first brought: the Italians, Meie cotogne, the Spaniards, Membrillo: the French men, Vn coiginer: both the Greekes and Virgil, call them of the colour χρυσομηλα, Golden Apples, & Struthia, which kinde (though they differ a little) are of this sort: for Columella speaketh of three sorts of Quinces, Struthia, Chrysomela, and Mustea, which all serue both for health and pleasure. They are planted after the same manner that Peares and Cherries are: some affirme, that the settes that haue beene set in March, or in February, haue taken such rote, as they haue borne fruit the yeere after. They grow well in cold and moyst Countries, in plaine & hillie grounds. In hot dry Countries, you must set them in October. Many set them with the tops and the set, but neither of them both is very good: and being set of science, they some degenerate. They are better grafted in the stock then in the barke, and that in February or March. They receiue into their stocks, the Graffes (in a manner) of all manner of trees, the Pomegranate, the Seruisse, all the sorts of Apples, and make the fruit the better. The Quince tree must be set in that order, that in the shaking of the winde, they drop not one vpon the other. When it is young or newly planted, it is helped with dung, or better with Ashes: they must be watred as often as the season is very drie, and digged about continually: in hot Countries in October, or Nouember: in cold Countries, in Februarie or March: for if you doe not often dig about them, they will either be barraine, or beare naughtie fruit: they must be prouyned, cut, and ridde of all encombraunces. If the tree be sicke, or prosper not well, the rote must be watred with the mother of Oyle, mingled with the like quantitie of water, as Didymus in Constantine saith, or vnslecke Lime mingled with chalke, or Rosen and Tarre must be powred vpon the rotes: you shall gather them in a fayre day, being sound and vnspotted, and very ripe, and in the wane of the Moone. They are best kept coffened betwixt two hollow Tiles, well closed on euery side with Clay: some lay them onely in dry places, where no winde commeth: others keepe them in Chaffe and Wheate, many in Honey: some in Wine, and maketh the Wine more pleasant. Democritus biddeth you beware, that you lay them not neere other fruit, because with the ayre they will corrupt them.

To keepe Quinces.

Theus

There is also made a kinde of Wine of Quinces (being beaten and pressed) and a little Hony & Dyle put into it: our Countrimen make of them a precious Conserue, and Marmelade, being congealed with long seething, and boyled with Sugar, Wine, and Spices. I will now shew you of the Medlar, which the Latines call Mespilus, the Italians Mespilo the Spaniards Mespero, the Frenchmen Mesplier, or Nefflier, the Dutchmen Mespelen: this Tree is also of the number of Apple trees, and Peare trees: it is planted in like manner as the Quince is: it delighteth in hot places, but well watered, though it doe well enough in cold. We haue seene it prosper very well among Okes, and Woodes: for we haue seene great Woods of them growing among Okes, that haue yearely yelded a great deale of money. Some say, it is planted of the science, in March or Nouember, in a well dounged ground and mellow, so that both the ends be rubbed ouer with doung. It is also set of the stone, but then it is very long before it come to any thing: it is excellently well grafted in the Bramble, the the Pirrie, or the Apple. The Medlars that you meane to keepe, must be gathered before they be ripe: and being suffered to grow vpon the Tree, they last a great part of the Winter: they are also preserued in sodden Wine, and Vineger, and Water. In Catoes time they were not knowne in Italie. Plinie and others haue spoken of them: neither is it certaine, whether the old writers take them for Seruisses. Plinie speaketh of three kindes of them: The first kinde hauing but three stones in them, called therefore Tricoccum: wee haue at this day two kindes, the one hauing here and there prickles, growing in euery Wood and Thicket, very sowre afore it be mellowed, & made soft with frost, and cold of Winter: the other hauing no prickles at all with a great fruit, which seemeth to be brought hereunto by diligent Planting and Grafting. The Wood of the wilde Medlar we vse to make Spokes for Wheeles of, and the twigs of them serue for Carters whips. Next vnto the Medlar, for neighbourhood sake, we must speake of the Seruisse, a high tree with a round berry, or fashioned like an Egge: wherefore it is called ουα, as Theophrastus witnesseth, and the fruit ὠόν, the Latines call it Sorbus, the Italians as the Latines, the Spaniards Seruall, the Frenchmen Cormie, or Cormier, the Dutchmen Sporeffelbaum; The fruit growes

The Medlar.

in

in clusters as the Grape doth: the wilde is better then the Garden fruit. It delighteth in cold places, and if you plant it in hotte Countries it will wax barraine. It hath no prickles as the Medlar hath, it groweth of the stone, the set, the rote, or the science, and prospereth in a cold and wet soyle vpon hilles: it is planted in February and March in cold Countries; and hot, in October and November. It is grafted either vpon his owne stocke, or on the Quince or Hawthorne, eyther in the stocke or the barke.

THRA. I maruell how can you haue Pomegranates here, I pray you shew what order you vse.

MARIVS. Among the strange fruits, there is none comparable to the Pomegratate (so called I thinke) because of his Countrey, Carthage and Africa, where the best doe grow: the tree (as yee see) is not high, the leafe narrow, & of a very faire greene, the flowre Purple, and long like a Coffine, the Apple that is compassed with a thicke rinde, is all full of graines within: it is called of the Greekes ῥοὰ or ῥοιὰ, as well the tree as the fruit ῥοα γλυκεια καὶ ὀι νωδυς, the Pomegranate sweete and sowre, it is called in Latine Malum Puaicum, and Malum Granatum in Italian Male grano, in Spanish Granada, in French Pomes de Granad, in Dutch Granatapffel. This Tree onely as the Figge and the Vine, the body being clouen, dieth not: the branches are full of prickles as the Gorst is: it loueth both a hot ground, and a hot Countrie, and liketh not watrie places. In some hot Countries, it groweth wilde in the bushes: it is planted in the spring time, the rootes being watred with Hogs dung and stale. It is grafted vpon his owne stocke, and also vpon other trees, & likewise of the sciences that grow from the rotes of the olde tree. And though it may be planted sundry wayes, yet the best way is the branches of a cubit in length, smoothed with your knife at both the ends, and set slopewise in the ground, with both his endes well smeared with Hogges dung and stale. There is also anotherway of planting it, which is, to take a very fruitfull stocke, which may be brought to the earth, and him after the manner of ther trees they Graffe by infolliation, betwixt the barke and the rinde, and well and closely binde it: after, they set it in the ground, not touching the grafted part, but the parts beneath, annointing it with the mother of oyle, and make it fast with cordes,

Pomegranates.

that

that it slip not backe, till the branch be growne. It much deighteth (as Democritus saith) in the Myrtill, in so much as the roots will meete and tangle together with great ioy. The fruit will grow without kernels, if as in the Vine the pith being taken out, the set be couered with earth, and (when it hath taken) the spring be proyned. There is (as African reporteth) in euery Pomegranate a like number of graines, though they differ in bignes. Basill writeth in his Hexam, that the sowre Pomegranate will grow to be sweet, if the body of the tree neere to the root be pierced through, and filled vp with a fat Pitch tree pin: you shall haue them endure a very great while, if they be first dipped in scaulding water, and taken out quickely, be laide in dry sand, or else in some heape of wheate in the shaddow, till they be wrinckled, or else so couered with chaffe, as they touch not one the other. Other say, it is best to keepe them like Quinces, couered with plaster, or chalke: for in cold places they are kept without corrupting. The rinde of the Pomegranate is called in Latine Malicorium: the flowre of the Garden Pomegranate, Dioscorides calleth, κύτινον, and of the wilde βαλαστιον.

THRA. I heare also, the Dut-landish Cytron is here verie carefully planted.

MARIVS. The Cytron, called also the Median, the Persian, and the Assirian Apple, because it was first brought out of Persia, & from the Medes: others say it was first brought out of Africa into Greece, by Hercules: and therefore Varro calleth it, the Apple of Africa: they are called in Italian Citroni, in Spanish Zidras, in Dutch Geternapffel Pomeranceen, in French Citron: the fruit is called in Latine Hipericum, & Aureum malum, the golden Apple, also the mariage Apple of Iupiter and Iuno: such of them as are yellow, & of a golden colour, they commonly call Oranges: such as are of a greenish pale yellow, they call Cotrols, or Citruls: those that are long fashioned like an Egge, if they be yellow, are called Citrons, if they be greene, Limons: if they be very great and round like Pompeons, they call them Pomeidzons: the tree doth alwaies beare fruit, some falling, some ripe, & some springing: nature shewing in them a wonderfull fertilitie, as in the trees that Homer describeth in the Orchards of Alcinous. The leafe is like the Bay leafe, sauing that there grow prickles amongst them: Cytrons.

the

the fruit is yellow, winckled without, swéet in sauour, and sowre in taste: the kernels like the kernels of a Peare, a great resister of poysons. The Trée is planted (as Palladius saith) foure manner of waies, Of the Kernell, the Science, the Branch, and the Stocke. If you will set the kernell, you must digge the earth two foote euery way, and mingle it with Ashes: you must make short beds, that they may be watred with gutters on euery side. In these beds you must open the earth with your hands a hand bredth, and set three kernels together, with the tops downeward, and being couered, water them euery day; and when they spring, leaue no wéedes néere them: they will spring the sooner, if you water them with warme water: others say it is best the grains being taken out in the spring, to set them diligently in good mellowed furrowes, and to water them euery fourth or fift day: and when they begin to grow, to remoaue them againe in the Spring, to a gentle and a moyst ground, for it delighteth in much wet: if you set the branch, you must not set it aboue a foote and a halfe in the ground, lest it rot. The science and the stocke, Palladius thinketh it better to be planted, and sheweth which way. If any man meane to cherish this trée, let him defend it well from the North, and set it toward the South, and the Sunne, in the Winter, in frailes and baskets: wherefore, some that are carefull and diligent in the tendering of this trée, do make little vaults toward the South, close couered: and within them, néere the wall, they plant the Orenge, suffering the vaults all Summer to lie open to the Sunne, and to haue the heat thereof: and as soone as Winter comes, they couer them straight with straw, or mattes, specially with the stalks of gourds. This trée delighteth to be continually digged about: they are graffed in hot places in Aprill, in cold Countries in May, not vnder the barke, but cleauing to the stocke hard by the roote: they may be graffed both on the Peare trée, and the Mulberie: but when they are graffed, must be fenced either with a wicker basket, or some earthen vessell. The fruit will be swéet, if the kernels be stéeped in water sodde with honey, or which is better in Shéepes milke. Such as you meane to kéepe, must bée gathered in the night, the Moone being downe, and gathered with branches and all, as they hang. Where the fruit burdneth the Trée, you must pull them off, and leaue but few

on it, which will be the pleasanter, and the kindlier fruit. It is at this day nourished both in Germanie and France, and is planted in vessels full of earth, and in hot weather is set abroad in the Sunne: in cold weather set in Sellars, or in hot houses. I haue seene in Germanie, certaine hot-houses, of purpose made of Firre bordes, that in Winter haue warmed all the Garden, & in Sommer the frames taken away, haue giuen place to the Sunne. If while they be young and little they be put into earthen vessels, or glasse, they grow according to the proportion thereof: so that you may haue them fashioned either like a man or like a beast, according to your fancie: but you must so order your moulds, as the aire may come to them. But lest I keepe you too long with these outlandish Trées, I will speake something of our owne trées, wherewith we are better acquainted. Among which we haue the Mulbery, in Latine Moros, in Italian Moro, in Spanish Mora, in French Meure, in Dutch Mulbern: this is accounted of all other trées the wisest, because he neuer blossometh til all cold weather be quite past: so that whensoeuer you see the Mulbery begin to spring you may be sure that Winter is at an end: he is ripe with the first, and buddeth out so hastily, as in one night with a noise he thrusteth out his leaues: they die the hands (as Plinie saith) with the iuice of the ripe berrie, & wash it off with the greene berrie: he changeth his colour thrise, first white, then red, and lastly black: he loueth hot places, and grauelly, and delights in digging and dunging, but not in watering: his rootes must be opened about October, and the Lees of Wine powred vpon them: it is sette of the stones, but thinne: it often groweth to be wilde: the best planting is the science, and the tops, a foote and a halfe long, smooth at both endes, and rubbed ouer with dung. The place wherein you set your Sets, they couer with Ashes mingled with earth, but couer it not aboue foure fingers thicke. Palladius bids you to set it in March, and to remoue it in October, or Nouember. Deritius teleth, that the Mulberie may be planted in the fall of the leafe, by thrusting into the ground the branches, after the order of the Fig trée, which I my selfe haue proued, specially, if the end that is cut be well bruised, that it may the quicklier take rote: and so when you haue made your hole with a stake, thrust it in: it is best grafted on the Béech, & the white Poplar, either by grafting

The Mulbery tree.

in

in the stocke, or by inoculation: and so shall the berries be white. It is graffed also in the Fig, & the Elme, which in old time they would not suffer, for feare of corrupting. Of the Mulberie is made a very noble medicine for the stomacke, and for the gout: they will longest indure (as it is said) kept in glasses. The leaues do serue to fede Silke-wormes withall, whereof some make a very great gaine, and set them rather for that purpose then for the fruit.

THRA. What tree is that with the ruddie coloured fruit, that is like a Cherrie?

The Cornell. MARIVS. It is a Cornell tree, called in Latine Cornus, in Italian Corneolo, in Spanish Zereko seluestro, in French Cornier, in Dutch Cornelbaum: this tree is thought neuer to exceed twelue cubits in height: the body is sound and thicke, like horne: the leafe is like an almond leafe, but fatter: the flowre and the fruit is like the Oliue, with many berries hanging vpon one stalke, first white, and after red: the iuyce of the ripe berries, is of a bloudy colour: it loueth both Mountaines and Vallies, and prospereth both in moyst ground and drie: it groweth both of the slippe, and of the seede. You must beware you plant it not neere to your Bees, for the flowre doth kill as many of them as tasteth it.

THRA. What Tree is the same that groweth next vs?

Ziziphus. MARIVS. That Tree is called Ziziphus, in Italian Guiggiole, in Spanish Azofeiso, in French Iniubæ, in Dutch Burckbyrle, the berries whereof, are like the Cornel berries, the flowre like the Oliue flowre, but more sweeter. Columella speaketh of two kindes thereof, the one red, the other white: they are set of the stones, in hot Countries, in Aprill, and in cold places in May, or else in June: you may set both the stone, and the branch: it is very slow in growing: if you set the plant, you must doe it in March in soft ground: but if you set the stone, you must set them in a little trench of a hand broad, three stones together, with their points downeward. It loueth not to rich a ground, but rather a light ground, and a warme place. In Winter (as Palladius saith) it is good to lay stones about the body of the Tree. The next are

Italian Filbert. Italian Filberts, in Latine Pistacea, in Italian Pistinachi, in Spanish Alhozigo, in French Pistaches, in Dutch Welsce pimpernus: the leafe is narrow and browne: for vpon the branches hang

hang the Nuts, like the Nuts of the Pine. Of this trée it is thought there is both male and female, and therefore they grow commonly together, the male hauing vnderneath his shell, as it were, long stones: It is grafted about the first of Aprill, but vpon his owne stocke, and vpon the Terebinth, and the Almond Trée, they are also set (as Palladius witnesseth) in the fall of the leafe in October, both of the slips, and the Nut. It delighteth in a hot and a moyst countrie, and ioyes in often watring.

THRA. Because I remember you tolde me before, that of Plants and Trées, some doe grow of the séed, or fruit, and some are Grafted: and because I haue heard the Grafting of most of them, I would now faine heare you speake of such Trées as grow onely of the stone, or berrie.

MARIVS. Your remembrance is good: for though they commonly grow better when they be graffes, yet some there be that prosper the better being sowen, and will scarce grow any other way. And though some of the foresaid Trées being set, doe well prosper, as the Medlar, the Cornell, and diuers other, yet sometimes they ware wilde, and are long before they come to perfection, which Virgill also affirmeth:

For that same Tree that of the seed, the stone or berrie growes,
Doth slowly spring, and long it is, ere any fruit he shewes:
And when it comes, it proueth wilde, and doth degenerate,
And loseth that same relish sweet, that longeth to his state.

But by Grafting it is restored againe: Some of them againe, how soeuer they be sowen or set, doe not degenerate or grow out of kinde, as the Bay, the Date, the Cypresse, the Peach, the Abricot, the Damson, the Pistace, the Firre Trée, and the Cherrie: and because they be not all of one order, I will tell you seuerally of the chiefest of them. To plant Trées of the séede, Nature (as I sayd before) taught men at the first: the séede being deuoured of Birds, and with the doung let fall in the clefts of Trées, where they after sprong and grew.

The Bay, in Latine Laurus, in all other tongues almost as in Latine. The berry is called in Latine Lauri Bacce, in Italian Bacche de Lauro, in Spanish Vaya de laurell, in Dutch Lorboren, a most gratefull Trée to the house, a porter to Emperours and The Bay.

Bishops, which chiefely garnisheth the house, and standeth alwayes at the entrie. Cato maketh two kindes thereof, the Delphick and Cypresse: the Delphick, equally coloured and greener, with great berries, in colour betwixt greene and red, wherewith the Conquerours at Delphos were wont to be crowned. The Cypresse Bay hath a shorter leafe, and a darker greene, guttered (as it were) round about the edges, which some (as Plinie sayth) suppose to be a wilde kinde: it groweth alwayes greene, and beareth berries, hee shoteth out his branches from the sides and therefore waxeth some old and rotten: it doth not very well away with cold ground, being hot of nature: it is planted diuers waies, the berries being dryed with the North winde, are gathered and layd abroad very thinne, lest they cluster together, afterward being wet with Urine, they are set in furrowes a handfull deepe, and very neere together: in March they be also planted of the slip, and the science. If you set them of the slip, you must set them not passing nine foot asunder: but so they grow out of kind. Some think, that they may be graffed one in another, as also vpon Seruisse & the Ashe: the berries are to be gathered about the beginning of December, and to be set in the beginning of March.

Nut trees. Nut trees are commonly planted of the Nut, as all other shell-fruits are. Of all Nuts, the Almond is counted to be the worthiest, called in Italian Mandorle, in Spanish Almeidras, in French Amandes, in Dutch Mandeles: they are set in February, & prosper in a clere and hot ground, in a fat and a moyst ground they will grow barren: they chiefely set such as are croked, and the yong plants: they are set both of the Slips, the Kot, & the Kernell. The Nuts that you intend to set, must be laide a day before in soft dung: others steepe them in water sodde with honey, letting them lye therein but onely one night, least the sharpnesse of the honey spoyle the Plant: and being thus ordered, Columella saith, they will be both the pleasanter, and grow the better. The tops and the sharpe ends you must set downeward: for from thence commeth the rote, the edge must stand toward the North: you must set three of them in a Triangle, a handfull one from the other: they must be watred euery ten daies, till they grow to be great: It is also planted with the branches, taken from the midst of the tree. The Almond is graffed not neere the top of the stocke, but

The Almond tree.

about

about the midst, vpon the bowes that grow out. This Tree doth some beare fruit, and flowreth before all others, in January, or February. Virgill accounts it for a Prognosticatour of the plentifulnesse of Corne.

When thicke the Nut Tree flowres amidde the wood,
That all the branches laden bend withall:
And that they prosper well and come to good,
That yeere be sure, of Corne shall plenty fall.

The bitter ones (which are the wholesomer) are made sweet, if round about the Tree, foure fingers from the roote, you make a little trench, by which he shall sweat out his bitternesse: or else if you open the rootes, and powre thereon eyther Urine, or Hogs dung: or if at the roote of the Tree, you thrust in a fat wedge of Pitch Tree. By this meanes (as Basill sayth) they will loose their bitternesse: but no Tree groweth sooner out of kinde, and therefore you must often remoue it, or graffe when it is great.

Walnuts, called in Latine Iuglantes, in Italian Noey, in Spanish Nuzes, in French Noix, in Dutch Groisse nusz: they are set in the ground (as Plinie sayth) the seame downeward, about the beginning of March: some thinke, that they will grow as the Filbert doth, either of the slippe, or the roote: it groweth speedily, and liketh a dry and cold place better then a hot. The Nut that you meane to set, will grow the better, if you suffer it to lye foure or fiue dayes before in the water of a boy, and will prosper the more, if it be often remoued: those Nuts (as it is thought) prosper best, that are let fall by Crowes, and other birds. If you pierce the Tree through with an Augur, and fill vp the place againe with a pin of Elme, the Tree shall lose his knottie hardnesse, neither will he lose his fruit, if you hang by either Mallet, or a piece of Skariet from a dunghill. Walnuts.

THRA. What is the reason you plant your Walnut trees round about on the outside of your Orchard, and not among your other Trees?

MARIVS. Because his shadow is great, and vnwholesome, beside the hurt he doth with his dropping. He sucketh out a great deale of good iuyce from the ground: for as you see, they are very mightie and high Trees, so as some of them are two or three fadome about: they occupie a great deale of roome with their

standing, and beguile the other Trées of their sustenance: Besides, there are certaine Trées they agrée not well withall, and therefore haue I set them on the outside of my Orchard, as standards to defend their fellowes from tempest & weather. Among Nuts, is also to be recounted the Hasell Nuts, a kinde whereof is the Filbert, called in Latine Auellanæ, in Italian Nociuole, in Spanish Auellamas, in French Noysette, in Dutch Haselnuzes: they are planted after the manner of the Almond: it delighteth in clay and watrish grounds, and vpon Hils, being well able to abide the colde. They were first brought into Asia, and Greece, from Pontus, and therefore called Ponticæ and Heracliotic æ, &c. Among the Nuttes also chalengeth the Chestnut his place, though he be rather to be reckoned among Maste, wherby he is called the Nut or Maste of Iupiter, in Latine Castanea, in Italian Castagne, in Spanish Castaua, in French Castagnes, in Dutch Kastey: it loueth well to grow on Mountaines, and in colde Countries: it hateth waters, and desireth a cleane and a good mould: it misliketh not a moyst grauell ground, and ioyeth in a shadowie and Northerly bancke, it hateth a stiffe and a red clay ground: it is planted both of the Nut, and is set: it is better planting Woods of them, of the Nut, then of the set, otherwise the safer way were the set, which in two yéeres beareth fruit. It is planted when the Sunne is in the Æquinoctiall, both of the science, the set, the branch, and the rote, as the Oliue is. The Chestnuts that you meane to sowe, must be very faire and ripe, the newer they be the better they grow. You must not set them after that sort that you set Almonds, or Filberts, but with the sharpe end vpward, and a foot a sunder: the furrow must be a shaftman déepe. You were better (as I sayd) to make your Groue of the Nut, then of the sets, which will be méete to be felled for stayes in seauen yéere. Columella, writeth, that the Chestnut, méet for the supporting of Vines, if he be sowed in well digged ground, doth quickly spring, and being felled after fiue yéeres, it prospereth like the Willow: and being cut out in stayes, it lasteth till the next felling, as shall be shewed hereafter, when we speake of Woods. They will also haue the Chestnut to be grafted on the Walnut, the Béech, and the Oake: it hath béene séene, that where they grow two and two together, they prosper the better.

Hasell Nuts.

Filberts.

Chestnuts

The Pine, in Latine Pinus, in Italian and Spanish Pino, in French Pin, in Dutch Hartzbaum, is planted not much vnlike to the Almond, the kernels of the keite-clockes being set as the Almond is: they are gathered in July, before the Caniculer winds, and ere the Nuts, the huske being broken, fall out. The best time of sowing them, Palladius reckoneth to be October, and Nouember: this Tree is thought to be a nourisher of all that is sowen vnder it. The Pitch tree is called in Latine Picea, in Italian Pezzo, in Spanish Pino negro, in Dutch Rordannenbaum: but I come now to the Cherie. The Chery tree, in Italian, the Tree Ceraso, the fruit Cerase, and Ciregie, in Spanish Cerezo, and Cereza, in French Cerisier, and Cerise, in Dutch Kirsbaum, Kersen: the Tree is easie to be planted, if the stones be but cast abroad, they will grow with great encrease: such is their forwardnesse in growing, that the stayes or supporters of Vines, being made of Cherrie tree, are commonly seene to grow to be Trees. They are grafted vpon the Plome Tree, vpon his owne stocke, vpon the Plane Tree, and on the Bramble, but best vpon the wilde Cherie, it ioyeth in being grafted, and beareth better fruit: if you graffe them vpon the Vine, your Tree shall beare in the Spring: the time of grafting, is eyther when there is no Gumme vpon them, or when the Gumme hath left running. They remoue the wilde plant, either in October or Nouember, that the first of January or February, when it hath taken roote, it may be grafted vpon. Martiall would haue you graffe it in the stocke: but indeed it prospereth better, being grafted betwixt the barke and the wood. It delighteth to be set in deepe trenches, to haue roome enough, and to be often digged about. It loueth to haue the withered bow continually cut away: it groweth best in colde places, and so hateth dung as if it be layd about them, they grow to bee wilde: it is also planted of the slips, and will beare his fruit without stones: if in the setting of the set you turne the vpper end downeward. Others will that the tree being yong and two foot high, be slit downe to the root, and the pith taken out of both sides, and ioyned together, the seames close bound about, and couered with doung: which within a yeere after, when it is well growen, the yong graffes (which hitherto haue borne no fruit) if you graffe them, will beare

The Cherie tree.

Cheries without stones, as Martiall sayth. There are sundry kinds of Cheries (as Plinie reporteth, or Apronianus) that are redder then the rest, Actianus, as blacke as a cole: which kind in Germanie yet at this day they call Acklische kirsen, Celicians, that are round. Plinie in speaking of the sundry sorts, preferreth the Duracins, which in Campania they were wonted to call Plinians: and a little after he saith, vpon the bankes of the Rhine, there grow also Kersis, of colour betwixt blacke, red, and greene, like the Juniper berries, when they be almost ripe: in which the common sort of bookes haue Tertius for Kersis amongst the Germanes: for Plinie, whereas in many places hee vsurpeth the Dutch words, as in the 9. 10. 17. and 18. booke, and in diuers other places, which being not vnderstood of the Latines, came altogether corrupted to the posteritie. There are also Bay Cheries, grafted at the first in the Bay, and haue a pretty pleasant bitternesse: at this day, the small Cheries are best esteemed, growing vpon a low bush with short stalkes, round fruit, and very red, much meat, soft, and full of licour. It is said they will beare very timely, if you lay Lime about them: it is good to gather them often, that they which you leaue may ware the greater: for setting and planting of Cheries, you may reade a great sort of rules in the gatherings of Constantine. There are also found a kinde of Cherries growing wilde in the Woods, and Hedgerowes, with little berries, some redde, some altogether blacke, which the Farmers in the Countrey doe vse for to fatte their Hogs withall. The Plome tree in Greeke κοκκυμιλος, the fruit κοκκυμιλα, in Latine Prunus and Pruna, in Italian Prune and Succiui, in Spanish Ciruelo, and Ciruela, in French Prune, in Dutch Preumen, it is planted from the middle of Winter, till the Ides of February: but if you set the stones at the fall of the leafe, let it be done in November, in a good and mellow ground two handfuls deepe: they may be likewise set in February, but then they must be steeped in lye three dayes, that they may sooner spring: they are also planted of the young sets that grow from the body of the tree, eyther in January, or in the beginning of February, the rootes being wel couered with dung: they prosper best in a rich and a moyst ground, and in a colde Countrey: they are grafted toward the end of March, and better in the clouen stocke,

Plome trees.

then

then in the barke, or else in January, before the Gumme begin to drop out: it is Graffed vpon his owne stocke, the Peach and the Almond. There are sundry sorts of Plomes, whereof the Damson is the principall, loying in a dry ground, & in a hot countrey, and is graffed as the other Plomes are. There are diuers coloured Plomes, white, blacke, purple, and red: Wheat Plomes, and Horse Plomes, wherewith they vse to fat Hogs. The finger Plomes are most commended, being of length, a mans finger, which are brought vnto vs from Bohemia and Hungarie, and Iulians, and Noberdians, being blew in colour, but later. The Damsons are dried in the Sunne vpon Lattises, Leads, or in an Oven, some doe dip them before, either in sea water, or in Wine, and after drie them. The Peach tree, called in Latine Persica, in Italian Perseo, in Spanish Durasuo, they are also called Rhodocina, and Dorocina, or Duracina, whereof there are foure kindes: but the chiefest are the Duracins, and the Abricots: in Nouember in hot Countries, and in others in January, the stones are to be set two foot asunder in well dressed ground, that when the young trees are sprong vp, they may be remoued: but in the setting you must set the sharpe end downeward, and let them stand two or three fingers in the ground: wheresoeuer they grow, they reioyce most in watry grounds, which ground if you want, looke that you water them abundantly, so shall you haue great store of fruit. Some would haue them set in hot countries, and sandy ground: whereby they say, their fruit will longer endure: the better will also the fruit be, if as sone as you haue eaten them, you set the stone, with some part of the fruit cleauing to it: it is graffed either on himselfe, the Almond, or the Plometree. The Apples of Armenia, or Abricot, doth farre excell the Peach, vsed as a great daintie among Noblemen, and much desired of the sicke: they are best graffed in the Plome, as the Peach in the Almond tree: the fairest graffes that grow next the body of the tree are to bee chosen and graffed in January, or Februarie, in cold countries, and in Nouember in hot: for if you take those that grow in the top, they will eyther not grow, or if they grow, not long endure. You shall inoculate, or imbud them in Aprill or May, the stocke being cut aloft, and many young buddes set in: neither must you suffer them to stand very farre one from the other,

The Peach Tree.

The Abricots.

that they may the better defend themselues from the heat of the Sunne. The Frenchmen, and our Gardners also, after the Italians order, doe graffe the Abricot, taking a graft (not full a finger long) or the bud that is well shot out, with a little of the rind cut off, and slitting the rind of a yong Plome tree crosse wise they set them in, binding them well about with Hempe, or Towe, and that in the end of June, or in July, and August. Some thinke they will be red, if they be either graffed in the Plane tree, or haue Roses set vnderneath them: they will also bee figured, or written in, if seauen dayes after that you haue set the stone, when it beginneth to open, you take out the Kernell and with Vermilion, or any other colour you may counterfeit what you will, after the stone closed vp about it, and couered with Clay, or Hoggs dung, you set it in the ground. Againe, you shall haue them without stones, if you pierce the Tree thorow, and fill it vp with a pinne of Willow, or Cornell tree, the pith being had out: the Roots of the Tree must be cut and dressed in the fall of the leafe, and dounged with his owne leaues: you shall also at this time proyne them; and ridde them of all rotten and dead boughs. If the Tree prosper not, powre vpon the rootes the Lees of old Wine mingled with water. Against the heat of the Sunne, heape vp the earth about them, water it in the euening, and shadow them as well as you may. Against the frosts, lay on dung enough, or the Lees of Wine medled with water, or water wherein Beanes haue beene sodden: if it be hurt with wormes, or such baggage, powre on it the Vrine of Oxen medled with a third part of Vinegar.

The Date. The Date tree, in Italian, in Latine, and in Spanish Palma, in French Arbor de Dates, in Dutch Dactelenbaum: the fruit in Latine Palmulæ, in Italian Datoli, in Spanish Dattiles, in French Dattes, in Dutch Dactelem it growth in a mild grauelly ground, and delighteth in a watry soyle. & though it desires to haue water all the yeere long, yet in a dry yeere it beares the better: therefore some thinke that dung is hurtful vnto it. About the River Nilus, & in the East parts, it growth plentiously, where as they vse to make both Wine and Bread of it: this Tree in Europe (for the most part) is barren, though it be planted of many for nouelty sake. The stones of Dates are planted in trenches of a cubit in depth

and

and breadth, the trench filled vp againe with any manner of dung, except Goates dung: then in the middest of the heape set your stones so as the sharper part stand vpward: others would haue it stand toward the East: and after, when first they haue sprinckled thereon a little Salt, they couer them with earth, well medled with dung: and euery day while it springeth, they water it: some remoue it after a yeares growth, other let it grow till it be great. Moreouer, because it delighteth in salt ground, the rootes must be dressed euery yeare, and salt throwne vpon them: and so will it quickly grow to be a great Tree. The Sets are not presently to be put in the ground, but first to be set in earthen Pots, and when they haue taken roote, to be remoued. Date Trees haue such a delight one in the other, that they bend themselues to touch together, and if they grow alone, they ware barraine. They are planted (as Plinie saith) of the branches, two Cubites long, growing from the top of the Tree: also of the slips and sliuers. The same Plinie affirmeth, that about Babylon, the very leafe (if it be set) doth grow.

THRA. I remember you told me once, the Spring and Science that groweth out of the rootes of some Trees, will very well be planted.

MARIVS. I told you before, that diuers of the Trees whereof I spake, might be planted of the branches, and of the Sciences, hauing some part of the Roote plucked vp with them: and so I said the Cherrie might be planted, as also the Hasell, the Laurell, the Myrtell, and the Medlar: likewise the fairest branches slipped off, and the ends a little bruised, and thrust into the ground, commonly doe grow to be Trees, as I my selfe haue tried both in the Mulbery, the Peare-tree, and the Apple-tree. One thing I will adde beside, that the Trees that beare fruit ouer hastily, doe either neuer come to their iust bignesse, or the fruit that they beare, doth neuer long endure: whereof I thinke sprang first that law of Moses, that fruit Trees should for three yeares be centented vncircumcised, and their forescinnes with their fruit, should be circumcised: that is, the burgens and blossomes should be plucked off, least he should beare before his time, or when he hath borne, lose his fruit: but I keepe you too long in the describing of my Orchard.

THRA.

THRA. O no, I rather (whilest I heare you) imagine my selfe to be amongst them, planting and viewing of their fruits: but now remaineth that in stead of a conclusion to your talke, you declare the order of preseruing them, to that end specially, that those things that are appointed for remedy (being not duely, or in time administred: be not rather a hurt) then a helpe.

MARIVS. Your motion is good: First therefore, and generally, dunging and watring is needfull for fruit Trées, a very few excepted: and herein héede must be taken, that you doe it not in the heate of the Sunne, and that it be neither too new, nor too old: neither must it be laide close to the foote of the Trée, but a little distance of, that the fatnesse of the dung may be drunke in of the roote. Pigeons dung, and Hogges dung, doe also heale the hurts or wounds of Trées. The water wherewith we water them, must not be Fountaine water, or Well water, if other may be had, but drawne from some muddie Lake, or standing Pole. Moreouer, you must take héede, as I also told you before) when we began to talke of planting of an Orchard) that your Trées stand a good distance a sunder, that when they are growne vp, they may haue roome enough to spread, and that the small and tender, be not hurt of the greater, neither by shaddow, nor dropping. Some would haue Pomegranate Trées, and Myrtels, and Bates, set as thicke together as may be, not passing nine foote a sunder: and likewise Cherry trées, Plumb trées, Quinces, Apple trées, and Peare trées, thirtie foote and more a sunder: euery sort must stand by themselues, that (as I said) the weaker be not hurt of the greater. The nature of the Soyle, is herein most to be regarded: for the Hill requireth to haue them stand néerer together, in windy places you must set them the thicker. The Oliue (as Cato saith) would haue fiue & twenty foot distance at the least. You must set your plants in such sort as the tops be not hurt, or bruised, nor the barke, or rinde flawed off: for the barke being taken away round about, killeth any kinde of Trée. You must also haue a regard of the shaddow, what trées helpeth, and what trées it hurteth. The Walnut trée, the Pine trée, the Pytch trée, and the Firre trée, whatsoeuer they shaddow, they poyson. The shaddow of the Walnut trée, and the Oake is hurtfull to Corne: the Walnut trée with his shaddow also, is hurtfull to mens

Shadow of Trees.

heads,

heads, and to all things that is planted neere it. The Pine tree with his shadow likewise destroyeth young Plants, but they both resist the winde, and therefore good to enclose Vineyards. The Cypresse, his shadow is very small, and spreadeth not farre. The shadow of the Figge tree is gentle, though it spread farre, and therefore it may safely enough grow amongst Vines. The Elme tree, his shadow is also milde, nourishing whatsoever it couereth. The Plane tree though it be thicke and grosse, is pleasant. The Poplar hath none, by the reason of the wauering of his leaues. The Alder tree hath a thicke shadow, but nourishing to his neighbours. The Vines is sufficient for himselfe, and the mouing of his leafe, and often shaking, tempereth the heate of the Sunne, and in great raine well couereth it selfe. The shadow of all those, is commonly milde and gentle that haue long stalkes: the dropping of all Trees is nought, but worst of all those, whose branches grow so as the water cannot readily passe through: for the drops of the Pine, the Oake, and the Mastholme, are most hurtfull, in whose company you may also take the Walnut: the Cypresse (as Plinie saith) hurteth not. Moreouer, proyning and cutting, is very good and necessary for trees, whereby the dead & withered boughes are cut away, and the vnprofitable branches taken off: but to proine them euery yeere is naught, though the Vine requireth cutting euery yeere: and euery other yeere, the Myrtill, the Pomegranate, and the Oliue, whereby they will the sooner beare fruit: the others must be the seldomer proyned. Oliue trees must be proyned in the fall of the leafe, after the setting of the seauen starres: and first, they must be well dunged, as a helpe against their hurts. You must cut away all the old rotten branches that grow in the middest, and such as grow thicke, and are tangled together, and all the water boughes, and vnprofitable branches about them: the olde ones are to be cut close to the stocke, from whence the new springs will arise. Scarifying also or launcing, is very wholsome for the trees, when they are screined with their leaues, & drineſſe of their barkes: at which time we vse to launce the barke with a sharpe knife, cutting it straight downe in many places: which, what good it doth, appeareth by the opening and gaping of the rinde, which is straight-waies filled vp with the bodyvnderneath. You must also trim and dresse the rotes of your

Dropping of Trees.

Proyning.

Scarifying.

Trees

Ablaqueation. Trées after this sort: You must open the ground round about them, that they may be comforted with the warmth of the Sunne, and the raine, cutting away all the rootes that runne vpward.

Remouing. The trées that you remoue, must be marked which way they stood at the first: for so teacheth Virgill:

And in the barke they set a signe,
To know which way the Tree did grow:
Which part did to the South encline,
And where the Northerne blastes did blow.

Also you must consider well the nature of the Soyle, that you remoue out of a drie ground, into a moyst, and from a barraine hill, to a moist Plaine, and rather fatte, then otherwise. The young plants being thus remoued, must in the second or third yeere be proyned, leauing still about three or foure branches vntouched, so shall they the better grow: thus must you vsually doe euerie other yeere. The old trée we remoue with the tops cut off, and the rootes vnperished, which must be helped with often dunging and watering. Apple-trées that blossome and beare no fruit, or if it beare, they sodainly fall away, you shall remedie by slitting of the roote, and thrusting in of a stone, or a woodden woedge. Also if you water your Trées with Vrine that is olde, it greatly auaileth (as they say) both for the fruitfulnesse, and pleasantnesse of the fruit. If the Trée decay by reason of the great heate of the Sunne, you must raise the earth about it, and water the rootes euery night, setting vp some defence against the Sunne. To cause their fruit to be quickly ripe, you must wet the little rootes with Vinegar, and Vrine that is olde, couering them againe with earth, and oft digging about them. The Vrine of men, if it be kept three or foure moneths, doth wonderfull much good to plants, which if you vse about Vines, or Apple-trées, it doth not onely bring you great encrease, but also giueth an excellent tast and sauour, both to the fruit and the wine: you may also vse the mother of oyle, such as is without salt, to the same purpose, which both must speedily be vsed in Winter.

When trees beare not, or hold not their fruit, a remedie.

THRA. We see that frosts and mists, doe oftentimes great harme to Trées, haue you any remedy against it?

MARIVS. Against frosts and mists, you must lay vp round about your Orchard, little Faggots made of stalkes, rotten

bowes,

boughes, or straw, which when the frosts, or mists arise, may be kindled, the smoake whereof auoydeth the danger. You must staue also drie dung amongst your Vines, which when the frost is great, you may set a fire: the smoake whereof disperseth the frost.

THRA. What if the Trees be sicke, and prosper not?

MARIVS. When they haue any sicknesse, they vse to powre vpon the Rootes the Lees of Wine mingled with water, and to sow Lupines round about them. The water also wherein Lupines haue beene sod, powred round about, is very good (as Plinie saith) for Apple trees.

THRA. Trees are oftentimes also hurt with wormes.

MARIVS. If your Trees be troubled with wormes, there are diuers remedies, for the iuyce of Wormewood destroyeth the Caterpillers. The seedes or graine, that are steeped in the iuyce of Sengreene, or Houseleeke, are also safe from any wormes: also Ashes mingled with the mother of Dyle, or the stale of an Oxe, medled with a third part of Vinegar. Moreouer, they say, that the Trees that are smoaked with Brimstone, or Lime, are safe from hurtfull vermine: Galbanum likewise burnt vpon the coales, driueth them away. The blades also of Garlicke, the heads being off, so burnt (as the smoake may passe through the Orchard) doth destroy the Caterpillers: some mingle Soote with the seeds, and sprinckle them with water. Democritus writeth, that a woman in her vncleanenesse, vngirt, and her haire hanging about her shoulders, if she goe bare-foote round about the place, the Caterpillers will presently fall: but perhaps I trouble you with this tedious, or long discourse of Yearbs, Plants, and Trees, and therefore though there be much more to be spoken of, least I should seeme to ouer-wearie you, I will make an end.

THRA. A trouble? no, you haue done me a singular great pleasure, in declaring vnto me the right ordering of a Garden, and an Orchard, which not throughly entreated of by others, you haue briefely, and perfectly, to our great commoditie described. And whereas you haue largely spoken of our Trees at home, it remaineth for you to say something of the disposing of Woods. It was my chaunce to passe yesterday, by a great Wood of Oakes, and Coppisse, planted in very good order, and hard by, a Will ow

Grous

Groue vpon the side of a Riuer, excellently well ordered, where the Fields were enclosed round about with great Elmes, which greatly beautifieth your dwelling, and yéeld (I warrant) no small profit: I therefore greatly desire to heare something of this part of husbandrie.

MARIVS. Though it be without my couenant, and that you demaund more then I promised, yet since you force me, I will not refuse it, least you should thinke I would faile you in any thing. As touching Woods, Ancus Martius (as Petrus Crinitus writeth) was the first in Rome that euer dealt in them: the olde Father had alwaies a speciall regard of Woods, wherefore Virgill saith:

Of Woods

If that of Woods I frame my Song,
Woods vnto Princes doe belong:
If that of Woods I list to sing,
Woods may full well beseeme a King.

It was ordained by the Romanes, that the Consuls should haue the charge of the Woods, that there should no Tymber be wanting for building of Houses, and Ships, and other Tymber-workes, both publique, and priuate. The state of Venice at this day, obseruetb the same order, pointing a priuate Officer for their Woods, who hath in charge as well to sée to the yéerely planting of them, as to let that there be wanting no Tymber, for their necessarie vses. The Wood that you told me you passed by, is of Dakes, Béeches, and other Mast trées: some part seruing for Tymber, and other for fewell. Of these therefore will I first begin to speake, and then of Oliue Groues, and Willowes, some of them be wilde, and grow of themselues, not néeding any loking to, but such, as daily experience shewes, are nothing so good, as those that are planted. Woods, and Forrests, doe chiefely consist of Dake, Béech, Fyre trée, Byrche, Pine, Pitch trée, Mastholme, Corke, wilde Oliue, Medlar, Crab-trée, Iuniper, Cornell, and Pyrrie: other Woods haue other trées, according to the nature of the ground. The great Wood of Hartelwald in Germanie, as it runneth through diuers Countries, beareth in some place onely Dake, in others Béech, in others Fyres. The Forrest of Arderne for the most part beareth Dake: Montificello, Larch, Fyre, Cornell, and Tamarice. Monte D.S.Gothardo,

great

great abundance of Chestnut trées. These wilder sort, though they grow of themselues, may yet well be planted, if you haue meete ground of the Acorne, and the Berry: each of them liketh some one kinde of ground better then another, as first Theophrastus, and after Plinie hath declared. In the mountaines delighteth the Fyrre trée, the Cedar, the Larsh, the Pitch trée, and such as beare Rosine: as also the Holme, the Terebinth, the Chestnut, the Mastholme, the Oake, the Beech, the Juniper, the Cornell, and the Dogge trée: though some of these also prosper well enough in the plaine. The Fyrre, the Oake, the Chestnut, the Fyrrebeech, the Mastholme, and the Cornell, grow as well in the Valley, as on the Mountaine: vpon the Plaines you shall haue the Tamarix, the Elme, the Poplar, the Willow, the Hasell, the Walnut, the Hornebeame, the Maple, the Athe, and the Beech. You shall not lightly see the Plumb trée, the Apple, the wilde Oliue, nor the Walnut, vpon the Mountaine, all such as grow as well in the Plaine, as vpon the Mountaine, are larger, and fairer to the eye, growing in the Plaine, but are better for Tymber, and fruit, vpon the Mountaine, except the Peare, and the Apple, (as Theophrastus saith.) In Marrish ground delighteth the Willow, the Alder, the Poplar, and the Priuey. And although the most Woodes doe spring of their owne nature and accord, yet are they by planting, labour, and diligence, brought to bee a great deale more fayre and fruitfull: for, as afore I told you how fruit trées are nourished and brought vp in Impe Gardens; so are these wilde and fruitlesse trées set and planted for Timber and Fewell. He that is disposed to plant a Wood, must first, according to his soyle, chose his sets: and if he haue them not springing of his owne, let him make an Impe Garden of the séedes, enclosing well the ground with Hedge, Rampire, or Ditch, least Sheepe, Goates, or any other Cattell, come in to bite and brouze it: for whatsoeuer they haue once bitten (as it were infected with a deadly poyson) perisheth: and therefore those that meane to plant Woodes, eyther for Timber, Fewell, or Maste, must carefully prouide against these hurtfull enemies. The Countrey lawes haue therein well prouided, that where such Springs are, they shall séede no Goates, nor such Cattell. Amongst the Mast Trées, and such as serue for Tymber, the first place of right

The Oake.

belongeth

belongeth to the Oake, called in Latine Quercus; in Italian Quercia, in Spanish Roble, in French Chesny, in Dutch Eichenbaum, he that will then plant an Oake Groue, must prouide him of ripe Acornes, not ouer-dried, nor faultie, or any way corrupted: these must he sow in good ground well tilled, with as great carefulnesse as he plants his Orchard, and well enclose it, that there come no Cattell in it: which (when they be something growne) you must about Februarie remoue to the place where you entend to plant your Wood: if you cut and proyne them, it is thought they will prosper the better for Mast: but if you reserue them for Timber, you must not touch the tops, that it may runne vp the straighter and higher. In remouing them, you must make your trenches a foote and a halfe deepe, couering the Rootes well with earth, taking good heede you neither bruse them, nor breake them: for better you were to cut them. The Oake agreeth well enough with all manner of ground, but prospereth the better in Marshes, and watry places: it groweth almost in all grounds, yea euen in grauell and sand, except it be ouer-dry: it liketh worst a fat ground, neither refuseth it the mountaine. We haue at this day an Oake in Westphalia, not farre from the Castle of Altenan, which is from the foote to the nearest bow, one hundred and thirty foote, and three elles in thicknesse: and another in another place, that being cut out, made a hundred Waine loade: not farre from this place there grew another Oake of tenne yards in thicknesse, but not very high: the Rouers in Germanie, were wont to vse for their Ships hollowed Trees, whereof some one (as Plinie saith) would carrie thirtie men. The next amongst the Mast trees is the Beech, in Latine Fagus, in Italian Faggio, in Spanish Haya, in French Faus, in Dutch Buchen, planted almost after the same manner that the Oakes be. The Mastholme in Latine Ilex, in Italian where it is better knowne Elice, in Spanish Enzina, in French Haussen: it groweth high, if it haue a ground meete for it: it prospereth vpon hilles, and likes not the Plaine: it beareth Acornes lesser then the Acornes of the Oake, a leafe like a Bay, and is continually greene. The like hath the Corke-tree, in Latine Suber, in Spanish Alcornoque, in French Liege, which is counted amongst those that beare Mast, the barke whereof we occupie for the flotes of our fishing Nets,

Beech wood.

and

and in Pantofels for Winter: all other trées (sauing onely the Corke, if you spoyle them of their barke doe dye. Another Mast-bearing Oke there is, called in Latine Quercus siluestrum, in French Chesne, a kinde whereof some thinke the Cerre trée to be, called in Latine Cerrus, growing in wilde and barren places. There are some that doe number the Chestnut trée amongst the Mast bearers: but of this I haue spoken before. The best Mast is the Oke Mast, the next the Béech and the Chestnut, then the wilde Oke, &c. All very good and méet for the fatting of Cattell, specially Hogges. The Oke Mast, or Acorne, maketh thicke Bacon, sound flesh, and long lasting, if it be well salted and dried: on the other side, Chestnuts and Béech Mast: make swéet and delicate flesh, light of digestion, but not so long lasting. The next is the Cerre Trée, that maketh very sound and good flesh: The Mastholme maketh pleasant Bacon, faire and weightie. Plinie saith, that it was ordained by the Law of the twelue Tables, that it should be lawfull for any man to gather his owne Mast, falling vpon the ground of his neighbour, which the Edict of the chiefe Justice doth thus interprete: that it shall be lawfull for him to doe it thrée dayes together, with this prouiso, that hee shall onely gather the Acornes, and doe no harme to his neighbour, as Vlpianus witnesseth. Glans Mast (as Caius sayth) is taken for the fruit of all trées, as Ἀκρόδυα, signifieth with the Gréeke, though properly Ἀκρύδρυά, be those fruits that are shelde, as Nuts, and such other. Vpon these Mast bearers there groweth also the Gall, in French Noix de Galle, in Italian and Dutch, as in Latine, in Spanish Agalla, a little Ball, rugged and vneuen without, whereof some be massie, some hollow, some blacke, some white, some bigge, some lesser. It groweth (as Plinie sayth) the Sunne rising in Gemini, commonly all out suddenly in one night: in one day it wareth white, and if the heat of the Sunne then take it, it withereth: the blacke continueth the longer, and groweth sometime to the bignesse of an Apple: these seruetb best to curry withall, and the other to finish the Leather, the wast is of the Oake: and thus of such Trées as beare Mast. Now will I ioyne withall the principallest of the other Trées, to make vp your Woods, amongst which are the Elme, and the Willow: the Elme, in Latine Vlmus, The Elme.

Mast, and his differences.

in Italian and Spanish Olmo, in French Orme, in Dutch Vlmbaum, and Yffenholtz: the planting whereof, because it is to great vse, and easily growes, we may not let passe: first, because it groweth well with the Vine, and ministreth good food to Cattle: secondly (as it is all heart) it maketh good tymber. Theophrastus and Plinie doe both affirme the Elme to be barraine, peraduenture because the séede at the first comming of the leafe, seemeth to lye hid among the leaues, and therefore it is thought to be some of the leafe (as Columella affirmeth.) He that will plant a Groue of Elmes, must gather the séede called Samara, about the beginning of March, when it beginneth to ware yellow, and after that it hath dryed in the shaddow two daies, sowe it very thicke, and cast fine sifted mould vpon it, and if there come not good store of raine, water it well: after a yéere you may remoue it to your Elme Groue, setting them certaine foote a sunder, and to the end that they rote not too déepe, but may be taken vp againe, there must be betwixt them certaine little trenches, a foote and a halfe distance: and on the rote you must knit a knot, or if they be very long, twist them like a Garland, and being well nointed with Bullockes dung, set them, and tread in the earth round about them. The female Elmes are better to be planted in Autumne, because they haue no séede: at this day in many places, cutting off Sets from the fairest Elmes, they set them in trenches, from whence when they are a little growne, they gather like Sets, and by this dealing make a great gaine of them: in the like sort are planted Groues of Ashes. The Ashe

Ash groues

in Italian Fraxino, in Spanish Fresno, in French Fraisne, in Dutch Eschen: the Ashe delighteth in rich and moist ground, and in plaine Countries, though it grow well enough also in drie grounds, he spreadeth out his Rotes very farre, and therefore is not to be set about Corne ground, it may be felled euery third or fourth yéere, for to make stayes for Vines. The Ashe groweth very fast, and such as are forwards are set in February, with such young Plants as come of them, in good handsome order standing a-row: others set such Ashes as they meane shall make supposters for Garden Vines, in trenches of a yéere old, about the Calends of March: and before the thirty sixth moneth they touch them not with any knife, for the preseruing of the branches: after

euery other yeere it is proyned, and in the first yeere ioyned with the Vine: if you vse to cut away the branches, they will grow to a very goodly height, with a round body, smooth, plaine, & strong: Plinie writeth of experience, that the Serpent doth so abhorre the Ashe, that if you enclose fire and him with the branches, he will rather runne into the fire then goe through the bowes. Byrch, called in Latine Betula, as Theophrastus writeth in his fourth Booke, is a Tree very meete for Woods: it prospereth in colde Countries, frostie, snowie and grauelly, and in any barraine ground, wherefore they vse in barraine grounds, that serue for no other purpose to plant Byrches: it is called in Italian Bedolla, in Dutch Byrken, in French Beula. Pine Woods, Fyre Woods, Pitch tree, and Larsh, are common in Italy about Trent. The Pine tree in Latine Pinus, in Italian and Spanish Pino, in Dutch Hartzbaum, is planted of his kernels, from October to Januarie, in hot and dry Countries: and in cold and wet places, in Februarie or March: the kernels must be gathered in June, before the clogges doe open, and where you list to sowe them, either vpon hilles or else where: you must first plow the ground and cast in your seede, as yee doe in sowing of Corne, and couer them gently with a light Harrow or a Rake, not couering them aboue a hand broad: you shall doe well, if you lay the kernels in water three daies before. The kernels of the Pine are called in Spanish Pinones. The Firre tree, in Latine Abies, in Italian Abete, in Spanish Abeto, in Dutch Deamen, loueth not to haue any great adoe made about it: if you be too curious in planting of it, it will grow (as they say) the worse, it growes of his owne kernell in wilde Mountaines, Plaines, or any where. The Pitch tree, in Latine Picca, in Italian Pezzo, in Spanish El pino de que se baza lapez, in Dutch Rododemem, is a tree of the kinde of Pines, and very like to the Pine, sweating out his Rozen as he doth: for there are fire kindes of these Rozen trees, the Pine, the Pitch tree, the wilde Pine, the Firre, the Larsh, and the Tarre tree, the planting of them all is alike. The Alder, a tree also meete for Woods, in Latine Alnus, in Italian Auno, in Dutch Elsen, in French Aulne, it groweth in plaine and marrish places neere to Riuers. Theophrastus saith, it yeeldeth a fruitfull seede in the end of Summer: many places are commodiously

Byrch.

The Pine.

Firre tree.

The pitch tree.

The Alder

Poplar, white and blacke.

planted with Poplar, whereof there are two sorts, the White, and the Blacke; the White is called with the Italians, Populo bianco: with the Spaniards, Alamo blanco: the Blacke, of the Italians, Populo nigro: of the other, Amalo nigrillo: in French, Peuplier: in Dutch, Peppelem: it is planted of the Branches and Settes, and delighteth in watrie places, or any other ground, it prouueth very fast: the blacke hath the ruggedder barke, his leaues round while he is young, and cornered in his age, white vnderneath, and greene aboue. The Tymber hereof is good for buildings, specially within doores: his wood is whitish within, and the rinde blackish, whence he hath his name. Theophrastus addeth a third kinde, which some call the Poplar

Willowes.

of Libya, and of the Alpes, it hath a rugged barke, like the wilde Perrie: a leafe like Iuie, and is in colour like a darke greene, sharpe at the one end, and broad at the other. The blacke Poplar growth in great plentie about the lower parts of the Rhyne: though Homer call the Willow a fruitlesse tree, because his fruit turneth into cobwebs before they be ripe: yet is the soueraignty giuen him amongst Woods that are vsually feld. Cato giueth the third place of husbandry grounds to the Willow, preferring it either before the Oliue Groue, Corne ground, or Meddow, for it is oftner to be cutte, and groweth the thicker: neyther is there so great gaine with so little charge in any thing. It delighteth in watrie grounds, darke and shaddowie, and therefore is planted about Riuers and Lakes, howbe it it groweth in Champion, and other ground. It is planted of young Settes, a foote and a halfe long, and well couered with earth: a wet ground requireth a greater distance betwixt them, wherein you shall doe well to set them fiue foote asunder, in order like the Sinke vpon a Dye: in the drie ground they may be sette thicker together, yet Columella would haue them fiue foote distant, for passing by them. There are two sorts

Osiar.

of Willowes, one sort enduring for euer, called Osiar, seruing for making of Baskets, Chayres, Hampers, and other Countrey stuffe: the other kinde growing with great and high branches, seruing for stayes to Vines, or for Quicksets, or stakes of Hedges, and is called Stake Willow: it is planted both of the twigge and of the stalke, but the stalke is the better, which must

be

be set in a moyst ground well digged, two foote and a halfe in the ground before it spring, and when the twigges are bare, you must take them from the tree, when they be very dry, otherwise they prosper not so well: these stakes or settes being taken from the young stocke, that hath beene once or twice cut, and in thicknesse as much as a mans arme, you must set in the ground three foote, or a foote and a halfe deepe, and fixe foote asunder, laying good mould about them, fence them well, that there come no cattell to pill off the barke of them. After three or foure yeares you may pull them, whereby they will grow and spread the better, and so you may continually cut them euery fifth, or fourth yeere, whereof you may make Sets for planting of more, for the olde ones are not so good to be occupied. The time of cutting of them, is from the fall of the leafe vntill Aprill, the Moone encreasing, and in Westerly, or Southerly windes: for if you doe it, the winde being in the North, we finde by experience they will not grow so well: you must cut them cleane away, that the olde branches hurt not the young Springs: some thinke the young Willow to grow the better the nearer the ground, and the smother he is cut. The Osiar commonly groweth of his owne selfe, and is also planted of his Roddes, in watrie and marish grounds, the earth raised vp, and layd in furrowes: it is planted, and springs most plentifully, where the earth is beaten vp with the rage and ouer-flowings of the water: it serueth as a sure defence for making of Bankes and Walles in Marshes, and that chiefely in March, the Moone encreasing: the Osiar may be cut euery yeere, or euery two yeere if you will. Loe, here haue you concerning Woods what needefullest are for our Country-men to plant: for as for Woods of Cedar, Cipresse, and other strange Trees, it is not for our Husbands to busie themselues about: wet and rich grounds that are meete for Corne, is also good to be planted with Oakes, Beech, Willow, and Poplar, although the Oake and the Beech refuse hillie, and lighter ground: Sandie, and barraine grounds, are good for Birch, Bramble, Broome, and Heath, as I haue sufficiently said before. Now perhaps you would haue me procede with Coppisse Woods, that are continually to be feld.

For planting of Osiars.

THRA. I would: if it were no paine to you.

MARIVS. Coppisse, or sale Wood, were first brought vp (as Plinie saieth) by Qu. Martius. This kinde of Wood groweth commonly of his owne accord in Forrests, and watrie places: but all Woods are not for this purpose, for some Trees there are which if you cut and poule often, will fade and dye, as the Ashe, the Juniper, the Cherrie, the Firre, the Apple, and the Pirrie: and some againe if they be not cut, will perish: the Vine requireth yeerely cutting, the Olive, the Mirtell, and the Pomegranate, each other yeere. In cutting of them (as they are diuers) so is their order: for the Oake, as he groweth slowly, so is he not to be cut, before he be of seauen, or eight yeeres growth: and the neerer the ground you cut him, the better he growes, though he may be polled seauen or eight foote aboue the ground: The like is of the Beech, sauing that he may sooner be cut. The great Willow, and the Poplar, are cut after one sort, as I shewed a little before: though the Osiar may be cut euery two yeere, or euery yeere. The Chestnut may be feld euery seauenth yeere, both for fewell, or for Vine staues. Trees are cut and pold sundrie wayes, for either they are felde close by the ground, or the body is polde, when it comes to be of the bignesse of a mans arme or more, as the Willow is. Coppised Woods are commonly seuered into so many parcels, as may serue for yeerely felling, some still growing while others are a felling, and because some of them grow faster then other some, euery sort hath his place, and his season appointed. Some are felled euery fourth yeere, some euery fifth yeere, as the Willow, the Poplar, the Alder, and the Birch: some, once in seauen yeere, as the Chestnut, and some in more, as the Oake. It remaineth, that I now shew you the manner of felling of timber, and what timber is meetest for euery worke.

THRA. I haue a great desire to heare what time is meetest for felling of timber, which much auaileth (as they say) to the long enduring of it: after, I would know what timber is meete for euery purpose.

MARIVS. The season of felling, no doubt is to great purpose, whether it be for timber or fewell: for such Trees as are feld either in the Spring, or in Summer, though they seeme dry without, are notwithstanding full of moysture, and wetnesse within,

within, which in burning, will neuer make good fire: and therefore Coppisse and fire-wood, your best felling is in Winter: and for building, it is best cutting of your trées in December, and Januarie, the Moone being in the wane, from the twentie, to the thirty day. Yet are there some that say, they haue found by experience, that Trées being cut in Januarie, are full of Sap: and therefore thinke it better either to cut them before, or after. Cato saith, the best time is about the twelfth of December, for the Timber Tree that beareth fruit, is best in season when his séede is ripe, and that which hath no séede, when it pilles it is time to cut. Such as are flawed, seruing for Pillers of Churches or other round workes, must be cut when they spring: Shingles, and such as the Hatchet must flawe, are to be cut betwixt midde Winter, and the beginning, in the Westerne Winds. Plinie affirmeth the best season for felling of timber, to be while the Moone is in coniunction with the Sunne. Vitruuius an excellent fellow in building, doth will you to fell your timber from the beginning of Autumne, till the time that the Westerne windes begin to blow, the which windes begin to blow (as Plinie saith) about the first Ides of Februarie: for in the Spring, all Trées are as it were with childe, and bend all their force to the putting out of their leafe, and their fruit. Since then they be Sappie, and not sound, by the necessitie of the season, they are made by the reason of their lowenesse féeble, and of no force: euen as the bodies of women, after they haue conceiued, from their conception, till the time of their deliuerance, are not iudged to be sound, or perfit. In like sort the Trées in Autumne, when the fruit and leaues begin to fall, the Rootes drawing from the earth their sufficient sustenance, are restored againe to their olde estate: beside, the force of the aire in Winter doth fasten and make sound the Trées, and therefore it is then thought the best time to fell your timber. The manner of cutting of it is this, first to cut it till you come to the middle of the pithe, and so to let it stand, that the Sap that is in it, may descend and drop out: so shall not the moisture within putrifie, nor corrupt the timber, but passe clearely away. When you haue cutte it, and you sée it drie that it hath left dropping, you may cut it downe, and so shall you be sure it shall best serue your turne. There are some Masters in building, that thinke it

best after you haue sawne out your timber in bordes, to lay them in water for three or foure daies, or if they be of Beech, for a longer time, eight or nine daies: and being ordered in this wise they shall neither (they say) be rotten, or worme eaten.

THRA. Now let vs heare what trees are best for timber.

MARIVS. There are diuers and sundrie vses of timber: such as are barraine, are better then the fruitfull, excepting those sorts where the male beareth, as the Cipresse, and the Cornell: in all trees the parts that grow toward the North, are harder, and sounder, which are almost couered with mosse, as with a cloake against the colde: the worst are those that grow in shadowie and watrish places, the massier and better during, are they that grow against the Sunne: and therefore Theophrastus deuideth all Timber into three sorts, into clouen, squared, and round, of which the clouen doe neuer rent nor coame: for the pith being bared, drieth vp and dieth: they also endure long, because they haue little moisture. The squared, and the round, or the whole timber, doth coame and gape, specially the round, because it is fuller of pith, and therefore renteth and coameth in euery place. And such high Trees as they vse for pillers and maine postes, they first rub ouer with Bullockes dung to season them, and to sucke out the sappe: for the moisture doth alwaies coame sooner then the dry, and dry better to be sawne then the greene, except the Dake, and the Bore, that doe more fill the teeth of the Sawe, and resist it. Some againe refuse to be glued either with themselues, or any other, as the Dake, which cleaueth as soone to a stone, as any wood, neither doe they well cleane, but to such as are of like nature: to be bored, the greene is worser then the dry: the light and the dry, are harder to be cutte: for Bandes and Withes, the Willow, the Broome, the Bytch, the Elme, the Poplar, the Vine, the clouen Reede, and the Bramble are best: the Hasell will also serue, but the first is the Willow: they haue also a certaine hardnesse and fairenesse, meete to be vsed in grauen workes. Among those that serue for Timber, are most in vse the Firre, the Dake, the Pine, the Larsh, the Escle, the Elme, Willow, Cedar, Cypresse, the Bore, Bytch, Plane tree, Aldar, Ashe, wilde Dake, Date tree, Beech, wilde Oliue, Mastholme, Walnut, Maple, and Holly, and diuers others, vsed according to their

nature,

nature, and the manner of the Countrie where they growe. The Firre tree, whereof I haue spoken before, giueth out Rozen, and his timber is meet for diuers workes, and greatly esteemed for his height and bignesse, whereof are made the Ship Masts, and Pillers for houses: For it is very strong, and able to abide great force. It is vsed also in building, for great Gates, and Dore postes: in fine, good for any building within, but not so well enduring without doores, and very sone set afire. They vsed (as Theophrastus saith) in the olde time to make their Gallies and long Boates of Firre, for the lightnesse sake, and their Ships for burden, of Pine tree, and Oake. Of Oake, I haue spoken a little before, the timber whereof is best, both for inward buildings, and for the weather, and also well enduring in the water: Hesiodus would haue yokes made of Oke. The wilde Oke serueth also well in water workes, so it bee not neere the Sea: for there it endureth not, by reason of the saltnesse: it will not be pierced with any Augur, except it be wet before: neither so will it suffer (as Plinie saith) any Naile driuen in it, to be plucked out againe. The Firre.

The Mastholme, in Greeke πρινος, a Tree well knowne in Italie, the Wood whereof is tough and strong, and of colour like a darke red, meete (as Hesiodus saith) to serue for Plowshares: it may also bee made in Wainescot, and Paile worde. The Mastholme.

The Larsh Tree, in Italian Larice, in Dutch Lerchenbaura, was in the olde time greatly esteemed about the Riuer Poe, and the Gulfe of Veniz, not onely for the bitternesse of the Sappe, whereby (as Vitruuius saith) it is free from corruption and wormes, but also for that it will take no fire, which Mathiolus seemeth with his arguments to confute. It is good to sustaine great burdens, and strong to resist any violence of weather, howbeit they say, it will rotte with salt water. The Escle is a kinde of Oke, called in Latine Esclus, is sone hurt with any moisture: the Elme, the Willow, and the Poplar, whereof I haue spoken before, will very sone rotte and corrupt: they will serue well enough within doore, and for making of Hedges. The Elme continueth very hard, and strong, and therefore is meete for the Cheekes and Postes of Gates, and for Gates, for it will not bowe, nor warpe: but you must so dispose it, that the top may The Larsh.

stand

stand downeward: It is méet (as Hesiodus sayth) to make Plowe handles of. The Ashe (as Theophrastus sayth) is of two sorts, the one tall, strong, white, and without knots, the other more full of Sap, ruggedder and harder. The Bay leafe (as Plinie sayth is a poyson to all kinde of Cattell: but herein he is deceiued, as it should appeare by the likelinesse of the name, μιλος, σμιλαξ, is the young Trée, whose leaues, (as is certainely tried) killeth all such beasts as chaw not the cud. Ashe, besides his manifold vse other wayes, maketh the best & fairest horsemens staues, whereof was made the staffe of Achillis, which Homer so greatly commendeth: it is also cut out in thinne bordes. The Béech, whereof I haue spoken before, although it be brittle and tender, and may be so cut in thin bordes, and bent, as he séemeth to serue onely for Caskets, boxes, and Coffers: his colour being very faire, yet is he sure and trustie in bearing of weight, as in Axeltrées, for Carts or Waines. The barke of the Béech, was vsed in olde time for vessels, to gather Grapes in, and other fruit, and also for Cruets, and vessels to doe sacrifice withall: and therefore Curius swore, that he brought nothing away of all the spoile of his enemies, but one poore Béechen Cruet, wherein hee might sacrifice to his Gods. The Alder is a Trée with streight bodie, a soft and reddish wood, growing commonly in the watrie places, it is chiefly esteemed for foundations, and in water workes, because it neuer rotteth lying in the water: and therefore it is greatly accounted of among the Venetians, for the foundations of their places, and houses: for being driuen thicke in piles, it endureth for euer, and sustaineth a wonderfull weight. The rinde is pulled off in the Spring, and serueth the Diar in his occupation: it hath like knots to the Cedar, to be cut and wrought in. The Plane trée is but a stranger, and a new come to Italie, brought thither onely for the commoditie of the shadow, kéeping off the Sunne in Sommer and letting it in, in Winter. There are some in Athens (as Plinie saith) whose branches are 36. cubits in bredth: in Licya there is one for greatnesse like a house, the shadow place vnderneath containing 81. foote in bignesse: the timber with his softnesse hath his vse but in water, as the Alder, but drier then the Elme, the Ashe, the Mulbery, and the Chery. The Linder, in Gréeke φιλυρια, and so in Italian, in Spanish Latera, in Dutch Lynden: this trée

Theophrastus

Theophrastus counteth best for the workeman, by reason of his softnesse: it breedeth no wormes, and hath betwixt the Barke and the Wood, sundry little rindes, whereof they were wont in Plinies time to make Ropes & Withes. The Bych is very beaufull and faire: the inner rinde of the Tree, called in Latine Liber, was vsed in the olde time in stead of Paper to write vpon, and was bound vp in volumnes, whereof bookes had first the name of Libri: the twigs and bowes be small, and bending, vsed to be carried before the Magistrate among the Romanes, at this day terrible to poore boyes in Schooles. The Elder tree, called of Dioscorides Ακτη, in Latine Sambucus, in Italian Sembuco, in Spanish Sauco, in French Suseau, in Dutch Hollenter, doth of all other trees soonest and easiliest grow, as experience, besides Theophrastus doth teach vs, and though it be very full of pitch, yet the wood is strong and good: it is hollowed to diuers vses, and very light staues are made of it. It is strong and tough when it is drye, and being laid in water, the rinde commeth off as soone as he is drye. The Elder wood is very hard and strong, and chiefely vsed for Boare speares, the roote (as Plinie sayth) may be made in thin bordes. The Figge tree is a tree very well knowen and fruitfull, not very high, but somewhat thicke (as Theophrastus sayth) a cubite in compasse, the tymber is strong, and vsed for many purposes, and sith it is soft, and holdeth fast whatsoeuer stickes in it, it is greatly vsed in targets. Bore tree, in Italian Boxo, in Spanish Box, in French Bouys, in Dutch Bustbaum, an excellent Tree, and for his long lasting, to be preferred before others. The Bore that turned is, (saith Virgill) Juniper, called both of Theophrastus and Dioscorides Αρκθὶς, because it drieth away vermine: for with his sauour, Toades and Snailes, and such like, are driuen away, in Latine it is called Iuniperus, in Italian Ginipro, in Spanish Euebro, in French Geneura, in Dutch Wachoiter: it is very like to Cedar, but that it is not so large, nor so high, though in many places it groweth to a great height: the timber whereof well endureth a hundreth yeares. And therefore Hannibal commanded that the Temple end of Diana should be built with rafters and beames of Juniper, to the end it might continue. It also keepeth fire a long time, in so much as it is said, the coales of Juniper kindled, haue kept fire a yeere together:

Iuniper.

the

The Ceder. the Gumme whereof our Painters vse. The Ceder Tree, in Latine Cedrus, and almost like in other tongues: the hardnesse of this Timber is onely praised, and that it will neuer rotte, nor be worme eaten, but continue euer. Salomon built that noble Temple of God, at Hierusalem, of Cedar: It is very meet for the building of Pallaces and Castles: the Cedar, the Eben, and the Oliue tree, doe neuer chinke nor coame. Images of Gods and Saints were alwayes made of Cedar, because it euer yeeldeth a moisture, as though it sweat. Theophrastus writeth of Cedars in Syria, of foure elles and more in compasse. The Rozen and Pitch of the Cedar tree, is called in Greeke κέδρια. The

The Cypresse. Cypresse, and the Pine, doe endure a long time without eyther worme or rotting. Plinie commendeth Gates of foure hundred

The Pine. yeeres olde. The Pine (saith Theophrastus) is of a great strength, and very meet for the straightnesse and handsomnesse, to be em-

The Walnut tree. ployed in building. The Walnut tree is a great tree, and commonly knowne, whose Timber is much vsed in seelings, and tables. Theophrastus writeth, that the Walnut tree before it falleth, maketh a certaine kinde of noyse, which it once happened in Antandro, the people being greatly afrayd, fled sodainely out of

The wild Oliue. the Bathes. The wilde Oliue, in Latine Oleaster, in Italian Oliue Saluatico, in Spanish Azenuche, in French Oliue sauuage, in Dutch Wilder Olyboum, of his Wood is made the haftes and

The Holly handels of wimbles and Augurs. Holme, or Holly, is a Tree whose leaues are full of prickles, round about the leafe, and the barke, being both continually greene, the berries like the Cedar: of the rinde and rootes they make Birdlime: the Wood is very hard, the branches will well winde and bowe, and therefore seruetb excellent well for quickset hedges: the Dutchmen call it

The Maple. Hulsen. The Maple, called by Theophrastus σφενδαμνος, in Dutch Masselterbaum, for the beautie of the wood is next to the Cedar, hauing a very fayre and pleasant graine, of the resemblance called Peacockes taile: with this wood Tables are couered most gorgerous to the eyes, and other fine worke made, specially of the knobs or wens that grow out of it, called Bruscou and Molluscou: of which the knobs hath the fairer and the more courled graine. Molluscou is a more open graine, and if so be it were of sufficient breadth for Tables, it were to be preferred before the

Cedar:

Cedar: now it is but seldome seene, and that in writing tables, or about beds. There is also a knob, or a wen, growing vpon the Alder, but a great deale worse then that of the Maple. The Date Tree, whereof wee haue spoken before, hath a very soft wood. The Corke, his timber is tough: but now for a farewell, I will shew you what workes euery timber is meet for. The Firre, the Pine, and the Cedar, serue for Ships, for Gallies: and Lighters (as Theophrastus saith) are made of Firre, for the lightnesse sake: Ships of burden, are made of Pine. Vpon the French and Germanie seas, they chiefly vse Oke about their Ships: the selfe same timber also serueth well for building of houses, specially the Cedar, and the Cypresse. The Firre, the Poplar, the Ash, and the Elme, are meet for the inner parts of the house, but they serue not so well in the weather, as the Oke doth. For conuciances of water, the Alder, the Pine, and the Pitch tree, are best made in Pipes: being well couered in the earth, they last a wonderfull while, but if they lie vncouered, they sooner perish: The Oke also, the Beech, and the Walnut, endure very well in the water. The Timber that longest endureth, is the Oliue, the Oke, the wilde Oke, and the Mastholme: For as Plinie witnesseth, the Oliue hath beene seene to stand two hundred yeares, the like the Cedar, and the Cypresse, as hath beene said before: for Rafters and Mortise peces, the Elme, and the Ashe, by reason of their length serues best. The best to beare weight, is the Fir, and the Larch, which howsoeuer you lay them, will neither bend, nor breake, and neuer faile, till wormes consume them. Contrariwise, the Oliue tree, and the Oke, will giue and bend, and so will the Poplar, the Willow, the Elme, and the Byrch. The Date (a worthie Tree) bendeth vp against his burden. The Poplar on the other side giueth at euery light thing. The Elme, and the Ashe, though slowly, are easely bent. These also are easely wound and bent: the Willow, the Byrch, the Broome, the Oke, and the Oken bordes. Shingles, to couer houses withall, are best made of Oke, Beech, and such others as beare Mast: and also of such as yeld Rozen, as the Pine, and the Pitch tree: the Pitch tree, and the Oke, serue best for Cups, Tankards, and such like. Those that are cut for Mainscot and thin bordes, the Cerre tree, the Terebinth, the Maple, the Bore, the Date, the Mastholme, the

The Date tree.

The Corke.

What turn each timber serues.

For Ships.

For houses

For water-courses.

For bearing of weight.

For Shingles.

the rote of the Elder, and the Poplar. For the beautifying of Tables, serueth chiefely the Maple, the Ash, the Walnut, and sometimes the Cherie, and the Peare: but the pretiousest are the Cypresse, and the Cedar Tables. For Axeltrees, Wheeles, and Spoakes, serueth the Oke, the Maple, and the Beech. Virgill doth also appoint the Cedar, and the Cypresse to this vse. Hereof they make the Spoakes of Wheeles, and hereof Carts and Waines. The selfe same Timber also serueth (as Hesiodus saith) for Plowes, Yokes, and Wagons: but that hee addeth hereunto the Ashe, & the Cherry tree, and as the Ashe for his softnesse, so the Mastholme for his hardnes. For Pullies, Wimbles, Sheathes, and Mallets, the meetest are the wilde Oliue, the Bore, the Mastholme, the Pedlar, the Elme, the Ashe, the Maple, and the Bramble: but the greater sort of Mallets, or Beetles, and the Wheeles, and Pullies for Mils, and Wels, are made of Pine, and Walnut tree. Cato would haue the Waines and Carts made of Holly, Bay, and Elme. Hyginus would haue the handles, or stealeſ of Husbandmens toles, made of Dogge-tree wood, Holme, Cherry tree, and (which we haue commonly in vse) Bore. Targets (as Theophrastus sayth) made of Willow, and Vine, for being pierced they close the harder together: but the Willow is the lightest and therefore the better. The Figge tree also, and the Linde, the Wych, the Poplar, and the Elder, serue as well for Targets. The best wood for Horsemens staues is the Ashe, and (as Virgill saith) for valiant staues, the Virtill: the Ewe tree serueth (as the same Virgill witnesseth) for Bowes:

The Ewe Tree for the Persian Bow they bend.

For Gates, they vse the Elme: for Hampers or Baskets, all such as easily bend. For Cupplings & Rafters of houses, the Elme: and the Ashe for thin bord: the best to cleaue, the Firre, the Poplar, and the Beech: for long during, and abiding the weather, and standing in water, the Oke is commended, for which the other serue not, saue for the water, the Beech, and the Alder: for fire, and light, are vsed the Firre, the Pitch tree, and the Pine. The best coales are made of the fastest wood, & the Oke, and the wilde Oke: but the finers rather desire the coales that are made of Pine tree, because they better abide the blowing, and die not so fast as the other. The Cherry tree, though the timber be of no great vse,

For tables

For Axeltrees.

Yokes and plowes.

For Hafts and Handles.

For Targets.

For chasing staues

For water workes.

yet seruetb it well to make Coale of for the Brasse Forges, be- For Coa-
cause as sone as the Bellowes leaue, the fire ceaseth, and there is ling.
little wast in it: but for building, the timber thereof is altoge-
ther vnprofitable, because it doth easily breake, & moulder away:
but being in postes vnhewed, it seruetb well enough within
doore. The aptest to take fire, is the Figge trée, and the Oliue
trée. The Figge trée because it is soft and open; the Oliue trée,
for the fastnesse and the fatnesse. The Larsh trée (as Vitruuius
saith) resisteth the fire, though Mathiolus (as I said before) go-
eth about to disproue it. In all the bodies of trées, as of liuely
creatures, there is skinne, sinewes, blood, flesh, veines, bones, and
marrow: their skin is their barke, of great vse among Country
people: the vessels that they gather their Vines, and other fruits
in, they make of the barke of Linde trée, Firre, Willow, Beech,
and Alder. The Corke hath the thickest barke, which though he The barke
lose, he dieth not, for so beneficiall hath nature béene to him, that
because he is commonly spoiled of his barke, she hath giuen him
two barkes. Of his barke, are made Pantofles, and Slippers, and
Floates for fishing Nets, and Angles: if the barke be pulled off,
the wood sinkes: but the barke alwaies swimmeth. The next to
the rinde in most trées, is the fat, the softest and the worst part
of the trée, and most subiect to wormes: therefore it is commonly
cut away. The sappe of the trée, is the blood, which is not alike in
all trées, for in the Figge trée it is milkie, which seruetb as a
Rennet for Chéese. In Cherie trées, it is gummie: in Elmes, sal-
tish: in Apple trées, clammie and fat: in Vines, and Peare trées
watrish: they commonly spring the best, whose Sappe is clam-
miest. The iuyce of the Mulberie, is sought for (as Plinie saith)
of the Philistians. Next to the fat, is the flesh, and next to that
the bone, the best part of the timber: all trées haue not any great
quantitie of this fat and flesh, for the Bore, the Cornell, and the
Oliue, haue neither fat, nor flesh, nor marrow, and very little
blood: as neither the Seruisse, and Alder, haue any bone, but
both of them full of marrow. Réedes for the most part haue no
flesh at all: in flesh of trées, there are both veines and arteries,
the veines are broader, and fairer: the arteries, are onely in such
trées as will cleaue, by meanes of which arteries it commeth
to passe, that the one end of a long beame laied to your eare,

if

if you do but fillip with your finger vpon the other end, the sound is brought forthwith to your eare, whereby it is knowne, whether the péece be straight and euen or not. In some trées there are knots on the outside, as the wenne, or the kernell in the flesh of man, in the which there is neither veine, nor arterie, a hard knop of flesh being clong, and rolled vp in it selfe: these are most of price in the Ceder, and the Maple. In some, the flesh is quite without veines, hauing onely certaine small strings, and such are thought to cleaue best: others, that haue not their strings, or arteries, will rather breake then cleaue: as the Vine, and the Oliue, will rather breake then cleaue. The whole body of the Fig is fleshie: as the body of the Mastholme, the Cornell, the wilde Oke, the Mulbery, and such others as haue no pith, is all bony. The graine that runneth ouerthwart in the Béech, was taken (as Plinie sayth) in the olde time for his arteries.

THRA. There are other commodities beside the timber to be gathered of these trées.

MARIVS. Very true: (for as I said before) of the Medlar, the Oke, the Chestnut, the Pine, and the Béech, these trées that grow in the Woods, besides their timber, beare fruit also, good and méete to be eaten. So of the Firres, the Pitch trées, and the Pines, we gather Rosen and Pitch, to our great commoditie and gaine: as of the Oke, the Béech, the Chestnut, the Medlar and the Pine, we haue fruit both méet for man, and also good for féeding of Hogs, and other Cattell. In time of dearth, both our forefathers, and we, haue tried the good seruice that Acornes in bread hath done, yea, as Plinie and others haue written, they were wont to be serued in amongst fruit at mens tables. Neither is it vnknowen what great gaines some countries get by Acornes, Rosen and Pitch: The Gall also groweth vpon these Acorne-bearing Trées, whereof I haue spoken before. Amongst all the trées out of which runneth Rosen, the Tarre trée, a kind of Pine, is fullest of sap, and softer then the Pitch, both méet for fire, and light, whose bordes we vse to burne in stéed of candels. The Cedar sweateth out Rosen and Pitch, called Cedria. Moreouer, of Trées, is Birdlime made, the best of the Terre trée, the Mastholme, and the Chestnut, specially in the Woodes about Scne, and néere the Sea side, where they are carefully planted in

Birdlime.

great

great plentie, by the Birdlime-makers: For they gather the berries from the trées, and boyle them till they breake, and after they haue stamped them, they wash them in water, till all the flesh fall away. Plinie affirmeth, that it groweth onely vpon Okes, Mastholme, Skaddes, Pine trées, and Firre. Birdlime is also made of the rootes of certaine Trées, specially of the Holly, whose rootes and barkes withall they gather, and lay them vp in trenches, couered with leaues in a very moyst ground (some doe it in doung) and there they let them lie till they rot, then take they them out, and beat them, till they waxe clammie, and after wash them in warme water, and make them vp in balles with their hands: it is vsed (beside other purposes) for the taking of Birds. Besides all this, there sweateth out of Trées a certaine Gumme knowen to all men, as of the Cherry trée, the Plome trée, the Juniper, the Olive, the Blackthorne, the Iuie, and Almond. Out of the Juniper, commeth vernish: out of the Myrrhe, Storax: out of the white Poplar, Amber. Plinie writeth, that Amber commeth out of certaine Pine trées in the fat, as a Gumme doth from the the Cherie trée. And thus these things that I haue héere at your request declared, touching the order of Planting and sowing, I beséech you take in good worth: you heare my wife calleth vs to Supper, and you sée the shadow is ten foote long, therefore it is high time we goe.

Vernish.

Amber.

THRA. I giue you most harty thankes that you haue thus friendly entertained mee in this your fayre Orchard, with the swéet description of these pleasant Hearbes and Trées.

IVLIA. Sir, your Supper is ready, I pray you make an end of your talke, and let the Gentleman come in héere into this Arbour.

MARIVS. Come let vs goe.

Soli Deo laus & gloria, per Christum Iesum.

The end of the second Booke.

The third Booke:

Of Feeding, Breeding, and Curing of CATTELL.

HIPOCONVS. EVPHORBVS. HEDIO. EVMÆVS.

THat the breeding and feeding of Cattell is a part of Husbandry, and neere ioyned in kindred to the tilture of the ground, not onely appeareth by Virgill, the Prince of Poets, who hath in his Georgickes throughly set forth the order thereof, but also by the witnesse of the more auncient Philosophers, Xenophon, and Aristotle. The like doth our common experience at home daily teach vs: for albeit the trade of Tillage and keeping of Cattell is diuers, and the manner of occupying many times contrary the one to the other: as where the Grasier and Breeder, requireth a ground full of Grasse and Pasture, the Husbandman on the other side, a ground without Grasse, and well tilled: yet in theis their diuers desires, there appeareth a certaine fellowship & mutuall commoditie redounding in their occupying of one the other, which Fundanius in Varro, doth seeme by an apt comparison to proue: as in a couple of Shalmes, or Recorders, saith he, the one differeth in sound from the other, though the musicke & song be all one (the one sounding the Treble, the other the Base) in like manner may we terme the Grasiers trade the treble, & the tillers occupation the base, following Dicæarchus, who reporteth, that at the beginning, men liued only by breeding & feeding of Cattell, not hauing as yet the skill of plowing and tilling the ground, nor planting of trees.

After-

Afterwards in the lower degree, was found out the manner of tilling of the ground, and therefore beareth the base to the feeder, in that it is lower; as in a couple of Recorders, the base to the treble. So this vsing to keepe cattell for plowing, cariage, dunging of our ground & other commodities: and on the other side, to till the ground for feeding & maintenance of our cattell, it comes to passe, that though the manner of occupying in tillage, and keeping of cattell be diuers, yet one of them so seruеth the turne of the other, that as it seemeth, they cannot well be asunder: for without the seruice of Horse and Oxen, we can neither plow nor dung our ground. Chaffe, straw, and other offall of corne is meeter to be spent vpon the ground, then to be sold, both for the Farmers behoofe, and the Lords, and better bestowed vpon the houshold cattell, then vpon the forreiners. Besides, the dung of the cattell enricheth the ground, and bringeth great encrease: and whereas there is no place (as Columella saith) but in the tillage of the ground, they haue as much neede of cattel, as men: the cattell serue not onely for the tilling of the ground, but also to bring in corne, to beare burdens, carry dung for the ground, and also for breed, and increase of the Stocke: whereby they haue their name Iumenta, of helping, because they helpe and further vs, either in our labours, by plowing or bearing. Neither is it onely sufficient to nourish and bring vp this kinde of great cattell called Iumenta, but also the other lesser sort of Beastes, as Sheepe, Swine, Goates: and of Fowles, Geese, Peacocks, Duckes, Pidgions, Hennes, Chickins, and other Poultrie, and things belonging to Husbandry, wherewith the good Husband, beside his owne sustenance maketh great gayne: and if the ground be for it, and Pales fauourable, there ariseth oftentimes as great profit, as in sowing of Corne, and that with smaller charges. For a proofe that feeding is gainefull, the words Pecunia, money, and Peculium, substance, or riches, being both deriued from the Latine name of cattels, may very wel serue: for in the old time they vsed their cattell instead of money, and their common penalties and fines, taken in cattell, the greatest was thirtie Oxen and two Sheepe, euery Oxe valued at v. s. vi. d. and euery Sheepe at vi. d. The smallest was a Sheepe: the very like is yet obserued with the noblest and warlikest people, whose substance lyeth altogether in cattell.

Cato being once asked by what part of husbandry a man might sonest be made rich? made answere, By Grasing: and being asked againe, which way he might get sufficient liuelyhood? he answered, By meane Grasing. Moreouer, that the worthynesse and first originall of keeping of Cattell is of greatest antiquitie, and that the trade thereof hath alwayes, from the time of the Patriarks hitherto, beene counted most honest, as well the Scriptures, as prophane Histories doe witnes, which kinde of life, how acceptable it hath alwaies beene to God, by those that liued in the first world, doth plainely appeare. The Scripture sheweth how graciously the Lord accepted the sacrifice of Abel, a keeper and feeder of sheep, besides, Seth, Noe, Abraham, Lot, Iacob, Iob, Amos. Holy and blessed men are commended for keeping and feeding of Cattell, whereby attayning to great wealth, they sustayned themselues, their Wiues, their Children, and their huge Families. The Sonnes of Iacob, when as they were demaunded by the King of Ægypt what manner of life they ledde? made answere, That they were feeders and keepers of Cattell. From which trade, Lot, Moses, Saul, and Dauid, were by the will of God aduanced to the Crowne, as among the Gentiles the most ancient, and famous Princes were, some of them brought vp by Shepheards, and some Shepheards themselues. Romulus and Cirus, being mightie Emperours, were brought vp among Shepheards. Besides, Valerius Maximus, Constantine, Probus, and Aurelianus, came all from the Ore-stall, to the Imperiall Seate. Homer commendeth Vlisses his Swincherd, for his great valiance and noblenesse. That the valiant and noblest people haue professed this trade, the Italians, Germans, and the Switzers can testifie, whose countries being now grown to more delicacie then they were wont to be, were wont alwayes, when their doings were most famous, to glorie and vaunt themselues of this life, as at this day the godliest and wisest doe. And therefore the ancient writers, as well Greekes, as Latines, doe count the chiefest wealth to be in the number of Sheepe, Cattell and Fruit: for which estimation the Cattell were supposed to be cladde in Golden Coates: whence sprang first the fable of the Golden Fleece of Colcos, which Iason and his companions attempted to fetch, and of the Golden Apples, kept by the daughters of Atlas.

The worthinesse and antiquitie of keeping of Cattell.

Besides

Besides, the signes of Heauen, the Seas, Mountaines, and Countries, doe beare their name of Beasts: among the Stars, the Ramme, the Bull: the Mountaine, Taurus: and the Sea, Bosphorus. Italie tooke his name of Calues. Moreouer the keeping of Cattell is the worthier, in that it hath some resemblance of the state of a Gouernour: and therefore the Prophets in their Oracles, and Poets in their verses, doe oftentimes call Kings and Princes by the names of Shepheards, and feeders of the people. Yea, the Lord of the whole world doth call himselfe a Shepheard. Since it appeareth by these examples, of what worthinesse keeping of Cattell is, and how neere it is linked with tillage, I haue heere thought good, after the entreating of Tillage, Gardening, and Orchards, to describe as briefely as I can, the order and manner of keeping of Cattell: which skill though Varro deuideth onely into three parts, I haue deuided into foure. In the first part I put the great Cattell for burden, as Horses, Asses, Mules, and Camels: in the second part, the lesse sort, as Sheepe, Goates, and Swine: in the third, such things as are belonging to the keeping and safegard of Cattell, not for the profit they yeeld of themselues, but for their necessary vse, as Shepheards Dogs, and Cats: of these three parts, in this third Booke, I entreat off: the fourth I referre to the fourth Booke. Hauing thus declared the contention betwixt keeping of Cattell, and Tillage, with the worthinesse and antiquitie thereof, I meane now to prosecute such things as are belonging to the same. I haue brought in the the Masters and keepers of euery kinde of Cattell, and resting themselues vpon the holy day in the greene grasse, and the Sommers shadow, euery one declaring his skill and knowledge, according to his profession. The parties are, Euphorbius the Neatheard: Hippocomus the Horse-keeper: Hedio the Shepheard, and Eumeus the Swine-heard.

EVPHOR. How sirra Hippocomus, whither wander you? Doe you not know that it is holy day, a day to dance in, and make merry at the Ale house?

HIPPO. Euery day is holy day with lazy and slouthfull marchants: it lieth me vpon to looke to my profit, to see whether my Horses feede well, and that they take no harme. The pastures are so burnt with the heat of Summer, that I am afraid for want

of meate, they will seeke to breake into other grounds, and so hurt themselues.

EVPHOR. Why bring you not them into this field, where there is both a good grotten, and pretty store of grasse among the headgroues.

HIPPO. You perswade me not to the worst.

EVPHOR. Come on then, bid Mastrix your boy bring hither your horses, and you your selfe, sit you downe vnder this Hasell, that will yeeld vs both shadow and Nuts, and we will send for Eumeus, and Hedio, if you thinke good, and wee will passe away the time with such talke as we shall finde.

HIPPO. Agreed: Goe Mastrix, fetch hither the Horses, with the Colts and the Asses.

Of Horses.

EVPHOR. And you Eumeus, and Hedio, bring your heards together, and come hither, euery man shall lay downe his shot, as they vse in the Tauernes, but without money or any charges, declaring at large what belongeth to the Cattell he keepeth. Your Horses Hippocomus are yet in good plight. I saw the horses of our neighbour Agrius of late, which are leaner and barer a great way.

HIPPO. Peraduenture they haue not so good looking vnto, though they neither want pasture, nor are much laboured, but mine on the other side, are continually laboured, and are not so well fed, but better looked vnto then my neighbours.

EVPHOR. Well, since both time and place requireth it, I pray you, let vs heare what you can say touching the charge and looking to of Horses.

HIPPO. Surely, I haue not so much money to tell, but I may well be at leysure, and therefore since you are so earnest with me, I will not denie your request: although that of this matter, an honest and learned Gentleman of England, Master Thomas Blundeile hath so throughly written to his commendation, and benefit of his Countrie, as there cannot be more said: I refer you therefore wholy to him: notwithstanding briefely I will shew you my fancie. Among all other creatures that we vse in our labour, the Horse may worthiest chalenge the chiefest place, as the noblest, the goodliest, the necessariest, and the trustiest beast that wee vse in our seruice, and since hee serueth to so many vses, I

should

should here bestow some time in his praise, and in declaring his seruice, but for this, another time shall better serue.

EVPHOR. We onely here desire to know the signes of a good, and an excellent Horse, and the right manner of ordering him.

HIPPO. First, you shall know that Horses serue for sundry purposes. Some, for the Plow, the Cart, and the Packsaddle, others, for light Horses, Coursers, and Horses of seruice, others againe, for Stallions, and breeders: and therefore they must be chosen according to their seruice. Souldiers, and men of Warre, desire a fierce Horse, couragious, swift, and well coloured. The Husbandman would haue his Horse gentle, large bodied, and meet for trauell and burden. Notwithstanding, the breeding and bringing vp of them, is almost one: for in their breeding, wee hope to bring them all to the Saddle.

EVPHOR. What things are most to be considered in their breeding?

HIPPO. He that hath a fancie to breede Horse, must first prouide himselfe of a good Race, and then of good ground, and plentie of Pasture, which in other Cattell ought not to be so greatly obserued, but in Horses there must be speciall care thereof. And therefore, you must first see that your Stallion be of a good race, well proportioned, and framed in euery point, and in like sort, the Mare. Some reckon their goodnesse by their Countries, wherein they take for chiefe, the Genet of Spaine, the Courser of Naples, the Sarmacian Horse, the Peloponesian, the Turkey, and the Thessalian, but these serue chiefely for running, and swiftnesse. For largenesse of body, enduring of labour, and fitnesse for breede, the best are to be had out of Freeseland, Holland, and Artoys. The shape and proportion of the Horse, ought heedily to be considered, for the very looke and countenance oftentimes declareth the goodnesse of his nature. Therefore you must diligently consider his making, from the heele to the head, and first you must chiefely regard his feet: for as in viewing of a house, it is in vaine to regard the beautie of the vpper Roomes, if the foundation be ruinous: so the Horse that is not sound of his feet, will neither serue the Souldior, the Husbandman, nor the Trauailer. In your looking vpon him therfore you must first consider his hoofes, The Hoofes.

that they be not tender and soft, but hard and sound, round, and hollow, that the hollownesse may keepe his foot from the ground, and sounding like a Cimball (as Xenophon sayth) may declare the soundnesse of the foote, for the hoofe that is full and fleshy, is not to be liked, and the Horses that haue such hooses doe easily halt, wherefore diuers commend a Horse like the hoofe of an Asse, the pasternes next to the hoofe, not too long, as the Goat hath, for shaking off his rider, and breeding of windgall, nor too short, for being hurt in stony ground. The legs and the thyes, sith they are the standerds of the body, they ought to be euen, straight, and sound, not gouty, with much flesh and veines, for such as haue their legges clad with much flesh and veines, they with great iourneyes grow full of windgals, and swellings, which will
The legs. cause them to halt, which legges at the first foling, are as long as euer they will bee, by reason whereof you may gesse what
The knees height the Horse will be of, being yet a Colt. The knees must be round, flexible, and small, and not bowing inward, nor stiffe,
The thies. the thyes large and well brawned, his breast great and broad, his
The breft. necke soft and broad, not hanging like a Goates, but vpright
The neck. like a Cockes, and well reining, his Mane thicke, falling on the
The mane right side, some like it better on the left, his head small and leane,
The head. for a great and heauie head is a signe of a dull Jade, his mouzell short, his mouth wide, with large wrinckles, still playing with the Bit, and foming: as Virgill:

There stamping stands the steed,
and foomy Bridell fierce he champs.

The mouth. The Horse that hath a dry mouth is naught: his chekebones would be euen and small, for if they stand too farre asunder, he will be ill to be bridled, and the vneuennesse of the chekes will make him headstrong, and neuer to rayne well, but to thrust out his head ill fauouredly, his eyes great, bluddy, and fierry, and
The eyes. standing out of his head, which is a signe of quicksenesse, and liuelinesse: hollow & little eyes are naught, and blacke, or pale stars in the eyes are to be dispraised: these faults are best spied in the night by candle light. Columella commendeth blacke eyes. A wall eye is very good, such as they say Alexanders Bucephalus had.
The eares The eares must be short, standing vpright, & stirring, for the eares

be

be the tokens of a Horses stomacke, which if they be great and hanging, are signes of a Jade. The Nosthrils must be wide, the better to receiue ayre, which also declareth a liuely courage: his shoulders large and straight, the sides turning inward: the ridge-bone ouer the shoulders being something high, giues the Horseman a better seate, and the shoulders, and the rest of the body is stronger knit together, if it be double: his sides deepe, well knit behinde, and something bowing vp, which both is better for the horseman, and a signe of a great strength: his loynes, the broader they be, the better he lifteth his forefeete, and followeth with the hinder, and his paunch shall the lesse appeare, which both disgraceth him, and burdeneth him: his belly must be gaunt, his buttocks large, and full of flesh, answerable to his brests, and his sides: for if he be broad hanched, and well spred behinde, and goeth wide, his pace will be the surer, which we may perceiue in our selues, if wee assaile to take vp a thing from the ground strydingly, and not with your legges together, we take it vp with more ease and strength. His tayle would be long, bristlie, and curled, the length whereof is not onely a beautie, but also a great commoditie to him to beate away flyes: yet some delight to haue them curtayled, specially if they be broad buttockt. In fine, the whole body would be so framed, as it be large, high, liuely sprighted, and well trussed. Some Horsemen would haue their Horse to be limmed after the proportion of diuers beasts, as to haue the head and legges of a Stagge, the eares and tayle of a Fox, the necke of a Swanne, the brest of a Lion, the buttocks of a Woman, and the feete of an Asse. Virgill in his Georgickes doth very Clarkely describe the tokens of a good Horse.

The nosthrill.
The shoulder.
The chine
The sides.
The loines
The belly.
The buttocks.
The tayle.

With head aduanced high at first, the kingly Colt doth pace,
His tender lims aloft he lifts, as well beseemes his race. (way,
And foremost stil he goeth, & through the streme he makes his
And ventures first the bridge, no suddain sound doth him afray.
High crested is his necke, and eke his head is framed small,
His belly gaunt, his backe is broad, and brested big withall.
The bay is alwaies counted good, so likewise is the gray,
The white and yellow worst of all, besides, if farre away
There happen a noise, he stamps, and quiet cannot rest.

But

But praunceth here and there, as if ſome ſpirit were in his breſt.
His eares he ſets vpright, and from his noſe the fierie flame
Doth ſeeme to come, while as he ſnuffes, & ſnorteth at the ſame.
Thicke is his mane, & on the right ſide down doth hanging fall,
And double chinde, vpon his loynes a gutter runnes withall.
He ſcraping ſtands, & making deep a hole, he pawes the ground,
Whiles as a loud his horned hoofe, all hallowed ſeemes to ſound.

You ſée in how few verſes the Poet hath expreſſed the properties of a good Horſe: other conditions there be for which they be liked, when they be pleaſant, firſt liuely, gentle, and tractable: For ſuch, as Columella ſaith, will both better be taught, and better away with trauell. Xenophon accounteth it a ſigne of a good Horſe, if after the wearineſſe of his iourney he ſeeme to labour luſtely: againe, we finde by experience, the better the Horſe is, the deeper he thruſts his head into the water when he drinketh, and that (being a Colt) ſtriueth to out runne his fellowes in the paſture, and as Virgill ſaith, leape firſt into the water, and paſſeth bridges, not tarrying for any other, nor fearing the Iſle.

EVPH. What colour in Horſes count you the beſt? The Poet ſeemeth to miſlike the white, which others againe, as I haue ſundry times heard commend, ſpecially in England, where they are well accounted of, and moſt eſteemed.

HIP. Touching the colours, there are diuers opinions, and of all colours, lightly you ſhall finde both good and bad: ſo that the colour is not ſo greatly to be regarded, if he haue other tokens of a good horſe, yet for beautie, and many times for goodnes, we make choyſe of colour. The beſt colours, as diuers ſuppoſe, are theſe, The roane, the white liard, the bay, the ſorell, the dunne, the daple gray, the aſhy white, the fleabitten, the milke white, the black, and the iron gray: the bay is moſt of price as far as I ſée at this day, and preferred by the Poet aboue the reſt. The Frenchmen call the bay horſe, Le bayari loyal, truſty Bayard: they are the better that haue a ſtarre in the forehead, and the foote ſpotted a little with white: aforetime the daple gray, the fleabitten, the mouſedun, and the griſell were moſt eſteemed, and ſuch as came neereſt to them, as the Iron gray, the bright ſorell, the browne bay. Onely Plato commendeth the milke white, that Virgill diſprayſeth.

Others

Others commend the blacke, specially if he haue either white starre in his forehead, or strake downe his face, or hath any white vpon his foote, the coale blacke without any white, is altogether misliked, the flea-bitten Horse proueth alwaies good and notable in trauell: the yellowish and the skued, or pied horses are discommended almost of all men, notwithstanding either of them (if they be well marked) proue oftentimes well enough, specially the yellowish, if he haue a blacke list downe his backe from the necke to the taile. The Stallion therefore would be of one colour, strong bodied, well limmed, according to the proportion afore. The Mares would likewise haue the said proportion of the Stallion, specially to haue large bodies, faire and beautifull, of one colour, great bellied, with large and square breast and buttockes.

The Stallion.

The Mares

Age.

EVP. What Age count you best for breede?

HIP. The Stallion may goe with the Mares when his ioynts and limbs be well knit and come to their growth, for if they be too young, they get but weake and wearish Colts: some vse to let them goe together at two yeeres olde, but three yeeres olde is the better: the Stallion will serue you from that time till twentie yeere, it hath beene seene that they haue gotten Colts till fortie, being helped a little in their businesse, for it is not yeeres but skill that abateth lust, as Aristotle afore Plinie wrote. Yet some thinke them not meete for breede before the fourth or fifth yeere, in which space they feede them lustely, to make them more courageous, for the luskier they be, the better Colts they bring, neither would they haue vnder sixteene Mares, nor aboue twenty, for one Stallion. Herodotus writeth, that one Horse will well suffice twentie Mares, but the number ought not alwaies to be obserued, but sometimes more, sometimes lesse, according to the state of the Horse, that he may the longer endure: a young Horse should not haue aboue fifteene or sixteene Mares with him: the horses must be sometime seuered for danger and hurting of themselues, hauing in the meane time good regard to the state of his body, for some be weaker and fainter then others.

EVPH. What age doe you thinke best for the Mare to goe to the Horse.

HIPPO. The Mares will conceiue, at two yeeres old, but I take it the better not to suffer them till they be three yeeres olde, and

and likewise I thinke them not méete for Colts after tenne, for an olde Mare will alwaies bring a dull and heauie headed Iade: they goe with Foale an eleauen moneths, and Foale in the twelfth.

EVPH. How can you know their age when you be doubtfull of it?

HIP. That may you know diuers wayes, but specially by the téeth, and those téeth that declare the age, the Grecians call γνωμονες, which téeth when he loseth, he loseth both estimation and sale. Aristotle affirmeth, that a Horse hath fortie téeth, of which he casteth the thirtieth moneth after his foaling foure, two aboue, and two beneath: againe in the beginning of his fourth yéere he casteth likewise foure, two aboue, and two beneath, being full foure, and going vpon his fifth, he casteth the rest, both aboue and beneath: such téeth as come vp againe be hollow: when he beginneth to be sixe yéere olde, the hollownesse of his first téeth is fild vp: in the seauenth yéere all his téeth are filled vp, and no hollownesse any longer to be séene: after which time, no iudgement of his age, by his téeth, is any more to be had: there are some that take vpon them to tell his age by the joynts of his taile, after the marke is out of his mouth. Palladius shewes, that a Horse when he begins to be olde, his temples ware hollow, his eie-brics gray, and his téeth long. Aristotle saith, that the age of all foure-footed beasts may be knowne by the skinne of their Iawes: for if it be pulde vp and presently let fall againe, if it fall smooth, it declares a young beast, if it lie in wrinkles, it sheweth he is olde. A Horse liueth commonly twenty yéeres, some thirtie, or fortie, and also to fiftie, as Aristotle saith, if he be of a good disposition, and well dieted: it is said there haue béene Horses that haue liued 75. yéeres, the Mare liueth not so long as the Horse, nor the Stallion, so long as the Horse that is suffered to runne amongst Mares: the Mare leaueth growing at fiue yéere old, and the Horse at sixe, or seauen.

EVPH. What time thinke you best for couering of Mares?

HIP. In the Spring, after the twelfth of March, I take to be the best, after the Spring in the rest of the yéere they are to be kept from the Horse, for hurting of the Horse: for the Mare after she hath conceiued, suffers the Horse no more, but beates,

and

and strikes him with her héeles, yet in most places, they suffer their Stallions to runne with their Mares all the Summer long, and take it to be the best way for answering the Mares desire, for many times the Mare will not abide the Horse till Summer time, or August, and the August Colt proues commonly very faire, although the Colts that are foaled in the Spring, are not to be desired, because they runne all the yéere with their dammes in good Pasture, and therefore it is best at that time to put the Mare to the Horse, for these creatures specially, if you restraine them, are most enraged with lust, whereof came at the first the name of that deadly poyson Hippomanes, because it stirreth vp a fleshly affection, according to the burning desire of beasts, which groweth in the forehead of the Colt, of the quantitie of a Figge, and blacke, which the damme doth straight, as sone as she hath foaled, bite off: and if shée be preuented, shée neither loues the Colt, nor suffers him to sucke, neither is it to be doubted, but that the Mares in some Countries so burne with lust, as though they haue not the Horse, with their owne feruent desire, they conceiue and bring forth after the manner of Byrdes, as the Poet noteth.

In furious lust the Mare exceedes all other beasts that be.

It hath bœne said, that in Spaine Mares haue conceaued with the winde, and brought vp their Colts, but the Colts haue not liued aboue thrée yéeres. Aristotle writeth, that a Mares desire is quenched by shearing of her mane.

EVPH. What if the Mare will not take the Horse, is there no meanes to make her?

HIPPO. There are that rub her taile with Sea Onions, Nettels, or Madder, and so prouoke her to lust, sometime a scurruie Jade is put to her, who when he hath gotten her good will, is straight remoued, and a better Horse put in place. If the Horse be too slowfull, his courage is stirred vp by wiping her taile with a Spunge, and rubbing it about his Nose. If we would haue a Horse Colt, we knit the left stone of the Horse with a corde: and for a Mare the right. The like is to be obserued almost in all other beasts.

EVPHOR. How often must she be Horsed after she take?

HIP. They take not a like, some are sped at once, some twise, some

some more. It is said, a Mare will not suffer aboue fifteene times in the yeere: being oftentimes satisfied with fewer. They must be put to the Horse at times, twise a day, in the morning, and at night: when they are sped, it appeareth by refusing, and striking at the Horse. They say: that there is amongst these beasts a great regard of kindred, and that you can hardly force the Colt to Horse the Damme: for proofe whereof they report, that where as a certaine Horse-keeper did make his Horse, by couering his eies, to couer his Damme, the cloath being puld away, when he saw what he had done, he ranne vpon his Keeper, and slew him: as soone as she is couered, the Mare must out of hand be beaten, and forced to runne, least she lose that she hath receiued. Surely a Mare of all other beasts, after her couering, doth runne either Southward, or Northward, according as she hath conceiued either Horse Colt, or Mare Colt: her colour also doth change and become brighter, which when they perceiue, they offer her the Horse no more. Some after a few dayes if they doubt her, offer the Horse againe, and if she refuse and strike (as I said before) they iudge she hath conceiued.

EVPHOR. Must they be couered euery yeere?

HIPPO. Such is our couetousnesse, as we seeke to haue them beare euery yeere: but if you will haue good Colts, let your Mares goe to Horse but euery other yeere, so shall they well answere your desire, howbeit the common vse is euery yeere.

EVPHOR. We see Asses sometimes to couer Mares commonly, and thereof is engendred the Moile, and foaled in the xij. moneth, as shall be said hereafter. Some say it is best to cut the mane of the Mare that shall be couered of the Asse, though others hold opinion that it shall abate her lust. The Mares that be with foale, must be well looked vnto, and put in good pasture. And if through the colde Winter, pasture be wanting, they must be kept in the house, and neither laboured nor iaded vp and downe, nor suffered to take any cold, nor to be kept too many in a straight roome, for casting their Foales, for all these inconuenences will hazard their Foales, yet to trauel them moderately, will do them rather good then harme, for too long rest will cause them to be restiffe, and to tyer sooner. Aristotle writeth, that the Scythians did vse to trauell their Mares great with foale, after the time they

began

began to stirre, supposing their foaling should be the easier, but good heede must be taken, that their bellies be not hurt with any thing while they are with foale: but if so be the Mare be in danger, either in casting her Foale, or in foaling, the remedy is, Polipody stamped, mingled with warme water, and giuen with a horne: it is said that the smell of a Candell snuffe, causeth them to cast their foales: you must euery yeere ouer-see your Mares, and such as be vnprofitable, or barraine, must be put away, for from their first foaling they are not to be kept aboue ten yeeres, at which time they are lusty enough, and may be well sold, but so wil they not be after: The young Foales are not to be handled with the hand, for they are hurt with the lightest touch that may be. It must be seene vnto, that if the Mare be housed, there be roome enough for her and her Foale, and that the place be warme enough, that neither the cold harme it, nor the Damme ouer-lie it, and therefore the place must be well chosen, that is, neither too hot, nor too colde, and afterwards by little, you must bring vp the Colt: when it groweth to be something strong, it must be put to pasture with the Mare, least the Mare receiue hurt by the absence of it: for chiefely this Beast of all others, most esteemeth her young, and if she be kept from it, taketh harme. The Foale that lackes his Damme, is often brought vp, of other Mares, that haue Colts: the Mare must goe in very good pasture, that the Colt may haue store of milke. Being fiue moneths olde, when you bring them into house, you must feede them with barly flowre and branne: at a twelue moneth olde, you must either put them into good pasture, or feede them with Branne, Chaffe, and Hay. Varro will not haue you to weane them, till they be two yeeres olde: and though I like not too sone weaning, yet we vse commonly to weane them at fiue or sixe moneths old, and to let them runne in good pasture, which custome prouoketh not amisse. Moreouer, as long as they runne with the Damme, you shall doe well to handle them now and then, least, when they be put from the Damme, they ware wilde: they must be taught to be gentle, and not onely to abide a man, but to couet his companie, and not to be afraid at euery strange sight, nor at euery noise, but to come to it. Xenophon saith, we must (as men) prouide Schoolemasters for our Children, so likewise teachers for our Horses, & appoint how we

will

will haue them broken: for as their seruice is diuers, so must be their breaking. But hereof we shall speake more hereafter, when we entreate of Horsemanship, and breaking of Horses: onely now we will deale with those that sucke, and serue for the Plow. To make them gentler, the bridles, and other Horse harnesses must be hanged by them, that they may the better be acquainted with them, both with the sight, and the gingling. Now when they be well tamed, and will suffer to be handled, Varro would haue you lay a Boy groueling vpon them twise, or thrise, and after to bestride them, and this he would haue done, when they be thrée yéere olde, for then they grow mest, and begin to be great brawned. There be that thinke a Horse may begin to be handled at a yéere and a halfe old, and Varro, at thrée yéere old, when their prouender is giuen them: but we vse commonly after two yéeres to labour them gently, first in harrowing of new plowed land, which is good both for their foote, and their pace, and also with plowing, & such like exercise: whereby we vse to acquaint them with colde and heate, in drawing together. It must be sáene to, that they be euen matched, least the stronger spoile the weaker, while he dreadeth the rating and whipping. Horses take lesse harme with drawing then with bearing. Thus must they be vsed to reasonable trauell, by reason whereof, they will be the harder, and not so lightly take harme: but herein must be great discretion.

EVPH. What say you to Geldings? for in these parts we vse Geldings most.

Stables. HIPPO. They serue for some purpose: but he that will haue a good Gelding, must geld (as they say) a good Horse; they are cut at a yéere old and elder: I my selfe haue cut them at fiue yéere old, and sixe yéere old: in cutting they lose their stomacke: you must looke that they be in good plight when you cut them; for as they are at their cutting, they commonly continue. The Mares also vse to be spayed, but not often, and with great danger.

EVPH. What manner of Stable would you haue, for I haue sometimes heard, that the Stable is of great importance?

HIPPO. Your Stable must be built in a drye place, for wetting the Horses hoke, which you shall auoide if you planke it with good Oken planks, or (which Xenophon would rather haue you

doe) with round paving stone, keeping it alwaies cleane from dung, and straw, and after laying fresh litter, so as they stand hard, and lie soft. Xenophon would haue the Stable so placed, as it may alwayes be in the Masters eie, and to be lightsome, least the Horse being vsed to the darke, his eie dazell at the light. Some thinke they will be the gentler, if they be vsed to the light, & the fairer, if they haue the Sun at the rising in Summer time: let as much aire come to them both day & night as you can. In Winter your Stable should rather be warme, then hot, and therefore your stable must stand toward the South, but so as the windowes may open toward the North, which being kept shut in Winter, may be warme, and opened in Summer, you may let in the cole aire.

EVPH. The like we vse in our Oxe stalls.

HIPPO. Besides, whereas the bodies of cattell, haue néede of rubbing, as well as mens bodies, for many times it doth the Horse as much good to be stroked downe the back with your hand, as to feed him. The Horse is to be continually curried, in the morning, at night, and after his labour. In currying of them we must begin at the head, and the necke: for it is a vaine thing to make cleane the lower parts, and leaue the other foule. It is good also to obserue due times for his féeding, his watering, and his trauell. Thus much of his exercise. Now followeth to speake of his diet: and because we haue spoken before of his pasture, we must also say somewhat of his other féeding. The better a man would haue his Horse to proue, the better must he looke to his meate for that good féeding (the Country people say) is a great helpe to the goodnesse of the Horse. If the Horse be young (as I said before of Colts) he must be fed with grasse, chaffe, and hay: if he be elder and meet to trauaile, his food must be the drier, as Chaffe, Barley, Dates, and Hay. Chaffe doth not so well nourish, by reason of the drinesse, but it keepes the body in good plight: and because hard meate is hardest of digestion, it is therefore to be giuen to those that labour. The stock or stud, must be pastured in large pastures and marshes, as also vpon mountaines, and hilly ground, but euer well watred, not dry, rather champion then woody, and rather soft sweet grasse, then high and flaggy: if the pasture be too short, they sooner weare their fore-téeth, and are toothlesse before their full age. And where as euery kinde of creature is naturally moist, a Horse

Currying.

Dyet.

ought chiefly (whether he be young, or old) to be fed with moist pasture, for the better conseruation of his naturall temperature. Some would haue you in no wise to giue your Horse grasse in the Spring time, but in June, or the fall of the leafe: they would haue you giue them grasse with the dewe vpon it, and in the night season, Dates, Barly, and Hay. Howbeit, in the colder Countries, in Germany, Fraunce, England, where the pasture is very good, they doubt not to scowre their Horses with greene grasse and weedes of the meddowes: and in the hotter Countries, they doe the like with greene blades of Wheat, or Barly. Some vse to giue them Apples shared in pieces, to scowre them withall, and thus much of scowring of Horses. Generally, whosoeuer will haue his Horse healthy, and able to endure trauell, let him feed his Horse with Dates, mingled with chaffe or straw, so shall he be temperately and well fed, and if so he labour much, giue him the more Dates. His meat must be giuen him as some thinke best, in a low Manger, set so low, as they are forced to eate their meat with some difficulty or trauell, which they say is to make them bend their necks: by which exercise both the head and the necke groweth bigger, and they will be the easier to be bridled: besides, they will be the stronger, by reason of the hard setting of the fore-feete. Howbeit, in some places, they vse high standing Mangers: after what sort soeuer they be, they must alwaies be kept cleane, and well swept before you cast in their meate. Their Prouender though diuers Horse-coursers that liue by sale of Horse, doe feede them with sodden Rie, or Bean-meale sod, pampering them vp, that they may be the fairer to the eie: yet is it not good food to labour with. The best Prouender that is, is Dates, and for default of them, Barly: you must beware you giue them neither Wheat, Rie, or any dry pulse: their Prouender must be giuen them rather often, and little, then once or twise a day in great portions, least you glut them therewith: they are vsed to be fed commonly fiue times a day, when they stand in the Stable, keeping an equall number of hours betweene the times: when they trauell, you may giue them meate seldomer, but in greater quantity, & if their iournies be long, they must haue Prouender besides in the night, alwaies remembring (as I said) that you glut them not. The better a Horse feedeth, the better will he labour. You must also beware

Scowring.

Prouender

that

that you giue him no prouender, neither Dates nor Barly, after any great labour, till he be thorow cold: notwithstanding you may giue him a little hay to cole his mouth. The hay must be sweet and well made, & thorowly shaken, before it be cast into the racke; and specially seene to, that there be no feathers of any fowle amongst it. If the horse be very hot after his labour, let him be well couered, and softly walked till he be cold, before you set him vp: when he is set vp, litter him well, least the coldnes of the ground strike into him: in any wise wash him not when he is hot, but when he is through cold, water him, and wash him, wiping him dry when you bring him in. If the Horse forsake his meat, some vse to stampe Garlick & Pepper, & to giue it him, rubbing his teeth well, till his stomack come to him: some would haue a clout wet in salt water, tyed vpon a stick, & thrust into his Iawes. In watering, you must loke well vnto him, for (as Aristotle saith) beasts do feed, & are nourished the better, if they be wel watred. Horses & Camels, do loue best to drinke a thick water, in so much as if the water be cleare, they will trouble it with their feete: for the most part Bullocks againe desire a faire cleare water, & running. The same Aristotle also affirmeth, that a horse may suffer thirst foure dayes without drink. Varro wils you to water your horses twise a day, which order we obserue, that is once in the morning, & againe in the afternoone: but in Winter, if they drinke but once a day, it sufficeth: before you water him, he must be well rubbed, and then led into the water vp to the knees, specially if he be leane, if he be fat, he may go the deeper. Notwithstanding there are some that hold opinion, they ought not to go so deepe, as their stones touch the water, specially if the horse be yong. After March, & the spring, it is very good to ride them vp & downe in some Riuer, which will exercise their legs, for the water drieth the legs, & restraineth the humors from falling downe, and keepeth them from windgals: as sone as they come from the water, you must with a little straw wipe them cleane, for the damp of the stable causeth inflamation in the horses legs that be wet. The water (according to Vegetius his minde) would be cleare, & springing, other like it a little running & troubled in a clay ground: for this water, by reason of the thicknes & fatnes, doth better nourish and feede the horse, then the swift running streame: yet those horses that are vsed to the swift & cleare riuers,

are commonly the strongest, and best travellers: and therefore it would be well considered how the horse hath beene accustomed: the colder the waters are, the lesse they nourish, the deeper a horse drinkes, the fatter he prouues: and therefore some Horse-coursers vse to wash their horses mouthes, first with water, and after to rub them with salt, to giue them an appetite to their meate and their drinke.

EVPHOR. I pray you let vs heare some remedies for horses diseases, for (as Aristotle saith) a horse hath as many diseases as a man.

HIP. As touching diseases in a Horse, it is better to preuent them by good heede taking, and (as Vegetius saith) to be more careful in keeping a horse healthy, then when he is sicke to cure him: which health you shal continue with ease, if you will obserue those things touching his dyet, his stable, and his labour, that I haue told you of before. Whosoeuer will haue a good horse, and keeps him in good estate, must oftentimes see him, come to him, handle him and stroke him: for that both makes him gentle, and giues him a fayre coat: and be still mindfull of the old prouerbe, The Masters eye maketh a fatte horse: and to be short, to haue him so still in his sight, as he rather want his owne meat, than his horse should: for he that neglecteth his horse, neglecteth himselfe. To let him haue moderate exercise, and to ride him now and them (if the weather be faire) into the field, will doe him great good: the morning is better to labour him in then the euening, neither must you in Winter or in Summer ouer labour him: for being in a sweat, and after taking cold, he falleth into dangerous diseases. And therefore remember what I said, that whersoeuer you haue laboured him or ridden him, be sure you couer him with some cloth, and walke him softly, that he may be cold, before he either be suffered to eate or drinke: when he is cold, he may be led to the water and washed: so as when you bring him into the stable, you litter him well, and throughly rub him, and so giue him meat. If he be ouertrauelled, the onely remedie is rest, and after his sweating, to wash his mouth in Summer with water and vineger, in Winter with brine: for the neglecting of these things, hath beene the destruction of many a good horse. Also, to powre into his mouth Wine and Oyle, in Summer, cold, in Winter, warme,

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(as Vegetius teacheth) and as wée finde by experience, is very good: for it is commonly séene, that a tyred Horse (if necessitie forceth a further iourney) with powring in a quart of good wine, will trauell lustilie. You must not suffer your horse to drinke after his iourney, till he be cold: howbeit, if he sweate not too extreamely, and be ridden sone after, it is not so dangerous: it is farre better to let him thirst, then to giue him cold water if he be hot. If a horse haue long rested, he is not to be trauailed vpon the sudden, either in galloping, or long iourney, but to be laboured faire and softly at the first. A horse that is wearie or tyred, will be wonderfully refreshed, so as it would séeme he had neuer bene trauailed, if he may wallow himselfe either in the stable, or other drie place out of the winde and raine: and therefore Xenophon would haue nére vnto euery stable a place meet for their wallowing, wherein after their iournies, they may tumble themselues: for in so doing, they shew they are in health, & refresh themselues. You must loke diligently that they be well looked to at night, and that after their sweat, they be well rubbed and curryed, and that they be not disquieted when they should rest. In winter they would be clothed with wollen, for taking of cold, and in Summer with Canuas, to keepe them from flyes. You must beware that you iourney them not long without staling, but after you haue trauailed an houre, or such a thing, prouoke them to stale (by riding them out of the way) into some place where Sheepe haue dunged, or into some high grasse, ferne or stubble, which order was continually obserued by the best dyeter of horses, that euer I knew in England, one Henry King, who hauing charge of that most worthy Gentlemans horses, Sir Thomas Chalenour, carried a faire company of Geldings from London to the Court of Spaine, who notwithstanding their long iourney through France, & the painefull passage of the Pirenies, by the skilfull diligence of their keeper, came thither in as good plight as they came out of England. And if so be you see he cannot stale, or staleth with paine, you must bathe him with bath appointed for cold, that is, Dyle mingled with Wine powred vpon his loynes: also a Louse put into his yard, or sope put into his fundament, hath bene seene to helpe him. If this do not helpe, you must squirt in honey boyled thin, with salt into his yard. Some would haue the licour of the

line Bitumen squirted in: Æliomus writeth, that the Horse that cannot stale, is presently remedied, if so be a Maid strike him vpon the face with her girdell, the fæte (which is the chiefest matter in a Horse) you shall alwaies kæpe sound: if as I tolde you afore, your Stable be well paued with round stone, or well planked and kept cleane: which done, you must stop his hoofes with Cowe dung, or for want thereof with horse-dung watred, and his legges must be often rubbed with a strawne wispe. To cause the hoofe to grow, or to repaire the broken hoofe, take of Garlicke heads seauen ounces, of Hearbe-grace thræ handfuls, of Allome beaten and sifted, seauen ounces, of Barrowes grease very olde two pounds, mingle all these with a handfull of Asses dung, boile them, and annoint the hoofes therewith. After their iourney, læ you search their fæte well, suffering no grauell, nor filth to remaine therein, you shall well refresh their hoofes with the ointment afore-said. The ioynts, or the pasternes, would be well bathed after their trauel with warme wine, or an egge or two would be thrust into their hoofes, the legges themselues would be washed with warme Bære, or some like bath. If the Horse thrust out one of his fæte, and stand not euen, it is a signe of some fault in the hoofe: the Horse halteth, either by reason of the spoiling of his hoofe in iourney, or by ill shoing, or by wholsome humors falling downe by low standing in the Stable, or by windgals. If the fault be in the shoing, strike vpon the head of euery naile with the Hammer, and when you perceiue him to shrinke, plucke out that naile, or powre vpon the hoofe colde water, and that naile that is first dry, pluck it out: if it matter, squæse it out, and powre in Pitch well sodden with old Swines grease: you must also spædily open his hoofe below, that the matter (if it be full of corruption) may descend, least it breake out aboue the hoofe, and so cause a longer time of healing. The signes of it be, if he hold vp his foot, which if you do pare him to the quicke, and where you perceiue it to looke blacke, open it, and let out the matter: if he be hurt inward, and standeth but on his toe, it sheweth the fault to be in his hoofe: but if he tread equally with his foote, it declares the gricke to be some other where, then in his hoofe: if in his haulting he bowe not his ioynts, it is a signe the sore is in the ioynts. For all halting generally, mingle Hemp with the white of an egge, and stop the foote

withall,

withall, and after clap on the shoe: if it be a wound, put therein the powder of Dyshershels, and Verdegrease to dry it vp, or the white of an egge, with Soote and Vinegar. The Cratches (as they commonly call them) is a malady that happeneth betwixt the Pasternes and the Hoofe, in the manner of a scab, and is ingendred of the damps of the Stable, while he standeth wet legged: the remedy whereof, is all one with the paines, which is likewise a sorance breeding about the ioynts, breaking the skinne, and matring: taking away the haire, wash the sore with warme Beere, or with the broath wherein is sodden Mallowes, Brimstone, and Sheepes suet, which must be bound about the sore place morning and euening, or else Sheepes suet, Goates suet, Swines grease, Verdegrease, and quicke Brimstone, Volearmoniack, and Sope, boiled and made in ointment, wherewith you shall anoint the sore twise a day, washing it first with warme Wine, and after it is dried annoint it, in the meane time keepe him out of the water: the Lees of wine is also sometime vsed in the curing of the cratches. Windgals, which are swellings, and risings in the legs, are cured with cutting, and burning: some thinke they may be restrained and cured, by riding the Horse oftentimes vp and downe in some colde and swift streame, also by washing his legges with Salt, Vinegar, Swines-grease, and Dyle, wrapping them vp certaine dayes, or by launcing, or scarifying they are cured: the outward sores are healed by burning. If the backe be wrung with the Saddell, or otherwise hurt that it swell, Vegetius would haue you to seeth Onions in water, & when they be so hot as the Horse may suffer, to lay them vpon the sore, and binde them fast, which will asswage the swelling in one night. Item, Salt beaten and medled with Vinegar, putting to it the yolke of an egge, layed vpon the swelling, will heale it: besides, Arssmart stamped and laid to, doth presently asswage the swelling. If the backe be galled, wash it with Beere and Butter, or cast vpon it the powder of a Lome wall. There is a disease that is common in Horses, called the Viues, which if he haue, turne downe his eare, and launce the sore at the rote of the eare, and take out the matter: but take good heede you cut not the veine that lieth a little aboue. If a Horse haue beene set vp hot after his iourney, and in his heate hath beene watred, or taken colde, which the Germanes call Verfaugen,

in English Foundred, or in some places Fraide: the remedie is the skin of a Weezell cut in small pieces, fresh butter, a rotten egge and vinegar mingled together, and powred into the horse with a horne: after which, let him stand couered with a wet cloth till he ware hot. A present, and assured cure for this disease, I learned not long agone, of that honest, wise, and valiant Gentleman, Captaine Nicholas Malbee, in whom there wanteth nothing belonging to a worthie Souldier: his medicine was this, Garter each legge immediately one handfull aboue the knee with a list, good and hard, and then walke him to chafe him, and put him in a heat, and being somewhat warmed, let him bloud in both the brest vaines, & and in the vaines of the hinder legges, betweene the hoofe and the pastorne, reseruing the bloud to make a charge withall, in this manner: Take of that bloud two quartes, and of wheat meale, as it commeth from the Mill, halfe a pecke, and fire egges, shels and all, of Bolearmoniacke halfe a pound, of Sanguis Draconis halfe a quarterne, and a quart of strong vineger: mingle them all together, and charge all his shoulders, brest, backe, loynes, and forelegs therewith, and walke him vpon some hard ground: three houres after, lead him into the stable, and let him stand tyed two houres to the racke, without meat or drinke, and walke him then two or three houres more, and then giue him a little warme water, with ground Malt in it, and after a little hay and prouender, then walke him againe vpon the hardest ground you can get: you shall ride him the next day a mile or two softly, & so from day to day vntill he be well, which will be within three or foure daies. Remember to let him stand the first day after his first walking, two houres in water vp to the belly: this medicine is infallible. The collicke, or paine in the belly is thought will be eased in a horse or Mule, onely with the sight of a Ducke, or any water fowle. To keepe your horse from flyes, it is good to wash him ouer with the iuyce of the leaues of the Gourd, in the midst of Summer. Many times horses are troubled with wormes, or bots, which you shall perceiue, if they cast their loke vpon their belly, if they wallow oftentimes, and strike their belly with their foote: the remedie is Harts-horne, Sauine beaten, and giuen him with a little Vinegar in a horne. Columella would haue you rake the horse with your hand, and after that you haue plucked

out

out the dung, to wash his fundament with Sea water, or Wine. Brasanolus in his Commentary vpon Hippocrates, declareth how he cured the Duke of Ferars horses, being in great danger with wormes, by giuing them Quicksiluer, and Scordium, or Water-Germander, when no other medicines would helpe. The Rhewme, or distillation, maketh a Horse slothfull, dull, and faint, yet will he be led, and ridden, and moderate labour is not amisse for him, let him drinke warme water with Wheat bran: the more filth he voydes at the mouth, the better will it bee for him. There are sundry diseases thought vncureable, which if the Horse had, and was sold, by the olde Lawes he was to be turned backe againe, except the bargaine were otherwise: of which number, are the broken winded, the lunaticke, and the mangines, called the Farcine, which disease if it come once to the stones, is thought vncurable. To this they adde the through Splent: some thinke the broken winded is not to be cured, because it is like to the consumption of the lungs in a man, yet some hope of recouery there is, if it be taken in time: for letting of blood in dry diseases, is against reason. But you may annoynt the whole body with Wine and Oyle, mingled together and warmed, and curry him against the hayre till he sweat, and giue him this drinke inward from the first day: the iuyce of Pisan, Swines grease clarified, and Amylum, in new sweet wine, which being boyled together, you may giue it him with a horne to open his pipes, and set him so as hee stand warme. The lunatike eyes are cured by letting him blood in the temple veines, bathing the eyes on the outside with some warme bathe, and putting into them some strong water certaine dayes, till they be whole: For the manginesse, take the wormes called Cantharides, beating them, and mingle with them a little Verde-grease, and so annoynt him with it, warming the body of the Horse with a fire panne. Others vse to wash him with warme water twise a day, and after to rubbe him with Salt sodden in water, till the matter come out. Aboue all other, they say it excelleth in the beginning to annoynt him with the fat of a Seale: if it haue runne long, you must vse stronger medicines, as Lime, Brimstone, Tarre, old Swines grease, of each a like quantitie, boyled together, and with a little Oyle made in an oyntment, they

they vse to rub it also with the Sote of a Caldron. Against many diseases both of Horses, and Bullocks, they vse the rote of the Yearbe called Black Elleboze, of some Bearefote, oz others Setterwozt, which they thzust in the bzest of a beast, betwixt the flesh and the skin, making a hole befoze with a Bodkin. Against all diseases of Hozses, Vegetius commendeth this Medicine as the chiefest. Centozie, Mozmewood, Dogge Fenell, Wilde Time, Sagapen, Betonie, Saxifrage, Aristolochia rotunda, take of each a like, beate them small, and sift them, and if the Hozse haue an ache, giue it him with water, if he be ferme, with good strong Wine. The old Husbands would not suffer their Hozses to be let bloud, but vpon great necessitie, least being vsed to it, if it should at any time be omitted, it should bzéde some disease: and therefoze in very young Hozses, and such as be healthy, it is best not to let them bloud, but in the rofe of the mouth: foz those that be come to their full age, you may let them bloud befoze you put them to pasture, but beware you beare a steddy hand, and strike them not too déepe. Geldings you shall not néed to let bloud. The Hozses of Barbary (as they say) neuer néede any medicine.

EVPHOR. You haue spoken enough of Hozses, it is time you say something of Asses.

HIP. It is greatly out of ozder, but since you will néeds haue me so to doe, I will not sticke with you to say what I can therein, that each of you may doe the like in his charge. Asses are commonly kept, yet not to be little set by, because of their sundzy commodities, and the hardnesse of their féeding: foz this pozze beast contents himselfe with what meat so euer you giue him, Thistles, Bzyers, Stalkes, Chaffe, (whereof euery Countrey hath stoze) is good meat with him: besides he may best abide the ill loking too of a negligent kéeper, and able to sustaine blowes, labour, hunger and thirst, being seldome oz neuer sicke: and therefoze of all other Cattell longest endureth: foz being a beast nothing chargeable, he seruetb foz a number of necessarie vses: in carrying of burdens, he is comparable to the Hozse, he dzaweth the Cart (so the load be not vnreasonable) foz grinding in the Mill he passeth all others: therefoze in the Country the Asse is most néedfull foz carrying of things to the Market, and Cozne to the Mill. In Ægypt and Barbary (where the ground is very light) they haue

Asses.

also

also their vse in plowing: and the fine Ladies of the Countrey doe ride vpon Asses richly furnished: yea, they be very apt to be taught, so as at this day in Alcayre, you shall haue them daunce very mannerly, and keepe measure with their Musitian. Varro maketh mention of two sorts: one wilde, whereof in Phrygia and Lycaonia there are great store: the wilde Asses that are tamed, are passing good, specially for breede, & they are easilie broken: the other is tame, of which I meane to speake. The best are brought out of Arcadia, (although Varro seemes to commend the breede of Italy for goodnesse.) He that will haue a breede of Asses, must haue the Male and Female both of reasonable age, large bodyed, sound, and of a good kinde: the Male must be at the least three yeere olde: for from thee, till they be tenne, they be fit for breeding: they bring forth their Colts sometimes at two yeeres and a halfe, but three yeeres is the best age: the Female goeth as long with her burden as the Mare, and dischargeth in all respects as shee doth: but she will not very well retaine, except she be forced immediately after the horsing to run about: she seldome bringeth forth two. When she foaleth, she gets her into some darke place, and keepes her selfe from being seene. They will beare all their life time, which (as Aristotle saith) is thirtie yeeres: they are put to the horse a little before the tenth of June, and beare euery other yeere: they bring forth their Foale at the twelue moneth. While they be with Foale, they must not be greatly laboured, for hazarding their Foale: the Male must neuer be idle, for he is as letcherous as the Diuell, and by rest will waxe naught. The Colt is suffered to run with the Dam the first yeere, and the next is gently tyed vp with her, onely in the night times: the third yeere they are broken, according to their vse. The Dam doth wonderfully loue her young, so much, as she will not sticke to come thorow the fire to it: but the water shee dare in no wise come neere, no, not touch it with her feete, neither will she drinke in any strange water, but where she is vsed to be watred, and so as she may goe and stand dry feete. They delight to be lodged in wide roomes, and are troubled with fearefull dreames in their sleepes, whereat they so paw with their legges, that if they lye neere any hard thing, they hurt their feete: in drinking, the scarsely touch the water with their lippes,

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(as it is thought) for feare of wetting their godly eares, whose shadowes they see in their drinking: no beast can worse away with cold then this. If your Asses halt at any time, you shall thus remedie them, wash all the foote with warme water, and afterward make them cleane with a sharpe knife, which when you haue done, take old chamber lye, as hot as may be, and melt therein Goates suet: or if you haue not that, Dre tallow, and anoint all the feet till they be whole.

EVPHOR. They say, that betwixt an Asse, and a Mare, is gotten the Moile, as a third kinde, of two sundry kindes, neither resembling the father, nor the mother.

Moiles. HIPPO. It is very true: as of the she Asse, and the Horse is engendred the she Moile, but altogether, stubborne, and vnreasonable dull. Also of the Mare, and the wilde Asse, being broken are bred Moiles that run passing swiftly, and are wonderfull hard hoofed, but rugged of their body, and mischieuous stomached, yet easie to be handled: the Mares for bréed, must not be vnder foure yéeres: nor aboue ten: they are foaled in the twelfth moneth, as Horses and Asses are, as Aristotle saith: but Columella sayth, their foaling time is not before the thirtéenth moneth. The Female conceaueth (as experience teacheth) assuredly after the seauenth day: the Male doth neuer better horse, then when he is most tyred. She that conceaueth not before shee hath cast her colts téeth, is taken to be barren, as she likewise that takes not at the first horsing. Those that are gotten betwixt a Horse and an Asse in olde time, were called Neyards, and such as were brought forth betwixt an Asse and a Mare, they called Moiles. The Moiles themselues (they say) doe neuer ingender: and if at any time they did, it was taken for monstrous, accounting the cause of their barrennesse, the contrarietie of their kindes: which matter a long time troubled both Aristotle, and the rest of the Philosophers. Though Aristotle hath other where written, that Moiles doe both ingender, and bring forth: and with him agréeth Theophrastus, affirming, that in Capadocia they doe commonly bring forth, and ingender of themselues. The like doth Varro, and before him Dionisyus, and Mago affirme, that the bréeding of Moiles in the countries of Affricke, is neither monstrous, nor seazon, but as common as our bréede of Horses: but the Moile

is

is both fayzer, and better stomached, that is begotten of an Asse and a Mare. The Stallion that you meane to haue foz your race of Moiles, must be as fayze as you can get, hauing onely this regard, that he be large of body, bigge necked, bzoad, and strong ribbed, large, and bzawne bzested, his thighes full of synowes, and the legges well knit, of colour blacke and spotted: foz Asses (though they be commonly dunne) yet that colour agrèeth not well with a Moile: some say, that what colour you would haue your Moyle to be, with that coloured cloake you must couer your Asse. The Asse so propoztioned (as I haue declared) that you meane to appoint foz your Stallion, you must straight wayes take from his damme, and put him to some Mare that hath a Colt sucking of her: you shall easily deceiue the Mare, by setting her in a darke place, remouing her owne Colt from her, and putting to her in stèad thereof the Asses Colt, which she will nurse as her owne. Afterwards, when the Mare hath bèene vsed to it a tenne dayes, shee will continually after that time giue it sucke. The Asse being in this ozder bzought vp, will better acquaint himselfe with the Mare: sometimes though he be sucked onely with his owne damme, being bzought vp when he is young amongst Mares, will well enough kèepe company with them (as Columella saith:) but our Asses are of themselues desirous enough of the Mares, that they nèede not to be trained to the matter: foz it is a wonderfull coltish beast, & vnreasonably weaponed. He must not be lesse then thzèe yèeres old when he couereth your Mares, which must be in the Spzing time, when you may well fèede him with grasse, and good stoze of Dates, and Barly: neither must you put him to a young Mare, foz if she haue not bèene hozsed befoze, she will so beat her wower, that she will make him like the wozse as long as he liueth: foz remedy whereof, you must at the first put to the Mare a wilder Asse, that may wo her befoze, but not suffred to hozse her, and when you perceiue that she is hozsing, away with the raskall, and put to your Stallion. A place fit foz this purpose, the Countrie people (as Columella saith) were wont to haue, which they called a Frame, oz a Bzake, with two railes on both sides, and a little distance betwèene, that the Mare cannot striue, noz turne from the Hozse, the lower part enclosed, and the Mare standing low, so the Asse may the better leape her, hauing the

upper

vpper ground for his helpe, which when she hath conceaued, and at the twelue moneths end brought forth, the yeere after she must be suffered to run emptie, that she may the better bring vp her colt. The she Moile (being a twelue moneth old) must be taken from the Damme, and let run vpon Mountaines, or wilde places, for the hardening of his hoofes, and the better enduring of labour, for the male is the better for burden, and the female the quicker and liuelier: both the kindes doe trauell well, and till the ground, if the plowman be not vnreasonable, or the ground so stiffe, as it requireth a draught of Oxen, or Horse. They will leaue striking and kicking, if you vse to giue them Wine, (as Plinie reporteth,) who likewise writeth, that a Moile will liue foure score yeeres.

EVPHOR. Since you haue begun with trauelling beasts, what can you say of the Camell?

HIPPO. The Camell is chiefely vsed in the East parts, which some suppose to be the seruiceablest cattell for man that is, and as it were thereunto onely framed, for he is bumbast vpon the backe for bearing of burdens. Also, he hath foure knees, whereas the Horse, the Asse, and such others, haue but two: for his hinder legges bow forward as a mans knee doth, wherewith hee kneeleth to receiue his burden. There are two kindes of them, the Bactrian, and the Arabian: the Bactrian haue two bunches vpon their backes, and the Arabian but one, and the other on their breast to leane vpon, both sortes of them lacke their teeth aboue, as the bullocke doth: they all serue in those Countries for burden, and to carry men in the warres: they are as swift as horses, but some a great deale more then others: neither will they breake their pace, nor carry more burdens then they are vsed to: they beare a naturall hatred to the horse: and can forbeare drinke for foure dayes: hee drinkes when he may, both for that is past, and to come, troubling the water before with his foot, otherwise hee delighteth not in it: hee is fedde beside his Pasture, and such things as hee gets in the Wood, with Dates or Barly, and Salt: he engenderetb backeward as the Elephants, Tygars, Lyons, Connies, and such other, whose instruments grow backeward: when they meane to goe to rut, they seeke the secretest and desertest places that may be; neither may a man at any time

come

come nére them, without great danger. They goe with young a twelue moneth, and are méete for bréede at thrée yéeres old, and after a yéere they conceaue againe, they beare but one at once, as Elephants, and other great beastes doe: they giue milke till they be great. Againe, (as Aristotle sayth) Dydimus in his bookes of Husbandry writeth, that the Camell hath a regard to his blood, as the Horse hath, and lieth neither with mother, nor sister. And the female Camell of Bactria, féeding vpon the Mountaines amongst the wilde Boares, is oftentimes breamed of the Boare, and conceaueth. Of the Boare and the she Camell, is engendred the Camell with two lumpes vpon the backe, as the Moile is of the Asse, and the Mare, and in diuers things resembleth his sire, as in bristled heares, strength, and not fainting in the myre but going lustily through, and in carrying double so much as other Camels, as the same authour sayth. The females of them are spaide, to serue the better for the warres: they liue (as Aristotle sayth) fiftie yéeres: others say a hundred yéeres, and are subiect to madnesse, (as Plinie sayth) there are a kinde of them called Camelleopards, that haue the resemblance of two diuers beasts, the hoofes and hinder legges like an Oxe, his forelegs and his head like the Camell, the necke like a Horse, being flecked white and red. Strabo sayth, he is couered like a fallow Deare, straight necked, and hie, like an Ostridge, his head some thing higher then a Camels.

EVPHOR. I remember I haue séene the like beast for all the world in a péece of Tapestry with blacke Moores, with their Mines, and baggage vpon their backes, saue that they had their little hornes vpon their heads, like as some Shéepe haue. I thinke Heliodorus in his Æthiopian storie, did first describe this beast, but these outlandish beasts we meddle not much with.

HIPPO. Goe to Euphorbus, let vs now sée you discharge your part, according to your promise, and tell vs some part of your cunning in kéeping your Cattell: for next to the Horse in worthinesse commeth the Oxe.

EVPHOR. Since it is so appointed, I am contented to Bullockes. shew you what I can say touching my poore skill: and first, I may not suffer the Horse to challenge the chiefe place, when the olde

writers

Writers and auncient people did alwaies giue the garland and chiefs praise to the Oxe, as to a good Plowman, and a faithfull seruant: for Hesiodus, a most auncient Writer, and the grauest Authour of our profession affirmeth, that the family doth consist of the Husband, the Wife, and the Oxe. The selfe same by his authoritie doth Aristotle seeme to alleadge in his Politickes, and in his Economickes, which beast was alwaies of that honour and estimation, that he was condemned in a great penalty, whosoeuer did kill him, being a fellow, and a chiefe helper in our husbandry. By the worthinesse of this beast, many great things receiued their names of them: for of the number, beauty, and fertilitie of Heifers, did Italy (as they say) first take his name, because Hercules pursued the noble Bull, called Italus. This is the chiefe companion of man in his labours, and the trusty seruant of the Goddesse Ceres: in many great things, for the roialty of the Oxe, they deriued their names from the Oxe, as in calling also the Grape Bumammam: in fine, Iupiter himselfe thought good to conuert into this shape his sweet darling Europa. Moreouer, of a rotten Steere are ingendred the sweete Bees, the mothers of Honey, wherefore they were called of the Greekes (as Varro saith) βυλόνας. The same Varro makes foure degrees in their age: the first of Calues, the second of Yeereings, the third Steeres, the fourth Oxen. The Sexes: in the first, the Bull-calfe, and the Cowe-calfe: the second, the Heyfar, and the Steere: in the third and fourth, the Bull, and the Cowe: the barraine Cowe he calleth Tauram, the melch Cowe Hordum, from whence came the feasts called Hordica festa, because the melch-kine were then sacrificed. The goodnesse of this beast is diuers, according to the diuersitie of the Country: the best were counted in the olde time to be of the breede of Albania, Campania, and Toscam: at this day we take the best kinde to be in Hungary, Burgundy, Frisland, Denmarke, and in England. Of Bullocks, some are for the draught, some for the staule, and some for the paile: to what purpose soeuer they serue, whether it be for labour, for milking, or for feeding, it is best alwaies to chose such as are young, of lustie age, rather then those that are olde and barraine, the words of couenant in the olde time (as Varro saith) in selling of Bullocks, were these; doe you warrant these Bullocks, or Steeres,

that

that you sell to be sound, of a sound Heard, and without fault: The Butchers that buy for slaughter, and such as buy for sacrifices, vse no word of warrantise: and though some Bullocks are chosen by their strength, some by the greatnesse of their body, yet the best commonly haue these properties: large, well knit, and sound limbs, a long, a large, and a deepe sided body, blacke horned, though in the colour there be no great matter, yet some mislike the white for their tendernesse, which also Varro consenteth, who would haue them broad foreheaded, great eyed and blacke, his eares rough and hairy, his iawes to be large and wide, his lippes blackish, his necke well brauned and thicke, his dewlappe large, hanging downe from his necke to his knees, his shoulders broad, his hide not hard or stubborne in feeling, his belly deepe, his legges well sette, full of sinewes, and straight, rather short then long, the better to sustaine the waight of his bodie, his knees straight and great, his feete one farre from the other, not broad, nor turning in, but easily spreading, the hayre of all his body thicke and short, his tayle long, and big hayred. Palladius thinketh the best time for buying of draught Oxen, to be in March, when being bare, they cannot easily hide their faults, by the fraude of the Seller, nor by reason of their weaknesse be too stubborne to be handled. It is best to buy them of your neighbour, lest the change of ayre and soyle hurt them: for the Bullocke that is brought vp neere home, is better then the stranger, because he is neither troubled with change of ayre, water, nor pasture: if you cannot haue them neere you, buy them from some like Countrey, or rather from a harder: and be well assured that you buy them euer matched, lest in their labour the stronger spoyle the weaker. Looke besides that they be gentle, skilfull in their labour, fearefull of the goade, and the driuer, not dreading any water or bridge: great feeders, but softly, and not ouer-hastilie, for such doe best digest their meate. In chosing of Bulles or Kine, the very like signes are to be required, that the Bull differeth from the Oxe, in that he hath a more frowning and fierce looke, shorter hornes greater, and thicker necke, so big, as it seemes the greatest part of his body, his belly something gaunter, and meeter for Bulling of Kine. The Bull, before he be suffered to goe with the Kine, must be well fed with grasse,

chaffe, or hay, and kept seuerally by himselfe, neither must he goe to the Cowe, till the tenth of June. Varro would not suffer him before the rising of the Lira: but Aristotle would haue him all the reddring time, to goe in pasture with the Kine. The Cowe likewise would be high of stature, and long bodied, hauing great bodders, broade forehead, faire hornes, and smooth, and all other tokens almost that is required in the Bull, specially to be youngest for when they passe twelue yeeres old, they are not good for breed, but they liue many times farre longer if their pasture be good, and they kept from diseases. The olde Cowe giueth more milke then the young, according to the Country peoples prouerbe, olde Kine more milke, young Hennes more egges. Againe, vnder three yeeres old, you may not suffer them to goe to Bull: if they chaunce to be with Calfe before, you must put the Calfe from them, and milke them for three daies after, least their bodders be sore, afterwards forbeare milking. Plinie writeth, that at a yeere old they be fruitfull, but the breede will be little, as it happeneth in all too timely ingendrings. You must cuery yeere in these beasts (as in all other) sort your stocke, that the old that be barraine, or vnmeete for breeding, may be put away, sold, or remoued to the Plow: for when they be barraine (as Columella saith) they will labour as well as Oxen, by reason they are dried vp, but we vse commonly to fat them: their age is knowne by the knots and circles of their hornes, which Plinie marketh likewise in Goates. The time for going to Bull, some take to be best in the midst of the spring: Palladius would haue it in July, for so in the ninth moneth she shall caiue, for so long she goeth with Calfe (as the common people say) a Cowe and a Mucane hath both one time. In many places they desire to haue their Cowes goe to Bull a thirty or forty daies after the tenth of June, that they may caiue in March, or Aprill: that they should haue much milke, so order the matter, as their Kine goe to Bull from the Spring, to Winter, whereby they alwaies milke some: at once bulling she conceiueth, if she chaunce to faile, she goeth to Bull againe within twenty dayes after: some say, if so be the Bull come downe on the left side of the Cowe, it will be a Cow-calfe, if on the right side, a Bull-calfe. The Greekes affirme, that if you will haue a Bull-calfe, you must knit the right stone of the Bull, & for a Cow

calfe,

calke, the left: Varro saith, that if you put the Cow to the Bull immediately after gelding, she conceiueth. Columella affirmeth fifteene Kine to be enough for one Bull. I thinke he will well enough serue twenty Kine, if he be such a Bull as I described: if you haue good store of pasture, you may let them goe to Bull euery yeere, but you must beware your Kine be not too fat, that will hinder their being with Calke. The Cowe should when she is reddring, haue but short pasture, and the Bull his belly full: so shall neither she be too fat, nor he vnlusty. If the Cowe will not take the Bull, you must stampe sea Onions in water, and rub her vnder the taile with it: if the Bull be not lusty enough about his businesse, take the peezell of a Stagge, burne it, and make it in powder, and with a little wine and the powder, bath his stones, and his peezell withall, which will serue for the like purpose in all other beastes (as Quintilian saith) his courage is also stirred vp by the like odours that you speake of for your Horse. A Bull ought not to leape the Cowe aboue twise in a day as some thinke, but we finde by experience, that he may oftner. In some places they haue common Bulles, and common Boares to euery Towne: A Bull will ware furious at the sight of any red thing, as the Elephant, and the Lyon, which can in no wise abide the sight of any white thing. A Cowe will giue sucke to a strange Calke, but let not the Calues lye with them in the night, for feare of ouer-laying them. Some weane them at the first, and suckleth them with Milke, or Whay, hauing a little Wranne in it, or Flowre, wherewith they bring them vp, till they be able to feede. Whether you meane to reare them for breede, labour, or feeding, you must let them want no store of good pasture: for though they be of neuer so great a breede, yet if their pasture be scantie, they will neuer come to their full growth: for pasture makes the beast (as the Countrey people say.) Mago, and the olde Husbands, would haue you to gelde them while they be very young, which order wee likewise obserue in cutting of them: and in the Spring, or at the fall of the leafe, when they be three moneths olde, or there about, wee vse to gelde the Bull Calues, and spay the Cowe Calues, sowing vp the wound, and annointing it with fresh Butter. Columella would not haue them cutte, but their

stones broken by little and little with an instrument, which kinde of gelding he best liketh, because in the little young ones, it is done without bléeding: for when they be something growne vp, it is better to cutte them at two yéere olde, then at a yéere olde, which must be done in the Spring, or at the fall of the leafe, the Moone being in the waine: you must tye vp the Calfe to a frame, and before you cut him, you must fasten about the sinewes, wherebyby the stones hang, a couple of small sticks like a paire of tongs, and taking hold therewith, cut away the stones, so as a little of the vpper parts of them may remaine with the foresaid synewes: for by this meanes you shall not hazard the beast by euermuch bléeding, neither is his stomacke quite taken away, but hath something of the father remaining, and yet loseth his abilitie of ingendring. Notwithstanding, if you suffer him immediately vpon his new cutting to goe to the Cow, it is certaine he may get a Calfe, but let him not so doe, for feare of bléeding to death. The wound must be annointed with the Ashes of Vines, and Lytharge, and he must not be suffered the first day to drinke, but nourished with a little meate: thrée dayes after he must be dyeted, according to his féeblenesse, with gréene bowes and swéete grasse cut for him, and looked to, that he drinke not too much: and if you will, you may annoynt the sore for thrée daies with Tarre, and a little Ashes, and Oyle, to heale him the sooner, and to kéepe the place from flyes. You must vse them while they be yet young to suffer to be handled, and stroked, and tyed vp to the Manger, that when they shall come to be broken, they may bée handled with more ease, and lesse danger: but Columella forbids you to meddle with the breaking, or labouring of them, before thrée yéere old, and after fiue: for the one is too soone, and the other too late. Those that you haue taken vp wilde, and be well framed, and proportioned, according to my patterne, you shall handle and breake in this sort: First of all, sée that you haue a large roome, where the breaker may easily goe vp and downe, and out at his pleasure, without any danger. Before the Stable you must haue a faire field, that the Stéeres may haue libertie enough, and not be feard, or haltred with trées or bushes. In the Stable, you must haue certaine stalles or bordes, yoke-wise set vp, a seauen foote from the ground, to which the Stéeres may be tyed: this

done,

done, chose you a fayre day for the purpose, and taking them vp bring them into the stable: and if they be vnreasonable, wilde, and curst, let them stand tyed a day and a night without any meate, to tame them withall: afterwards let him that keepes them, offer them a little meat, not sideways, or behinde, but before, coing them all the while, and speaking gently to them, stroking their backes, and their mosels, and sprinkling them with a little sweet wine, taking good heed, that they strike him neither with head, nor with heele: for if he once get that tricke, he will neuer leaue it. Thus being a little acquainted with him, you shall rubbe his mouth with Salt, and let downe into his throat certaine lumpes of salt tallow, and powring after a quart of good Wine, which will make him in three dayes as good a fellow as you would wish him to be. Some vse to yoake them together, and let them draw some light thing, or plow in a light plowed ground, that their labour hurt not their neckes.

The readier way of breaking them, is to yoke them with an olde Oxe, that may easily instruct them: if he happen to lye downe in the furrow doe neither beat him, nor feare him, but binde his feet together, and let him lye, that hee may neither sturre, nor feede: which being well punished with hunger, and thirst, will teach him to leaue that sullen tricke. The feeding of this kind of Cattell is diuers, according to the diuersitie of Countries: if there be store of good Pasture in the Countrie, there is no foode to that: in Countries where wanteth Pasture, and specially in Winter, he must be kept in the Stall, and fed with such fodder as the Countrey yields. Where there are Tares to be had, it is the best feeding for them: and Hay is very good, Chaffe, and Colestalkes with Chaffe and Hay, and chopt straw sodde together in water, is very good feeding for Winter. In some places, they feede altogether with new threshed strawe: in many places they giue them Lupines steeped in water, or Chiches, or Pelon, mingled with Chaffe: besides, the branches and leaues of Vines, the greene branches of Elme, Ashe, Poplar, and Holme: in winter, when other greene bowes faile, the Figge Tree will serue, or the brousing of Okes, & Holly. Oxen are some fat in good Pasture, and with Wheat, Rapes, Apples, and Radish: Oxen, or Kine, will be passing fat, where there wanteth Pasture,

by giuing them meale mixt with Wheat, Chaffe, and Rapes, or Graines. They will ware the sooner fat, in washing them with warme water, or (as Plinie saith) by cutting their skinnes, and blowing in winde to their bellies with a Reede. Sorion teacheth that they will be fat, if when they are taken from pasture, you giue them the first day Collworts chopt and steeped in sharpe Vinegar, and afterwards Chaffe, being well cleansed and mingled with Wheat branne, for the space of fiue or sixe dates, feeding them after with good store of fodder: in Winter you must feede them at the first Cock-crowing, and againe when the day begins to breake: in Summer first at the breaking of the day, then at noone, and at night: in Summer you must water them twise a day, three houres afore noone, and three houres after: in Winter, once a day with warme water, which is also thought to be good for fruitfulnesse: and therefore the Lakes that are filled with raine water, are good for them. This kinde of Cattell desireth no cleane, or faire water, but foule and pudled: yet it were better to giue them faire water. Also, you must prouide them of warme pastures for the Winter, and in Summer very cole: chiefly Mountaines where they may browse vpon the bushes, and picke vp a good liuing among the Woods: but in lowe grounds and neere the Riuer Oren are sooner fatted, and Kine giue a greater quantity of Milke. In Summer, they lye abroade all the nights in many places: yea, in England you shall haue them fodered abroad all the Winter. Though they be able to abide colde, yet must you prouide them of large Stalles, for the succouring of such as be great with Calfe. Your Stables or Dressals, must stand dry, and be well floored, either with stone, grauell, or sand: the stone will suffer no water to abide vpon it, the other will soone drinke it vp, and dry it: both sorts must be layed slope, that the water may runne away for rotting the groundsels, and marring their houses. Let them open toward the South, so shall they be the drier, and the warmer: notwithstanding, let your windowes open North and East, which being shut in Winter, and open in Summer: may giue a healthfull ayre. In fine, as neere as can be let the houses be neither too hot, nor too colde, and as dry as may be: Columella would haue two Dressing-houses, one for the Winter, the other for the Summer, both vncouered,

but

but well and high walled, for keeping out of wilde beasts. The Stals would be eight foote wide, that they may haue roome enough to lye in, that the Kine great with Calfe hurt not one the other, nor the stronger Oxe wrong the weaker: and that there may be roome for their Keepers to come about them, and for yoaking them. Vitruuius would haue the Oxe-house open towards the East, and to be neere the fire: for fire is naturally beneficiall to Cattell, both for the drying vp of the infective damps, and the keeping of the Cattell warme. Besides, by seeing of the fire, they are made gentler, and by the heate thereof, what colde they haue taken in the Pastures is expelled, and diuers inward diseases cured. The houses must be seuered with diuers roomes, enclosed and racked, the Racke must haue such partitions, as one beast beguile not the other, whereto they must be well haltred and tyed, for hurting one the other: Cato would haue the partitions lettised. Moreouer, it is to no purpose to feede them well, except you also looke to the keeping of them in health, and sound, and therefore whether they be in house, or abroad, you must alwaies haue a speciall regard vnto them, and to ouer-looke them in the night, specially, if there be any Kine amongst them with Calfe. And though it be needefull at all times to ouer-see them, both morning and euening, yet most needefull is it of all other times, to see to them in the Spring, when you first put them to pasture: for at that time, by reason of their change of diet, both Oxen, Kine, and Hayfars, are most in danger of sicknesse: in Winter againe to looke to them, that they be not, for sparing of charges, kept so poore, as they be vtterly spoiled. And therefore you must spare no litter, specially when they come from labour, to rubbe them, and dry them, stroking them with your hands, and raising the hide from the flesh, which will doe them great good. In comming from worke, or out of the pasture, you must wash their feete well with water, before you bring them into the house, that the durt and filth cleauing to them, breede no diseases, nor soften their hoofes. Beware of too much cold, or heate, for too much of either, filleth them with diseases. You must take heede they be not chaft, nor chafed vp and downe, specially in hot weather, for that bringeth them in a Feauer, or causeth them to haue a Flire.

Take héde also that there come neither Swine nor Poultrie néere their stalles, for both of them with their dunging poysoneth the beast. The dunging of a sicke Swine doth bréede the Pestilence, or Murraine amongst Cattell. You must away with all manner of Carrions, and burying them well for infecting your Cattell. If so be the Murraine chance to come amongst them, you must presently change the ayre, and seuer your Cattell farre asunder in diuers pastures, keeping the sound from the sicke, that they be not infected, nor suffering them either to féede together, or drinke together.

The Murraine and his diuers kindes.

The Pestilence or Murraine, is a common name: but there are diuers kindes of it: in some Murraines, the cattell driuell, and runne both at the nose and mouth: in others againe they be dry, and fall away more and more: sometimes it comes in the ioynts, and causeth them to halt before or behinde: sometime in their kidnies, and appeareth by the weaknes of their hinder parts, wherein they séeme to haue great paine in their loynes. Another kinde there is, that riseth like a Farcine, with pimples ouer all the body, now appearing, and presently vanishing, and comming out in a new place. Another sort, betwixt the hide and the flesh, wherein the humour sweateth out in diuers parts of the body. Sometime it is like a leprosie, when all the skinne is full of little pimples, and sometime a kinde of madnesse, wherein they neyther heare, nor see so well as they were wont, though they looke fayre and fat, and lustie enough. Euery one of these kindes, are contagious and infectiue: and therefore as sone as you perceiue them infected, you must presently put them asunder, for infecting the whole flocke, lest you impute that to the wrath of God (as many fooles doe) which happeneth through your owne beastlynesse, and negligence. The common remedy (as Columella saith) is the roots of Angellica, and Sea Thistle mingled with Fenell séede, and with new boyled Wine, Wheat flowre, and hot water to be sprinckled vpon them. The common people, when they perceiue either their Horse or Bullocke sick, or any other cattell else, they vse to take the rote of blacke Ellebor, called of some Consiligo, of others Bearefote: and for a Bullocke, to thrust it in the Dewlap; for a Horse, in the breast; for Swine or Shéepe, through the eare, making a hole with a Bodkin, & thrusting the rote presently

Setterwoort.

through

through, which the new wound holdeth fast that it can not fall out, whereunto all the whole force of the poyson doth straight-waies gather, and runneth out in filthy water. Perfumes in this case (as Vegetius teacheth) do much good, as Brimstone, vnslecked Lime, Garlick, wilde Mariorum, and Coriander seede, laid vpon the coales, and the Oxen so held as they may receiue the smoke by their mouth & nose, that it may fill the braine, and their whole body with a healthfull ayre. It is good also thus to perfume the whole body, both for the health of the sicke, and preseruing of the whole. Before I proceed any farther, I will set you downe what kinde of Spices, and what quantitie you ought alwaies to haue in a readinesse for your cattel. You must haue one pound of Fenicrike, halfe a pound of Liquerresse, one pound of Graines, Turmericke, halfe a pound or a quarterne of Bay berries, one pound of Long Pepper, halfe a pound of Triacle of Gean, a pound of Anisseede, halfe a pound of Comin, halfe a pound of Madder, Ortment, halfe a pound. The hearbe whose rote you may vse (as I said before) groweth in many places in the Woods: it was once brought vnto me by chaunce from Darndall in Sussex, by one Richard Androwes, a good painefull searcher out of such things. For beside his present remedying of Cattell, he seruеth against diuers diseases in a man, specially for the Quartane, as the learned Mathiolus hath in his description of Plants mentioned. For Cruditie.

To returne to my Cattell: if they want their digestion, or chawe not cudde, which diseases is perceiued by often belching, and noyse in the belly, with forbearing of their meate, dulnesse of their eyes, and not licking of themselues. Take a handfull of Pellitorie of Spaine, as much of Hearbegrace, as much of Fetherfew, Sage, Horehound, and Bay Salt, three pintes of very strong new drinke: seethe them all together three or foure walloppes, and giue it him blood-warme in the morning, not suffering him to drinke till the afternoone: if you neglect this disease, so that he be payned in the belly, and full of griefe, hee will grone, and neuer stand still in one place. For remedie whereof, you shall binde his tayle close by the Rumpe, as straite as may bee, and giue him a quart of Wine, with a pinte of the purest Oyle: and after driue him apace for the space of a mile and a halfe: annoint your hand with grease, and rake him:

afterwards,

afterwards, make him runne againe: some vse to let him blood in the taile, within a handfull of the rumpe.

The Taile

There is a disease which they call the Wolfe, others the Taile, which is perceiued by the loosenes, or softnesse betwixt the ioints: take the Taile and feele betwixt euery ioynt, and where the ioynt seemeth to be a sunder, or is soft and not close as the other ioynts, there take and slit him the longest way vnder the Taile, about two inches long, and lay in the wound Salt, Soote, and Garlicke, and binde it fast with a clout about it. The Cholicke, or paine in the belly, is put away in the beholding of Geese in the water, specially Duckes, (as you sayd before of Horses:) for the sight of the Ducke, as Vegetius and Columella say, is a present remedy to this beast.

The Flixe

For the Flixe, or the Laske, which in some places they call the Ray, take Sloes and dry them in powder, and giue it them to drinke: if it be the bloody Flixe, the olde fellowes were wont to cure it in this sort: They suffered not the beast to drinke in three dayes, and kept him fasting the first day, and gaue him the stones of Reazins, or Grapes, dryed and made in powder two pounds, with a quart of sharpe tart Wine, and suffered them to drinke no other drinke, and made them eate the browsing of wilde Oliue trees, and Mastrixe trees: and if they mended not with this, they burnt them in the forehead to the very braine pan, and cut off his eares. The wounds, till they were whole they washed with Dre pisse: but the cut parts were to bee healed with Oyle and Pitch.

Laske in Calues.

If your Calues haue the Ray or Laske, take swéet milke, and put therein the Rennet of a Calfe, make it no thicker but as the Calfe may well drinke it, and giue it him luke-warme.

The Cough.

If your Bullocke haue the Cough, and if it bee but beginning, giue him a pinte of Barley meale with the yolke of an Egge, Reazins boyled in swéet Wine and strained, a pinte: mingle them together, & giue it him fasting. Also Graines beaten and mingled with Flower, fried Beanes, and meale of Lentils, all stirred together, & giuen him in a mash. Columella would haue you giue them Grasse chopt, and mingled with Beanes that are but a little broken in the Mill, and Lentils small ground, and mingled with water. The old Cough they cured with two pound

of

of Hysope, steeped in three pintes of water, and mingled with Flower, which they made him to swallowe, and afterwards powred into him the water wherein Hysope had beene sodden, also Peason, with Barly water and sodden Hony, when they had the Cough, and Consumption of the Lungs. To keepe them aliue, they vsed to burne the roote of a Hasell, and to thrust it through their eares, giuing them to drinke a pint of the iuice of Leeks, with the like measure of Dyle and Wine. For the Cough of the Lungs I vse to giue them long-Pepper, Graines, Fenegryke, Bayes, Annisseede, Ointment-balles, Turmericke, and Madder, beating them all together, and seething them in good Ale grounds. If your Calues haue the Cough, take Dentory, and beat it to powder, and giue it them.

If they haue the Feauer, or Ague, you shall perceiue it by the watring of their eies, the heauinesse of their head, the driuling at the mouth, beating the veines, and heate of the whole body: let them fast one day, the next day let them blood a little betimes in the morning in the taile, after an houre giue them a thirty little stalkes of Collworts sod in Dyle, Water, and Salt, which must be powred fasting in them, fiue dayes together. Beside, you may giue them the tops of Olive trees, Lentils, or any tender brutings, or branches of Vines, and wipe their mouthes with a Spunge, giuing them colde water thrise a day. The Feauer.

The blood falling downe into the legs, causeth them (as Vegesius saith) to halt, which as soone as you perceiue, you must straightwaies looke vpon the hooses, the heate whereof will declare his griefe, beside, he will scarse suffer you to touch it. But if so be the blood be yet aboue the hoose in the legs, you shall dissolue it with good rubbing, or if not with that, with scarifying, or pouncing the skinne. If it be in the foote, open it a little with a knife betweene the two clawes, and lay to the sore, cloutes dipped in Vinegar and Salt, making him a shoe of Broome, and be well ware he come not into any water, but stand dry. This blood, if it be not let out, will breed to matter, which will be long ere it heale: if it be opened at the first with a knife, and made cleane, and after clouts dipped in water, Salt, and Dyle laid to it, and at the last annointed with olde Swines grease, and Goates suet boyled together, it will quickely be whole. This disease, as I take it, Halting.

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the countrey people call the Fowle, or the Wilspe, which they sometime cure with drawing a rope of straw, or hayre, through the Cléese, till it bléede, or by searing of it with a hot yron. If the blood be in the lower part of the Hoofe, the vttermost part of the Clée is pared to the quicke, and so the blood let out, and after the foot wrapped with clowtes, and shoed with Broome, you must open the Hoofe in the middest, except the matter be ripe. If he halt by reason of the Crampe, or paine of the sinewes, you shall rubbe his knées, thighes, and legs, with Salt and Dyle, till he be whole. If his knées, or ioynts be swolen, they must be bathed with warme Vineger, and Linséede, or Dylet beaten and layd to it, with Water and Honny. Also Spunges wet in hot water, and dryed againe, and annoynted with Hony, are very good to be laid to the knée: if vnder the swelling there be any humour, Leauen, or Barly meale sodde in water and Hony, or swéet Wine, must be layd to it: and when it is ripe, it must be opened with a knife, and healed as before.

All griefes generally, if they be not broken, must be dissolued whilest they are new, with bathes, and fomentations: and if they be old, they must be burned, and the burning annointed with Butter, or Goates suet. If he haue hurt his héele, or his hoofe, stone Pitch, Brimstone, and greasie Wool, must be burnt vpon the soare with a hot yron. The like must bee done when it is hurt with a Stubbe, a Thorne, or a Naile, being first plucked out, or if it bee very déepe, it must bee opened wide with a knife, and so handled: for kibed héeles, take and cast him, and binde his legges fast together, then take your knife, and cut it out as nie as you can, and let him bléed well: then take a peny-worth of Verdegrease, and the yoalke of an Egge, and temper them well together, and binde them close to the place, and he shall heale. If the Vdder of your Kine doe swell, you shall bathe them with Iuy, sodden in stale Béere, or Ale, and smoke them with Hony-coames, and Camomell. If the Bullockes féete be néere worne, and surbated, wash them in Dre pisse warmed, and kindling a few twigges, or sprayes, when the flame is done, cause him to stand vpon the hot imbers, and annoynt his hornes with Tarre, and Dyle, or Hogges grease. They will neuer lightly halt, if after they haue béene laboured, their féete

be washed well with cold water, and afterwards their pasterns, and the places betwéene the Clées be rubbed with olde Swines grease.

The scabbes, or mangenesse, is gotten away with rubbing them with stamped Garlicke, which also cureth the biting of a madde Dogge: besides, Peneriall, and Brimstone, beaten and boyled with Oyle, Vineger, and Water, and after whilest it is warme, a little Alom made in powder, and cast into it, doth cure the scabbe, being annointed in Sunshine. Others vse to annoint them with Butter, and Bullocks pisse: and some againe take Rozen, Tarre, and Wine, and vse it as a Pultesse. Scabbes.

Hide-bound, is when the skinne so stickes to his backe, that you cannot take it vp from the ribbes, which happeneth by suffering him to take cold after his sweat, or if after his labour he be wet with raine, or brought low with sickenesse: which, because it is very dangerous, you must loke that when they come from their labour, and are hot, you sprinckle them with Wine, and giue them some péeces of fat, or suet. But if they be already hide-bound, it is good you sæthe some Bay leaues, and with the warme decoction thereof, to bathe his backe, and to rubbe him all ouer with Wine and Oyle mingled together, and to lift and plucke vp the skin round about, and that abroad while the sunne shineth. If his bléeding stench not after the cutting of the vaine, the remedy is, to lay his owne doung to the place. A common medicine for all diseases (as Vegetius reporteth) is this: the rote of a Sea Onion, the rote of a Poplar, and the common Salt, of each a sufficient quantitie, lay them in water, and giue it your Cattell to drinke till they be whole: which also being giuen in the beginning of the Spring, for the space of foureteene dayes, preserueth them from all sickenesse. Now that you haue heard in what sort the old husbands did remedie the diseases in their Cattell, I shall briefely declare vnto you the remedies that are obserued in sundry diseases at this day, whereof I haue chopt in some amongst the medicines before. Hide-bound.

First, for the Murraine: it beginneth at the first in the throat, and swelleth in the head, and rotleth with much noyse in the throat, whereby it is perceiued: take a quart of newe Milke, halfe a peny-worth of Butter, a peny-worth of Garlicke, two For the Murraine.

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peny-worth of English Saffron, two peny-worth of Cinamon, two peny-worth of Turmericke, a quantity of Hearbegrace, a quantitie of Bittony, mingle them all together, and giue it him warme: then take an aule, and thrust the toppe of his nose vpward, take but the very toppe, to thrust through, and not to the headward, then let him blood in the necke almost a pottell, if hee be able: saue the blood, and let it stand, if it change, he may liue, if not, he dieth. Another for the same. Where he swelleth about the iawes, and vp to the eares, open him vnder the iawes to the rote of the tongue, and get in your finger, and open it a good widenesse, then take a good pece of rusty Bacon, and a handfull of Raggewort, stampe them well together, and fill the hole full with it: then let him blood at the nose, and the tongue. A drinke for the same. Take Tansie, Hearbegrace, Lungwort, Hysope, Time, of each a like quantitie, halfe an handfull, stampe them, and take a quart of good Ale grounds, and seeth them a walop, or two: take and straine it, and put the licour into a vessell, put thereunto a peny-worth of Graines, a peny-worth of long Pepper, a peny-worth of Ortment, and an peny-worth of Fenegreke, so giue it the beast luke-warme.

For the Lungs.

The sickenesse of the Lungs is perceiued, if the Dewlap be hard closed together very farre vp: also in hard feeling the hide vpon the backe, it cracketh, or snappeth much: also a short husking, and thrusting out the tongue withall: if it be much perished on the left side, he is vncurable, which you shall perceiue by the Hide, which will stick fast on that side, and likewise the Dewlap: if he be farre gone, he will groane much. The remedy for this disease, is to take long Pepper a peny-worth, round Pepper as much, of Graines two peny-worth, of Turmericke two peny-worth, of Fenegreke two peny-worth, of Mace as much, Cloues a peny-worth, of Anisseeds a peny-worth, of Madder two peny-worth, of Triacle of Gean, the vtter rinde of Walnuts dryed, and made in powder, Juniper berries powdred, Dre Lungwort, Fetherfewe, Hearbgrace, Tansie, Horse Mintes, Bay berries powdred, a peny worth of Garlicke, a quart of Chamberlie, a pinte of Salt, a quantitie of Butter. Setter him before, or immediatly after this medicine giuen.

Settring of Cattel.

The order of Settring a Bullocke is this: take Setterwort,

otherwise

otherwise called Bearefote, and Garlicke, like quantitie, pele and stampe the Garlicke, and pare the Setterwort cleane, and wrappe them well in Butter, then cut the Dewlap two inches behinde the sticking place, to the brestward, and cut it alongstwise about two or three inches, and pull the Dewlap with thy finger, or with a sticke, round about, one side from the other, as much as you can possible: Then put the Setterwort, Garlicke, and Butter, as much as thou canst well put in, and thus doe on both sides the Dewlap, then rowle him so that the string may goe through both holes on both sides the Dewlap, alwayes remembring to cut the Dewlap a hand broad, or aboue the bottome, and in any wise to rent him to the bottome, before you put in the medicine. The third day after the Settring, looke to the opening the wound, and let out the corruption (if it be come downe) if not, put in more of the medicine, and turne the rowle: and if it be much swollen, and hard, and will not rot, take a hot iron, and take vp part of the soare, the skinne, and the flesh, in such place as thou seest most conuenient, so as it come not to the bone, and thrust the iron through on the one side, and on the other, or once right vnder, if the swelling be right beneath, and Tarre him well if the flies be busie. Which flies, if they chaunce to get into the soare, take a cloth, or towell, and lappe it about a sticke, and put it into skalding hot Tarre, and so among the Magots, searching euery corner well. After you haue pearced him with the hot iron, remember to take a little sticke, and Towe, and dipping it in Sallet Oyle, or woll Oyle, to rubbe the hole where the yron passed.

The sickenesse of the Gall, is knowen by the running eyes, or if he haue much yellow eare-wax: it is also discerned by the browne yellowes vnder the vpper lippe: the Cure is this: Take Chamberlie, good Ale-grounds, or Beere-grounds, hard Swte in powder, Galliwort, beasts Lungwort, Planten leaues, Yearbegrace, Hempseed, or Hempe toppes, Garlicke stamped, a peny-worth of Aqua vitæ, for a great Bullocke, take almost a quart of this medicine, for a small Bullocke, lesse: when hee hath drunke, take Salt, Loame of the wall, and leauened bread, and rubbe well his tongue, and all the rofe of his mouth: then wash his backe, and chafe it well with Chamberlie, take warme: gather

The Gall, or Yellowes.

gather all these Hearbes in Summer, and keepe them, and make them in powder. This Medicine serueth likewise for the Lungs.

For the Liuer. If a Bullocke be diseased in the Liuer, he complaineth first in the legges, which will so grieue him, that he shall not be well able to stand, though he be in good liking: the remedie is this: Take a quart of good Ale (if it may be gotten) if not, take Beere, put therein Liuerwort a good handfull, Wormewood as much, a peny-worth of Garlicke, halfe a peny-worth of Madder, a peny-worth of round Pepper, as much long Pepper, a peny-worth of Cloues and Mace, a peny-worth of Triacle, mingle them together, the Hearbs being powdred, and giue the Beast a drinke luke-warme.

The Blaine. The signes of the Blaine are these, Swelling about the face and the eye, and somewhat in the body: if it be in the body, it swelleth much there: the onely remedie is: Take and search him in the mouth, if you perceiue blisters vnder the rootes of the tongue, or other place there-abouts, then cut them to the bottome, and let them out, and rubbe the place with Salt: search him also in the bodie at the fundament, by the arme or hand of some young stripling: and when his arme is in as farre as hee can, let him turne his arme vpward, and feele for the Blaines, or Blisters, and breake them with his nayles, pulling them quite out: see that he annoint his hand well with Grease or Sope.

The Sprenges. There is a disease called the Sprenges, wherein hee will smite his head backward to his belly, and stampe with his legges: you must put your hand into his fundament, as far as you can, & pull out the dung, then shall you finde bloud, pull the bloud quite out, and take a good handfull of Bay Salt, and put it in at twise, as far as you can: if he haue this disease, he will swell in the bodie, and couet much to dung.

The Staggers. If he haue the Staggers, he will loke very red about the eyes, and cast his head backward: take the fourth part of an ounce of Pepper, bruise it, and take halfe a pinte of sharpe Vineger, warmed bloud warme, and powre it into his Nosthrils, & hold his head well vpward, and let him bloud at the Nose.

The Dasie. If your Bullocke turne round, and haue the Dasie, you shall take him by the head, and feele vpon his forehead, and you shall feele it with your thumbe: cut the skinne crosse-wise right in the place, and wipe away the bloud as it doth encrease with a clout, and binde a cloth ouer his head, and keepe it warme. If

your

your Oxen Pisse bloud, keepe them foure and twenty houres from water, and then giue to euery one a little dishfull of rennet curds in a quart of milke, let them not drinke in foure houres after. Piffing of bloud.

There sometime runneth a bloud vpon the backe of a Bullocke, which will make him draw his legges after him, and goe as if hee were swaide in the Chine: cut off a joynt or two of his tayle, and let him bleede: if he bleede too much, knit his tayle, or seare it.

If he haue the Panties, he will pant much, and shake in the Flanke, and sometime shake downe: giue him a little rennet, with Soote and Chamberlye. If he swell of the Taint, or Stingworme, giue him vrine, salt, and tryacle to drinke. If he be Hidebound, stampe the leaues of Florredelise, straine them, and giue the beast to drinke: if he chaunce to haue a stroke in the eye, take the iuyce of Smalledge, Fenell, and the white of an Egge. The Gargyse is a swelling beside the eye vpon the boane, like a botch, or a byle: if your Bullocks haue it, cut off round about it peeces of skinne as broade: then cut also round about those peeces one narrow lappe of the skinne, which will keepe the disease from his lippes, for if it come to his lippes, it is vncurable: Then take Chamberlye and Salt, and seethe them together, and wash the places where the skinne is cut off, and wash it therewith euening and morning, till the swelling be gone, scraping off the scabbes, and other filth at euery dressing to the quicke, till the swelling be gone, not sparing it so long as it watreth and runneth: when the swelling is cleane gone, take Naruoile and Honey, boyled together bloud warme, and annoynt all the said places, which will both heale it, and cause the hayre to come againe. We haue certaine medicines besides, that we vse generally for all diseases; as this, which is very soueraigne: Take a handfull of beasts Lungwort, a handfull of other Lungwort that serueth for the pot, a handfull of inward rinde of Elder, a handfull of Rewe, choppe them small, and put them into a pottle of good Ale, let them seethe till they be soft, then stirre them, and put in the liquour a peny-worth of long pepper, a peny-worth of graines, a peny-worth of Liquerise, a peny-worth of Anisseede, a halfe-peny-worth of Comen, a peny-worth of Turmericke, all well beaten, and put into the liquor, with a quarter of a pound of Madder: and whilst all these do seeth, take a great bole dish, and put therein a handfull of Tayle. Pantie. Taint. Hidebound. Gargyse. For all diseases.

Bay salt, halfe a handfull of Garlick, foure new layd Eggs, shels and all, two balls of Oytment, grinde all these things with a Pestle, in the bowle: then take the liquour aforesaid from the fire, till it be halfe cold, and put the warme liquour into the bowle, with the Garlicke, Salt, Eggs, and Oytment, brew it well together, and giue the Beast to drinke bloud-warme, or a little more. Another of the same sort is this: Two peny-worth of Comen, a peny-worth of Grains, two peny-worth of Anisseeds, a peny-worth of Bay-berries, a peny-worth of Fenecrik, a peny-worth of Turmericke, one ball of Oytment, a peny-worth of Triacle, or rather for the Lungs, three or foure spoonefuls of Madder, beat them all together, and put them in three quarts of drinke, set them on the fire, till they be bloud-warme, giue the beast no drinke in the morning before, nor till none after, in the Summer, and in the Winter till night: or if you will, you may giue them this medicine following: Take Flint sote, that is hard dryed vpon a posst or rofe, and beat it into powder with salt, then take running water, and seethe it, rank Iuie, with the sote and salt, and when the Iuie is soft, take and wring out the iuyce, and straine all together through a linnen cloth, and giue it your cattell to drinke bloud-warme, in the Spring, and at the fall of the leafe. Bubale, called of the common people Buffes, of Plinie Bisonte, are common in Italy, beyond the Apenin: a wilde and sauage Beast, that for their fiercenesse, are handled with rings of Iron in their noses: of colour blacke, their bodies large and mighty, their leggs well set, and knit very strong: and in respect of their bodie, short, their hornes large, crained, and blacke, their hayre small and short, their tayles little: they are in those parts vsed for carriage, drawght, and like vses, as the Oxe. Of the milke of this beast are made Cheases, that about Rome and other places are greatly esteemed. Columella counts them to be strong meate, and heauy of digestion. Loe here is all that for my share I haue to say touching my cattell: now Hedio, hold you the candle another while.

The Buffes.

HEDIO. Next vnto the greater sort of cattell, the chiefest place is to be assigned to Sheepe: yea, if you consider the great commoditie and profit, they are to be preferred before them: for as Oxen serue for the tilling of ground, and necessarie vse of men, so is to this poore beast ascribed the sauegard of the body; for

Sheepe.

the

the Sheepe doth both with his fleece apparrell vs, and with his milke and wholesome flesh nourish vs (as the Poet witnesseth.)

Poore beast, that for defence of man, at first created wast,
And in thy swelling vdder bear'st, the iuyce of daintie tast: (saile,
That with thy fleece keepst off the cold, that should our limbs as-
And rather with thy life, then with thy death, doest vs auaile.

Of Sheepe there are sundry breedes. The rich and a champion countrey breedeth a large and a great sheepe: the barren and the cliffie, a reasonable stature: the wilde and the mountaine ground, a small and a wierish sheepe. The old husbands did greatly commend the breede of Milet, Appulia, and Calabria, and most of all, the breede of Taranto, next of Parma, and Modena. At this day, for the fineneſſe of their fleece, are most in price the sheepe of England, of Germany, about the Rhine, and of France. Varro counselleth all such as would buy Ewes, to haue their chiefe consideration of their age, that they be neither too old, nor too young: the one of them not yet come to it, the other already past profit: but better is that age, whereof there is some hope, then where there followeth nothing but a dead carkasse. Your best is therefore to buy them at two yeeres old, and not to meddle with such as are past three: their age is to be knowne by their teeth: for the teeth of the olde ones are worne away: next must you looke, that your Ewe haue a large bodie, deepe wolled, and thicke ouer all the body, specially about the necke and the head, and good store vpon the belly: for such as were bare necked and bellyed, the old husbands alwaies refused. The necke must be long, the belly large, the legges short, though the sheepe of England be long legged, the tayle in some countrey short, in others very long: for in Arabia some haue tayles a cubite long, but wonderfull broad: others, (as both Herodotus, and Ælianus affirme) three cubits long, so that the Shepheards are forced to tye them vp, for being hurt with trayling vpon the ground. In Ægypt a Rams taile hath beene found to weigh 11. pound and more. The Ram must haue his hornes great, winding inward, and bending to the face, though in some places they haue no hornes at all, and yet no better Rammes: the hornes must rather crookle inward

The choise of Ewes.

Rammes.

then grow straight vp. In some Countries that are wette and stormie, Goates & Rammes are to be chosen that haue the greatest and largest hornes, whereby they may defend their heads from storme and tempest: and therefore in cold and stormie countries, the horned Rams are best: in milde and gentle clymates, the polld. Beside, there is this inconuenience, when he knows himselfe to be armed, he will alwaies be fighting, and vnruly among his Ewes, and though he be not able to serue the turne himselfe, yet will he suffer no other Ramme in the Flocke, till he be euen cloyed, and lamed with letchery. The Pollard on the other side, finding himselfe vnarmed, is milder and quieter by much: wherefore the Shepheards, to restraine the rage of the vnruly, doe vse to hang before his hornes a little bord with sharpe pricks inward, which keepes him from his madnes, while he perceiueth himselfe to be hurt with his owne bloud: others say, that if you pierce his hornes with a wimble, next to the eares, where they winde inward, he will leaue his brawling. In some places also the Ewes are horned: but to the Ramme. His eyes must be browne, his eares must be great, his brest, shoulders, and buttocks broad, his stones great, his tayle broad, and long: you must looke beside, that his tongue be not blacke, nor peckled, for commonly such will get blacke and pyed Lambes, as Virgill noteth:

And though the Ramme in sight be white as snow,
If blacke within his iawes his tongue be wrought,
Refuse him quite, lest if he leape thy Ewe,
He doe infect thy Fold with colour nought.

Buy not your Sheepe but washed and vnshorne, that the colour may plainelyer appeare: the white colour, as it is the beautifullest so is it the profitablest. In March is your best buying of Sheepe: for Shepheards like such as haue well worne out the winter. Whosoeuer will be a sheepmaister, must regard the abilitie of his ground: for it is not enough to haue pasture in Summer, but they must be well prouided for in Winter: in any wise you must haue store of pasture: and better it is, and more profitable to the Maister, to keepe a few sheepe well, then a great number with scarsitie of pasture. Florentinus is of that fancy, that he would your number

When to buy sheepe

should

should rather be odde then euen, thinking that number more fortunate, for the healthinesse, and long continuance of the cattell: but these are superstitious toyes, as are a great number other, imagined by the faithlesse. We sure euery yeere once, to make your muster, and supply the places of such as are dead, or sicke, with a new and a sound number, so that the Master be not deceiued with an old vnprofitable flocke. The hardnesse and crueltie of the cold Winter, doth oftentimes beguile the sheepheard, and destroyeth many of his flocke: whereof (presuming of their strength in the end of the Summer) he had made no supply, and therefore Columella is of opinion, that the age for breed ought not to be lesse then three yeeres, nor aboue eight, both because that neyther of the ages is meete to be kept: and also that whatsoeuer commeth of an old flocke, hath lightly a smacke of his old parents imperfection, and proueth either to be barraine or weake. The selfe same Columella would haue the Ewes to be put to the Ramme after they had passed two yeeres old, and the Ramme to be of fiue yeeres old, for after seauen they decay. In many places at this day, they suffer both the kindes to breed from two yeere old, till nine: but before two yeeres, it is not good to put eyther the Ramme or the Ewe to breed, although in most places they suffer the Ewe at a yeere old. The Ramme is put by his purpose, by the Wickers, or Bulrishes, tyed to the Ewes tayle, but more commodiously, by going in seuerall pastures: howbeit, they are not commonly seuered, but suffered to go together. The Rammes that you would haue to serue your Ewes, must afore the blossoming, be kept in good pasture, for two moneths, whereby they may be the better able to doe their businesse: but in our country, we commonly suffer them to feede together. To increase their lusts, you shall giue them in their pasture the blades of Onions, or Knot-Grasse: They rather couet the old Ewes then the yong, because they be eastier to be entreated, and the Rammes themselues in age be the better. By knitting of the right stone, you shall haue Ewe Lambes, and of the left, Ramme Lambes: also their blossoming in the North-winde, getteth Ramme Lambes, and in a South winde, Ewe Lambes, one Ramme (as Didymus affirmeth) sufficeth for fiftie Ewes: when they haue all conceiued, the Rammes must againe be banished, for dangering

and harming the Ewes. During the time of their blossoming, they are to be watred in one place (as both Varro and Plinie affirme) because the change of water both discoloureth the wooll, and dangereth the Lambe. The policie of Iacob the Patriarh, in procuring of partie coloured Lambes, is well enough knowen. The best time for blossoming, is from the setting of the Waerward, to the setting of the Egle: (as Varro and Columella haue written) which is (as Plinie interprets it) from the third Ides of May, till the thirteene Kalends of August: others thinke it good all the yeere long, many preferre the Winter Lambe before those that fall in the Spring, as a creature that of all others best broketh his Winter byrth. The thunder, if the Ewes goe alone makes them cast their Lambes, and therefore it is good to let them goe with company for auoiding that perill: they goe with Lambe one hundreth and fiftie daies, or fiue moneths: such as are afterward lambed, are feeble and weake, and such were of the old writers called Cordi: for the most part they bring but one Lambe a peece, yet oftentimes two, and if they be well fed, fire at a time. It hath beene seene in Gelderland, that fiue Ewes haue had in one yeere fiue and twentie Lambes: it may seeme peradventure to many incredible, and yet no great maruaile, since they haue twise a yeere most times two, and sometime fire at a time. The Shepheard must be as carefull as a Midwife in the yeaning time, for this poore creature (though she be but a Sheepe) is as much tormented in her deliuery, as a shrew, and is oftentimes the more dangerously vexed and pained in her labour, in that she is altogether without reason: and therefore it behoueth the Shepheard to be skilfull in medicining of his cattell, and so cunning a Midwife withall, as if need require he may helpe his Ewe, what danger soeuer happen. The Lambe as sone as he is fallen, must be set on foote, and put to the dammes vdder, and oftentimes his mouth held open, the milke must be milked in, that he may learne to sucke, but before you doe this, you must be sure to milke out the first milke called Colostra, whereof I will speake hereafter: for this, except some quantitie be drawne out, doth hurt the Lambe: if the damme die, you must suckle it with a horne: if the Lambe will not of himselfe sucke, he must be put to it, and his lips annointed with sweet Butter, and Swines grease, and seasoned a

little with swéet Milke. As sone as they are lambed, they must be shut vp together with their dammes, wherby both the damme may cherish them, and they learne to know their dammes. Afterward, when they beginne to waxe wanton, they must be seuered with Hardelles: or (as Varro writeth) after ten daies they must be tied to little stakes with some gentle stay, for hurting of their ioynts, and waxing leane with too much play. The weaker must be seuered from the stronger, for hurting of them. And in the Morning betimes, before the flocke goe to pasture, and in the Euening when they be ful, the Lambs must be put to their dams: and when they waxe strong, they must be fed in the house, with Clouer, and swéete grasse, or else with Branne, and Flowre. And when they haue gotten greater strength, they must be let out with their dammes about noone, into some sunny and warme Close néere adioyning. In the meane time, you must not deale with the milking of Ewes, so shall you haue them to beare the more woll, and bring the more Lambes. When the Lambes are taken from their dammes, good héed must be had, that they pine not away: and therefore they must be well cherished in their weaning time with good pasture, and well kept, both from cold, and extreame heat. Now after that they haue forgotten the vdder, that they care not for their dammes, then shall you let them féed with the flocke: howbeit in most places the Lambes are suffered to féed in the flocke together with their dammes, and to sucke till harueste time, till the dammes themselues doe weane them. Varro would haue you not to geld your Lambes vnder fiue monethes old, and that in a season neither too hot, nor too cold: but experience teacheth vs, that the best gelding is vnder the damme when they be youngest: for in the elder (as in all other beasts) it is dangerous. Those that you will kéepe for Rammes, you must take from such Ewes as vse to haue two at one time. The best pasture for shéepe, is the Grasse that is turned vp with the Plow, and groweth vpon fallowes: the next is that, that groweth in dry Meddowes: the marishy ground is to be refused, and that which groweth néere vnto Lakes and Fennes: the plaine and the champion Fields and Downes, are best for the delicatest and finest wolled Shéepe. To be short, the shorter and finer the Grasse is, the méeter it is for Shéepe: and yet is there no pasture so

good, or so fine, but with continuall vse your Shéepe will be weary of it, except the Shepheard remedie this fault with giuing them Salt, which (as a sauce to their foode) he must set readie in Summer when they come from pasture, in little troughs of wood, by licking whereof they get them an appetite both to their meate and their drinke. For where as Shéepe wareth sonest fat with watering (Aristotle affirmeth) you must in Summer euery fift day let them haue Salt, a pecke to euery hundred: so shall your shéepe be alwaies healthy, ware fat, and yéeld you plenty of milke. Moreouer, against the Winter rotte, or hunger rotte, you must prouide to féede them at home in Cratches. They are best fed in the warmer countries, with the leaues and brousings of Elme and Ash, and the Haie that is made after Harvest in the end of Summer, because it is softest, and therfore swéeter than the other. With what héede and carefulnesse this cattell is to be fed, Virgil declares, who wils a regard to be had of the time, both of their watring, and féeding.

When Summer faire with Westerne windes doth call,
Your lustie flockes to woods and pasture send
Betimes, when day doth spring and ouer all
The gladsome grasse the hoarie dew doth bend.
From thence when as the fourth houre of the day
With loftie Sunne doth make them drie to bee,
To wels or waters deepe go take thy way,
And make them drinke in troughes of Oken tree.

But in the none time, and the heat of the day, you must driue them to the vallies, and shades, (as he saith) a little after.

Wheresoeuer of Ioue the ancient Oken tree,
His broad and mightie branches spreads, or where
In sacred Groues of Holmes the shadowes bee.

After when the heat is past, you must driue them againe to the water, and so bring them againe to field.

When Sunne is set, and Euening starre appeares,
Then cooles the aye, and dewie Moone shee cheeres.

Varro affirmeth, that they diuided their pasturing times in Puglia after this manner. First they put them out to pasture betimes in the Morning, when as the dewie grasse doth farre exceed in pleasantnesse, and swéetnesse, the Grasse that being burnt with

the heat of the Sunne, is ouer dry. About noone againe, till it ware cooler, they are to be driuen vnder some cold, or watrie rocks, and broad shadowed trées, and toward the euening be suffered to féede till Sunne set, alwayes hauing regard, that in their driuing, ther heads be from the Sunne: for no beast is so tender headed. Within a little after the setting of the Sunne, they must be driuen to water, and after suffered to féede againe, till it be darke: for then is the Pasture swéetest. This order is to be obserued from the rising of the seauen Starres, and the lesser Dogge, till the later Æquinoctiall. The like doth Columella and Plinie teach, that after the rising of the Dogge, the flocke must afore noone be driuen Westward, and féede with their face toward the West, and afternoone they must bée brought againe Eastward. The fields whence the Corne is newly had off, is good to pasture them for two causes; both for that they are well fedde with the leauings of the sheaues, and that with the trampling of the strawe, and dunging, they make the ground richer against the next sowing: but our Countrey men doe not well like, that Shéepe should féede vpon the eares of Wheate. The Pasturing of them in the other seasons, as Winter, and the Spring, differs in this point: that they put them not abroad till the Sunne haue drawne vp the dew, and hurtfull vapours of the ground, and so féede them all the day long, thinking it sufficient to let them drinke at noone: but our husbands vse not to suffer their shéepe to féede abroad in the Summer time, neither before the Sunne rising, nor after the setting, by reason of the dew, being more hurtfull in Summer, then in Winter. In Winter, and the Spring time, they kéepe them in a Fold, till such time as the Sunne hath drawne vp the Rimes, and hoare Frosts from the Fields: for the frostie grasse, at this time of yéere, stops their heads with Rhume, and fils their bellies full of water: and therefore in the cold and wet seasons of the yéere, it is enough to let them drinke once a day. Moreouer the Shepheard, as also the kéeper of all cattell, must deale gently and louingly with their flocke, and comforting, and chéering them with singing, and whistling: for the Arabians (as Alianus writeth) do finde, that this kinde of cattel taketh great delight in Musicke, and that it doth them as much good as their Pasture. Beside, they must be well ware in the driuing of

them

them, and ruling of them, that they guide them with their voice, and shaking of their staffe, not hurting, nor hurling any thing at them, nor that they be at any time far off from them, and that they neither lye nor sit: for if they goe not forward, they must stand: for it is the Shepheards office to stand alwayes as high as he can, that he may playnely and easily discerne, that neither the slow, nor the great bellyed in lambing time, nor the quick, nor the liuely, while they roame, be seuered from their fellowes: and least some thiefe, or wilde beast beguile the negligent Shepheard of his cattell. Of their Pasturing, I thinke I haue spoken sufficiently; and therfore I meane now to shew you of their Houses, or Shéepcoats, whereof there ought to be a speciall regard, that they be conueniently placed, not subiect to windes, nor stormes, and that they rather stand toward the East, then toward the South. Columella would haue them built low, and rather long then broad, that they may be warme in the Winter, and that the straightnesse of the roome hurt not the young. And beside, he would haue them stand toward the South: for this beast (though his garments bée warme) cannot away with cold weather, neither yet with the great heat of the Summer. I haue séene some Shéepe-houses so framed, as they haue had their gates toward the South, and toward the East, that they might answere to the seasons of the yéere. Columella would haue the House set toward the South, and on the backe-side a close Pasture, where they may safely take the ayre. You must loke besides, that where they stand, the ground be made fayre and euen, something hanging, that it may be cleane kept, and that the vrine may be well voyded away: for the wetnesse hereof doth not onely hurt, and corrupt their féete, but also spoyleth their coates, and maketh them ruffe and ill fauoured. Let there be no moysture therefore, but alwaies well strawed with drie ferne, or strawe, that the Ewes that be with young may lye the softer and cleaner. Let their beds be very cleane; for the cleaner they lye, the better they féede: let them in any wise be well fed, for a small number (as I said before) well fed, yéeld more profit to their Maister, then a great flocke barely kept. You must also haue seuerall partitions to kéepe the weaker and the sicke, from the strong and vnruly. And thus much of housed shéepe, that are euery day brought

Sheepe coats.

home:

home: but in some places they are kept abroad, farre from either towne or house, in Forrests, and open wilde fields and downes: in these places the Shepheard carryeth with him his Hardles, and his Nets, and other necessaries to fold his flocke withall. In the desart fields, when as the Winter pastures, and the Summer pastures are distant certaine miles asunder (as Varro saith) hee would haue the flocks that haue wintred in Apulia, to be kept in Summer vpon the Mountaines of Kiete: and Virgill thus writeth of the Shepheards of Lybia:

What should I here of *Lybian* Shepheards tell,
Or of their Pastures write, and dwellings poore,
That night and day on Downes, and Desarts dwell,
Where wanders still the Flocke without the doore:
And on the ground doth lye the Shepheard heare,
While he remoues with him continually
His house, and all his household goods doth beare,
His staffe, his dogge, and all his armory?

The like haue I my selfe seene in Switzerland, and other places of Germany, where the Shepheard, lying still abroad with his flocke, folds his sheepe in the night with Hardles, tying their dogges about them for watchmen: the Shepheard himselfe in a little house vpon wheeles, keepes hard by his charge. The sheepe of Greece, Asia, and Toranto, and those which they call, Couered-Sheepe, are commonly vsed to be kept in houses, rather then abroad, for the excellencie and finenesse of their wooll.

EVPHOR. What times doe you appoint for the shearing of your Sheepe?

HEDIO. The times of shearing, are not in all places one, but varie, according to the disposition of the ayre, the cattell, and the countrey: the best way is to haue good regard to the weather, as the sheepe be not hurt by shearing in the cold, nor harmed by forbearing in the heate. In some places they haue two seasons in the yeere for shearing of their sheepe: the first season for their shearing, is either with the beginning of May, or else with the ending of Aprill: the second season of their shearing, is about the beginning of September. Such as doe vse to sheare their

Shearing of Sheepe.

Sheepe

shéepe but once in the yéere, do commonly appoint for their season the tenth of the Moneth of June: about which time also such as doe sheare twise a yéere, doe sheare their Lambs. Thrée daies before you sheare them, you must wash them well, and when they be full drie, you may sheare them: they doe not in all places sheare their shéepe, but in some places (as Plinie saith) pull them. The old Husbands did account for the best Woll, the Woll of Puglia, and that which in Italy was called the Gréeke Fléece: the next in goodnesse they tooke to be the Woll of Italy: in the third place they estéemed the Milesian Fléece: the woll of Puglia is but short, and méete to be worne onely in riding Cloakes. The woll about Toranto, and Canas, is thought to be passing good: but the best at this day is the woll of England. The finer your Pasture is, the finer (as it is thought) you shall haue your woll. The woll of such shéep as are slaine by the Wolfe, and the garments made thereof, (as Aristotle saith) are aptest to bréede Lice. If you happen in the shearing to clippe the skinne, you most forthwith annoint it with Tarre: when you haue shorne them, some thinks it good you anoynt them with the iuyce of sodden Lupines, Lées of old Wine, and the dregges of Oyle made in an oyntment: & after thrée daies to wash them (if it be néere you) in the Sea, or if the Sea be farre of, with raine water, sodden with Salt. And being thus ordered, you shall not haue them to lose their woll all the yéere, but to be healthie, and to carry a déepe and a fine fléece: and therefore Virgill biddes you,

Goe plunge them oft in healthy streames.

There be some againe, that would haue you to annoint them thrée dayes in the yéere, the dayes being soone after you haue washed them with Oyle, & Wine mingled together. Against Serpents, that many times lie hid vnder their cribs, you must burne Cedar, Galbanum, or Womans Hayre, or Harts horne: in the end of summer is your time for drawing and seuering of them (as I told you before) when you must sell your shéepe, that through féeblenesse, they fayle not in the winter. Beside, killing one or two of them, you must looke well vpon their Liuers, and if the Liuer bée not sound (for thereby is for séene the danger) then eyther sell them, or fatte them, and kill them: for very hard it is to saue them their Liuers being perished. Infected Shéepe are more

subiect

subiect to scabbes and manginesse then any other cattell, which commeth (as the Poet witnesseth :)

When coldest stormes doe wet them neare,
And hoary frosts on ground appeare.

Or if you wash not off the sweat of the Summer with salt water : or otherwise, if when they be shorne, you suffer them to be hurt with brambles, or thornes : or if you put them into houses, where either Horses, Mules, or Asses haue stode : but specially lacke of good feeding, whereof procedeth poreneste, and of poreneste scabbes and manginesse. The shepe that is infected is thus knowne, If he eyther scratch, stampe with his foote, or beate himselfe with his horne, or rub himselfe against a tree : which perceiuing him so to doe, you shall take him, and opening his woll, you shall finde the skinne ruffe, and as it were itchie. Diuers men haue diuers remedies for this maladie, but such as are not at hand to be had : Virgill thinks there is no presenter remedie

Then at the first to clippe away the sore :
For being hidde, it festreth the more.

Constantine out of Dydimus affirmeth, that the scabbes of Shepe are healed by washing them with vrine, and after annointing them with Brimstone and Oyle. The common Shepherds, when they perceiue a shepe to fall a rubbing, they straightwaies take him, and shedding the hayre, doe seare the place with Tarre: others doe teach other remedies, more hard to come by, which are not for euery Shepheard, nor euery Countrey to vse. And if the whole Flocke be infected, it doth many times so continue, as it shall be needfull to change houses, and (which in all other diseases behoueth) both Countrey and ayre. This one alonely medicine haue I alwaies proued for the keeping in health of this cattell, to be most present and soueraigne : Take the berries of Juniper beate them small, and sprinckle them with Dates and Salt, mingle them all together, and giue it your Shepe three or foure times in the yeere : for though they refuse to eate the Juniper berries of themselues, yet for the desire of the Salt and the Dates, they will easily take them all together. If they be lowsie, or full of tickles, they vse to beate the rootes of Maple, and seething them in water, and opening the woll with their fingers, they powre the liquour, so as from the ridge of the backe, it runne ouer the body.

Others

Others vse the rote of Mandrake, being well ware that they suffer them not to tast it. If they haue the Feuer, you must let them blood in the hæle, betwixt the two Clées, which the Poet teacheth, saying:

It easeth straight the flaming feauers paine,
If in the foot you strike the spinning veine.

Some let them blood vnder the eies, & some behind the eares. The fowle, a disease betwixt the Clées, is taken away with Tarre, Allom, Brimstone, and Veneger, mingled together: or powder of Verdigrease put vpon it. The swelling betwixt the two Clées, must be cut with great warinesse, least you hap to cut the worme that lieth in it, for if you doe, there commeth from her a hurtfull matter, that poysoneth the wound, and maketh it vncureable. Master Fitzherbert, a Gentleman of Northamtonshire, who was the first that attempted to write of Husbandry in England, appointeth this cure: his words be these. There be some Sheepe that haue a worme in his foot, that maketh him to halt, take that sheepe, and loke betwixt his Clées, & there you shall finde a little hole, as much as a great pins head, wherein groweth fiue or sixe blacke haires, like an inch long, or more: take a sharpe pointed knife, and slit the skin a quarter of an inch long aboue the hole, and as much beneath, and put thy one hand in the hollow of the foot, vnder the hinder Clée, and set thy thumbe aboue, almost at the slit, & thrust thy finger vnderneath forward, and with your other hand, take the blacke haires by the end, or with thy knives point, and pulling the haires a little and a little, thrust after thy other hand, with thy finger & thy thumbe, and there will come out a worme, like a pece of flesh, nere as big as a little finger: when it is out, put a little Tar in the hole, & it will shortly mend. If they happen by the extreame heat of the Sunne to fall downe, and to forsake their meat, giue them the iuice of the wilde Bete, and cause them beside to eate the Bets. If they hardly draw their breath, slit their eares, and let them bleed. If they be troubled with the Cough, Almonds beaten with Wine, and powred a prettie quantitie into their nosthrils, remedieth them. A Sheepe, or Swine, that hath the Murraine of the Lungs, you shall helpe by thrusting through their eare, the rote of Setterwort: this sicknesse doth commonly spring of want and scarsitie of water, and therefore (in Summer

Master Fitzherbert for curing of Sheepe.

The Murraine of the Lungs.

time

time specially) you must suffer no kinde of Cattell to want water. Their legges, if they happen to be broken, are to be cured in like sort as mens be, being wrapped first in woll dipped in Oyle, and Wine, and afterward splented. The young Lambes, and other Shéepe, also while they goe abroad, are troubled with scabs and mangineſſe about their lippes, which they get by feeding vpon dewie grasse: the remedie is Hysope and Salt, of each a like quantitie beaten together, and their mouthes, their pallats, and their lippes rubbed withall: the vlcerous places must bee annointed with Vineger, Tarre, and Swines grease. If they chaunce to swell with eating of any Worme, or venemous grasse, you shall let them bloud in the veines about the lippes, and vnder the taile, and after powre into them Chamberlye. If they happen to swallow a Horseleach, powre into them strong and tart Vineger warme, or Oyle. Against the Murrion, or the Rot, I haue séene giuen them, certaine spoonefuls of Wine, and after a little Tarre: this medicine was vsed by Maister Iohn Franklin of Chart in Kent, who was in his life time a skilfull husband, and a good housekéeper. In like sort haue I séene this medicine: Take for euery sore, one peny-worth of Triacle, and likewise one little handfull of Hempséede, ground Iuie, Elder leaues, and Fetherfew, as much as a Tenisball of Loame, and as much Bay salt, put thereto Chamberlie, & a little Soote, make it all luke-warme, and giue to euery one three spoonefuls good, and after euery one a little Tarre, before they goe out of hand. In some places they vse to take the dryed flowres of Wormewood, and mingling them with Salt, they giue them to their shéepe, as a generall medicine against all diseases. This medicine is commended by Hieronimus Tragus, both for assuaging of any paine, and driuing away any hurtfull diseases from Cattell.

Lambes.

Eating wormes or venomous grasse.

Maister *Iohn Franklin.*

EVPHOR. Good Hedio forget not to speake something of your Goates.

Goates.

HEDIO. Goates haue many things common with Shéepe: for they goe to Bucke at one time, and goe as long with young, as Shéepe doe: they yéeld commoditie with their Flesh, their Milke, their Chéese, their Skinnes, and their Hayre: the Haire is profitable to make Ropes of, and Packes, and diuers like instruments, belonging to Sea-men, by reason that it neyther rots

with

with moisture, nor is easily burnt with fire. Varro maketh mention of two sortes of them, a heary sort, and a smooth. Such as haue Wennes, or Wartes, vnder their chinnes, are taken to be most fruitfull: their Vdders would be great, their Milke thicke, and the quantitie much. The hée Goate would be softer hayred, and longer, his Necke short, his Throat boll déeper, his Legges fleshy, his Eares great and hanging: it is thought better to buy the whole flocke together, then to buy them seuerally. At the Chinne of euery one of them hangeth a long beard, which Plinie calleth Aruncum, by which, if any man draw one of them out of the flocke, the whole flocke (as amazed) stand gazing vpon him. The hée Goate, because of his beard, and as (Alianus sayth) by a certaine instinct of Nature, preferring the male before the female, goeth alwaies before his woman. The bargaining for this Cattell, is not after the manner of bargaining for Shéepe: for no wise man will promise that they be frée from sickenesse, being as they be, neuer without the Ague: but he assures them that they be well to day, and can drinke. One thing is to bee wondred at in this Beast, that he draweth not his winde as all other beasts doe at his Nose, but at his Eares. The best kindes of them, are those that bring forth twise a yéere, and such you must séeke for your bréede. The Goate is able to engender at seauen moneths olde, being euen as lecherous as may be: for while he is yet sucking, he will be vpon the backe of his damme: and therefore he wareth feeble, and vnable, before he be fiue yéeres olde, being now soked and consumed with his ouertimely luskinesse of his youth: and therefore after he come to be fiue yéere olde, he is no longer to serue your turne for bréed. The time when you shall suffer them to go to rutte, is in Autumne, a little before December, that at the comming of the Spring, and blossoming of the trées, the young may be brought forth. The Goate goeth with young (as I said) fiue moneths, as the Shéepe doth: she brings forth commonly two, and sometime fire (as Plinie witnesseth.) Such as beare twise, you must kéepe for your stocke, for the renuing thereof, and the encrease. As touching their bréeding, you must in the end of Autumne seuer your he Goates. The young Goates of a yéere old, and two yéeres, bring forth Kiddes: but (as Columella saith) they are not to be suffered to bring them vp,

except

except they be thrée yéere old: and therefore you must away with the young, that the Goates of the first yeere may breed: and suffer the Kidde of a two yeere damme, to sucke no longer then it is meete to be sold. When the Kiddes are brought forth, they must be brought vp in like sort as I told you of the Lambes: sauing that the wantonnesse of the Kidde is more to be restrained and hédlier to be kept in, and must be fed beside their milke, with young bowes. Plinie affirmeth, that they be scarce good for bréede at thrée yéeres old, but if they passe foure, they be starke nought, and that they begin at seauen moneths, euen while they be vnder the mothers breast. The first riding prospereth not, the second is somewhat to the purpose, the third spredeth, she brings forth, till she be eight yéers old, and therefore the she Goats, when they be aboue eight yéers, is not to be kept: for she then becommeth barraine. Those which want hornes, (as in the male kindes) of all others be the best: for the horned, by reason of their weapons are hurtfull and vnruly. Besides, the female of such as lacke hornes, doe giue alwaies greater plentie of milke: but Columella (as he commendeth the Pollardes in a temperate and milde countrey) so in a boysterous and a stormie Region he would haue them horned. Such as haue hornes, doe shew their age by the circles of their hornes: it is thought, that they see as well by night, as by day, and that they alwaies ley their faces turned one from the other, and in that order also féede. Cold (as it is said) is very hurtful to this kinde of cattell, specially to those that be with young, as likewise the extreame heate. The wit of this beast Nutianus reporteth, he once had experience of, whereas a couple of them chanced to méete vpon a very long and narrow Bridge, and the straightnesse would not suffer them to turne, and to go backward blindfold in such a straight, considering the swiftnesse of the streame vnder them, was more vnpossible, the one of them lying downe the other passed ouer his body. Varro doth commend sundrie little flockes kept seuerall, rather then great flocks together, vsing for example one Gaberijus, because a great flocke is soner subiect to the murraine, thinking fiftie to be enough for one flocke. Columella also affirmeth, that there ought not to goe aboue one hundred of them together, whereas of Shéepe he alloweth a thousand in one flocke. The biting or bruising

ſting of them, is poyſon to all kinde of Trées, and therefore were they in old time ſacrificed to Bacchus, becauſe they were ſo hurtfull to Vines. Their ſtables Columella would haue to ſtand vpon a ſtonie ground, or elſe to be paued, for this beaſt needeth nothing vnder him but a few boughes: when he lieth abroad, the Shepheard muſt often ſweepe and make cleane their houſes, not ſuffering any dung, or moiſture to remaine in them, that may be hurtfull to the flocke: for as I ſaid before, they are ſeldome without Feauers, and much ſubject to the peſtilence. And whereas other cattell, when they haue the Murraine among them, as ſoone as they be infected, begin to languiſh, and pine away: onely theſe Goates as ſoone as they be taken, though they be neuer ſo luſtie to looke vpon, ſuddenly fall downe together, and die as thicke as Haile: which diſeaſe doth chiefely happen, by too much rankeneſſe of paſture. And therefore as ſoone as you perceiue one or two of them fall downe, let the whole flocke blood with as much ſpeed as you may, and ſuffer them not to feed all the day, but ſhut them vp the foure middle houres of the day. If they be diſeaſed with any other ſickneſſe, you muſt giue them the Rootes of Réedes, and of the great white Thiſtle, ſtamping them with yron peſtles, and ſtrained with raine water let them drinke it: and if ſo be this medicine heale them not, your beſt will be to ſell them, or to kill them, and powder them: and when you buy new, bring them not home too haſtily, till the diſpoſition of the ayre be altered. If they fall ſeuerally ſicke, cure them in ſuch ſort as you doe your Shéepe. Florentinus ſaith, if you ſtamp with water the guiſard of the Stork, and giue them to drink a ſpoonefull a péece, it preſerueth both Shéepe and Goats from all murraine and peſtilence. If their bellies be ſwelled with water, which the Greeians call ὑδρωπα, the Dropſey, if the ſkinne be lanced a little vnder the ſhoulder, it lets out the hurtfull matter, and you may heale the ſore with Tarre.

EVPHOR. You haue for your part very well ſatiſfied vs, touching the good ordering of your cattell: there remaines yet one thing for you, which you all forgate to ſpeake of, and that is the ordering of Milke, our chiefeſt food and ſuſtenance.

Milke. HEDIO. Séeing that of this cattell whereof I haue entreated, the profit of the Milke is not ſmall, it is no great reaſon we

should ouerpaſſe the ordering of the ſame: for Milke (as Varro ſaith) of all liquid things wherewith we fede, is the greateſt nouriſher. Milke differeth in goodneſſe according to the nature of the bodies that giue it: as the Milke of Women, of Kine, Sheepe, Goates, Aſſes, Mares, and Cammels: the greateſt nouriſher is Womans Milke, the next Goates Milke, whereby the Poets faine, that their God Iupiter himſelfe was nurſed with Goates Milke: the ſweeteſt next Womans Milke, is the Cammels Milke: the wholeſomeſt is Aſſes Milke, the Aſſe as ſoone as ſhe is with Colt, giueth milke: the Cow, neuer till ſhe hath calued: moſt comfortable to the ſtomacke is Goates milke, becauſe he rather fedeth on Bruts and Bowes, than vpon Graſſe. Cow Milke is moſt medicinable, and moſt of all loſeth the bellie. Sheepes Milke is ſweeter, and nouriſheth more, but is not ſo good for the ſtomacke, by reaſon it is fatter and groſſer. All Milke that is milked in Spring time, is watriſher then the milke of Summer, as likewiſe is the milke of young cattell: it is wholeſomer being ſodden, ſpecially with the Prebbles of the Sea. The Sheepe about Pontus, neere to the riuer Aſtace, doe giue (as Plinie ſaith) blacke milke. All milke generally (as Dioſcorides writeth) is of good nouriſhment, but filleth the ſtomacke and the belly with winde: that which is milked in the Spring, is thinneſt but loſeth the belly moſt. The difference of milke, is taken (as Varro ſaith) of the paſtures, the nature of the cattell, and the milking. Of the paſture, when the cattell is fed with Barly-ſtraw, and all other hard and dry meats, and this greatly nouriſheth. For purging of the belly, the graſſe paſtures, ſpecially where the cattell fed of purging hearbes, as Cardanus in his booke de Plantis teacheth, that if you will purge Melancholy, you muſt feed your milch Goate, or Aſſe, with Polipodi, and for all other humours Sene, for the Dropſie with Spurge, or Agaricke: for cleanſing of the bloud, with Fumitory, or Hoppes: and if you will but onely loſe the belly, with Mercury, or Mallowes: ſo farre Cardanus. Our countreymen doe chiefely commend for milke, the paſtures where growth Spery, and Clauer-graſſe, and that is all bedeckt with yellow flowres. For the cattell, the difference is betwixt the ſicke and the healthie, the young, and the old: and for the milking, that is beſt that is not long kept after the milking, nor

Blacke milke.

Error in the vnderſtanding of *Dioſcorides*.

that is milked immediately vpon the Caluing, a grosse vnwholesome kinde of Milke. To trie whether Milke be mingled or not, you shall take a sharpe Rush, and putting it into the Milke, let it drop from thence vpon your Naile, and if the drop runne abroad, it is a signe there is water in it: if it keepe together, it shewes it to be pure and good. Of Milke is made Butter, whose vse (though it be chiefely at this day among the Flemings) is yet a good and profitable food in other Countries, and much vsed of our old Fathers, yea euen of the very Patriarches (as the Scriptures witnesseth.) The commoditie thereof, besides many other, is the assuaging of hunger, and the preseruing of strength: it is made in this sort. The Milke, as sone as it is milked, is put out of the Paile into Bowles, or Pannes, the best are earthen Pannes, and those rather broad then deepe: this done, the second, or the third day, the creame that swimmes aloft is fleeted off, and put into a vessell rather deepe then big, round and Cilinder fashion: although in some places they haue other kinde of Charmes, low and flat, wherein with often beating and mouing vp and downe, they so shake the Milke, as they seuer the thinnest part off from the thicke, which at the first, gathers together in little crombles, and after with the continuance of the violent mouing, commeth to a whole wedge, or cake: thus it is taken out, and eyther eaten fresh, or barrelled with Salt. The Butter-milke that remaineth of the Butter, is eyther kept for the family, or giuen to Calues and Hogges, as a dainty food. Cheese is also made of the Milke of cattell, the Milke being powred into a Vessell of earth, putting into it a little rennet, the quantity of a Walnut, in a great vessell of Milke, whereby it runneth into Curd. Varro doth better like the Rennet of the Leuret, or the Kid, then the Lambes: howbeit, we commonly vse the Calues Rennet: others vse sundrie other meanes, onely with heate, warming it in Tinne vessels, and after dipping those Vessels in cold water, which is the sweetest and cleanliest manner: others put in the seede of wilde Saffron, and being so turned, the Whey doth greatly purge fleame: others againe vse the Milke of the Figge tree, and then doth the Whey purge both choler and fleame: some purge it with Drimell, or syrope of Vineger, which is of all other waies the wholesomest: some besides, vse the little

Butter.

Cheese.

skinne

skinne of Birds Guisards, and others, the flowres of wilde Thistles, or Hartichokes. The newer and better the Milke is, the better will be the Chéese: for made of two sorts of Milke, or Milke that is too néere fléeted, it soone sowreth, and wareth hard and nought, and is not to endure any while. Againe, being made of fat and new Milke, it will very long endure, and long continueth in his fatnesse and softnesse: about a two or thrée houres after you haue put in your Rennet, the Milke commeth to a Curd, which is straight waies put into Formes, or Cheese-fats, and pressed: or if they be but small, they are onely pressed with the hand. If they be of any quantitie, they haue great waight vpon them: it is very néedfull you presse out the Whay with as much spéed as you can, and to seuer it from the Curd, and not to let it lie slowly drayning of it selfe. Those that make great Chéeses, haue moulds for the purpose, and Waights and Presses answerable. After this, they take them out of the Presse, and lay them vpon Herdels, or faire smooth Tables, in a shadowie and a cold place, and close from all windes, sprinckling them all ouer with Salt, that they may sweat out all their sowrenesse, laying them so, as they touch not one the other. When they be now well hardned and thickned, they are taken vp, and pressed againe, with great weights, and rubbed ouer with parched Salt, and after laid in presse againe, whereby it is thought they will neyther haue eyes, nor be ouer drie: which faults hapneth to come when they be eyther not well pressed, or too much salted. Some vse to put into the bottome of their Pailes, the grééne kernels of the Pine Apple, and milking into them, doe cause it so to turne. You may also cause your Chéese to relish of whatsoeuer you will, as Pepper or any other Spice: but Columella counts that for the best Chéese, that hath least mixture in it. The strongest Chéese, and hardest of digestion, are those that are made of Buffes milke: the next are such as are made of the milke of Ewes, but the mildest, and lightest of digestion, are those that are made of Goates milke: the Cheese that is made of Mares milke, is of the same qualitie that the Buffes Chéese is. There is Chéese also made of Cammels milke, and of Asses milke: the Chéeses that are made of Buffes milke, are at Rome, of all other cattell in greatest estimation. Such as are touched both aboue and beneath,

and haue more then foure Pappes, you can make no Chéese of their milke, for it will neuer curd. In our daies, the best Chéeses are counted the Parmasines, made about the Riuer of Po, estéemed for their greatnesse, and daintinesse, of which you shall haue brought into other countries that weigh aboue threescore pound. Next are commended the Holland Chéese, the Chéese of Normandie, and the English Chéese. In England the best Chéese is the Chesshire, and the Shropshire, then the Banbury Chéese, next the Suffolke, and the Essex Chéese, and the very worst the Kentish Chéese. The places where the best Chéese is made, appeareth by this old English Distichon, better sensed, then footed.

Banbury, Langtony, Suffolke good Chéese, Essex goe thou by,
Shropshire: *cum* Chesshire, Hertford may wel with the best péere.

Of the discommoditie of Essex Chéese, our English Partiall Iohn Haywood, thus merrily writeth:

I neuer saw Banbury Cheese thicke enough,
But I haue seene Essex Cheese quicke enough.

Chéese they say will best endure, and is longest preserued, if you kéepe them in heapes of Pulse, or Wheat. and if you kéepe your Kennet in the iuyce of Bytch, you shall be sure to haue neyther Mite nor Créper in your Cheese. The Cheese that is soft and new, doth more nourish then the drie, and be more comfortable to the stomacke, not long in digesting: the old is contrarie, according to the prouerbe. No Cheese good but the new. Old Cheese will become new in taste, if you lay them in Time, Vineger, or in Wine: if through age it be hard and bitter, let it be rubbed ouer with Meale of vndried Barley, and then dip it in water, and after, the outer rinde scraped off. We haue oft times proued, that hard Cheese wrapped in Clouts wet in Vineger, or Wine, and oftentimes sprinckled with Wine, and so laid vp, returne to a softnesse, and a very pleasant taste. Some lay it in Leauen, couering it close therewith, and thereby make it soft. It is reported, that Zoroastes liued twentie yéeres in wildernesse with Cheese so ordered, as it neuer waxed old.

EVPHOR. Of the Whey that commeth from the Cheese being sod with a soft fire, till the fatnesse of the Cheese swimme aloft, are made Welcurds.

Welcurds.

HEDIO. You were wont to loue them well.

EVMEVS. I doe indeede, specially if there be good store of new Milke put to the Whey. The old writers doe teach the making of a kinde of white meate, not much vnlike to Welcurds, which they called Melcan, and made it in this sort. They put into a new earthen vessell Vineger, and suffered it to boyle softly vpon the fire, till the vessell had drunke vp the Vineger, and into that vessell they powred in Milke, and set it where it might stand stedfast, whereby they had within a while their desire. But me thinketh I haue for my part done enough, it commeth now to your turne EVMEVS to goe forward with the rest. Melcan.

EVMEVS. That the keeping of Swine belongeth to Husbandrie, doth euidently appeare by the saying of the ancient husbands, counting him a slothfull and an vnthrifftie husband, that hath his Bacon rather from the Butcher, then from his owne Roofe: for there ariseth as great profit many times to vs of our owne Swine, as doth to you that be keepers of greatest cattell of your flockes: for if Bacon be away, the chiefest supporter of the Husbandmans kitchin is wanting. And whereas Swines flesh seemeth abhominable to the foolish Iewes, I beleeue verily they neuer tasted the Gamonds of France, so highly commended by Varro, Strabo, Atheneus, and other learned writers: which I suppose were none other but the flitches of Westphaly, so greatly esteemed at this day, not onely in Germanie, but in Rome, and that they were called by the names of Celticke Gamonds, because the old writers, especially the Greeks called all Countries on this side the Alpes, both French and Dutch, by the name of Celticke. Surely there is no beast besides, that makes more daintie dishes, there is in him neere fiftie different tastes, where euery other beast hath but one, and hereof came at the first the sharpe Law of the Censors, forbidding it to be vsed at suppers, the Vdders, the Stones, the Tripes, and the forepart of the heads of Swine, (as Plinie witnesseth.) And most apparant it is, that not onely the French, and the Dutch in those daies, but also the Italians, and the Greeks, nourished great heards of Swine. Among the Greekes, Homer maketh mention of one of my name, that had twelue Hogsstyes, euery Stye containing fiftie Porklings, and Polybius writeth, of more Swine.

then a thousand to be readie at a time among the ancient Italians, Tuskans, and French. Varro accounteth a hundred but a small heard. Who so will nourish Hogges, must haue regard both to the fairenesse, and the age. Varro addeth beside the nature, the kinde and the countrey. And because the young doe commonly resemble their parents, he would haue you chose such as are faire, and large bodied, and which makes most to the matter, as fruitfull as may be: which Varro, doth chiefely commend those that be of one colour, their bristles would be thicke, and blacke, if it be in a cold countrey: if in a temperate, you may nourish the smooth. Their proportion would be long, large-sided, and belled, wide buttocked, short legged, and footed, bigge necked, and well brawned, short groined, & turning vpward, his taile wrinckled. The kinde is most commended, that bringeth many Pigs, the countrey that breadeth large and great: the best age for the Boare, is a yéere old, though at halfe a yéere old they are able to serue a Sow: one Boare is enough for tenne Sowes, and more. The Sow is sufficient to bring Pigges at a yéere old, and so for seauen yéere after, the fruitfuller she is, the sooner she wareth old: at the first farrowing, you shall easily sée what number she will bring forth: she will not much differ in the other. The best kinde of Sowes haue twelue pappes, the common sort tenne, or not so many. Euery Pigge doth know his owne Pappe that that he was borne too, and sucketh onely that, and none other: if you take away the Pigge, the Pappe drieth, as both Plinie, and experience sheweth. They were wont to be bought and bargained for in this sort. Doe you warrant that these Swine are sound, that I shall well enioy them, that you will answere the faults, and that they be of a healthy bréede? A wet moorish ground is mœtest for this cattell, for he delighteth not in water, but in durt and myre, so much (as Varro writeth,) that the Wolfe, as soone as he hath caught a Sow, draggeth her to the water, because his téeth are not able to abide the heat of her flesh. And although this beast will away with any ground, (for he feedeth both in mountaines, champion, and marish,) yet his chiefe delight is in the woods that is full of quagmires, where there groweth store of Oke, Corke, Béech, Mastholme, wilde Olives, wilde Dates, Haselnuts, Crabbe trées, Plome trées, and

Cherie

Cherie trées: for these beare fruit at diuers times, and fœd the Heards almost all the whole yeere. Where there wanteth woods, they must be fed from the ground, whereof a Marrish is to be preferred before a dry ground, that they may mousell in the Marsh, digge vp Wormes, wallow in the myre, and tumble in the puddles of water, which in Summer is most nœdfull. They also hunt after rootes, specially Ferne rootes, and the rootes of Bulrushes, Rushes, and Sedges, beside good Grasse well fœdeth a Swine, and Orchards of Cheries, Plums, Apples, and Nuts: and notwithstanding all this, the Barne, for you must fœde them often by hand, when meate fayles abroad: and therefore you must preserue store of Acornes, in Cestornes in the water, or dryed vpon smokie floores, also Beanes, Pease, and Tares must be giuen them, and not so much as Barley spared: for this kinde offœding doth make them faire, and not onely fats them, but giueth the flesh a pleasant taste. When they are yet young, and sucke, both they, and their Dammes must be well fed, they must be put to fœde early in the morning, afore the heat of the Sunne, and after kept in shadowy places, where there is good store of water. Afore they goe to pasture, they must be medycined, lest the Grasse scarre them too much, by which they will be greatly weakned. In Winter they must not be put abroad, till the frost be off the ground, and the Ise thawed. And though the Swine will runne at the knowne voyce of the Swineheard, yet Varro will haue them brought both to pasture, and homeward, with the sound of a Horne: their meate must be giuen them scattered thin, so shall both lesse suffice, and the greater shall not harme the smaller: as soone as they heare the Horne, though they be neuer so farre off in the Woods, they come running with all haste. Polybius telleth, that the Italians vse not to follow their heards, as the Grœkes and others doe, but going a prettie way before them, they blow their hornes, their Heards being acquainted with the blast, doe follow them in great order. They doe so well know, and obay the call of the Swineheard (if we may beleeue Alianus, that when certaine Rouers, landing vpon the Coast of Tuskan, and taking great numbers of them out of their Sties, carried them aboard, the thieues hauing weighed vp their Anker, and being vnder sayle, the Swine vpon the hearing of their

A wonderfull knowledge in Swine.

keepers

kéepers boyce, suddenly ran to the one side of the Shippe, and ouerturned her, whereby (the Pirates drowned,) the Swine came safe to land to their Maisters. As I haue here told you of the conditions of the Boare and the Sowe, and of their kéeping; so will I now shew you the manner of their bréeding: The Breeming time is reckoned to be from Winter, till the twelfth of March, so shall you haue them to farrow in Summer: for the Sowe going foure Moneths with pigge, farroweth in the fift. She is with pigge at the first breeming, but they vse to let them goe often to Boare, because they sone miscarrie: and if you will haue two farrowes in one yéere, you must put your Sowe to Boare in Februarie, or Januarie, that she may farrow in Aprill or May, when as there is good pasture abroad, and Milke is in his chiefe strength: and when they be weaned, they may well féede vpon straw, & grottens: and after, the Sow may farrow againe in the end of Autumne: for Varro saith, her farrowing times are so diuided for the nonce, as she may farrow twise a yéere, while she hath foure Moneths to beare them, and two to féede them. As sone as they bée with pigge, you must kéepe the Boare from them: for with his vnruliness, he maketh them to cast. Young Swine for bréede, must not be lesse then a yéere olde, as Varro would haue it: howbeit they begin at eight moneths, and continue seauen yéeres. The Boare beginneth at eight moneths, or sixe, and continueth well foure yéeres, and after, at thrée or foure yéeres olde, you may geld them, and fat them. Some would not haue you kéepe vp aboue eight, others not aboue sixe: not that the Sow is able to kéepe no more, but that she that kéepeth more, sone fayleth. Varro reporteth, that the Sow of Æneas Lauinus, farrowed at one time thirtie white pigges: but it is monstrous when she farroweth more then she hath paps. Euery Sow must haue her Stie by her selfe when she hath farrowed, and not suffered to goe with the whole Heard, as other cattell are, but little Coates to bée made for them, wherein they may be kept eyther farrowing, or with farrow: for Swine, if they lye together in any number, being commonly ill mannered, doe lye one vpon another, whereby they hurt such as are with pigge. And therfore you must haue seuerall Sties where they may farrow, and made high, that the Sow cannot get out; for couered they must not be

by

by any meanes, that the Swineheard may loke that the Sow ouerlay none of them, and to sée what they want, that he may make them cleane, and as oft as he cleanseth it, he must straw sand, or such like, to drie vp the moisture: for though she be but a swinish creature, yet loueth shée to haue her chamber cleane. When she hath farrowed, she requireth greater quantitie of meate, whereby she may giue the more Milke, specially Barley stéped in water, or ground, and tempered with water. And if you haue not good store of meate, your best is to sell the Pigges: so shall the Damme, being deliuered of her burden, bée sooner with farrow againe. Such as are farrowed in Winter, are commonly poore and wretched, both because of the cold, and that their Dammes doe not like them for wanting of milke, and biting their Papps. If the Sowe eate her Pigges, it is a wonder: for Swine of all other beasts, can worst away with hunger, which when it prouoketh, they eate not onely their owne, but young children, which not long since happened in Sussex, to the pittifull discomfort of the Parent. They suffer not the Sow to goe abroad in tenne dayes after her farrowing, except it be to drinke: after, they suffer her to goe about the house, that shée may the better giue milke. When the Pigges ware great, they desire to goe abroad with their Dams, at which time they are fedde by themselues apart, to the end they may the sooner forget their mother, which they will doe in tenne daies. It behoueth the Swineheard to be careful & diligent about his charge, that he haue in memory euery one of them, both old and young, that he consider euery farrow, and shut vp those that be great with pig, that they may farrow in their stie. He must haue special regard of euery young pig, that euery one of them be brought vp vnder his owne damme: for if they get out of the stie, they straightwaies mingle one company with another, wherby the poore Sow is forced to giue milke many times to more Pigs then her owne: and therefore the Swineheard must shut vp euery Dam with her owne Pigs. And if his memory serue not to know them all, let him pitch euery Sow and her Pigs with a seuerall marke: for in a great number it shall behoue him so to doe, for confounding his memorie. The olde Husbands obserued alwaies two times in the yéere for cutting of them, the Spring, and the fall of the leafe, whereby they

A Childe eaten by a Sowe.

auoyded the danger both of the heate and cold. The Boare pigs they cut when they were fire Moneths old, and againe at foure yeere old, to make them fatte, making two wounds, and taking out the stone of euery side: or else when you haue taken out one stone, you must thrust your knife againe into the wound, and cutting asunder the skinne betwixt both the stones, draw out with your fingers the other, so shall you make but one scarre: but this kind of cutting is somewhat more dangerous. The Sowes are spaide by burning the Matrix with an Iron, and the scarre healed vp, whereby they will both haue no more pigges, and be the fatter. Aristotle, and following him Pline, would haue the Sow after two dayes fasting, hanged vp by the fore legges, and so cut, whereby she will be the soner fat: but I iudge it better to cutte them when they be young, at two Moneths old, or younger, for so are they in least leopardie. After they be cut, you must keepe them from drinke, and giue them but little meate: the wound must bee annoynted with fresh Butter, and sowed vp. As the wristling and turning vp of the taile is a signe of a sound Hogge, so be there certaine and assured signes of their sicknesse: for if you plucke off the bristles from the backe, and finde that their roots haue bloud in them, it shewes the Swine is not well. Besides, if your Hogges be sicke, or taken with a Feuer, they hang their heads at one side, and suddenly as they runne abroad, they stay, and being taken with a turning giddinesse, they fall downe: and therefore you must marke well on which side they hang their heads, that you may cut the eare of the contrarie side to let them bloud: and vnder the tayle beside, two inches from the rumpe, you shall strike the vaine, which there is easily to be seene, by the bignesse of it: you must first beate it with a little sticke, and after it swelleth with the beating, open it with your knife, and hauing bled sufficiently, binde it vp with the rinde of Willow or Elme: after this, keepe them vp in the house a day or two, and giue them warme water, with a good quantitie of Barly flowre.

Of diseases in Swine, and the cure.

The Quinsey.

If the Quinsey or Vuula, (to which disease this beast is wonderous subiect) chaunce to take them, Dydimus would haue you let them bloud behinde aboue the shoulders, others vnder their tongue: some againe cure them with settering. If the kernels swell in the throat, you must let them bloud vnder the tongue,

and

and when they haue bled, rubbe their mouthes within with salt, finely beaten, and wheate flowre : Democritus would haue you giue to euery Sowe, three pound waight of the beaten root of Daffadill. If they vomit, and loath their meate, it is good to giue them before they goe abroad, the shauings of Iuorie, fryed with salt, and ground Beanes. Swine while they feede abroad, by reason of their great deuouring (for it is an vnsatiable beast) do wonderously labour with the abundance of the Spleene : for remedie whereof, you shall giue them water as oft as they thirst, in Troughes made of Tamarice, the iuyce of which wood is very holesome for them. Democritus teacheth to giue vnto Hogs that haue the Spleene, the water wherein the Coales of Heath hath beene quenched. This beast hath sometime a sicknesse wherein he pines away, and forsaketh his meate : and if you bring him to the field, he suddenly falleth downe, and lyeth as it were in a dead sleepe : which as soone as you perceiue, you shall shut vp the whole Heard in some house, and make them to fast one day, both from water and meate : the next day, the root of the wilde Cucumber stamped, and strained with water, is giuen them to drink: which as soone as they haue taken, they fall a vomiting, and so purge themselues. When they haue thus expelled their choler, you shall giue them hard Beanes, strained with Wine. An excellent medicine against all Pestilence of Swine, doth Hieronimus Tragus teach, which is; when you see them infected, to giue them the Rootes of Polipodi, or Oke Ferne boyled in Wine, whereby they shall purge whatsoeuer is euill from them, and most of all choler, wherewith Swine are most troubled. The same Hieronimus (as I remember) teacheth for a Horse (though it be without my commission to meddle with them:) If he be sick, and suddenly fall downe of a disease that you know not, to put vnder his tongue a peece of a Ferne root, whereupon you shall see him immediately voyde vpward and downeward whatsoeuer is in his body, and presently amend : this he saith (and truely I dare beleeue him) that he proued with a Horse of his owne. But to my Swine : whereas thirst in Summer is hurtfull and dangerous to all kinde of cattell, to this beast it is most hurtfull : and therefore you must not water them as you doe Sheepe & Goates, but twise, or thrise a day : but if you can, you must keepe them

by

by the water side, that they may goe thereto at pleasure: for the Swine is not content with drinking, but he must often cole and plunge his filthy panch in the water, neither delighteth he in any thing so much, as to wallow in the durt. And if you haue no such place nére, you must draw some water from the Well, and giue it them in Troughs abundantly: for except they drinke their fill, they will fall sicke of the Lungs: which disease is cured (as Columella writeth) by thrusting the Rote of Setter-wort through their eares: Plinie affirmeth the Tode to be a present remedie for the sicknesse of Swine. Some say, that if a Sowe lose one of her eyes, she dyeth sone after; otherwise shée liueth fifténe yéares. There is a kinde of disease amongst Swine (though otherwise they be healthie and fatte) wherein their flesh is all infected with little graines, as bigge as Pease: the Grékes call them Galazos, and we at this day Meazled Swine, which you shall sone perceiue by the sight of the tongue, and the hoarsenesse of their voyce: this disease they say, is naturall vnto them, from which you shall preserue them, if you nayle certaine plates of Lead in the bottome of their Trough. You shall also kéepe them from this disease, if you giue them to drinke the Rote of Briony: the generall and common remedy is Allome, Brimstone, and Bay-berries, of each alike: adde thereunto a handfull of Soote, beate them all together, and put them in a Bagge, which Bagge you shall cast into their water when they drinke, and renew it twise in the yére.

Meazled Swine.

EVPHOR. I pray you Eumeus doe not dissemble, but tell vs truely how you doe to haue your Hogges so fatte, I beléue you are in the Barne sometime when you should not be?

EVMEVS. What means so euer I vse in ordering my flocke, is not to my Maisters losse, no more then is your diligence, whereby you bring your cattell to be so faire. I told you before, that he was an vnthriftie Husband, that had his Bacon from the Shambles, & not of his owne prouision: and besides, my Maisters Phisitians giue great commendations to Hogges flesh, in that it hath such a néreneste and agriement with our bodies, neither is there (as I said before) a beast that makes more dishes. And therefore it is greatly for profit, to haue the Husband-mans Kitchin well stored with Bacon, wherewith he may sustaine his houshold

all

all the whole yéere. You shall easily (though woods be wanting) finde Barnes, Marshes, and Corne-fields to féede them in. They will be fat (as Plinie supposeth) in thréescore dayes, specially if they be kept from meat thrée dayes before you féede them: they are fatted with Barley, Dátes, or other Corne, or Pulse, either given whole, or ground, but of all others, best with Mast: and that flesh is better, and of more substance that is fed with Acornes, then that which is fatted with eyther Béech mast, or Chestnut. This beast will in time be so fat, as he will be able neither to goe, nor stand. Yea Varro tells that there was séene in Arcadia a Sowe so fat, that she was not onely vnable to rise, but suffered a Mouse to make a nest in her body, & to lay her yong there. The same Varro reporteth, that there was sent to Volumius a Senator in Rome, a piece of Porke of two ribs that weighed thrée & twenty pound: the thickenesse of which Sowe from the skinne to the ribbe, was one foote and thrée inches. Your best is to put to fatting your Swine of two or thrée yéeres old: for if they be yonger, their growing will hinder their féeding. To kéepe your Bacon any long time, you must vse great diligence in the salting and drying of it, whereby you shall haue it both the wholesomer, and swéeter, and besides to continue diuers yéeres to serue the turne, if scarsitie happen. Your Hogge being in this sort fatted, you must shut vp, and not suffer him to drinke the day before you kill him, whereby the flesh will be the drier. When you haue thus after his thirst killed him, you shall eyther skald him with water, or with a flame made with strawe, or sticks, syndge him: for the manner of such as flay him, I like not. After that, hanging him vp by the héeles, you shall plucke out his bowels, and put them to dressing: his flesh being colde and hard, you shall lay vpon a table, and cutting out the Head, the Gammon, and the Flétches, pouder them with Salt, thrusting great store thereof in euery place, specially where the bones be: that done, put it into your poudring tubbe, strowing salt enough vnder it: some would haue you salt it in the wane of the Moone. Before you pouder it, you must presse and dry out all the bloud, and the water. Some before they salt it, doe plucke out the bones, thinking it the best way for preseruing it, and to kéepe it longest swét. Others againe doe not straight wayes put it into the poudring tubbe,

but

but doe leaue it vpon a Table for ten daies after, and then hang it vp in a pure ayre, to dry in the larde. And when it hath bëene dryed in the winde certaine dayes, by little and little, they let the smoke come to it, and afterwards more abundantly. The Bacon will be the swëeter, if beside the smoke, the winde may come to it: if you hang it in great smoke at the first, it will be rustie. Dydimus saith, that the Bacon will long continue swëete, if after the dressing, coling, and drying, it be hanged vp in shadowy and moist places, rather toward the North, then toward the South, and that it will be swëeter, if it be couered with snow and chaffe: the Tubbes that you powder in, must be such as haue had Dyle in, rather then those that haue had Vineger. Although I haue before spoken of the worthynesse and antiquitie of Shepheards, and Heardsmen, yet must I here say, that it is in vaine to medle with the ordering and këeping of cattell, except you haue handsome and skilfull men that may take the charge: for the knowledge of këeping of cattell hath a discipline, wherein a man must from his very Childe-hood be brought vp: and surely it is mëete, that the husband, or Bayliffe, haue bëene brought vp, or trayned in all these Trades, and to come by degrëes to his Maisters prize: As from a Swineheard to a Shepheard, from a Shepheard to a Neatheard, &c. And most true it proueth in this that commeth to passe in all other gouernments, that such are best able to take charge of gouernment, that passing by degrëes and offices, haue from being vnder gouernment, come to gouerne themselues: for though (where the flocke is but small, and fëeding not farre off, is brought home euery day) children and young folks are able to serue the turne, yet where the flocks be great, and must bëe kept night and day in Forrests, and wilde fields (as I saide before of the flocks that wintred in Appulia, and summered in the Mountaines of Kiete) hëere I say the Shepheards must both bëe men of lustie age, strength, and diligence, as also skilfull in that belongeth to their office: for neither olde men, nor children, are able to endure the hardnesse of clyming the hilles, nor the sharpnesse of the cold Mountaines, which they must alwayes doe that follow their flocke, specially they that këepe Bullocks and Goats, that delight to fëede vpon Rocks, and Clëeues. You shall sëe on the Mountaines of Swytzerland, great and godly fellowes,

Of Shepheards.

furnished

furnished in warrelike manner to follow their Heards and Flockes, and to lodge in the wilde desarts, farre from the company of men, and there also to make both Butter and Chéese: wherefore such as are méet to take charge in these places, must be light, swift, and well limmed, and not onely well able to follow their flockes, but if néede be to defend them from wilde and rauening beasts, to lift great burdens, to follow the chase, and to be good archers: in fine, such a one as Homer doth make his Eumeus to be. And therefore the olde Husbandmen in hiring of a shepheard, did alwayes couenant among others, that hee should be sound of body and limme, and frée from filching and theft. In Sclauony, the Heardesmen doe vse to haue their Wiues abroad with them, as companions of their iourney to dresse their meate, and such things as they néede: such things as are for the health of his beasts, the shepheard must haue alwayes in a readinesse. Varro would haue him both for this purpose, and for the better order of his reckonings with his Master, to write and reade. Of the number of the Heardsmen, how many euery flocke ought to haue, is to be measured by the Countrie, and kind of the Cattel. The same Varro alloweth for euery fourescore Goates one shepheard, which Atticus alloweth to an hundred, to euery fitie Mares two men: in our Countrey one shepheard sufficeth for an hundred, or two hundred shéepe: yea, many times for thrée hundred, and aboue, specially where they bee euery day brought home. One Swineheard will kéepe twenty, or thirtie Hogges, or more, if the ground be thereafter, the like for Wellockes, and Kine. For Horses we seldome haue Heardsmen, but euery man kéepeth them at home, either in Stables or Pastures, not commonly exceeding the number of twenty. In what order you shall féede your Cattell, either in Summer or in Winter, and when towards the South, and when to the West, I haue told you before.

The Dogge (though the Lawyer alloweth him not in the number of Cattell) and though he yéelds of himselfe no profit, yet is he as the shepheard, for his trustinesse, and watching of the flocke) to be estiémed and set by: for they haue béene séene to fight in the defence and quarrell of their Master. Yea, diuers of them haue béene knowne after their Masters death, vpon great Dogges.

affection and loue, to famish themselues, whereupon the price of good Dogges grew to be very great. It is written, that Alcibiades gaue for one Dogge eightscore pounds. There is not a more necessary creature then the Dogge about Husbandry: for beside his singular faithfulnesse and watching in the night time, he is also a quarter master in keeping of Cattell, and very needfull for the defence of them, specially Sheepe and Goates, which would be sone destroyed by Wolfes, Fores, Crayes, and other vermine, if Dogges were not set to be their keepers. Swine feeding in heards, if the wilde beastes inuade them, making as if were a larum with their grunting, and crying, assemble themselues, in their owne defence. The greater Cattell defend themselues some with their heeles, some with their Hornes, onely the poore Sheepe hath no Souldier but the Dogge. Of Doggers that serue for profit, there are but three sorts: for the fourth (which are but for pleasure) I make no account. One of the sorts is such, as by scent, or swiftnesse, serue for the chase, and killing of wilde beasts: these, what manner of ones they should be, and how they should be ordered, Xenophon and Oppianus, in their Cynigetickes haue taught, and I in my last booke, where I shall speake of hunting, will declare.

But now I will onely speake of Dogges for the husbands, and keepers both of the house and the Cattell: and first of the Mastie that keepeth the house: for this purpose you must prouide you such a one, as hath a large and a mighty body, a great and a shrill voyce, that both with his barking hee may discouer, and with his sight dismay the Theefe, yea, being not seene, with the horror of his voice put him to flight. His stature must neither be long nor short, but well set, his head great, his eyes sharpe, and fiery, either browne or gray, his lippes blackish, neither turning vp, nor hanging too much downe, his mouth blacke and wide, his neather-lawe fat, and comming out of it of either side a fang, appearing more outward then his other teeth, his vpper teeth euen with his neather, not hanging too much ouer, sharpe, and hidden with his lippes, his countenance like a Lion, his breast great, and shaghayrd, his shoulders broad, his legges bigge, his taile short, his feet very great, his disposition must neither be too gentle, nor too curst, that he neither fawne vpon a theefe, nor flee

The Bandogge for the house.

vpon

vpon his friends, very waking, no gadder abroad, nor lauish of his mouth, barking without cause, neither maketh it any matter though he be not swift: for he is but to fight at home, and to giue warning of the enemie.

The Dogge that is for the folde, must neither be so gaunt, nor so swift as the Grayhound, nor so fatte nor heauy as the Masty of the house, but very strong, and able to fight and follow the chase, that hee may be able to beat away the Wolfe or other beasts, and to follow the théefe and recouer the prey, and therefore his body would rather be long then short and thicke: in all other points he must agrée with the Bandog. Touching the kinde, the Dogge is thought better then the Bitch, because of the trouble she bringeth when she is sawte: howbeit, the spayd Bitches doe bite sorest, & are more waking. For their age, they must neither be whelpes, nor too olde: for the whelpe can neither defend himselfe, nor the flocke, whereas yet the old hath some vse about a house. If you haue a whelpe (which age is better to be trained, either for the house or the fold) you shall perceiue by the foot whether he will be great or no. His head must be great, smooth, and full of vaines, his eares great, and hanging, his ioynts long, his forelegs shorter then his hinder, but very straight and great, his clawes wide, his nailes hard, his héele neither fleshy nor too hard, the ridge of his backe not too much appearing, nor crooked, his ribs round and well knit, his shoulder pointes well distant, his buttockes fat, & broad, and in all other parts (as I sayd) of the Bandogge before. For his colour it maketh no great matter, though Varro would haue him white, and so would Columella the Dog for the field, as he would haue the House-dog to be black: but the pyed colour is iudged naught in them both. The white they commend, because he may be discerned from the Wolfe in the night, whereby they shall not strike the Dogge in stead of the Wolfe. The blacke againe, for the house is best commended, because of his terrour to the théefe in the day, and the hurt that he may do by night, by reason of his not being séene: the dunne, the branded, & the red, do not mislike me, so they be well marked beside. Thus must you iudging him as a Lyon, by the claw, eyther buy one, or bring vp one for your purpose. How much teaching or bringing vp preuaileth, appeareth by Lycurgus his example in Xenophon.

The Shepherds Masty.

To make them fierce & curst, you must plucke them by the eares, set them together with your handes, and keepe them from being hurt, so shall you haue them the bolder and the fiercer, and such as will neuer giue it ouer. You must vse him first to the chaine, by tying him to a clogge, letting him drawe it a while by his necke, and when you haue a little space vsed him in this sort, then may you eyther lead him or tie him: it is best to keepe them tyed in the day time, to make them the curster, and to let them loose in the night time: so shall they in the night time watch, and in the day sleepe. To arme them against the Wolfe, or other wilde beastes, you may put broade collors about their Neckes full of Nailes, and iron studdes, lining it with soft leather within. You must loke that your Dogges be of a good kinde, and (if you can) all of one kinde, so shall they sticke the better together: choose them that haue the curstest Dammes, and such as haue their Pappes euen. They begin to litter at a yeere old, and continue nine yeeres, after tenne they be worth nothing.

The Dogge (as Columella saith) gettes Whelpes lustily, till he be tenne yeeres olde: the whelpes of the olde Curres are slow and naught. Homer seemeth to make the life of a Dogge aboue twenty yeeres, where he speaketh of the comming home of Vlisses, and the knowledge of his Dogge: And I my selfe haue seene Dogs that were said to be so much, but altogether vnprofitable. Their age may be knowen by their teeth, the young hauing (as Aristotle saith) white teeth and sharpe: the olde, blacke and blunt. In the Spring they begin to be salute, and goe with Whelpe (as Aristotle and Xenophon saith) threescore dayes, or at the most threescore and three. Varro writeth, that they goe three moneths with young: the Dogs of Lacedemon ingender at eight moneths olde, and all other Dogges also at halfe a yeere: they are with whelpe at once limyng: they litter about June: when they be littered, they are blinde, and the more milke they haue, the longer it is before they see, but neuer longer then one and twenty dayes, nor sooner then seauen dayes. Some holde opinion, that if there bee but one at a litter it will see the ninth day, if two the tenth day, and so a day added for as many as be, and that those that be of the first litter, doe soonest see: the best of the litter is that which last seeth, or which the Witch first carrieth to her Kennell.

As

As sone as they be whelped, cast away such as you mislike: of seauen, keepe three or foure: of three, two: while they be young, at the first they must be suffred to play with the damme, that they may grow the better, afterward, let them be taught, and tied (as I tolde you) tying them in the day, and letting them lose in the night, and such as you know to be of a good kinde, and would haue them proue well, suffer them not to sucke a strange damme: for the milke and bloud of the mother is of great force to the goodnesse and growth of the Whelpe. And if so be the Bitch lacke milke, suckle them with the milke of a Goate, till they be foure moneths olde. Lay vnderneath them in their Kennels Straw and Chaffe, that they may lye warme: for they cannot well away with cold. You must cut the tailes of the Whelpes when they be fire wekes old, in this maner, there is a sinewe that runnes from the ridge of the backe, to the tip of the taile, which being held fast with a pincer, & a little drawne out, you shall cut asunder, whereby neither the taile shall grow to any foule length, nor the Dog shall at any time after (as they say) be mad. They are thought to lift vp the legge when they pisse, at fire moneths olde, which is a signe of the perfectnesse of their strength. The feeding of both kindes is all one, they may be fed with bones, porredge, and such like: in any wise let them want no meat, for if they doe, they will for hunger rauen abroad, and forsake both the house and the flocke. Xenophon would haue you giue them milke all the yere long, and such food as they shall feede with all their life time, and no other thing: if you feed them too full, it will breed (as he saith) diseases in their legs, and rot them within. Bread is their common meat, but Varro would haue it giuen eyther with Milke or Whay, by vse whereof, they will neuer forsake their Cattell. You may giue them beside, bread, with the broth of sodden bones, and the bones themselues brooled, which will make their teeth the sounder, and their mouthes and iawes wider, and they will be the keener, by reason of the sweetnesse of the Marrowe. You must beware they eate no dead Sheepe, lest by reason of the taste, they fall to the liue ones. While the Bitch hath Welpes, you must feed her rather with Barley bread then wheaten bread: for they prosper better with it, and makes them giue more milke. You must feede them thrise a day, in the morning when you tye them

vp, at none, and againe at night, when you let them loose. Their names that you giue them, must be short, that they may sone heare when they be called. The Grékes, and the Latines, gaue them names of two sillables, the Germaines lightly but one sillable, as Ball, Slut, Patch, Grim, &c. Although Columella would not haue their names vnder two sillables, shewing for example the names of Dogges among the Grékes, and the Latines, as σύλαξ, ρόμη, αλκη, λάκὸνς, and Lupa, Tigris, Cerua. Xenophon reckoneth vp thousands, all for the most part of two sillables. The diseases and grieuances of Dogges, are the biting of Flies, Tickes, and Manginesse. Against this you must wash them when they be Whelpes, with bitter Almonds, stamped and strained with water, washing them both about their Eares, and betwixt their Clawes, that neither Flies sticke to them and blister them, nor Tickes, or Lice molest them: and if they be already mangie, you must annoint them with Tarre, and Hoggs-grease: the Tickes also, if you touch them with this medicine, will presently fall off, for you must not plucke them off by force. If your Dogge be full of Fleas, the remedy is Cummin beaten, with a like quantitie of néesing powder, and mingled with water, rub him ouer with it, or the olde dregs of Oyle rubbed ouer all his bodie. If he be scabby, take Cythisus, and Cesamum, beate them together, and mingling them with Tarre, annoint the sore: this medicine will also remedie a Christian creature. They say also, that if you thrust the skin through with an iron, it will heale the manginesse, or if you smeare them ouer with Gunne-pouder, or cast them into a Tanners fatte.

Fit names of Dogs.

Aristotle writeth, that Dogges are chiefely troubled with three diseases, Madnesse, Quinsey, and the Gout, and whatsoeuer he byteth in his madnesse, becommeth also mad, and dieth thereof: the madnesse is most extreame in the Dogge dayes: whatsoeuer is bitten by them, falleth straightwayes into a loathing, and feare of Water. To preserue them from it, you must mingle with their meate for thirtie dayes together, or if they be already infected, giue them néesing pouder to eate. Plinie writeth, that there is in the tongue of Dogges a little worme, called of the Grékes Lyrta, which if it be taken out while they be whelpes, they will neither be madde, nor grédy, nor rauenous. If the

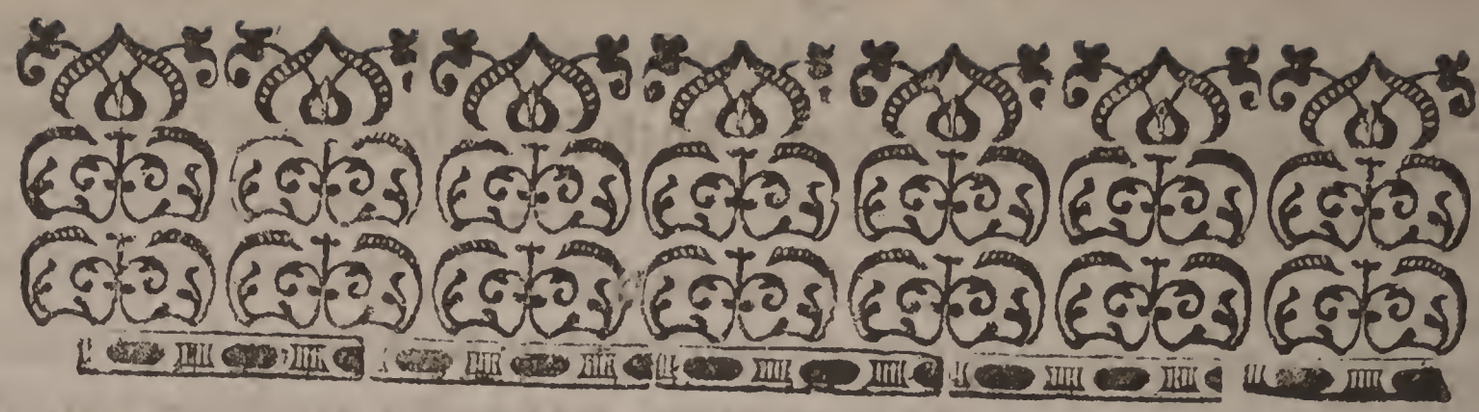
Dogge

Dogge be madde, he refuseth both meate and drinke, and driu- Madde Dogges.
leth ill fauoured fomie matter, both from his nose, and mouth, hee looketh with a loathsome countenance, his body is leane, and more clong together then it was wont to be, he beareth his taile betwixt his legges, and biteth without any barking whatsoeuer he meetes, falling as well vpon men, as beasts, making no difference betwixt his friendes, and strangers. As the Dogge is a watchman and keeper of the house and the flocke, so the Cat is a households seruant to be cherished.

The Egyptians for their profitablenesse, did worship for their Cattes.
God a golden Cat, for whereas Rats and Mise, as well in Cities, as in Granges, are greatly hurtfull, we keepe vp Cattes for the auoyding of the mischieke, neither is there a speedier remedy. The Catte is a beast of nature enemie to the Mouse, watching in the night, and sleeping in the day, stealing suddenly and swiftly vpon the Mouse: she seeth better by night then by day (as Alexander Aphrodiseus writeth) her eyes shine and glister in the darke. They goe a Catterwalling about February, or other times in the yeere (for they often ingender) and bring forth their young ones blinde, as the Bitch doth. Herodotus saith, that after the Catte hath kitned, shee commeth no more at the Bucke, which when hee perceiueth, and cannot haue his purpose, he killeth the young, whereof when she seeth her selfe bereft, for very desire of young (whereof this kinde is most desirous) shee commeth straight to the Bucke. For my part, I would rather counsell you to destroy your Rats and Mise with Traps, Banes or Weesels: for besides the sluttishnesse and loathsomnesse of the Catte (you know what she layes in the Malt heape) she is most dangerous and pernitious among children, as I my selfe haue had good experience.

Soli Deo honor & gloria.

The end of the third Booke.

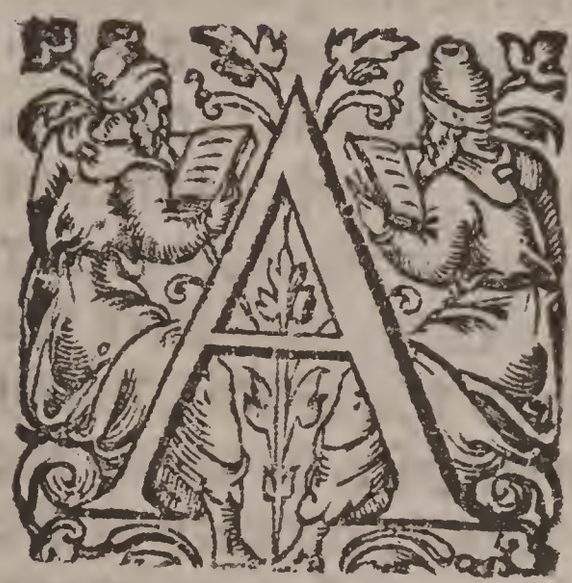


The fourth Booke.

Entreating of Poultrie, Fowle, Fish, and Bees.

PVLLARIVS. CHENOBOSCVS.
MELLISSEVS. PISCINARIVS.

PVLLA.



A kéeping and bréeding of Cattell, doth yéeld no small commoditie and gaines to the husbandman, so the nourishing and maintenance of Poultrie, Fowle, Bées, and Fish (if the Countrie be for it) doth commonly arise to his great aduantage, whereby both the reuenue is greatly encreased, and the table daily with daintie, and no chargeable dishes furnished. Cages, and houses for Birds, wherein were kept all manner and sorts of Fowle, were first deuised by Master Lelius Strabo at Brundisium, from which time it was first put in vse, to pen vp such creatures, as naturally were accustomed to flie at their libertie in the ayre. At which time also began to be brought in strange and outlandish Fowles, the kéeping and bréeding whereof, yéeldeth to the husbandman both pleasure and profit. We haue here brought in Pullarius, Chenoboscus, Mellisseus, and Piscinárius, euery one of them seuerally entreating of such things as belongeth to his charge.

MELLISSEVS. I sée you haue héere (Pullarius) great store of Fowle, and Poultrie, and I beléeue verily, the profit and commoditie of them will not quite halfe the charges they put you to.

PVLLARIVS. Yes verily, they quite our cost, whether

we

wee sell them, or keepe them for the Kitchin. It is sayd, that Auidius Lurco made yearely of his Poultrie, and Fowle, fiue hundred pound.

MELLISSEVS. But I doe a great deale better like the common Poultrie, that we keepe about our houses.

PVLLARIVS. We haue also of the same heere at home with vs.

MEL. Then let me vnderstand (I pray) in what order you keepe them, for herein you seeme to be most skilfull.

PVLLAR. It is meet that euery one be skilfull in that trade that he professeth. If you will, I will not refuse to shew you that little cunning that I haue: so you on the other side vouchsafe to shew me the ordering of your Bees.

MELLISSEVS. I will not sticke with you for that, to tell you the best I can.

PVLLARIVS. Well then, with a good will I declare vnto you my knowledge, beginning first with those kindes that are most in vse: for amongst all other household Poultrie, the chiefe place is due to the Cocke and the Henne, that are beside so common, as the poorest widdow in the Countrie is able to keepe them. In this Bird there are three points of naturall affection chiefly to be wondered at. The first, the great carefulnesse that they haue during the time of their sitting, wherein for the desire of hatching their young, they seeme to be careless of either meate or drinke. Secondly, that they beare such loue to them, that they sticke not to hazard their owne liues in the defence of them. And thirdly, that in the storme, great colde, or sickenesse, they preserue and nourish them vnder their winges, not making for the while any account of their owne selues. There is hereof a sweet comparison in the Gospell, wherein our Sauiour Christ compareth himselfe to the Henne that gathereth her Chickens vnder her winges. And therefore, since these are common for euery man to haue, and that they allwayes feede about the house, I thinke it best to begin with them, and to tell you which are best to be liked, which to be brought vp, and which to be fatted.

The choise of Hennes for brood.

First, the best to be bought for brode, are the dunne, the redde, the yellow, and the blacke, the white are not to be medled with, because they are commonly tender, and prosper not, neither are

are they besides fruitfull, and are alwayes the fairest marke in a Hawke, or a Bussards eye. Let therefore your Henne be of a good colour, hauing a large body, and brest, a great head, with a straight, redde, and dubble combe, white eares and great, her tallons euen. The best kinde (as Columella saith) are such as haue fiue clawes, so that they be free from spurres: for such as weare those Cockish weapons are not good for breede, and disdaine the company of the Cocke, and lay but seldome, and when they sit, with their vnruly spurres they breake their Egges. The little Pullets, or Hennes, though the olde age, both for their vnfruitfulnesse, and other causes disalowed them, yet in many places they proue to be good, and lay many Egges. In England, at this day, they are vsed as a daintie dish at mens tables.

The choise of Cockes.

In the choyse of your Cockes, you must prouide such as will treade lustily, of colours, as I told you for the Hennes, and the like number of tallons, and like in many other points, but of stature they must be higher, carrying their heades straight vp, their Combes must be ruddy and high, not hanging, nor falling downe, their eyes blacke and sharpe, their Bils short and crooked, their eares great and white, their wattels orpent, hauing vnder them as it were, a kinde of grayish beard, the Weake feathers of colours diuers, either a pale, golden, or a glittering greene, which must hang rufling from his Necke to his shoulders, their Breasts must be large, and well brawned, their Wings well feathered and large, their Tailes dubbled and flagging, their rumpes and thighs full of feathers, their legs strong, well armed with sharpe and deadly Spurres: Their disposition (for you shall not néede to haue them great fighters) would be gentle, quicke, and liuely, and specially good wakers, and crowers: for it is a Byrd that well aporcioneth both the night and the day, and (as Prudentius witnesseth) exhorteth to repentance. Neither must you on the other side, haue him a Craddon, for he must sometime stand in the defence of his wife, and his children, and haue stomacke to kill or beat away a Snake, or any such hurtfull vermine: but if he be quarrellous, you shall haue no rule with him for fighting and beating his fellowes, not suffering them to treade, though he haue more then his hands full himselfe. This mischieke you may easily preuent with shackling him with a shoe sole: for although such lusty

fighters

fighters are bredde vp and cherished for the game, yet are they not to serue the Husbandmans turne at home. A Cocke framed and proportioned after this sort, shall haue fiue or sixe Hennes going with him.

MELLISSEVS. I pray you let mée vnderstand what time of the yéere is best for bringing forth of Chickens?

PVLLARIVS. In some places, specially the hottest Countries, the Hennes beginne to lay in January, in colder Countries, eyther in February, or at the latter end of January: you must also further their laying, by giuing them meates for the purpose, as Barley halfe sodde, which maketh both the Egges the fayrer, and causeth them to lay the oftner. Some thinke it good to mingle therewith the leaues, or the séedes of Citysus, which both are thought to be greatly of force in making them fruitfull. If this be not to be had, you may supply the want with Spery, or (as Cardanus saith) with Hempeséede, which will cause them to lay all the Winter.

When they lay, you must sée that their nests be cleane, and kept still with fresh cleane straw: for otherwise they will be full of fleas, and other vermine, which will not suffer the Henne to be quiet, whereby the Egges doe not hatch euen together, or many times ware addle and rotten. The Egs that you set vnder them, must be new layd, howbeit, so they be not aboue tenne dayes olde, it maketh no great matter: if you looke not to them they will straight wayes sit after their first laying, which you must not suffer, for the young Pullets are better for laying then sitting: the desire of sitting is restrained by thrusting a feather through their nose. The old Hennes must rather be suffered to sit then the younger, because of their experience. Herein must you haue a speciall regard to know which be best to sit, for some be better to bring vp Chickins then to sit. Others againe, will breake or eate vp both their owne Egges, and their fellowes Egges: such you must put aside, and if their Nailes and Willes be sharpe, rather imploy them in broding then in sitting. Democritus telleth, that Chickens may be brought forth without setting vnder the Henne, if so be the doung of Hennes sifted very fine, bee put in little bagges, basted about with soft feathers, vpon which the Egges must be laid straight vpright

with

with the sharpe end vpward: vpon these againe must the like quantitie of Hennes doung be laid, so that they be of euery side closely couered. This done, you must suffer them to lie for the two or three first daies, and after, euery day turne them, taking good heed, that you knocke them not one against the other in the turning. After twenty dayes, you shall finde the Egges broken: and therefore the twentieth day, plucking away the shels, and taking out the Chickin, you may commit them to the Henne. It is written, that Chickens haue beene hatched by the continuall warmth of a womans bosome: beside, it hath beene seene that Egges being laid in an Ouen, or a warme place, couered well with strawe and chaffe, hauing a little fire beside, and one to turne them continually, haue disclosed and broken at their accustomed time. Aristotle writeth, that Egges put in warme vessels, or couered with doung, will hatch of themselues. The number of the Egges that your Henne shall sit vpon, some would haue to be odde, and not alwaies alike, but in Januarie, and February fifteene, and no more, in March ninetéene, and no lesse: which number you shall continue all the Summer, till September, or October, after which time it is to no purpose to breede any longer: for the Chickins, by reason of the colde weather, and diseases, neuer prosper. Yea, some be of opinion, that after the tenth, or twelfth of June, you shall neuer haue faire brode, and that the best season for setting, beginneth at the tenth of March. And herein you must alwayes be sure to haue the Moone encreasing, from that she be tenne dayes old, till fifteene: for that is the best time to set in. And so must you againe dispose the time, as the hatching may fall out in the encrease of the Moone: for the iust time of hatching, there are sundry opinions: Aristotle writeth, that they are hatched in ninetéene dayes, Varro (for Chickins) one and twentie daies, or twentie dayes: for Peacockes, and Géese, seauen and twentie dayes, and sometimes more: Duckes, in the like space to the Henne, specially if they sit night and day, allowing them onely the Morning, and the Euening to féede: which times they must of necessitie haue. If so be you will set vnder your Henne Peacockes Egges with her owne, you must set her vpon the Peacockes Egges ten daies before she haue her owne Egges, whereby they shall be hatched all at once, neither must you set aboue

haue Peacockes, or Gose Egges vnder a Henne. If you would haue all Cocke Chickins, you must chose such Egges as be longest and sharpest, as againe (for Hennes) the roundest, (as both Plinie and Columella write) though Aristotle seeme not of that opinion. To vnderstand which be good Egges, which not, you must (as Varro teacheth) put them in water, and such as be nought will swim aloft, and the good goe straight to the bottome. Others doe hold them vp against a Candle, and if they see through them, they iudge them light and nought. You must in no wise shake them, or shogge them, least you breake the strings of life, that are but newly begun: it hath beene seene, that by shaking of the Egs, the Chickins haue beene hatched lame. We may beside perceiue whether the Egges will proue well or no, if foure daies after the Henne haue sitten, you hold them vp in the Sunne, or other light, and if you see that they be cleere, cast them away, and put other in their places. Against thunder, that many times marreth the Egges, some doe set about them the Leaues, or Branches of Bayes, or Bentes, or Grasse, others (againe) the heads of Garlicke, and Nailes of yron. In the great heat of the Summer, you must now and then sprinckle the Egges a little with water, and wet them, least by the extreame heat they ware drie and adle, specially the Egs of Turkies and Hennes. Whensoeuer you meane to make cleane their nests, you must take vp the Egges, and lay them tenderly in some little Basket, & so lay them speedily againe in the cleane nest: neere to the place where the Hen sits, you must set water, & meat, that they may the better keepe their nests, and that by their long absence the Egges ware not cold. And although the Henne doth alwaies turne her Egges, yet it behoueth you when she is from the nest, to turne them softly with your hands, that by receiuing a like warmth, they may the sooner be readie. And if she haue happened to burst any of them with her feete, you must presently remoue them. At the ninetenth day, you must looke diligently whether the Chickins do iobbe the shell with their billes, and hearken whether they peepe: for many times by reason of the hardnesse of the shell they cannot come forth, and therefore you must helpe them out with your hands, and put them to the Henne, and this you must doe no longer then three daies: for the Egges that after one and twentie

To haue Cocke Chickins, or Henne-Chickins.

Against hurt of thunder.

daies

bates make a noise, haue nothing in them, and therefore you must cast them away, that the Henne lose not her labour. Vpon the twentieth day, if you stirre the Egges, you shall heare the Chickin, from that time begin the Feathers, the Chickin lying so, as the head resteth vpon the right foote, and the right wing lieth vpon the head, the yolke vanishing by little and little. You must not take the Chickins away as they be hatcht, but suffer them to remaine one whole day with the Henne in the Nest without meate or drinke, till such time as they be all hatched. It is wonderfull, & yet the experience séene, that before they be suffered to eate, they take no harme, though they fall from a great height. The next day, when all the flocke is come forth, Columella would haue you to put them vnder a Sieue, and to perfume them with the smoke of Peneriall, or to hang them in a Basket in the smoke, which preserueth them (as it is thought) from the pippe, which many times destroyeth the poore Chickin: then must you put them into a Coope with the Henne, and féede them at the first with Barley-meale, sodden in water, and sprinckled with a little Wine. Afterwards, when they goe abroad, you must feele euerie one of them whether there remaine any of the meate they receiued the day before: for if their croppes be not emptie, it betokeneth want of digestion, and therefore you must kéepe them fasting till all be digested. You must not suffer them to go farre from the Henne, but to kéepe them about the Coope, and to féed them til they ware strong with bruised Barly, and Barly meale: you must also take good héede, that they be not breathed vpon, by eyther Toad, Snake, or Euet, for the Ayre of such is so pestilent, as it by & by destroyeth them all: which mischiefe is auoided by burning of Harts horne, Galbanum, or Womans haire, the smoke of all which preuenteth this pestilence. You must sée beside that they lie warme: for they neither can suffer cold, nor too much heat: the feathers about their tailes must be pulled away, least with the hardning of their dung, the passage be stopped, which if it be, you must open softly with a little quill: you must kéepe them with the Henne for a moneths space, and after suffer them to go at liberty. Both the old and young, are of all other diseases most troubled with the pippe, specially about Harueſt time, which is a little white skin, couering the tippe of their tongue, which is to

Against the pippe.

be

be plucked away with the nailes, and the place to be poudred with Ashes, or Garlike poudred & sprinckled vpon it. From this plague you shall preserue them, by feeding them in cleane vessels, and giuing them alwaies the purest, & cleannest water; and keeping their houses alwaies cleane, and smoked, or by smoking them, as they sit, with the smoke chiefly of Bayes, and Sauin. The wiues of the countrie do commonly cure them, by thrusting a Feather through their nose, and stirring it euery day: their diet must be Yearbgrace wrapt in Butter or Garlike, mingled with Meale or Water, or Cloues of Garlike wet in warme Sallet-oyle, and put into their mouthes. Some (saith Columella) doe vse to wash their mouthes with pisse, and keepe their bils so long close, as the Salt and bitter tast force them to cast at their Nose the spring of the disease. Others againe do cut Garlick in gobbets, and putting them in skalding Oyle, after it is cold, doe wash their mouthes. If they happen to eate Lupines, they will straight swell vnder the eyes, which if you doe not gently open, and take out the Core, it presently killeth them. And if so be the Pippe haue now closed vp their eyes, and that they forsake their meate, you must launch their Cheekes with a sharpe knife, and thrust out the water that lieth vnder the eies, and put into the wound Salt finely beaten: this happeneth chiefely when in the Summer time they drinke foule water, and also when they want meat, or take cold. If their eies be sore, you may heale them with the iuice of Purcelane, and Womans milke, annointing on the outside, or with Cummin, Hony, and Salt Armoniacke. You shall rid them of Lice, with parched Cummin, and Stauesacre, a like quantitie of each beaten together, and powred on with Wine: also the water wherein wilde Lupines haue beene sodden. If your Henne fall to eating of her Egges, taking out the white, you must powre in Plaister, of some liquid thing, that may come to a hardnesse in the shell. To keepe them from eating of Grapes, you shall giue them the Berrie of the wood called the wilde-Vine, gathered from the hedge before it be ripe, and sodden with Wheat flower, the euill taste whereof will cause them to loath Grapes. Plinie affirmeth, that if you giue them the flowres of the Vine with their meat, they will not touch the Grape. As in all other cattell of the countrie, so in these kindes the best are to be kept, and the

worst

themselues with laying. In the middest of all Egges, there lyeth as it were, a droppe of bloud, which is supposed to bee the heart of the Bird, which is the first in all the body framed: the body it selfe is wrought of the white: the sustenance is the yolke: the head, while it is in the shell, is bigger then all the body, the eyes shut vp more then the head. While the Chickin increaseth, the white goeth to the midst, and the yolke compasseth round about. The twentieth day (as I said before) if you stirre the Egge, you shall heare the Chickin, from which time the feathers come forth, lying so, as the head resteth vpon the right foote, and the right wing couereth the head. The adle Egges are thought to come of the vaine lust and treading of the Hennes together: some suppose them to be bredde of the winde, and therefore call them Winde Egges, as Aristotle before Plinie hath written. Egges are preserued in Winter, if you keepe them in Chaffe, Strawe, or Leaues: and in Summer, if you couer them with Bran, or Wheate. Some doe couer them before in fine beaten Salt, for the space of fire houres, and after wash them and lay them in Chaffe, Strawe, or Bran. Others againe couer them in Beanes, and some in Beane flowre, and some in heapes of Salt: but Salt, as it suffereth not the Egges to corrupt, so it greatly diminisheth the substance of them. Your Hen Houses must be made in that part of the House, as lyeth in the Winter toward the rising of the Sunne, and ioyning as neere as may bee to some Kill, Oven, or Chimney, or to the Kitchin, so as the smoke may come amongst them: for smoke is very wholsome for this kinde of Fowle. And that was (I thinke) the cause that the old people made choyse in their quitrents of smoke Hennes, as of the best, as it appeareth by old Rentalles. Let the front of your Henne house stand alwayes towards the East, and to that Coast let the dore open. Let the inner romes be well furnished with Lofts, and Ladders, and small Windowes opening Eastward, at which your Poultrie may fly out in the morning, and come into the Roost at night. Loke that you make them close at night, and let the Windowes be well letteised for feare of Vermine. Let your nests and lodgings, both for laying and breeding, be orderly cast: and against euery nest and rosting place, place steppes and bordes to come vp by, making them as rough as

may

Our Wiues of the Countrey, cutting them betwixt the legges, take out their stones, and sowing vp the wound, annoint it with Butter; which done, they shut them vp in a Coope, not suffering them to drinke in a day or two. From the beginning of Harueſt, and all Winter long, the offall of the Corne, and the Barnes dore doth fede them sufficiently: where they plant Vines, sparing other more costly fodes, they fede them with the kernels of the Grapes: and where there is neither the offall of Corne, nor Grapes, they must be fedde with Dates, Spery, or such like. To cause them to lay in Winter, you must giue them (as I told you) Hempesede.

If you would haue great Egges, Leoncus teacheth to beate into powder Bricke, or Flaunders Tile, and mingling it with Chestill and Wine, to make it in Dow, and giue it to your Henne, in to put a Saucerfull of the powder of the Bricke, to a Gallon of Branne, and to fede them with it. The Egges of Pigeons, Geese, Peacocks, and Turkies, be all white: the Egges of Water Fowle be greenish, and pale: the Ginnie Hennes Egges be like the Pehennes in all things, sauing that they be speckled as the Turkie Hens. The Pheasants, and the Kastrils Egges, are reddish. The Egges of all Fowles (as Plinie saith) are of two colours, wherein the Water Fowles Egges, hauing a great deale more yolke then white, and that more blacke then others. The Egges of Fishes, are all of one colour, hauing no white in them. The Egges of Birds are by reason of their heate, brittle: and Serpents Egges, by reason of their coldnesse, tough: Fishes, by meanes of their moysture, soft in laying, the round part of the Egge commeth first out, the Shell being soft, and presently after hard: what forme soeuer they haue, the long are most commended, as witnesseth the Poet. The Egge in fashion framed long, and of them (as I said before) is brought forth the Cocke Chicken, as of the round ones the Henne, though Aristotle be against it. Some Hens doe lay very great Egges, and those most times with two yolkes, hauing the shell deuided as it were with a circle, which both Aristotle writeth, and our experience approueth. Some doe lay double, and hatch double: some are so fruitfull, as they lay great numbers at once, some euery day, some twise a day: some are so fruitfull as they kill

Of Egges.

CHENOBOSCVS. And if you will néedes haue me, I will not refuse to shew you somewhat also of my feathered cattell.

MELLISSEVS. I pray you doe so.

Of Geese. CHENOBOSCVS. Amongst the Fowle that we kéepe about our houses in the Countrey, the second place of right is due to the Gose and the Ducke, which are of the number of those that they call Amphibia, because they liue as well vpon the land, as the water. And because the kéeping of Géese requires no great labour, it is a thing not vnméete for the Husbandman, for that (if hée haue place commodious for it) it is done without any charges, and yéeldeth good aduantage both with their brode and feathers: for beside the profit of their Eggs, you may twise in the yéere, at the Spring, and the fall of the leafe pull them. Moreouer, they are a very good dish for the Table: yea, being more watchfull then the Dogges, they giue warning when they sléepe. And therefore they were with the Romanes had in great honour, because they with their gaggling bewrayed the enemie, that otherwise in the night time had taken the Towne. Plinie writeth of a Gose that would neuer be from the Philosopher Lacydes. Your choyse must be of those that be of the fairest kinde: Varro liketh best the white ones, which colour was most esteémed in the olde time, as appeareth by the presents that were giuen: the same Varro accounteth the gray for a wilde kinde. They are kept in Marshes, Fennes, Lakes, and Moorish Commons: for to Corne ground, Meddowes, and Pastures, it is a very hurtfull Fowle: she biteth whatsoeuer young Spring she may reach, and what she once hath bitten, doth neuer lightly prosper againe: besides, she stencheth the ground with her vnprofitable, or rather most hurtfull dunging: wherefore (as I said) it is best to kéepe them in Fennes, Lakes, and Marshes. If you haue store of such ground, you shall doe well to kéepe them: for you cannot well kéepe them without good store of water and pasture. The Gose delighteth in such meat as is naturally moist & cold, and shunneth naturally such things as are hurtfull for her, as the leafe of the Bay, and (as Alianus writeth) the Oleander: the best and méetest time for them to bréede in, is from the Kalends of March, to the tenth of June. They tread most commonly in the water, while they swim in the Riuers, or Fish-ponds. Columella would haue

you

may bée, that the Hennes may take good hold when they fly vp to them, and not by their ouer-smoothenesse, bée forced to flutter, and hurt their Egges. It shall not be amisse, if you parget the house both within and without with good Plaister, whereby neither Wéezell, nor other hurtfull Vermine may enter in. Wooded Floores are not for Fowle to roost vpon, which almost all kinde of Birds refuse, because of the hurt that they receiue by their dung, which if it cleaue to their féete, bréedeth the Gout. And therefore to rooste vpon, you must make them Pearches, which Columella would, should be made foure-square: but it is better to haue them round, so that they be not too smoothe for them to take hold by. Let the Pearches reach from one side of the wall to the other, so as they stand from the Floore a foote in height, and two foote in distance one from the other: and thus haue you the fashion of your Henne House. The Court where they goe, must be cleane from dung and durtinesse, not hauing water in it, sauing in one place, and that must be verie fayre and cleane: for if it be puddle, or durtie, it bréedeth (as I sayd before) the Pippe. To kéepe their water cleane, you may haue fayre Earthen or Stone Vessels, or Troughs of wood, couered on the toppe, in the which, there must be seuerall holes, so bigge, as the head of the Fowle may easilie enter: for if you should not kéepe them thus couered, the Poultrie would in their drinking defile and poyson it with their dung. Their meate must be giuen them betimes in the morning for straying abroad, and a little before night, that they may come the timelier to their rest. Those that be in the Coope, must (as Columella saith) bée fedde thrise in the day: the others must be vsed to an acquainted voyce, that they may come at the calling. The number must bée well marked: for they soone deceiue their kéeper. Beside, you must haue round about by the walles, good plentie of dust, wherein they may bathe and proyne themselues: for as the Swine delighteth to wallow in durt, so doth this kinde to bathe and tumble in the dust. And this is (I thinke) almost all that is to be said of Pullein.

MELLISSEVS. Yea, but wée must heare something also touching the other sorts of Fowle, that are kept about the house, which peraduenture Chenoboscus can instruct vs of.

her Egges. When your Gozlings are come fozth, you shall foz the first ten dayes feede them with the Gose in the nest. Afterwards, when the weather is faire, you may suffer them to goe abzoad, taking good heede that they be not stinged with Nettles, noz that you let them goe an hungred into the pastures: but to giue them after they goe abzoad the leaues of Endiue, oz Lettuse chopt, to asswage their hunger: foz if you put them an hungred into the field, they straine and bzeake their owne necks, with pulling at the tough and stubbozne weedes, by reason of the sudden starting backe againe of the weede. The Gozlings of diuers bzodes must not goe together, noz be shut vp together, foz hurting one another. When they be foure Moneths old, oz somewhat befoze, is best time foz fatting them: the youngest are sonest, and easiest fatted. If you giue them ground Mault, and Wheate flowze, you neede giue them nothing else, so you let them haue dzinke enough, and keepe them from going abzoad. The Gzeekes did vse to put to two parts of ground Mault, foure parts of Bzan, tempzing it with water, letting them dzinke thzise a day, and at midnight. If you would haue their Liuers soft and tender, you shall mingle dzy Figs, well beaten with water, and making pellets thereof, cram them with it foz the space of seauentene oz twentie daies. The Iewes at this day, being the skilfullest feeders that be, doe vse a strange ozder in the fatting of them, wzapping the Gose in a Linnen Apzon, they hang her vp in a darke place, stopping her eares with Peason, oz some other thing, that by neither hearing, noz seeing of any thing, she be not fozced to struggle, noz cry: after they giue her pellets of ground Malt, oz Bar, leyseeped in water, thzise a day, setting by them water and grauell, by which manner of feeding they make them so fatte, as the Liuer many times commeth to be fiue pound in waight. Whilst I was at the Councell of Wormes, there was a Liuer of a Gose bzought me by a Iew, that waighed foure pound. Plinie is also a witnesse of the greatnesse of the Liuers of fat Geese, affzming, that they will grow after they be out of the bodyes, being spzinckled with milke. The common ozder of fatting with our Countrey people, is to shutte them vp in a darke, and a narrow place, and to set befoze them Barley, oz Beech wheate, giuing them water, with a little sand, oz grauell in their Troughes:

Eating of Geese.

and

you kéepe for euery Gander, thrée Géese, thinking by reason of their vnweldinesse, this number to suffice: within your Court, you must make them for their better safetie, seuerall, and secret pennes, in sundry parts thereof, where they may sit and brède. Some would haue the Gose-roome framed in such order, as euery Gose may haue a place to her selfe: which, if any man thinke too troublesome, he may make one sufficient wide roome to serue them all. The places where they shall lay, must be drie, and well strawed with straw, or such soft matter, and well defended from Vermine. The Gose must not be suffered to lay out of her nest, but when you shall perceiue they séeke it, you must grope them, and if they be with Egge, which you shall easilie féele, then shut them vp in their nests, which you shall not néede to doe aboue once, or twise: for where she hath once layd, she will alwaies of her selfe séeke to be. They will lay (as some hold opinion) thrise in the yéere, if they be not suffered to sit, as it is best you doe not: for their Egges are better to be hatched vnder a Henne, then of themselues, and will better a great deale prosper. The Egges of Géese, and Swannes, were vsed (as Alianus witnesseth) as a most daintie dish at Bankets, among the Kings and Princes of the Indies. Aristotle affirmeth, that the Gose alwaies vseth to sit, and neuer the Gander, contrarie to the order of many other Fowles, continuing alwaies till she haue hatched. After the last laying, you shall suffer them to sit, and marke euery ones Egges with a seuerall marke, that they may be set vnder their owne Gose, for it is thought they will neuer hatch a strangers Egges, without shée haue her owne vnder her. Of Gose Egges, as of Pehennes Egges, you shall (as I said before) neuer set vnder a Henne aboue fiue, nor vnder thrée: but vnder the Gose you shall set at the least seauen, and at the most fiftéene. You must kéepe to lay vnder your Egges, the rootes of Nettles, which they say preserueth them against the stinging of Nettles, which otherwise many times killeth the Gozling, if they sting them. The Egges will not bée hatched if the weather be colde, before the thirtieth day, if it be warme, in lesser time: howbeit for the most part, the Gozling is hatched the thirtieth day after the sitting. Some doe vse to set by the nests Barley steeped in water, or Mault, whereby the Gose shall not be forced to be any while absent from

Their fode must be (as I said) Otes, Barley, Pease, Panicle, Millet, and Sperie, if you haue any store. They lay great store of Egges, wherewith, as with Gose Eggcs, you may well fede your familie. The Egges of Ducks and Gese, are kept in like sort as I told you of Hennes Eggcs: and beside, in Bramne, Wheate, or Ashes. They bréde in the same season that Gese, and other Fowle do, about March & Aprill. And therefore where you kéepe them, you must strawe sticks and strawes for them to make their nests withall. Their Egges must be suffered to be hatched by themselues, or else remoued and set vnder some Hen: for the Ducklings that the Henne hatcheth, are thought to bée gentler and tamer. You must take good héede, that the Egges which they lay, be not eaten and spoyled by Crowes and Pyes, while the Damme is seeking abroad for meate. If so be you haue Riuers and Lakes for the purpose, it is best to let the Dammes bring them vp: for when they be hatched, they will liue very well vpon the water with their Dams, without any charge at all: onely take good héede, that they be defended from Buzards, Kites, Crowes, and other like Vermine: but so you vse them, as they will euery night come home to the house: for it is not good to let them be abroad in the night, for danger of losing them, and making them wilde. Yet hath it béene séene, that such as haue hatched abroad, haue afterwards come home, and brought with them a great number at their tayles. When I was Ambassadour in England, it was told me by men of good credite, that there was in Scotland néere to the Sea certaine trées, that yéerely brought forth a fruit, that falling into the Sea, became a kinde of wilde Ducks, or rather Barnacles, which though it séemed strange to me, yet found I Aristotle a witnesse of the like, who writeth, that the Riuer Hypanus in Scythia, bringeth forth trées, whose leaues being somewhat larger then Maple leaues, whereof commeth a kinde of foure footed Byrdes.

Peacocks. But now to Peacocks, which Birds, being more for pleasure then profit, are néeter to be kept of Noble-men, then of poore Husbands of the Countrey, though Varro writeth, that M. Aufidius Lurco, who first began the fatting of this Fowle, made yéerely of his Peacocks foure hundred pound, whose example numbers following, the price of Peacocks grew to be great, so

much

and with this order they haue them fat in fouretéene dayes. After harueſt, they will be fat with the Grotten, or Stubble. They are plucked (as I ſaid before) twiſe in the yéere; in the Spring, and in the fall of the leafe. Some vſe to clippe them, but then their feathers neuer grow ſo well: but if you pull them, you ſhall haue them to come verie fayre againe: and this is enough for a Goſe.

Ducks and Tealeſ are to be ordered in like manner almoſt as the Goſe, ſauing that they delight more in waters and Mariſhes: and therefore you muſt force ſome Waters, Lakes, or Poles, for them, whereunto they may eaſily goe and ſwimme, and diue at their pleaſure. Columella would haue you haue a Court for the nonce for them, where no Tattell vſe, and néere to the houſe, round about the which you ſhall build for them little handſome Romes, thrée foote ſquare, with prettie dores to euery one of them: which when they bréede, you ſhall kéepe ſhutte. Hard by, you muſt haue either ſome Pond, or Riuer, wherein (as I ſaid) they may ſwimme: for without the helpe of the water they can as euill liue, as without the land. It is good alſo to haue néere vnto them, ſome good Paſture, or Meddow, or to ſet about the Ponds or Riuers, ſuch Herbs as they beſt like; as Clauer, Fenegréeke, Endiue, Lettuſe, and ſuch other as they moſt delight in, and wherewith their young doe well féede: beſide, you muſt giue them Otes, Barley, and other Corne in water. There is nothing that they more loue then Acornes, nor that better fatteth them. They delight wonderfully to bée amongſt Réedes and Sedges, wherein they may lye ſafe from rauenous birds, but ſo, as there grow no great ſtalked wéedes, that may hinder their ſwimming: for they delight greatly to play themſelues in the water, and to ſtriue who can ſwimme faſteſt, when the weather is fayre and warme: for as they loue ſuch places where they may beſt pray vpon the creatures of the water, ſo are they much offended if they be reſtrayned of their libertie in ſwimming. In Winter, when the waters be frozen, you muſt ply them ſometimes with meate. They delight to make their neſts in ſome ſecret Couert, but therein you muſt preuent them, and make their neſts in their owne lodging, or abroad, well couered and cloſed with Wéedes: to which neſt you muſt haue ſome little ſluce, or gutter, by which you may euery day powre in water and meate.

Ducks.

tying the Henne with a long line, that she goe not too far abroad, but that the Chickin may come home in time. After the first moneth, you may giue them Barley, and Bread: and after the seauenth moneth, you may put them to roust in the house with the other, not suffering them to sit vpon the ground, but vpon Perches for taking of cold. And although when they ware great, they chiefely delight to sit vpon the toppes of houses, and be as the Goose is, which are the best watchmen, and also the best warning giuers in the night time: yet is it best for you to vse them to sit vpon Perches, in houses made purposely for them. Columella thinkes it not good to suffer sundry Hennes with their Chickins to feed together, because the Henne after she seeth a bigger then her owne, maketh the lesse account of her own Chickins, and many times by that occasion forsaketh them. The Cocke, by the great lust that he hath to tread, breakes a sunder the Egges that be vnder the Henne, and therefore it is best to haue the Hennes to sit as secretly as may be: they also vse to beat and chase their owne Chickins, till they see them cressed vpon the head, taking them till then, to be none of their owne. One Cocke sufficeth for fiue Hennes, who by too oft treading, doth many times cause that the Egges neuer come to good. In warme countries they begin to tread in February, when setting vp his taile round about him, taking himselfe for no small person, he beginneth to woe, and therefore at this time both the Cocke and the Henne are to be cherished with meates for the purpose to increase their lust, as Beanes tosted a little by the fire, and giuen them warme euery fiue daies in the morning. The quarrellous and troublesome Cockes, must be seuered from their fellowes, for hurting the weaker, and keeping others from treading. The Hennes must be kept so, as they may lay onely in their houses, and euery day groped for her Egges, and heedely looked to, with soft straw laid vnder their Perches: for many times they lay as they sit vpon the Perch. The diseases of this Foule, and the remedies, are almost one with the diseases of the house-Cocke and the Henne spoken of before, that is, the Pippe, and ill digistion. Their greatest danger is when their Coames come first out, for then are they pained, as children are in breeding of teeth.

Diseases.

MELLIS.

much, as their Egges were sold for halfe a crowne a peece, the Peacocks themselues, at foure Nobles a peece. The flesh is very good and delicate, meete for Noble-mens Tables, and will be long kept without corrupting, the Egges also be very pleasant, and good to be eaten. Hortensius they say, was the first that euer killed Peacocke for the Table in Rome, as a new dish at the Priests feast. To this Bird, is ascribed both vnderstanding, and glory: for being praised, he sets vp straight his taile, and (as Plinie eloquently describes it) chiefely against the Sunne, whereby the beautie may more be seene. His taile falling euery yeere with the fall of the leafe, he mourneth, and creepeth in corners till his taile be sprong againe. They goe abroad, as Hennes and Chickins doe without a keeper, and get their owne liuings, they be best kept in little Iliands: for they flie neyther hie, nor farre off. Some thinke it to be a spitefull and enuious Bird, as the Goose to be shamefast, and that he deuoureth his owne dung, because he would haue no man receiue benefit by him. He liueth (as Aristotle saith) fiue and twentie yeeres: he breedeth at three yeeres old, the Cocke hauing his feathers diuers coloured: he hatcheth in thirtie daies, as the Goose doth, and layeth three times in a yeere, if the Egges by taken away, and set vnder a Henne. You must loke that those that you set vnder a Henne, be new laid, and that the Henne from the first of the Moone, be set vpon nine Egges, fiue of the Peacocks, and foure of her owne. The tenth day after she hath sit, take away the Hennes Egges, and put vnder the like number of fresh Hennes Egges. They must be turned, and therefore marked vpon one side. And see that you chose the greatest Henne, for if the Henne be little, you must take the lesser number of Egges, as three Peahens Egges, and fiue Henne Egges. When they be hatched, you must as you doe with the Henne, let them alone: the first day afterwards bring them out, and put them with the damme into a Pen, and feede them at the first with Barley flowre, sprinkled with water, or pappe made of any other Corne, and cooled. A few daies after, giue them beside this, chopped Lookes, and Curds, or fresh Cheese, the Whey well wrong out: for Whey is thought to be very hurtfull for the Chickins. After they be a moneth old, you may let them goe in the field, and follow the Henne,

tying

March, or sooner. In hot Countries they lay great numbers of Egges, if they be continually taken from them, and set vnder Hennes, and if so be you take them not away, they begin to sit at the first: for they be of all others most giuen to sitting, and so much, that if you take away all their Egs, they will sit vpon a stone, or many times the bare Nest. You must therefore restraine them of this desire, either thrusting a feather through their nose (as I told you before) or by wetting their bellies with cold water. You must set vnder their Egges as (I taught you before) in the Peacocke: for they haue both one time of hatching. The keeper must marke the one side of the Egges, and alwaies turne them, sprinckling them now and then gently with faire water, and take heed the Cocke come not at them, for he will breake them as well as the Peacocke: for the Cocke of this kinde, is a froward and mischieuous Bird. The Chickens being hatched vnder a Henne, may be kept with the Hennes Chickens, or else very well alone with the Henne, growing faster a great deale then the Peachicke. You shall feed them in like sort as you doe the Peacocke, or other Poultrie: for they will eate any thing, and delight in Grasse, Weedes, Grauell, and Sand. And because they cannot away with cold, nor wet, you must keepe them in Winter, in the warmest and driest places you haue. The Pearches whereon they vse to sit, must not bee high, but an eyght or tenne foot from the ground, neither be they able to flie any great height, and therefore must be holpen with Lathers, or steppes. The greatest disease that they are subiect vnto, is the Pippe, and the Squecke, which must be holpen in like sort as the Hennes, and the Egges kept after the same manner. In some places they vse to make Capons of them when they be young, which are serued as a daintie dish to the Table, as was much vsed in the house of that godly and vertuous Semproma, the Ladie Hales of Kent, who was first the wife of Sir Water Mauntill, of Northamptonshire, a woman in whom all vertues and bounties in her life time florished.

Lady *Hales*, a mirrour of Gentlewomen.

MELLISSEVS. I well remember that Lady, and haue heard her highly commended of such as in her life time best knew her, for a number of gracious and godly gifts that were in her, as her speciall loue and delight in God, and in his seruice, her helpe-

full

Turkie Cockes.

MELLISSEVS. I would faine learne the right ordring of their outlandish Birds, called Ginny-Cocks, and Turky-Cocks.

CHENOBOSCVS. This kinde of Poultrie wee haue not long had amongst vs: for before the yeere of our Lord 1530. they were not seene with vs, nor I beleeue knowne to the old writers. Some haue supposed them to be a kinde of the Birds, called in the old time Meleagrides, because of their blewish Coames: but these kinds haue no Coames, but onely wattels. Others againe reckon them for a kinde of Peacockes, because they doe in treading time after the same sort, spread and set vp their tailes, bragging and banting themselues: howbeit they neyther resemble these in all points. But because this kinde of Fowle, both for their rarenesse, and also the greatnesse of their bodie, is at this day kept in great flockes, it shall not be much amisse to speake of them: for in daintinesse and goodnesse of meate, the Hennes may compare with eyther the Goose, or the Peahen, and the Cocke farre excell them. The colour of their feathers, is for the most part white, blacke, or pied white and backe, some blew and blacke. Their feete are like vnto the Peacockes, their taile short, but spread, and borne vp after the Peacockes guise, specially when they tread. The heads and the neckes of them, are naked without feathers, couered with a wrinckled skinne, in manner of a Cowle, or a Hoode, which hanging ouer their billes, the draw vp, or let fall at their pleasures. The Cocke hath the greater wattels vnder his chinne, and on his breast a tuft of haire. The colour of that wrinckled skinne about his head (which hangeth ouer his bill, and about his necke, all swelling as it were with little blathers) he changeth from time to time like the Camælion, to all colours of the Rainebow, sometimes white, sometimes red, sometimes blew, sometimes yellow, which colours euer altering, the Bird appeareth as it were a miracle of Nature. The dieting and keeping of them, is almost all one with the Peacocke, sauing that this Bird can worse away with cold and wet. It is a Bird wonderfully giuen to breeding, euery Cocke must as the Peacocke, haue foure or fiue Hennes with him: they are more forward in breeding then the Peacocke, beginning eyther the first yeere, or at the farthest at two yeere old; they begine to lay in

March,

March, or sooner. In hot Countries they lay great numbers of Egges, if they be continually taken from them, and set vnder Hennes, and if so be you take them not away, they begin to sit at the first: for they be of all others most giuen to sitting, and so much, that if you take away all their Egs, they will sit vpon a stone, or many times the bare Nest. You must therefore restraine them of this desire, either thrusting a feather through their nose (as I told you before) or by wetting their bellies with cold water. You must set vnder their Egges as (I taught you before) in the Peacocke: for they haue both one time of hatching. The keeper must marke the one side of the Egges, and alwaies turne them, sprinckling them now and then gently with faire water, and take heed the Cocke come not at them, for he will breake them as well as the Peacocke: for the Cocke of this kinde, is a froward and mischieuous Bird. The Chickens being hatched vnder a Henne, may be kept with the Hennes Chickens, or else very well alone with the Henne, growing faster a great deale then the Peachicke. You shall feed them in like sort as you doe the Peacocke, or other Poultrie: for they will eate any thing, and delight in Grasse, Weedes, Grauell, and Sand. And because they cannot away with cold, nor wet, you must keepe them in Winter, in the warmest and driest places you haue. The Pearches whereon they vse to sit, must not bee high, but an eyght or tenne foot from the ground, neither be they able to flie any great height, and therefore must be holpen with Lathers, or steppes. The greatest disease that they are subiect vnto, is the Pippe, and the Squecke, which must be holpen in like sort as the Hennes, and the Egges kept after the same manner. In some places they vse to make Capons of them when they be young, which are serued as a daintie dish to the Table, as was much vsed in the house of that godly and vertuous Semproma, the Ladie Hales of Kent, who was first the wife of Sir Water Mauntill, of Northamptonshire, a woman in whom all vertues and bounties in her life time florished.

Lady *Hales*, a mirrour of Gentlewomen.

MELLISSEVS. I well remember that Lady, and haue heard her highly commended of such as in her life time best knew her, for a number of gracious and godly gifts that were in her, as her speciall loue and delight in God, and in his seruice, her helpe-

full

full hand and comfort to such as were poore, and distressed, as well in relieuing them with meate and money, as with healing diseases, and curing a number of loathsome, and almost incurable vlcers, and wounds, her milde and sweete disposition, her great humilitie and carelesnesse of the vaine world, and other such vertues, I would to Christ that all other Gentlewomen, that professe Christ outwardly were as well giuen to follow him in deed, as she was vnfainedly.

CHENOBOSCVS. She was a very Phenix and Paragon of all the Gentlewomen that euer I knew, neyther am I sure I shall euer see the like: but shee happily resteth with him, whom in her life time she so earnestly serued. If you be not weary, I will returne to my Fowle, and shew you the best order for keeping and maintaining of Pigeons.

PVLLARIVS. I thinke both MELLESSEVS, and PISCINARIVS would gladly heare you tell vs something of this, as I my selfe most willingly also would.

CHENOBOSCVS. Though you PVLLARIVS are better able to speake hereof then I am, yet because of my profession, I will not refuse to take it vpon mee. Whatsoeuer he be, that giues himselfe to the trade of Husbandry, it behoueth specially to haue a care for breeding of Pigeons, as well for the great commoditie they yeeld to the Kitchin, as for the profit and yeerely reuenewe that they yeeld (if there be good store of Corne fields) in the Market. Varro writeth, that in his time a payre of Pigeons were sold for 1000. H. S. And that Lucius Axius, a Knight of Rome, before the ciuill warres betwixt Cæsar and Pompey, sold his Pigeons at tenne pound the payre: so much was that time giuen to wantonnesse, and gluttony, yea, at this day in our time, hath beene seene giuen for a payre of Pigeons tenne pound Flemish. And therefore the Douehouses are commonly built with great cost, and beautie, in the toppes of turrets and houses, from whence by narrow grated windowes they flie abroad to their feeding. Pigeons (if the countrey be for them) are fed and maintained with little cost, feeding themselues all the yeere long with such meate as they finde abroad, except at such time as the ground is couered with Snow, when as you must of necessitie helpe them with a little Pigeons.

meate.

meat. There is two sorts of them, one wilde kinde, that is brought vp in Doue-houses, and of colour, eyther blewish, white, speckled, or dunne: howbeit, the white is not good to be kept, because they be sonest destroyed with vermine. In Italy there are of this sort, as bigge againe as ours, and are now common in Flaunders. Another sort is more familiar and tame, and something more large of bodie, with rough feete, and commonly of colour white, and sometime speckled and yellowish: this kinde is commonly kept in Cities and Townes, where the others cannot be kept, and is fed with meat at home, & because they are euer in danger of vermine, and rauening Birds, they are still kept within doores, and alwaies fed at home. This kinde the common people call tame Pigeons, or moneth Pigeons, because they breede euery moneth, saue in the dead of Winter. Both these sorts are wonderous fruitfull, breeding commonly eight times a yeere (if the kinde be good) yea sometimes tenne, and eleuen times: for in Egypt (as Aristotle telleth) they breede all the Winter long. And though Hennes are more fruitfull in laying of Egges, yet Pigeons are more profitable by often bringing forth young: and therefore you must prouide you such breeders, whose bodies be great and faire, not too old, nor too young, of a good and perfect colour, and a fruitfull kinde. It behoueth him that will begin a Doue-house, not to begin with the young and little ones, but with the breeders, and to buy so many Cockes, as he doth Hennes, and to keepe them if he can, matched together of one Nest: for if they be so matched, they will breede a great deale better. They bring forth commonly a Cocke and a Henne together (as Aristotle writeth) and our experience sheweth it. In March they begin to breede, if the weather be warme, before. There is no Bird fruitfuller then the Pigeon, and in fortie daies she conceiueth, layeth, and sitteth, and brings vp, and that for the most part all the yeere, except (as I haue said before) in Winter. She layeth two Egges, and when shee hath layed the first, which is a Cocke, the next she layeth, which is a Henne, the third neuer lightly commeth to good. Both the kindes doe alwaies sit, the Cocke in the day, the Henne in the night, they hatch in twentie daies, they lay after fiue treadings. In Summer they sometimes bring forth in two

monethes three paire: For vpon the nineteenth day they hatch, and presently conceiue againe. And therefore you shall often finde among the yong Pigeons, Egges some readie to hatch, and some flying: if there be no Cockes, the Hennes will tread one another, but the Egges neuer come to good, but are winde Egges: Aristotle and Theodotus calleth them water Egges, whereof there neuer commeth any thing, and because the young ones will breede at fiue moneths old, we suffer the first flight to flie, to increase the breede: as being hatched in March, will breede againe in July, or August. Those that we meane to take for the Kitchin, or the Market, are best to be drawne at the latter time of the yeere, when they are worst able to defend themselues from the cold, and from Buzzards, and Crowes: the best for brood among all Fowles, is the March brode. They that meane to fat Pigeons to sell them the dearer, doe seuer them when they be newly feathered, and feede them with chawed white Bread twise a day in Winter, and thrise in Summer: and such as be now hard pend, they leaue in the Nest, plucking the feathers of their wings, and breaking their legs, that they remoue not from their places, giuing the dammes good plenty of meate, that they may better feede themselues, and their young. Some (as Gellius writeth) doe softly tye their legs, for if they should breake them, they thinke the paine would keepe them from fatting: but this tying doth little good, for while they struggle to get themselues loose, the labour will keepe them from being fat: but their legs being broken, the paine will not remaine aboue two daies, or three at the vttermost, and will keepe them that they shall neuer stray from their places. Some vse onely to pinion them, but so fal they many times out, and become a prey to Vermine: and therefore it is good to bring them to the Kitchin, before they be full ripe. The vnfruitfull and naughtie coloured, and the otherwise faultie, ought chiefely to be fatted, and must be crammed in such sort, as you cramme Capons. Doue-houses, or places for Pigeons, to builde in, are made after diuers manners: for the tame Pigeons, and such as are fed at home, they make in the highest parts of their Houses lying toward the South, certaine hollow Roomes, and Celles for them, such as PVLLARIVS hath described of his Pullein: and if

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the place doe not so serue, driuing in certaine Pinnes into the wall, they lay vpon them frames of bords, with partitions in them, or earthen pots to bréed in, letting certaine Ledges runne from hole to hole, that they may the better come to their Nests, and walke vp and downe in the Sunne. But the houses for the other wilder kinde, because they containe great numbers, are built after a more hansomer order, although vnder the Eues of houses, and in steeples of Churches, you shall haue thousands bréeding. Varro appoints the Douehouse to be built in this sort: a Tower adioyning to the house, and well lofted and séeled aboue, with one little dore in it, and foure windowes, answering the foure quarters of the Heauen, which windowes must be well grated, so as they may giue light enough, and keepe out vermine. All the walles within must be faire white limed, for with this colour is the Pigeon wonderfully delighted: besides it must be well pargetted and plaistred without, specially about the windowes, so as neither Mouse, Wésell, nor other Vermine may enter: the windowes must be so placed, as they may let in the Sunne all the Winter, hauing a hole of sufficient widenesse ouer against them, well netted and tunnelled, in such sort as the Pigeons may easily flie out and in at, and yet not suffer any hatefull Bird to enter: for the Pigeon taketh great delight in flying now and then abroad, where after she hath recreated her selfe, she commeth with ioy to her nest againe: as on the other side she mourneth, if she be restrained of her liberty. Round about the wals within you must haue little round holes, from the top to the bottome, wherein they may bréed: Varro would haue them thrée handfuls in length, and ledged from hole to hole for them to walke vpon. Some thinke it best to make your holes of Lome, or Lime and not of Bricke and Stone, as may do, because of the warmth. There be some that builde their Douehouses vpon pillers in the midst of some Pond, or great water, both because they delight in water, and because they will haue them safe from vermine. The meat that they most delight in, is Tares, wilde Fetch, Pease, Wheat, Millet: where these be not, you may giue them Spery, specially in Winter Rape séed, and Cockle: for by gathering and pecking vp these little séeds, they get themselues a heat in cold weather. When you giue them meat, you must throw it hard by

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the walles: for that part is commonly cleanest from dung. And though Varro bids you to sweepe and make cleane your Doue-houses continually, & that the dung is good and profitable for the land, yet seeing this kinde of fowle doth delight in places sprinkled with their owne dung, you shall not neede to be carefull in cleansing of it. Looke well that they be not fraid, or disquieted with Gunnes, or noise of people, or other like, specially when they sit: if you haue occasion to goe into the house, see that you doe it about none time, when they be abroad a feeding, and be sure to knocke wel before you come in. Some say, that it will cause them to loue the house, and allure others to come thither, if you sprinkle them with Cummin before they goe to feeding, or perfume the house with Sage, and Frankensence. Some haue another experience for this purpose, and that is Potsherds beaten small and searced, mingled with the hearbe Coast, and good old Wine, and giuen vnto them. Others take Barly flowre, sodden with drie Figs, and a part of Hony. Cardan teacheth this, as the best for this purpose, of Barly or Millet, of Cummin, of Coast, of Agnus Castus, of Hony, of old Lome, or Morter, of good Muskadel, boile them all together, and make a stone of them to be set in the middest of a house. Tragus teacheth to take the rootes of the Thistell, and to boile them with the pickle of Hearings. Constantine out of Didymus, writeth of diuers other things for this purpose, which who so will, may trie. Looke well that they be not destroyed by the Hawke, or Buzzard: the Hawke is a speciall enemie to this Bird, whose taking, Varro teacheth you in this manner: to lay a Pigeon vpon the ground, and to sticke, bending closely ouer her, a couple of Lime rods. There is a kinde of Hawke, that naturally is terrible to other Hawkes, and preseruetb the Pigeon: the common people call it Castrell. Columella affirmeth, that if you take the young Castrels, and preserue them euery one in earthen vessels well couered and plastered all ouer, and hang them in the corners of the Doue-house, it makes the Pigeon haue such a loue to the house, as they will neuer forsake it. They haue many other aduersaries, Crowes, Dawes, and Owles, which all destroy the Pigeons, specially when they breed. I found of late in mine owne Doue-house, an Owle sitting solemnly in the Nest vpon her Egges in the middest of all the Pigeons, and hard by

the house of an old hollow tree, I found peeces of young Pigeons, that the Owles had brought to feede their young with: and though the Owle seeme to be greater then the Pigeon, by reason of the thicknesse of her feathers, yet will they creepe in at as little a place as the Pigeon will: so small and little is their bodies, though they be bombased with Feathers. Againe, Weasels, Stotes, & such like. Palladius would haue you hedge the Doue-house about with sharpe prickly branches void of leaues, as Gorse, Briers, and such like, as they dare not passe through for pricking. Dydimus and others, do bid you hang great branches of Rue all about the house, specially at the entrance of the doore, or to put wilde Rue vnder their wings, or to sprinckle them with Rue: for this hearbe (as they say) hath a speciall force against such hurtfull vermine. Some say, that if a Wolfes head be hanged in the Doue-house, it will driue away all hurtfull vermine.

MELLISSEVS. We haue heard enough of Pigeons, I pray you proceed with such other Birds as you keepe in the countrey. Keepe you any Fesants here?

Fesants. CHENOBOSCVS. This kinde of Birds (though they be verie seldome kept among the countrey people) yet of many curious and fine fellowes, for their rareneſse and daintineſse, they are brought vp and kept. And because they benefit the keeper, and profit the Husband, (if the soyle and countrey be for them) the old writers haue placed the keeping of them, within the compasse of husbandrie. Palladius teacheth, that you must prouide such as be young and lustie, that were of the last yeeres bringing forth: for the old ones be neuer fruitfull. One Cocke is sufficient for two Hennes: they breede once a yeere, and lay to the number of twentie Egges, beginning in Aprill, and somewhere in March, but they are better to be brought vp vnder a Henne: so as you set vnder one Henne fifteene Egges, obseruing the time of the Moone, and the number of the daies, as I told you before of the Henne. The thirtieth day they come forth: for the first fifteene daies you must feed them with Barly-floure tenderly sod, and cooled, vpon which you must sprinckle a little Wine. After you shall giue them Wheate, Grashoppers and Antes Egges: let them not come neere the Water for catching the Pippe, which if they chance to haue, you shall

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rubbe their billes with Garlicke, stamped together with Tarre. They are fatted in thirtie dayes, with Wheat-floure, or Barly-floure made in Pellets, the Pellets must bee sprinkled a little with oyle, and so put into their throates: you must take héede you put it not vnder their tongues, for you doe, you kill them: neither must you giue them any meate till you perceiue the first be digested.

PVLLARIVS. What say you to Turtle Doues, these are also brought vp and kept in some Countries.

CHENEBOS. Columella affirmeth, that Turtles will neuer lay, nor bring forth in the house, nor Partridges: and therefore they vsed to take them wilde when they were ful ripe, and to féede and fat them in little darke roomes like Pigeons holes: the olde ones be not so good, as neither the Pigeon is. In Winter you shall hardly haue them fat, in Sommer they will fat of themselues, so they may haue plenty of Wheat and Corne: the water must be very cleare and fresh that you giue them. They hold opinion, that the Turtle after he hath lost his mate, continueth euer after solitary. But because there is greater store of Thrushes and Blackbirds, we care the lesse for kéeping of Turtles. Though Thrushes and Blackebirds bee kept in diuers places: yet as Plinie saith, there is in no place greater companie, then is taken in the Winter time in Germany: that they were vsed for great daintiies, appeares by Horace: Turtles. Thrushes and Blackbirds.

No daintier dish then is the thrush,
Nor sweeter then the Trype.

They are commonly dressed whole, and not drawne, for their inward partes may well be eaten, so they be new: their Crops are commonly full of Juniper Berries: Master Varro writeth, that Thrushes were were in his time at twelue pence a péece. Where they vse to kéepe them, they also put as many as they take wilde among the others that they brought vp before, by whose company and fellowship they passe away the sorrow of their prisonment, and fall to their féeding: for you must alwayes haue olde fellowes for the purpose, by whose example they may learne both to eate & drinke. They must haue warme houses, as your Pigeons haue, crossed through with small Pearches: for after they haue flown about, or haue fed, they desire to rest.

The Perches must be no higher then a mans height, so as you may easily reach them standing vpon your feete. The meate must be cast in such places of the house, as lye not vnder the Pearches, for filling of it. Columella and Palladius write, that vnripe Figges beaten and mingled with Wheate-flowre must be giuen them, that they may eate thereof their filles. Aristotle maketh many kinds of them, among which hee also putteth the Colmons, that feede vpon Grapes. Our Thrushes doe feede for the most part vpon Juniper berries, which their Croppes being opened (as I said) doe shew. They vse also in many places to keepe Quailes, which is rather a Bird of the Earth, then of the Ayre (as Plinie saith) but because they feede vpon Elebor, and venemous seedes, and beside are vexed with the falling sicknesse, many doe meruaile (as Athenæus writeth) why they be so greatly esteemed. They say their young must be fedde with Antes, and Emets Egges, as the Partridge. It is thought, that he flieth ouer into other Countries in the Winter time, as the Crane, and the Storke doth, following for the guide their oldest Quaile, called the mother Quaile.

Quailes.

PVLLARIVS. You haue gotten one noble and goodly fowle, that is vsed to be brought vp in the husbandmans Ponds, Lakes, and Riuers, I meane the Swanne.

The Swanne.

CHENOBOSCVS. You say true: for this Bird is commonly brought vp in the Low-Countries, and kept in great numbers in Lincolne-shire, a Countrey replenished with Gentlemen of good houses, and good house-keepers. And Athenæus alledging the authoritie of Aristotle, accounteth this Fowle to be very fruitfull, and of great stomacke, so much, as it is thought they dare giue battaile to the Eagle. They are bred and kept (as you well say) in Lakes, Riuers, and Fish-ponds, without any charge at all, and doe great good in the Riuers by plucking vp the weeds, and other annoyances: for the excellency of his downe, and daintinesse of his flesh, he is greatly esteemed. There is one excellent kinde of them, that taketh his name of the good watch that hee keepeth, and is alwaies cherished and kept in the Ditch of Cities, and fortresses, for his great faithfulnesse in giuing warning. They be kept almost in

like

like manner as Géese are, but that they vse to sit longer, sitting a whole moneth or there abouts: they bring forth seldome aboue eight, and so many did my Swannes bring me, and sometime fiue. They make their Nests hard by the water, of Sedges, Wéeds, and like stuffe; their young ones they carry straight into the riuers. If the Lakes and Streames be frozen in Winter, you must house them. This Bird is counted among such as liue longest, fore-shewing her owne death, as Plato and Martial witnesse, with a swéet and lamentable song. Thus much concerning my profession I haue told, I trust you that be my friends, will take it in good part, and now PISCINARIVS I resigne my place to you, to whose turne it is come.

PISCINARIVS. It falleth out in good order, that from talking of Winter Fowles we should come to entreat of Fish-ponds, and Fish: although I doe meane to entreat largelier both of kéeping and taking of Fishes in my Halienticks, but because the husbands house, both for watering of cattell, and other vses, cannot be without Ponds, and Lakes, and that euery house is not so seated, as it hath earable ground about it, it is lawful for the husband to make his best aduantage of his Ponds, and Waters. The Noble-men and Gentle-men of Rome, were wont to build about their Houses faire Fish-ponds, and many times satisfied herein their pleasure, with exceeding cost and expences, as M. Varro writeth of the sumptuous and costly Fish-ponds of Hortensius, Hircius, and Lucullus. M. Cato, when he had the wardship of Lucullus, made foure hundred pound of the Fish in his Pond. The same Varro maketh mention of two sorts of Fish-ponds, the one of swéete water, the other of salt, the one amongst the common people, where the Springs féede them, and of great profit, the other néere to the Sea, where Neptune doth yéeld them both store of Water and Fish: for examples, may serue the Fish-ponds of Hortensius, which rather pleased the eye, then the Purse. The best making of Ponds, is eyther by the Sea, as Lucullus, who to let in the Sea into his Ponds, made a passage through the middest of a great hill, whereby he thought himselfe as great a Lord of Fish, as Neptune himselfe: or else to haue them from some great streame or Riuer, that may bring in both Water and Fish, which by Flood or

Of Fish-ponds.

Sluse, may let in alwaies fresh water, not suffering the old to corrupt, but alway refreshing it, and bringing more Fish. The next in goodnesse, are those that are fed with pipes or secret passages vnder the ground, and may be let out againe by Sluses, which Sluses must so be made, as when you lift, you may let the water into your Meadowes, to make them more fruitfull, as is to be seene in the Countries of the Switzers, and Heluetians, and in many other places. And therefore the waters (as I said) must be well inclosed with good Bayes, Bankes, and Walles, that they may be able to abide the rage of the floods, and the water. The worst and last kinde, is such as are made in Lakes, standing Poles, or raine waters. These kinde of Ponds, though they be the worst, by reason of their vncleane stinking and corrupt water, yet where there is no better, are to be made account of: for though they be not the wholesomest for keeping of Fish, yet they yeld some commoditie, and are most necessary about the house, eyther for watering of Cattell, keeping of Geese and Duckes, and washing, and other like vses: but if so be you can make them eyther by the Sea, or nere some great River, so as the water may be let in and out at your pleasure: and whensoeuer you open the Sluses, to let out the water. Be sure that you haue them well grated, that the Fish can by no meanes passe through, and let the passage, if the place will suffer it, be made on euery side of the Pond: for the old water will best void, whensoeuer the streame bends, if the currant lye against it. These Sluses or Passages, you must make at the bottome of the Ponds, if the place will so serue, that laying your leuell with the bottome of the Pond, you may discerne the Sea, or River, to lye seauen foote higher: for this Columella thinkes, will be a sufficient leuell for your Pond, and water enough for your Fish. Howbeit, there is no doubt, the deeper the water comes from the Sea, the cooler it is, wherein the Fishes most delight. And if so be the place where you meane to make your Pond lye leuell with the brim of the Sea, or the River, you must digge it nine foote deepe, and lay your Currant within two foote of the toppe, and so order it as the water come in abundantly: for the old water lying vnder the leuell of the Sea, will not out againe, except a greater rage come in: but for the Pond that is

subject

subiect to the floud and ebbe, it is enough if it be but two foote deepe. In the bankes and sides of these Ponds, you must haue Bushes and Creeke-holes for the Fish to hide them in from the heat of the Sunne: besides, old hollow trees, and rootes of trees are pleasant and delightfull harbours for Fish. And if you can handsomely conuey them, it is best to bring from the Sea, little Rockes, with the Weeds and all vpon them, and to place them in the middest of your Ponds, and to make a young Sea of them, that the Fish may scarsely know of their imprisonment. About Turwan in France, and in other places, you shall finde in Loughes and Kayne-water, euen in the Wildernesse and Heathes, great abundance of Fish. In diuers places of the low Countries, where they haue their Ponds fed with the Riuer, which they may shut out at their pleasure, they so order them, as they be eyther enuironed, or deuided with deeper ditches, wherein the Fish doth liue in the Summer time: and the rest of the ground betwixt the ditches, the water being voided and kept out by Sluses and Bankes, is sowed with Summer Corne, and after Harueſt, the water let in againe, whereby the ground being wonderously enriched, doth yeeld great Croppes of Barly and Summer corne, and (as the Poet saith) for the land, so may be said for the water, Not euery ground for euery seed, but regard must be had, what for euery one is meet. The Romanes keepe in their Ponds Lampreies, Dysters, Luces, Mullets, Lamporns, Guylthéeddes, and all other Fish besides, that are vsed to be kept in fresh waters. Ponds for Dysters, were first deuised by Sergius Orata, at the Baynes, about the time of L. Crassus the Orator, before the Battaile of Marsie, not so much for delicatie, as for the commoditie and gaine. Cockles, and Mussles, were kept in Ponds by Fuluius Hirpenus. Moreouer, diuers Fishes delight in diuers places. The best Pikes and Luces were thought to be in the Riuer of Tyber, betwixt the two bridges: the Turbotes, at Rauenna: the Lampreyes in Cycill: so Riuers, Lakes, Pooles, and Seas, in some places haue better Fish, then in others. But to returne to my Fish-ponds from whence I came, neyther may all sorts of Fishes be kept in euery one, for some sorts are graueilers, delighting onely in Graueily, Stony, and Sandy waters, as Peanowes, Gudgins, Bulheads,

Ruffes, Trouts, Perches, Lampzons, Creuilles, Barbils, and Cheuins. Others delight againe in Muddie places, seeking euer to lie hid in the Mud, as the Tench, the Eele, the Breame, the Carpe, and such others. Some againe delight in both, as the Pike, the Luce, the Carpe, the Breame, the Bleake, and the Roach. The Grauelly Fishes, specially the Menowes, are ingendred of Sheepes dung, laid in small Baskets in the bottome of a Grauelly Riuer. The Luce, or Pike, groweth (as likewise doth the Carpe) to be great in a short time, as in three or foure yeeres, and therefore in such Ponds as haue neyther the Sea, nor Riuer comming to them, we vse euery fourth, or third yeere, to draw the old, and to store them with young. And in these parts we chiefely store them with Carpe, hauing small Ponds and Stewes for the purpose to keepe them in, so as you may come by them at your pleasure. Thus much I thought good to declare vnto you touching my profession, let vs now see what you (MELLISSEVS) can say for your Bees, and your Hony.

Bees. MELLISSEVS. Because I will not haue our discourse of husbandry deprived and maymed of such a profitable member, whose vse may in all places, be they neuer so desert, or barren, be had, I thinke it good as a conclusion to the whole, to shew you for my part, the manner of keeping and ordering of Bees: for the good husband by cherishing of them, picketh out many times a good peece of his liuing, yea, the poore soule of the Countrey that hath no ground to occupie, may raise hereof, and that without charges a great commoditie. Merula reports, that Varro had yeerely for the Rent of his Bees, a thousand gallons of Hony: and that in a house in Spaine, hauing not passing one Acre of ground to it, hath yeerely beene made of the Bees, foure score pounds worth of Ware and Hony. This little poore creature the Bee, doth not onely with her labour yeeld vnto vs her delicate and most healthy Hony, but also with the good example of their painefull diligence and trauaile, encourageth man to labour and take paines according to his calling: in such sort, as it seemeth the Almightie and most excellent Maiestie, hath of all other specially created this little poore creature, for the benefit and commoditie of man; by whom besides the com-

Industrie of Bees.

moditie

moditie of the Honey and Wax that they make, we might take both example to spend our life in vertuous and commendable exercises, and also to honour and reuerence the wonderfull bountie and goodnesse of the most gracious Lord shewed towards vs, in the creation of this small and profitable Worme. They are continually busied in labouring, they shew great cunning and workemanship in their trauailes: they haue alwaies amongst them the liuely Image of a perfect Common-wealth, they yéeld obedience to their Prince, not liking the gouernment of sundry heads, but loue to be ruled by one: each one of them laboureth and trauayleth in his charge, in so much, as the wisest Gouernours and Councellers in Common-weales, haue taken the Bées for their Patterne in chosing of Princes, distributing of Offices, rewarding of vertues, and punishing malefactors. Varro did alwaies call them the Birds of the Muses: and Virgill with wonderfull colours, doth eloquently set forth the Bées, their Common-weale, Palaces, Buildings, Cities, Lawes, Manners, Warres, and Trauailes, supposing them to be partakers of reason, and that they haue some instinct from aboue, in that they so nére resemble the mindes of men, yea, many times excell them, touching their obedience to their Prince.

Bees their Common-weales.

The Birds of the Muses.

Virgill.

Not Ægypt in his prime, nor Lydia large and wide,
Ne yet the Parthian people great, nor all the Medes beside,
Doe so their King obay, who being safe and well,
Their mindes are all together one, he onely beares the bell.
On him they cast their eyes, and garde him day and night,
And oft they beare him on their backs, in his defence they fight:
But if he chance to dye, then all is dasht and done:
Their Combs asunder downe they teare, and all to ruine runne.

If the King be taken, the whole Swarme is had: if he be gone, they disperse themselues abroad, for they cannot liue without a King, hating as well the headlesse gouernment, as the subiection to many heads. If the King, or (as we tearme him) the Maister Bée die, the whole swarme droupeth, and mourneth, they straight waies cease from gathering of Honey, they stirre not abroad, but onely with a heauy and sorrowfull humming, they swarme and

cluster

cluster together about his bodie. The nature surely of this poore creature is greatly to be wondred at.

Virgil

They onely of their broode haue a common care,
And neighbour-like their houses nearely stand:
And ruled are by Lawes that none do spare,
Alone they know their home and natiue land,
And mindfull of the stormy Winter neere,
In Summer get to liue by all the yeere.

Their Princes pallace is sumptuously built, in some seuerall part of their Hiues, being mounted aboue the rest, which if you happen to broose, you destroy the brood. They liue all as it were in a Campe, and duely keepe their watch and ward, working together, and oftentimes sending abroad their Colonies, they are warned at their Captaines appointment, as it were with the sound of a Trumpet, by which they know both their times of warres, and truce: they ward all the day time at their gates in warlike manner, and haue great silence in the night, till one of them in the morning humming out the discharge of the watch: they get them abroad to their businesse, as the Poet hath eloquently expressed.

Virgil.

Together all they quietly doe lie.
Together all they toyle with equall might:
And in the morning forth together flie.
And home as fast they come againe at night.
Where as they lay their weary lims to rest,
And trim their wings, and set their legs in frame:
Till euery one himselfe hath throughly drest,
Then singing at their doores a while they game.
Till one giues warning for to go to bed,
Then downe they lay to rest their sleepie head.

For when the sleepie time of the night comes in, they make lesse and lesse noise, till one of them goeth about with the like sound that he gaue in the morning, setting as it were the watch, and giuing them warning to go to rest: at which time they all sudden-

denly

denly hold their peace. In the morning (as I said) at the discharge of the watch, they roame straight to the gates, but flye not abroad, except they see the weather will be faire: whereof by nature they haue perfect vnderstanding.

Nor from the Hiues, if like it be to raine,
They farre doe stray, nor trust will they the skie
If that the South-wind blow, but still remaine
At home, or busied be with waters nie.
Short flights they make, and when such stormes they see,
They beare about the smallest stones they finde:
And as the Boates in floods that balast bee,
So with the same they counterpoise the winde.

Bees foreshewing of stormes.

Being loded, they flie with the winde: if any tempest suddenly arise, they counterpoise themselues with little stones, flying in the winde as neare the ground as may be: their labour, both at home, and abroad, is certainly appointed. They labour at the first within the compasse of threescore paces about the Hiue, and when the flowres there haue beene sufficiently wrought, they send abroad their discouerers to finde out more foode. And when they fall all together to their businesse, some worke the flowers with their feete, others carry water with their mouthes, and droppes in their little floses: the young lusti fellowes labour abroad, the elder at home. Those that goe abroad, do with their forelegs lade all their Thighes, which nature for the nonce hath made rough: thus being loaded, Legs, Head, Backe, and all, as much as they may beare, they returne home, where there waiteth commonly three or foure at the dore to vnload them. Within, all this while are some laying in order, some building, some making cleane, and some making readie their meate: for they feede seuerally, for feare of beguiling one the other. They frame their houses archwise within the Hiues, with two passages, so as they may enter one way, and goe out another. Their combes that they make are wrought full of holes, which holes (as Varro saith) are their Celles or lodgings, made euery one fire quare, according to the number of their feet: these Celles they doe fill with Hony, filling euery one in a day or two. These combes are

fastned

fastned to the vpper part of the Hiue, and hang little vpon the sides, not cleauing to the Hiue, being now cornered, now round, according to the fashion of the Hiue: as both Plinie reporteth, and I shall hereafter shew you, when I speake of the framing of the Combs. The Combs are kept vp from falling, with small pillers and proppes below, so built as they may goe round about to repaire them. The three first lofts of their Celles beneath, are left emptie for feare of the Hiue: the vppermost are as full as may be, such as are loyterers and idle vagabonds amongst men, are noted, and punished with death.

The punishment of loiterers.

Some range for food and plie the fields abroad,
Some still at home doe labour busily:
And round about with waxe the Hiues doe loade,
Which from the gummes they painefully doe trie.
The first foundations for the Combes they make,
And clammy cleauing Waxe they fasten by:
While others of their broode the charge doth take.
And fosters vp the seede that shall supply.
An other sort doth worke the Hony pure.
And filles the Celles with licour that you see:
And others are appoynted to the doore,
To looke abroad vvhat vveather is like to be,
Or to vnload such as haue laboured vvell,
Or els to driue the drousie Drone away:
Their labour smokes, and all of time doth smell,
The Hony sweet that in their Combs they lay.

And a little after.

The great doe guide the Hiue,
Make fast the Combes and Pallaces contriue.

CHENO. Of the worthinesse, trauaile, workemanship, and good order of this little creature, you haue sufficiently spoken, it now remaines that you declare vnto vs their sundry kindes, their keeping, and their ordering.

MELLISSEVS. Aristotle maketh many sorts and kindes

of

of them, whereof he counteth the short speckled, and well knit to the best: and next to them, the long ones like Waspes: the third, the kinde that you call the Théefe, with a very large bodie: the fourth, the Drone, being bigger then all the rest, wanting both his sting and courage to labour: and therefore they vse to make at the entrie of their Hives small Grates, wherein the Bée may enter, but not the Drone. And the same Aristotle, in the chapter before saith, that there are two kindes of Kings or Maister Bées, the one of a golden colour, which is counted the best: the other blacke, and more partie coloured: they be twise as bigge as the other Bées, the tayles of them as long as one and a halfe of the other, they are called of some, the Mother of Bées, as the chiefe breeders, because the young of the Drones are bredde without a King, but the other Bées neuer. Virgill following herein Aristotle, doth most commend the little, long, smoothe, and faire Bée, and making mention of two sorts of Kings, he describes the worser, whereby he shall doe no harme.

The kinds of Bees.

The Theefe.

The Drone.

Breeders.

The best sorts of Bees.

Destroy (saith he) and let the other liue,
Whose golden hew doth glister in the eye:
And decked with glittering scales, faire shew doth giue,
Of farre more grace, and farre more Maiestie.
With loathsome looke the other doth appeare,
And dragling drawes his tayle with heauie cheare.

The shape of their King.

And as there is two sorts of Kings, so is there of the other Bées.

Some Vglie seeme, and some againe doe shine,
Bedasht with drop of golden colour fine.

Being milde and gentle: for the Bée, the greater he is, the worse he is, and if he be angrie, and fierce, and round, hée is worst of all. And because (as I said before) the best are onely to be medled with, sith the good and the bad are a like chargeable, and require like tendance, and speciall héede to be had that you mingle not the bad with the good: for lesse will the encrease of your Honey be, if some of your Swarms be ill matched. You may store your selfe with Bées three manner of waies, eyther by buying them, taking the

What to be considered in buying of Bees.

the wilde Swarmes, or making them by Arte. Such as you buy, let them be of the kinde and shape that I told you of, and be sure before you buy them, that the Swarmes be whole and great, which you may iudge by looking into the Hiue, or if you cannot be suffered so to doe, you may guesse it by other tokens: as if so be you see great numbers clustring at the dore of the Hiue, and if you heare a great huzzing and humming within: or (if they be all at rest) putting your lippes to the mouth of the Hiue, and blowing therein, you shall easily perceiue by their answering sound, whether their number be great or no. In buying them, beside, you must looke whether they be sound, or sicke: the signes of their being in health (as shall be shewed when I speake of their diseases) is, if their Swarmes be great, themselues faire, and well coloured, and worke lustily. Againe, a token of their not being well: as if they be hayrie, looke loathsomely, and dustilie, except at such time as they labour: for then they wax leane and ruffe, with extreame traueil. You must make your coniecture likewise by their age, such as are not aboue a yeere olde, looke faire and smoothe, and shine, as if they were Dyed: the old ones are both in sight and feeling, ruffe and rugged, and by reason of age, wrinckled: which neuertheleffe, for cunning in making their Combs, experience, industrie, and skilfulnesse in the weather, doe farre passe the others. In any wise see that you buy them rather from your next neighbour, then from a strange Countrey, or farre off, for they many times perish by change of ayre, or shaking in the carriage. And if you be driuen to carry them farre, take heede you neyther iogge, nor tumble them: the best way to carry them is vpon a mans shoulders, and that in the night time, suffering them to rest in the day, and powring in to them such sweet things as they delight in, and keeping them close. It is better remouing them in the Spring, then in Winter: for they doe not so well agree with Winter. If you carrie them from a good place, to a barraine, they will straight-ways bid you farewell, and forsake their Hiues. When you haue brought them to the place where you meane they shall stand, if it be day time, you must neither open them, nor place them till it be night, to the end they may after the quiet rest of the night, goe cheerefully to their worke the next morning. Be sure to marke them well besides for two or

Transporting of Bees.

The taking of Bees.

thro-

thrée dayes after, whether they goe all out or no: for if they doe, it is a shrewde signe they will away. Sometime, if the place be good, you shall assay to store your selfe with wilde Bées: for although that Bées (as Plinie saith) cannot be rightly tearmed either wilde, or tame, yet Varro calleth them wilde that brède in wilde places, and tame, such as we kéepe at home: and affirmeth the manner of kéeping them to be diuers. There is great store of the wilde sort in Sarmatia.

PVLLARIVS. They say, that in Liuonia and Sarmatia, (from whence is brought hither great store of Ware, and Hony) the Countrey people doe gather it in great abundance in hollow trées, and desart places.

MELLISSEVS. The greatest token of Bées and Honey néere, is where they be in great numbers about the waters: for if you sée the number but small, it is a signe it is no good place for Bées, and if so be you sée they come in great numbers, you may sone learne where the stocks be: in this sort, as Columella and others haue taught: You shall carry with you in a Saucer, or such like thing, some redde colour, or painting, and standing néere to springs, or waters there abouts, as fast as they come, touch them vpon the backes while they are a drinking, with some little straw dipped in the colour: and tarry you there till such time as you sée them returne. If the Bées that you marked doe quicklie returne, it is a token their houses be not farre off, if it be long ere they come, it shewes they dwell farther off: wherefore you may iudge by the time. If they bée néere, you shall easily finde them, if they be farre off, you shall come to finde them in this sort: Take a péece of a Réede, or a Ker, with his knots and joynts, and making a small hole in the side, powre into it eyther Honey, or some swéete thing, and lay it by the water: and when you sée the Bées haue found it, and entred the hole for the sauour of the Honey, stoppe you the hole with your thumbe, and let but one goe out at once, whose course you shall follow, as farre as you can sée him, and this shall bring you part of the way: when you can no longer sée him, let out another, and follow him, and so another, one after another, till you come to the place. Others vse to set some little vessels with hony by the water: which, when some one Bée or other hath hapned to taste, she giueth straight knowledge

To finde out the Bees.

to her fellowes, whereby by their flying in number, they come to finde out their dwellings. If you finde the Swarme to be in some such hole, as you cannot come at them, you shall driue them out with smoke, and when they be out, bring them downe with the ringing of a lattin Bason, so as they may settle vpon some tree, from whence you shall shake them into your Hiue. If the swarme bee in some hole aboue in the branches, you may sawe off the branch handsomely, and couering it with a white cloth, place it amongst your Hiues. If they be in the body of the tree, then may you softly sawe off the tree aboue the Bees, and afterward, close vnderneath them: and being couered as before, carry them home, stopping well the chinks and riftes, if there be any. He that seeketh the Bees, must begin in the morning, that he may haue the whole day before him to marke their labouring. Thus farre of the kinds of Bees, and getting of them: now will I shew you of the placing of them, ordering, and keeping of them. The place for your Bees and your Hiues must be so chosen, as they may stand quietly and secret, standing specially in such place, as they may haue the Sunne in Winter, and in the Spring time alway at the rising, and such as is neyther too hot, nor too cold: for the excesse of eyther doth hurt them, but rather temperate, that both in Summer and Winter, they may haue moderate warmth, and wholesome ayre, being farre remoued from the company of eyther man, or beast.

Standing for Bees.

Where neither winde may come, whose blasts forbids
Them bringing home their loade, nor sheepe, nor wanton Kids,
To spring among the flowres, nor warding best,
Shake off the dew, and trampling spoyle the rest.

What Vermine annoyeth the Bees.

For they most of all delight in quietnesse: beware beside, that there be no hurtfull creatures neere them, as the Tode, that with his breath doth both poyson the Bee, and also draweth them to him, the Woodpecker, the Swallow, the Sparrow, the Storke, Spiders, Hornets, Butter-flyes, Serpents, and Mothes.

Driue from thy Hiues the hurtfull Lysart greene,
Keepe Throstles, Hennes, and other Birds vntrew:

And

And Progne, on whose brest as yet is seene
The bloodie marke of hands that Itys slew.
All these destroy thy Bees, and to their nests doe beare
Such as they take in flight, to make their young ones cheare.

Of such things as hurt your Bées, I will hereafter speake more, where I shall shew you of their diseases and harmes: in the meane time I will goe forward with the placing of them. The place where they should stand, would rather be in the valley, then verie high: but so as the rebound of no Ecco, doe hurt them, which sound is verie noysome vnto them: so shall they flée with more ease and spéede to the higher places, and come laden downe againe with lesse trauaile. If the seate of the house will so suffer, it is good to haue your Bées stand néere your house, and to be enclosed with a hedge, or a pale: but on such side as they be not annoyed with the sent of sinke, priuie, or dunghill. The best standing, is within the sight of the master, by whose presence they are safest kept. For their better safetie (if you feare them) you may set them a yard or more from the ground, enclosing them with little grates left open against euery Hiue, or so lettised with stone, as the Bée may easily come out and in, and escape both Birds and Water: or if you list, you may make a little house by for the Keeper, wherein you may lay your Hiues for your Swarmes, and other necessaries méete for your Bées, setting néere to the Hiues some shadowing Trées for them to swarme vpon, according to the Poets aduise.

The valley better for the Bee, then the hill.

And plant the Date tree neere, or pleasant Oliue tree,
That with their floury branches sweet, thy hiues may shadowed (be:
That when the Captaines young, lead out their lustie swarmes,
The pleasant shade may them allure, to shun the greater harmes.
Not needing for their ease, in places farre to roame,
When as they may more safely sit, and better speed at home.

If it may be, let them haue some faire Spring néere them, or else some water conueyed in pipe: for without water they can neyther make Hony, Wax, nor bréed vp their young: and therefore saith the Poet.

Faire water necessary for Bees.

Haue fountaines sweet at hand, or mossie waters greene,
Or pleasant brooke that passing through, the meads is sweetly
And straight-waies after. (seene.

If either ſtanding poole be neither to them nie,
Or running ſtreame with haſty courſe, their dwellings paſſeth by
Caſt boughes of Willow croſſe, and mightie ſtones withall,
That may preſerue the fainting Bee, that in the floud doth fall.

Round about the Bee-yard, and neere to the hiues, ſet hearbs, plants, and flowres, both for their health, and profit: ſpecially ſuch as are of the ſweeteſt and delicateſt ſauour: as Cithyſus, Time, Caſſia, Roſemary, Sauery, Smallage, Violets, Sage, Lauender, Myrrhe, wilde Marierum, wilde Tyme, Balme, ſweete Marierum, Saffron, Beanes, Muſtardſeed, Poppey, Pellilot, and Roſes. And if there lie Ground neere it for the purpoſe, ſow it with Rape ſeede, and Beechwheat: for they wonderfully delight in the flowres hereof. Plinie writeth, that Bees delight greatly to haue Broome flowres neere them: of trees they moſt delight in theſe. The Pine, the Willow, the Firre-tree, the Almond, the Peach, the Peare-tree, & the Apple, and ſuch as the flowres thereof be not bitter. Of the wilde ſorts, the Terebinth, the Lentiſe, the Lind-tree, the Cedar, and the Maſtholme. The beſt hony (as Palladius ſaith) is made of Tyme: the next of wilde Time: the third, of Roſemary. You muſt remoue from your Bees, the Yew tree, Bor, and the Cornel: Plinie would alſo haue the Oliue away. Baniſh alſo all the kinds of Sporge: for with that, as alſo with the flowres of the Cornell, they fall into a Fire and die. Beſides you muſt ſuffer no Wormewood, nor wilde Cucumber to grow neere them, for they both deſtroy the Bees, and ſpoyle the honie. And be cauſe the flowre, or fruit of Elmes doth ſpecially hurt them, therefore in ſuch parts of Italy where plenty of Elmes grow, the Bees do not long continue. Touching your hiues, they are made of diuers fashions, according to the manner of the country. Some are made round, ſome ſquare, ſome three foot in height, and one in breadth, made very narrow toward the top, leaſt the Bees ſhould ouerlabor themſelues in filling of them. Some make their hiues of Lanterne horne, or Glaſſe, to the end (as Plinie ſaith) that they may view the manner of their working, Varro maketh mention of earthen hiues well plaiſtered within and without with good Dre-dung, ſo as the roughnes and ruggednes cannot diſpleaſe them: but for all that, the earthen hiues be the worſt that may be, becauſe in Summer they be too hot, and in

Hearbs that Bees delight in.

Hearbs noyſome to Bees.

Of the Hiue.

Winter

Winter too cold. The best hiues, are those that are made of Corke wicker, or rindes of trées, because they kéepe out both cold and heat: the next are such as are made of Straw and Bents matted together, two foot in breadth, and so much, or more, according to the number of your Bées in height. In some places they make them of one péece of wood, cut and hollowed for the nonce, or of ioyned boords, fiue or six foot in height, and these neither are too hot in Summer, nor too cold in Winter. Of these wooden hiues, the best are those that are made of the Figge trée, Pine, Aspe, and Walnut, of such length (as I told you) and a cubit in breadth. Besides, they would be couered with either Lime, or Dre dung: for so (saith Florentine) you shal kéepe them long without rotting. You must also bore them through slopewise, whereby the winde gently entring, may drie vp all cobwebs, or such like noyances. You must alwaies haue good store of hiues lying by you, that may be remoued, and easily carried where you list: for the fixed, or standing hiues, be discommodious, as which you can neither sel, nor remoue: though Celsus séeme to commend the standing hiues, because they are neither subiect to stealing, nor burning, being made of Brick, or Loame. Your hiues (as Columella out of Celsus doth teach) must stand vpon some table of stone, a yard from the and ground, so much in breadth, so smoothed and plaistered, as neither Toad, Euette, or Snake may crépe vp: and in such order they must be placed as there may be betwixt euery one a little wall, or partition, being open both before & behinde. If you haue no such partitions, then place them so, as they be a prettie way distant one from the other, that in dressing and loking to any one of them, you shake not, nor hurt the other: for a little tumbling doth soone marre all their houses, and many times spoyle the Bees. It is enough to haue thrée rankes of them, one aboue the other: for the kéeper shall haue enough to doe, to ouerloke the vppermost. The part where the Bee doth enter, must stand a little lower then the hinder part, so as the raine can not runne in, and the water (if there be any) may easily voide. And because cold doth more annoy the Bée, then heate, you must arme your hiues well behinde, against the hurt and bitternesse of the North winde, and let the Sunne come bountifully to them in the Front. And therefore it is best for you to make

How you must place your hiues.

the holes where they come in and out, as small as you may, that they suffice onely for the bignesse of the Bee, partly for auoyding of cold, and partly to keepe the Euets, Beetels, Butterflies, Bats, Mothes, and such other hurtfull vermine, that would otherwise destroy the Combes: wherefore it is good you haue two or three such small holes together in euery hiue, for the commoditie of the Bee, and restraine the enemie.

PVLLARIVS. Well, I pray you let vs know when the Bee beginneth to labour, and when he ceaseth.

MELLISSEVS. Because I haue declared vnto you before their toile, their diligence, and order of their trauaile, I will now likewise shew you what time they begin to labour. In the Winter time, from the setting of the seauen starres, till the beginning of the spring, they keepe their houses, and come not abroad, by reason of the cold: in the spring, they come straight abroad, and from that time forward (if the weather let them not) they neuer rest day. First of all, they frame their Combs, and Wax, that is, they make their houses and chambers, whereof they make so many, as they thinke themselues able to fill: then fall they to breeding, and last of all, to making of hony. Their Wax, they make of the flowres, trees and plants: their honie, of the gummes and clamminesse of trees that are glewy, as Willow, Elmes, Reed, Juice, Gumme, and Rozen: Aristotle saith, they make their Combes of flowres, their Wax, of Gummes, and their Hony, of the dew of the Ayre, that falleth chiefely at the rising of the starres, and that there is no honie made before the rising of the seauen starres, and their combes of flowres, and that the Bees do not of themselues make the honie, but onely gather the honied dew that falleth, because the keepers finde the Celles to be filled in some one, or two daies: and that the honie being taken away in the end of Summer, the hiues are not found to be furnished againe: though there be flowres enough at that time. This, and much more heereof (saith Aristotle) whom Plinie following, affirmeth honie to be made of the Ayre most of all, at the rising of the starres, chiefely the Dogge shining out earely in the morning: therefore you shall finde in the morning betimes, the leaues of the trees bedewed with honie, as you shall likewise haue the Apparrell, Hayre, and Beards, of such as haue beene earely abroad.

When the Beeresteth. The beginning and order of his trauaile.

In the morning, our Common people call it Manna, or Hony-dew, cleauing to the leaues before the rising of the Sunne, as it were Snow, or rather Candied-Sugar. Whether it be the sweate or excrement of the Heauens, or a certaine spittle of the Starres, or a iuyce that the ayre purgeth from himselfe: howsoeuer it be, I would to God it were such as it first came from aboue, and not corrupted with the vapours and damps of the earth. Besides, being sucked vp from the leaues by the Bees, and digested in their Mawes (for they cast it vp at their mouthes) and also distempered with the sent of the flowres, ill seasoned in the Hiues, and so often altred and transformed, losing much of his heauenish vertue, hath yet a pleasant and speciall celestiall sweetnesse in it. The best Honey is of Time (as I haue sayd before) and good likewise of Cithisus, of the Figge Tree very pleasant: Varro saith, they take not their sustenance, and their Honey both from one. A great part of their foode is water, which must not be far from them, and must be very cleane, which is greatly to purpose in making of good Honey. And because euery season suffereth them not to be abroad, they must at such times be fed, least they should then be forced to liue all vpon the Honey, or to leaue the Hiues emptie. Some giue vnto them Water and Honey, sodden together in little vessels, putting into it Purple wooll, through the which they sucke it, for feare of drinking too much, or drowning themselues: others, dry Figges, either stamped by themselues, or mingled with water, or the drosse of Grapes, or Reasins mingled with sweete Wine, and tosts made therewith, or with Honey: yea, I haue seene some vse (but in my fancie without reason) to giue them Bay Salt. Moreouer, as the Bees require great looking to continually, and their Hiues dayly attendance, so most of all they craue diligent regard, when they are about to Swarme, whereunto if you haue not a great good eye, they will bid you farewell, and seeke a new Maister. For such is the nature of Bees, that with euery Prince, is bred a Commonwealth, which as sone as they are able to trauaile, doe as it were disdaine the gouernment and fellowshippe of the old Bee, which most hapneth when the Swarmes be great and lusti, and that the old Stagers are disposed to send abroad their Colonies: and therefore you shall by two tokens specially know when the new

Manna.

The best Honey of Time.

Bees, their Winter-foode.

Going away of Bees, and the tokens thereof.

Princes with their people will abroad. The first, when as a day or two before they cluster and hang (specially in the euening) about the mouth of the hiue, and seeme to shew by their comming out, a great desire to be gone, and to haue a Kingdome and Countrey by themselues: which, if you prepare them at home, they content themselues very well with it. And if the Keeper prouide not for them, taking themselues to be greatly iniured, they depart, and seeke a new dwelling. To preuent this mischiefe, Columella willes you to loke diligently to them in the Spring time about eyght of the clocke, or at noone: after which houres they commonly goe not away, and to marke well their going out and comming in. The other signe is, that when they are readie to flye, or going, they make a great humming and noyse, as Souldiers readie to remoue their Campe. At their first comming out, they flye aloft, playing vp and downe, as it were tarrying for their fellowes till all their company come. Yea, many times the old inhabitants, being wearie of their dwellings, doe leaue their hiues, which is perceiued when they come so out, as none remaine behinde, and presently mount into the ayre, then must you fall to ringing of Pans and Basons, to feare, or bring downe the run awayes, who being amazed with the great and suddaine noyse, doe eyther presently repaire to their olde hiue, or else knit themselues in swarme vpon the branch of some tree neere to the place: then must the Keeper out of hand be readie with a new hiue prepared for the purpose, and rubbed with such hearbs as the Bee delights in, or sprinkled with little drops of honie (I haue seene in some places vsed Creame) and so shaking them into the hiue, and couering them with a sheete, let him leaue them till the morning, and then set them in their place. He must (as I told you before) haue diuers new hiues in a readinesse to serue the turne withall. And if so be you haue no trees nor bushes growing neere the hiues, you must thrust into the ground certaine boughes and branches for the purpose, whereupon they may knit and settle themselues, and rub ouer the boughes with Balme, or such pleasant hearbs, that when they (as I say) knit and settle, putting vnder the hiue, and compassing them with some little smoke, you may cause them to fall into a new Countrey: for they will rather goe into a new hiue, then into an old: yea, if you

Bees delight in new hiues.

offer

offer them the hiue that they came from, they will forsake it for a new. Some of them will suddenly leaue the hiue without any tarrying, which the Keeper may perceiue, if he vse to lay his eare in the night time to the hiues: for about three dayes before they goe, they make a great noyse, like Souldiers ready to raise their Campe: which Virgill noteth:

Signes of suddaine departing, and remedies.

Their mindes are easily knowne; for such as stray,
The brasen sound commaunds to come away,
When through them all a warning voice is sent,
That doth the warlike Trumpet represent.

And therefore when such noyse is heard, they must be very well watched, whether they come out to fight, or to fly, the keeper must be at hand: their fights, whether it be among themselues, or one hiue with another, are easily stickled:

A little dust cast vp on high,
Doth end the quarrell presently.

Or Honied water, sweete Wine, Broath of Reasins, or any pleasant liquour, wherein they delight, cast and sprinckled amongst them doth straightwaies part them. The selfe-same remedies makes two Princes of them, being fallen out, to be quickely good friends againe: for when there hapneth many times to bee in one hiue sundry Kings, by whose dissention the whole number of the Subiects, in the Princes quarrels, goe together by the eares, you must by all meanes seeke to remedie it, least by ciuell dissention, the poore people be destroyed. And therefore if you perceiue them often to fight, your best is to kill the headdest of the dissention and to appease the fury of the fighters, by those means that I told you before. And when the Martial Swarme is setled vpon some branch of a tree, look if they hang all together like a cluster of Grapes, which is a signe, that there is either but one King, or if there be moe, they be agreed: and then you shall not trouble them, but take them into the hiue: but if so be they hang in two or three clusters, like the Paps or Udders of a beast, it is a signe there are diuers Master Bees that agree not together: for which you shall search where you see the Bees to cluster most. Therefore annointing your hands with the iuyce of balme, or Beewort, that they may abide you, thrust in your fingers softly amongst them, and shedding the Bees, search well till you haue found the

Diuers Kings in one Hiue.

ring leader of the dissention, whom you must take away. What the proportion and shape of the King is, I haue told you a little before, that is, something longer then the other Bées, and lesser winged, of a faire and glistering colour, smooth, and without sting. Howbeit, some of them be shagheard, and ill coloured, which are naught, and to be killed: Let the best (as he saith) weare the Crowne: who must himselfe also be deprived of his wings, if he be too busie headed, and will alwaies be carrying his people abroad: so shall you, with the losse of his sayles, keepe him at home spight of his teeth, while he dare not for want of his wings venture out of the doores, and so shall he keepe his people at home. Dydimus writeth, that the Bées will neuer goe away, if you rub the mouth of your Hiue with the dung of a new calued Calfe. To the same end seruetb it, if you stampe the leaues of wilde Oliues, and Garden Oliues together, and annoint the Hiues in the euening therewithall: or if you wash the Hiues and the walles with Honey sodden with water. When an old stocke is come to a small number, and that there be not Bées enough to furnish the Hiue, you must supply the want with a new Swarme, destroying the King of the first swarme in the Spring, so shall both the swarms dwell together in amitie with the old Parents, as shalbe shewed you hereafter, where I meane to speake of repayring the stocke. The Summer being past, ensueth the time for taking of Honey, to which harueft the trauaile of the whole tendeth. The time for gathering thereof, Columella teacheth to be then, when we perceiue the Drones to be driuen out, and banished by the Bées: for thence they Driue the drousie Drone away. This Drone is an vntimely birth, and an vnperfect Bée, but very like vnto the Bée, saue that he is bigger bodyed, lying alwaies idle in the hiue, not labouring himselfe, but féeding like a lubber on the sweate of his fellowes, yet seruetb he for the bréeding and bringing vp of the young: which when he hath done, they thrust him out of the hiue. Varro appointeth three seasons for the taking out the hony: the first at the rising of the seauen Starres: the second in Summer: the third at the setting of the seauen Starres: this signe is when the hiues be heauie, and that they be double furnished. You may make your coniecture by the Bées, when they make great noise within, and when you see them stand dauncing, and

playing

The shape of the King.

To keepe the King at home.

Gelding or driuing the Hiues.

The Drone.

Time for taking the Combs.

playing at their doores, as also, if looking into the Hiue, you perceiue the mouthes of the Combs to be couered with a Honey filme. Dydimus thinketh it to be the best time at the first harueſt, the rising of the seauen Starres, or the beginning of May: the second, the beginning of Autumne: the third, the setting of the seauen Starres, which is about October: howbeit, these times be not alwaies precisely to be obserued, but according to the forwardnesse of the season: for if so be you take the honey before the Combs be readie, they take it ill, and presently leaue working. The time for gelding, or driuing your Bées, is earlie in the morning: for you must not at none trouble your hiues. For this kinde of gelding of your hiues, you must haue two instruments for the nonce, a foote and a halfe long and more: the one of them must be a long knife of a good bredth, hauing at the end a bending crooke to scrape withall: the other must be plaine, and very sharpe, that with the one you may cut the Combs, and with the other scrape them, and draw out whatsoeuer dregges or filth you finde in them. And if your hiues be not open behinde, you shall make a smoke with Galbanum, or dry dung, being put into an earthen pan made for the purpose, small at the one end, from whence the smoke shall come, and broad at the other, from which you shall blow vp the smoke from the fire, in such sort, as Columella sheweth you. This pot you must suffer at the first, to smoke into the hiue, and afterward round about without, and so shall you driue them. He that medleth in this case with the Bées, must specially keepe himselfe from letcherie, and drunkennes, and wash himselfe cleane: for they loue to haue such as come about them to be as pure and cleane as may be. They delight in cleanlinesse so much, as they themselues doe remoue from them all filthynesse, suffering no filth to remain amongst their labours, raking vp in heaps together the excrements of their owne bodies, which in the rainy daies, when they worke not abroad, they remoue and throw out of the hiue. If you set Garlick by them, they will sting all that come nere them. Their anger is chiefely assuaged by the presence of those that vse to tend them, at whose comming they ware milder, being well acquainted with those that are their keepers. If there be two swarmes in one hiue, and agreed together, they haue two sorts and manner of Combs, euery swarme obseruing

Bees hate theeues and vncleane persons.

his

his owne order, but all the Combes so hang by the rowes of the hiues and sides, as they touch not the ground where the Bees vse chiefely to walke, as I said before of the building of their Combes. The fashion of their Combes, is alwates according to the fashion of their hiues, sometimes square, sometimes round, sometimes long as the hiues are, in which they are fashioned as in a mould. Plinie writeth, that there were Honey-Combes found in Germanie, of eight foote in length: but howsoeuer they be, you must not take them all out, but must vse discretion in taking of them. Amongst our people in the first Bee harueſt (if I may so tearme it) they vse with their croked knife, to pare away no more but the emptie Celles, till they come to those that be full, taking heede that they hurt them not: and this they doe in the Spring. In the latter harueſt, that is, at the end of Summer, they take the Combes full of Honey, in such sort, (as I told you) burning the old Bees, and alway keeping and preseruing the young swarmes. In the first taking, when the Meddowes are full of flowres, they leaue the fift part of the Combes behinde: in the latter harueſt, when winter approcheth, they leaue a third of their Combes for the sustenance of the Bee: But this quantitie cannot certainely be prescribed for all Countries, but must be measured according to the abundance, or want of flowres. Dydimus Thaseus, thinketh good to leaue them a tenth of their Combes in the Summer time, if the Hiues be very full, otherwise, according to the proportion: and if they be emptie, not to meddle with them. Plinie would not haue the Honey of the Spring-time (which hee calleth flowre Honie) to be medled withall, but to be spared. Others leaue no Honie at all for them, because of the abundance of flowres that are then springing, which is the chiefe foundation of their Combes. Such as be skilfullest doe leaue the Bees a twelfth part of their labour: and this they do about thirty dates after the swarme, which they make an end of commonly in May. The old and the corrupt Combes, are for the most part at this time taken away: and the sound, and such as are filled with Honie, left. In taking of the Honie at the later time of the yeere, they vse to destroy the oldest stocks, to saue the charges of feeding of them. This driuing and gelding of Hiues is not commonly vsed in the Countrey, but they rather, according to their

Fashioning of the Combes.

customes

custome, at the end of the yeere burne them, alledging for their authoritie an old English Prouerbe of their owne:

Driue Bees, and loose Bees: burne Bees, and haue Bees.

And in some places they drowne them. When you haue thus spoiled your Hiues, you shall carry all your Combes into some handsome place, where you meane to make your Honey, and stoppe vp all the holes and creuisses of the walles and windowes, as close as you may: for the Bees will be very busie to recouer the pray. Your Hiues being thus driuen, if there be any ill placed Combes at the entrie, you shall alter them, and place them in good order, so as the toppes stand downeward, so when you next geld them, you shall easlyer take out the olde Combes, and leaue the new, and the waxe shall be the newer: which the older it is, the worse it is. Whensoeuer you take your Combes, loke that you straine out the Honey the same day, while they are hot and new. The Honie that you take at the full of the Moone (as Plinie saith) yeeldeth most, and the fayrer the day is, the thicker it is. The Combes being taken out, let them rather be warme, then heated, least by ouer-heating them, you straine out the Waxe with the Honie: afterward, put them into a good strong bagge, and with a Presse, or other Instrument made for the purpose, or with a Wicker Basket, presse out the Honie; but see that before you presse it, you seuer from it such Combes, as haue in them young Bees, called with some, Grubbes, or any red or rustie drosse: for these with their euill iuyce corrupt the Honie. When the Honie is thus strained out, it is put into earthen vessells, and suffered to stand vncouered a few dates, till it haue wrought, and cast vp aloft all his Dregs, which you must often scumme off with a little sticke: but in many places they are not so curious, but tumble all together, and so sell it grosse as it is. The best Honie is alwayes in the bottome, as the best Oyle aloft, and the best Wine in the midst.

CHENOBOSCVS. What Countries yeelds the best Honie, and which count you the best?

MELLISSEVS. The best Honie was in the olde time thought to be in Athens, and in Cycill: it is now thought very good that commeth from Moscouia, and the North-east Regions. The best Honie.

The

The Hony at the beginning is thin as water, and after the straining, it worketh like new Wine, and purgeth: at the twentieth day, it wareth thicke, and afterwards is couered with a thin rine, or filme, where the froth of the purging is gathered together. The best Hony, and least infected, the Bees doe gather from the leaues of the Oke, the Lind tree, and the Reed. There is three sorts of Hony, the best kinde is that which is called Authim, or flowre-Honie, made in the Spring time: the next, is Summer hony, or hasty-hony, made in thirtie dayes after the tenth of June, when the Dogge begins to come in: the third is Heath-hony, a wilde kinde of hony, and not allowed, being gathered after the first showrs of Autumne, while the heath is flowred: and therefore like the Sandy hony. The best hony (as Diophanes saith) is cleare, yellowish, smooth in touching, & fine, roping, if it be drawen in length, and long sticking together, clammy, and hard to be got a sunder: the Hony that is of the worst making, is to be boyled. Bread, if it be dipped in it, doth straight corrupt it, and therefore take heed you put it not where bread hath beene. The fragments of the Coame that hath once bene pressed, being taken out, heated and strained againe, doe make a second Hony, which you must put vp, and keepe by it selfe, for spoyling of the other. Naughtie, and counterfeit Hony is descerned by the burning, for ill hony burneth not cleare, as the said Diophanes witnesseth. The drosse that remaineth, after the pressing, after that you haue diligently washed it in swet water, must be put in a brasse Caldron, and putting a little water thereto, melted vpon the fire, which when you haue done, you must straine the Wax through a Siue, or such like thing made of Straw, or Rushes: and after seeth it againe, and powring it into some vessell with water, from whence you may easily take it, make it vp in cakes, or what fashion you like. Plinie writeth, that the Coames must first be washed well, and afterward dryed in the darke, for the space of three dayes, & the fourth day set vpon the fire in a new earthen vessell, so as the Coames be couered with water, and then strained through a Siue: last of all, boyled againe in the same vessell, and the same water, and powred into vessels with colde water, hauing their sides nointed with Hony. The Wax will be very white after it hath stood in in the Sunne, and beene twise sodden: you shall make it blacke

Three sorts of Honny.

Bread corrupteth Hony.

The making of Waxe.

with

with the Ashes of Paper, and being mingled with Vermillion, it will be red, and so otherwise coloured as you list.

CHENEBOS. If in the making of your Hony your Bees be almost consumed, what wayes haue you to repaire them?

MEL. When as an olde stocke is come to be small, and that you are to furnish out the number, you must destroy (as I sayd) the new king in the Spring time, when there is a new brood in the Hiue, that the new people without discord, may dwell with their olde parents. And if so be the Coames haue not yelded a new brood, you must take the dwellers of two or three other hiues, & put them into one, but so (as you remember before) to sprinckle them with some swet licour, and so shut them vp with food conuenient for them, till they be fully acquainted, leauing but little breathing holes about the Hiue, & keepe them thus enclosed three dayes. Others doe vse to kill the elder king, but that Columella alloweth not: but if the king be very old, (the age of Bees shall shortly be shewed vnto you) and the people alwaies giuen to sedition, then shall you chose a king from the Hiues, that haue most number of kings. I told you before how you should make them agree, when you put two swarms together, lest they should destroy one another, that is, to take away the kings of the new swarmes. Bees decayed. The repairing of them.

CHENOBOS. What if the whole stocke be decayed by taking the Hony, or by sickenes, and diseases, will they breed againe? or may they be repayred by art?

MEL. By both, though the breeding, and ingendring of Bees is very doubtfull with Aristotle, neither dare he after his long disputations, affirme any certaintie thereof: sometime he reciteth the opinions of others, some thinking that they are ingendred by copulation, the Drone being the male, and the Bee the female: other saying, that they bring forth young, but doe not ingender, but that they gather their yong ones, but from whence, they know not. Some say, from the flowres of Marioram: some, from the flowres of the Reede: others from the Olive flowres, because whensoeuer there is great plenty of Olives, there is also great swarmes of Bees. There are againe that thinke the Drones to be so gathered, and the Bees to be bred onely of the kings: and a little after, he saith, The young are the best bred, when the hony is made, they labour with their legs the Wax, and with their Breeding of Bees.

mouth

mouth they cast out the Honie into the Cels, and hauing laid their young, they sit vpon them as Birds doe. The little Worme, or Grubbe, being thus hatched while he is small, lyeth crumpled vp in the Coame: afterward, sprawleth abroad by his owne force, and falleth to feeding, cleauing so to the Coame, as he seemeth to be tied. The brood of the Bee, and the Drone, is white, of which commeth little Wormes, that after grow to Bees, and Drones: thus much, and more, saith Aristotle. In other places he would seeme to gather, that the Bees are ingendred of the kings, saying, that if this were not, there were no reason for such things as are committed in their gouernment, and that the kings by good reason, remaine still in the Hiue without any trauaile, as only borne for breeding. Beside, they be greater, as though their bodies were purposely feamed for generation, & they punish the Drones. It is not very likely that the children should punish the Parents, therefore the Bees are not ingendred of Drones. Besides, it is a great argument, that Bees are ingendred without copulation, that their brode lieth very small at the first, wrapped vp in the holes or Celles of their Coames, whereas all other Flies and Wormes that are bred by copulation, doe long ingender, and quickly lay in greatnesse, according to the kinde of the Worme. Plinie following herein Aristotle, affirmeth, that Bees doe sit as Hennes doe vpon their Egges: and that which is hatched, is at the first a small white worme, lying crosse the hole, and cleauing in such sort, as it seemeth to feede. The king is at the first, of a yellowish colour, as a chosen flowre, framed of the finest substance, neither is he bred a Worme, but with winges at the very first. The other common sort, when they begin to haue fashion, are called Nimphes, as the Drones, the Sireus, and the Cepheus, whose heads, if any man chance to pull off, they serue as a delicate food to the breeders. After a little time, they powre into them foode, and sit vpon them (making a great noise, as it is thought, to procure a heat necessary for their hatching) till breaking a sunder the filmes that encloseth euery one of them like an Egge, the whole brode commeth forth. Plinie addeth, that this was seene and obserued at Rome, in a Hiue made of Lanterne hornes: the whole brode is finished in fiue and fourtie daies. As soone as they are brought out, they are taught to trauaile straightwayes with their

dammes

dammes, the young people waiting presently vpon their young king. There are sundry kings bred for failing, and when they come to age, by common consent, the foulest and vntowardest of them are destroyed. That there is two sorts, and what fashion they be of, I told you before.

CHENOBOS. Let vs now heare some thing of their age. The age of Bees.

MELLIS. Their age (they say) may thus be knowen. Such as are not aboue a yeere olde, doe shine, and looke as they were newly oyled: the old ones be rough, shaghayrd, wrinckled, loathsome, & ill fauored to looke vpon, howbeit, for making of Toames, these are the best. Aristotle in his booke before mentioned affirmeth, that Bees liue fiue or seauen yeeres, and that if a stocke continue nine or tenne yeeres, the keeper of them hath good locke. Plinie writeth, that one stocke was neuer seene to continue aboue ten yeeres, not though you supply the places of the dead euery yeere with new: for commonly in the tenth yeere after the first hiuing, the whole stocke dieth. And therefore to auoide the mischiefe of being vtterly destitute, it is good to encrease the number of your Hiues with new Swarmes euery yeere. And if so be your Bees, through sudden storme, tempest, or cold, lie dead vpon the ground, you must gather them together into a platter, or a broad bason, and lay them in your house toward the South, specially if the weather be good, after, cast amongst them Ashes of Figge tree wood, being something more hot, then warme, shake them gently vp and downe, so as you touch them not with your hands, and so setting them into the Sunne, they will (as Varro sayth) quicken againe. To whom Columella subscribing, addeth, that such Bees as you finde dead vnder your hiues, if you lay them vp in a dry place all the Winter, and bring them out into the Sunne in the Spring, when the weather is faire, and sprinckle them with the foresaid Ashes, they will recouer within a few houres. They that list, may proue it. I haue not hitherto tried it. Marcus Varro holdeth opinion, that Bees are ingendred sometime of other Bees, and sometimes of the body of a yong Bullocke putrified, reciting this Epigramme of Archelaus.

To reuiue Bees that be dead.

Making of Bees.

Of Steere that strangled is are children strangely bred,
Of Horse ingendred is the Waspe, and Bee, of Bullocke dead.
The Horses breed the Waspes, the Bullockes breed the Bees.

For a young Oxe, or Steere, being strangled, corrupted, and cast into some such place, where the putrified vapour can not breath out, and store of hearbs and flowres, agreeing with the nature of the Bees thrust into the body, as Time, Cassia, and such like, wherewith the vapour may be tempered, you shal hereof quickely haue Bees, euen as you may of the body of a horse likewise ordered, haue Waspes and Hornets. Virgill hath described both the manners of ingendring of Bees, and the first sort, in these words.

This vse, you vvonder vvould, doth please the Bee,
The Chaines vnchast of Venus they detest:
To file themselues vvith filthie lechery
They iudge vnmeet, nor will be so increast.
But from the plants and pleasant flowres sweet,
They fetch their tender brood, and hence they get:
Both King and Court, and whatsoeuer's meet
To raise their vvalles, and Empyre vp to set.

The other manners, or repairing of Bees by art, the same Poet eloquently thus touched.

But if your Bees doe happen all to die,
The breeders gone, that should their race renew:
His lesson learne, vvhose skilfull cunning hie,
Made Bees, vvith bloud of Bullockes that he slew, &c.

Bees made of a Steere.

The manner how Bees are ingendred of a Bullocke, Virgill doth largely discourse out of Mago, and Demberitus. You must frame a little house foureſquare, about ten cubits in bredth, & as much in height, with foure windowes, on euery side one. A yong fat Steere being brought vp hither, his Nose, his Eares, and all other open vents stopped, & filled with linnen, dipped in Pitch, must be beaten with numbers of clubbes to death, so as both the bones and the flesh, may be broken without any blood: for of the blood commeth the Bee. Afterward, the house being deepe strawed with Time, and the Bullocke laid vpon his backe, the dores and the windowes must be close shut vp, and so plaistered, as there can no aire enter. Three weekes after, the windowes must be opened on euery side, saue where the winde bloweth strongest, and the light and the aire let in: when it hath bene well cooled & refreshed, the windows must be shut vp againe, and made as close as before: and being opened the eleuenth day after, you shall finde the house

full

full of Bées, and nothing left of the Oxe, saue the hornes, the hayre, and the bones: they hold opinion besides, that the Kings are engendred of the braine, and the other Bées of the body.

PVLLARIVS. I like not so costly comming by Bées.

MEL. Of the same opinion is Columella: I tel you but the order of the old skilfull fellows, you may chose whether you will try it.

CHENOBOS. I had rather you would tell vs what sicknesses and diseases they are subiect to, and how we may know the sicknesses, and in what sort to helpe them.

MELISSEVS. I will willingly shew you. The signes and tokens of their health, as if they be liuely, quicke, and many in number: if their workmanship be neatly and equally wrought: if they goe about their businesse chéerefully, and if they loke faire and smoothe. The signes of their not being in health, is, if they loke loathsomely, be rough and hayrie, except in the time of their labour, when they commonly loke like labourers, or be drowsie, or if you sée them carrying out of dead carkasses, and following the corses, after the manner of mourners, or that you heare no noyse, nor stirring amongst them. These signes when you sée, Columella willeth you to giue them meate in little troughes of Réedes, specially Honie sodden, and ground with Galles, or Roses. You must also to heale them, perfume them with Galbanum, Reasins, or old strigges of Grapes. If the King happen to dye, the common people waile and mourne with great heauinesse, neither will they make any prouision for their owne sustenance: and therefore if you féede them not, they will famish themselues.

Signes of sicknesse in Bees.

PISSINARIVS. With what diseases are they most vexed?

MELIS. They are many times infected with the Pestilence, against which you haue no other remedie, then to seuer the hiues farre asunder. Their chiefest and early sicknes, is in the beginning of the spring, when the Spurge and the Elme doe both flowre: for as vpon new fruits, so at their first comming abroad, entised with these new flowres, being almost hunger staruen with the winter passed, they féed so gréedily as they fall into a Flix, whereof if they be not quickly remedied, they die. For Spurge doth loose the bellies of all other creatures, but the flowres of Elme bringeth onely the Flixe to the Bée. And therefore in such Countries, where there is great plentie of these trées, the bées continue

The diseases of Bees, and the remedies.

but a while. Columella teacheth you against this disease, to giue them Rosemary sodden with water and Honie: some againe vse to giue them the stale of men, or Bullocks: as also the graines of the Pomegranate beaten, and sprinckled with Wine or Reasins, with the like quantitie of Manna kneaded together, & giuen them in sharpe wine, boyled in an earthen vessell, and powred into little Rédes. Virgill describeth an hearbe, called Aumellus, with a yellow stalke, and a purple flowre, the iuyce of whose root being sodden in old Wine, and strained out, is very good to be giuen them. Columella out of Higimus, teacheth to remedy them in this sort: First, to take out all the rotten and corrupt Combes, and to giue them fresh meate, & after to perfume them with smoke. It is good also to put to a decayed hiue, a new swarme, as I said before. Many times they die of a disease which they call, The great deuouring, which hapneth when they haue made so much ware, as they thinke they shalbe able to fill, and afterwards, by storme and tempest, many of them be destroyed, so that the remaine sufficeth not to fill the Combes, whereby the emptie parts of the Combes becommeth rotten, and so by little and little infecteth both the honie and the Bées: For which the onely remedie is, either to put in a new swarme to fill vp the cells, or if you haue no such swarms, to cut away part of the Combes before they come to be naught, which you must doe with a very sharpe knife, for feare of displacing the rest of the Combs. A cause beside many times of the death of the Bées, is their too much prosperitie, as when there are diuers yéeres great abundance of flowres, & the Bées so busie in their féeding, that they forget their bréeding, who ouer-wearying themselues with trauaile, they die, not leauing any brode behinde them. It is called Blapsigonia, when either by sicknesse, slothfulnes, or barrennesse, they leaue no fruit behinde them. To remedy this: It is good euery third day, to shut vp the hiues close, leauing but very small holes, out of which they cannot créepe, so shall they be forced to looke to their brode, when as they cannot otherwise range abroad. Many times besides they are the cause of their owne deaths, when perceiuing their Honie to goe away, they féede too grédilie. Their owne honie doth also many times destroy them: for being touched with it on the backe, they are so limed, as they cannot stirre: and Oyle doth not onely kill Bées, but also all

other

other like creatures, Flyes, and Wormes. They hate all filthie sauours, and sting such as smell of Dyntments: they are often besieged with Waspes, Hornets, and great Gnattes: the Swallow doth oftentimes spoyle them: the Woodpecker doth with his long tongue, thrust into the hiue, licke vp their honie: and diuers other Birds (as I haue said before) annoy them. The Tode bloweth them, and sucketh them vp at their owne dores, who sustaines no hurt by their stinging. Sheepe are also hurtfull and troublesome to Bees, in whose Fleeces they tangle themselues, as they can hardly get out. In the waste woods of Sarmatia, where they make their Combes in the hollow Firre trees, the Beare, for the desire of the Honie, climeth vp to them, and robbeth them. Against these Beares, the Bee-keepers vse to hang before their hiues great Paules, and Beetles, which the more angerlie the Beare showeth aside, with the greater sway they come vpon his head againe, whereby the Bees are well defended. The sauour of Treuisses, if any man boyle them neere to them, doth kill the Bees. The Ecco is also a great enemie to them, that with her resounding, doth shake and feare them: and hurtfull to them is also the Mist. The Spider is also their deadly foe, and where they can preuaile, make hauocke of the hiues, setting their webs and nets in euery corner, to ouerthrow the poore Bee. The night-Butterflie, that flyeth about the candle, is hurtfull to them two waies: for they both consume the Combes, and of their excrements left behinde them, is ingendred Mothes: in the very wood beside, breedeth a Worme that consumeth the Ware. These hurtfull Vermine, the carefull Keeper must diligenty labour to destroy and preuent, and looke that he plucke vp all such bushes and plants as offendeth them, not suffering any such to grow neere them, and to keepe all hurtfull Cattell from them, letting them alwaies haue such things at hand, as they most delight in. For the Keeper hath worke enough to turne him to all the yeere long: for after the twelfth of March, their Hiues must be opened and looked vnto, that all the rubbish, and filth of the Winter may be swept away, and the Spiders that spoyle the Combes plucked out, and that they may be smoked with smoke made of Ore-dung, or linnen (as I spake of before:) for smoke is of nature profitable to the Bees. And though it be troublesome for the time to them, yet

To keepe Bees from Beares.

Hiues purged in the Spring.

Smoke good for Bees.

yet it is certainely very wholsome for them. The Wormes, besides Mothes, and Butterflyes, must be killed, which cleauing like a pestilence to the Combes, doe fall away if you mingle with your dung the marrow of the Dre, and laying it vpon the coales, make your smoke: with this order shall your swarmes be kept still in health, and shall be better able to abide their labour: this kinde of purging them must be often vsed, from the Kalends of April, till the fall of the leafe. The Keeper must keepe himselfe (as I said before) cleane from drunkennes, letcherie, and all vncleane and strong sauouring sents: for they loue to be purely and faithfully looked vnto (as hath beene often said.) About an eight and fortie daies after the entring of the Sunne into Aries, they begin to swarme, and at the same time do many stocks perish, that haue few and diseased Bees. About the same time are bred in the outermost part of the Combes a brode of a great bignes: which some count to be the Kings: others call them Brees, because they course and chase the Bees, and therfore thinke it good to destroy them. From the rising of the seauen Starres, that is, from the fift Ides of May, till the tenth, or the twelfth of June, they vse to cast their swarmes: at which seasons they must be carefully looked vnto for going away: from that time, till the rising of the Dog, or the comming in of the Dog-daies, which is almost thirty daies, (as Columella saith) the harueft is both for Honie and Corne.

Oesti.

Times for swarming.

In what sort the hiues are to be driuen and gelded, it is shewed before: but at this time, and till the twelfth of September, the hiues must be opened euery tenth day, & smoked. The hiues being thus smoked, you must refresh the Bees, with sprinckling and casting into the emptie parts of their hiues, very fresh and cold water: and if any thing remaine, not washed away, you must sweepe it out with a Goose wing. Besides, the Mothes, if they appeare, must be sweeped away, and the Butterflies killed, which dwelling in the hiues, are commonly a bane to the Bees: for they both eate vp the Ware, and with their dung doe breede a kinde of Worme that they call Hiue-mothes. These Butterflies, as Columella teacheth, you may when the Mallow flowreth (at which time there is greatest number of them) destroy in this sort. You must haue a vessell of brasse, very high and straight, narrow necked and mouthed, in the bottome whereof you must haue a light, and set it in

To destroy Butterflies.

the euening néere vnto your hiues, and you shall sée all the Butterflies straightwaies fall to the light, and while they play about the flame, they burne themselues, while they can neither get vp, by reason of the straightnes, nor shun the fire, by meanes of the brasen walles. Betwixt the rising of the Dog, and of the Bearward, which are almost fiftie daies, you must take good héed your Bées be not spoyled by Hornets, which at that time lie in waight for them, euen at their owne doores. After the rising of the Bearward, about the twelfth, or fourtéenth of September, is the second harueft of your Hony: from that time, till the setting of the seauen starres, which is about fortie dayes, the Bées do prouide for their winter store, of the flowres of Heath, Tamariske, and other bushes and shrubs, of which prouision you must take nothing, lest you discourage them, & driue them away: from the setting of the seauen stars (which is about the entrance of Nouember) the beginning (if we may beléeue Plinie) of winter. The Bées liue all the winter long vpon such store of Hony as they haue laid vp: at this time, the Hiues must be opened & cleansed of whatsoeuer filth is in them, and diligently ordred, for during the winter time, your Hiues must neither be opened nor stirred, and therefore in the end of Summer, while the weather is yet milde and temperate, your Hiues being made cleane in some sunny day, sée that you thrust vnder them certaine close couers that may reach to the very bottome of the Coames, not leauing any voide space, whereby the Hiue shall be the warmer. When you haue this done, close vp euery rift and open place with Clay, and Bullockes dung mingled together, dawbing it all ouer without, leauing onely a little hole to come in and out at. You must arme them also against the cold tempest, with good couertures of Straw and Boughs. Some vse to put in the Hiues small Birds being drawen, which with their feathers kéepe the Bées warme all the Winter, and therewith, if they happen to lacke food, they féed themselues sufficiently. Yea, it hath béene séene they haue so fed vpon them, as they haue left nothing but the bare bones: howbeit, as long as their Hony sufficeth, they neuer meddle with the birds. It is very good and necessary (as I told you before) to set them meat in little Troughs or Réedes, to defend themselues against famine. When Winter is past, in the space of forty dayes, they make an end of all their

Not sturring of Bees in Winter.

Honie, except their Keeper doale the more liberally with them. It hath often also beene seene, that their Combes being emptie, they haue continued fasting, till the Ides of February, and cleauing to the Combes, as if they were dead, yet haue retayned their life: but least they should lose it altogether, it is good to powre them in some sweete liquours by little pipes, whereby they may sustaine their liues, till the Swallow with her appearing, promise a welcomer season.

After which time, when the weather will suffer them, they begin to seeke abroad for themselues: for after the Sunne is in the Æquinoctiall, they neuer rest but trauell painefully euery day, and gather flowres, and necessaries for their breeding.

Besides, because few places are so fruitfull, as to yeeld flowres both Summer and Winter: therefore in such places, where after the Spring and Summer (at which times, both Beanes, Rapes, Willows, and other plants and hearbs, in euery place do flowre) the flowres doe fayle, they are carried of diuers (and that in the night, as I told you before) into such places, whereas there is good store of late flowring hearbs, as Time, Wilde Marierum, and Sauerie, wherwith they may be fed, and gather food at their pleasure: and as Columella writeth, that Bees in the olde time, were brought from the fields of Achaia, to the pastures of Athens, and so transported in diuers other places. So may we with vs carry them from places where the flowres be consumed in the Spring, to the Summer flowres, as Clouer, and such other: and after that, about the end of the Summer, to places furnished with Heath, Tamariske, and such other late bearing flowres. For the auoyding of this inconuenience of carrying from place to place, I will shew you in what sort I haue ordred my Bee-yard at home. And because Master Hersbach hath shewed you before in his Garden many good hearbes, and yet not whereto they serue, I will shew you a few plants, that I haue set about my Bees, seruing both for their commoditie, and the health of my houshold: I haue chosen of a great number, such as be most necessarie, & of greatest vertue: whose speciall vertues, and wonderfull workings, giuen onely by the most gratious and bountifull framer of the world, and being as it were sucked and drawne out by the carefull toyle and diligence of the Bee, must needes adde a greater perfection to

their honie and their ware. I haue first enclosed the Yard where my Bees stand, with a Quickset-hedge made of Black-thorne and Hony-suckle: the one of them seruing the Bee with his flowres at the beginnieg of the Spring; and the other at the latter end of Summer. The first, the Black-thorne beareth a pleasant white flowre, so much the welcomer to the Bee, as it is the very farewell of the winter: for he commonly flowreth not till the winter be past. These flowres newly gathered & steeped all a night in the best and strongest wine, and afterwards distilled in Balneo Marie, being drunke, helpeth any paine in the sides, as hath beene certainlie proued. Tragus the Germane confesseth, that with this onely water he hath cured all maner of paines about the stomack, heart, or sides. Wine made of the Sloe, and preserued vntill Julie, or August, when the bloudy Flix most raigneth, is a soueraigne medicine against it. The other, the Hony-suckle, or the Woodbine, beginneth to flowre in June, & continueth with a passing sweet sauour, till the very latter end of summer. The water thereof distilled and drunk, two or three daies together at times, allwageth the heate of the stomacke, helpeth the Cough, and shortnes of breath. Rags of linnen dipped therein, and applyed, doe heale any heate of the Eies, or Liuer. Next vnto my hiues, I haue planted the sweet hearbe Melissa or Apiastrum, called in English, Balme; with a square stalke, a leafe like a smooth Nettle, and a yellow flowre, and groweth almost in euery hedge, an hearbe well knowne to the old women in the Countrie, and greatly desired of the Bee. This Melissa, or Balme, sodden in white Wine, and drunke two or three mornings together, purgeth the brest, helps the short-winded, comforteth the heart, driueth away the dumpish heauinesse, that proceedeth of Melancholy, helpeth the Falling-sicknesse, and almost all other diseases: being chopped small, and steeped a night in good white wine, and afterwards distilled, is greatly commended, not onely in deliuering Women from their pangs and griefes of the Mother, being drunke to the quantitie of three or foure Spoonefulls, but also cureth the paines or fainting of the heart, called commonly, The passion of the heart. Cardanus greatly commendeth this hearbe, for the comforting and reuiuing of a decayed memory: and affirmeth, that it is a causer of sweete & plesant sleepes. Next vnto this haue I growing that sweete and precious hearbe,

Blacke-thorne.

Woodbine

Balme.

Angellica.

Angellica, whose seedes I first receiued from that vertuous and godly Lady, the Lady Golding in Kent, a Gentlewoman that setteth her whole felicitie in the feare and seruice of the Almightie: this Herbe is in flowre, seed, leafe, stalke, and sauour, so like vnto Louage, as they may hardly be discerned the one from the other, the leafe doth in a manner resemble the Figge leafe, sauing that it is more iagged, and indented round about. If any man be suddenly infected with the pestilence, feuer, or immoderate sweat, let him take of the root of this Angellica in pouder, halfe a dram, and putting to it a dramme of Treacle, mingle them together with three or foure spoonefuls of the water distilled of the said root, and after he hath drunke it let him lie and sweat, fasting for the space of three houres at the least: this doing, by the helpe of God, he shall escape the danger: the roote steeped in Vinegar, and smelt vnto, and the same Vinegar some times drunke fasting, doth preserue a man from the pestilence: to be short, the root and the water thereof, is soueraigne against all inward diseases, it scowreth away the collections of a Pluristie beginning, helpeth Vlcered and corrupted Lungs, and is good against the Cholicke, Strangurie, and restraint of Womens Purgations, and for any inward swelling, or inflamation, the iuyce thrust into a hollow toth, asswageth the paine, the water dropped into the eare, doth the like: the sayd iuyce and water put into the eye, quickeneth the sight, and taketh away the thin skinnes and rines that couereth the eye. Besides, a most present remedy in all deepe and rotten sores, is the iuyce, the water or the powder: for it clenseth them, and couereth the bone with good flesh. It was called in the old time Panacea, or Healeal. Next vnto this Angellica, haue I growing in great plentie, Cardus Benedictus, or blessed Thistle, which the Empirickes, or common Proalisers, do commend for sundry and great vertues, affirming that it was first sent out of India, to Fredericke the Emperor, for the great vertue it had against the Headach, or Megrime, being eaten or drunken. Likewise, they say, it helpeth against the dazing, or giddinesse of the head, maketh a good memorie, and restoreth the hearing. For the proofe of his great force against poyson, they bring forth a young maiden of Pauy, that hauing vnwares eaten of a poysoned Apple, and therewithall so swollen, as no Treacle, or medicine could

For want of Treacle, you may take the whole dramme.

Cardus Benedictus.

cure her, was at the last restored to health, by the distilled water of this Thistle: and likewise that a boy, into whose mouth as he slept in the field, happened an Adder to creepe, was saued by the drinking of this water, the Adder creeping out behinde, without any hurt to the childe. In fine they affirme, that the leaues, iuyce, seed, and water, healeth all kinde of poysons, and that the water hath healed a woman, whose breast was eaten with a Canker to the very ribbes. I haue also set into this little peece of ground, great store of the hearbe called Namularia, or Penigrasse, which creepeth close by the ground, hauing vpon a long string little round leaues, standing directly one against the other, and a yellow flowre, like the Croe-foot. It is a soueraigne hearbe for healing of wounds, not onely outward and greene wounds, but also inward sores and vlcers, specially of the Lungs, whereof there hath beene good proofe. Tragus affirmeth, that he hath seene dangerous and desperate wounds cured with this hearbe, being boiled with Hony and Wine, and drunke. It healeth exulcerations of the Breast and Lungs, and may be well giuen to those that Cough, and are short breathed, and to little children diseased with the drie Cough, who by reason of their tender age may take no stronger medicine. I haue seene good plentie of it growing by the shadowie ditches, about great-Peckam in Kent. I haue beside there growing, Scabious, an hearbe that groweth commonly in Corne, with a iagged leafe, lying round vpon the ground, and thrusting out in Summer a long stalke, with sundry branches, the flowre growing in blew knobs, or tuftes, like hony Combes. This hearbe being sodden with Wine, and drunke, doth helpe the Pluristie, against which diseases, the women of the countrey, that many times take vpon them to be great Doctresses in Phisicke, do still the water thereof in May, and giue it to be drunken at each time, two or three spoonfuls, not onely against the Pluristie, but against inward impostemes, coughes, and all diseases of the breast. Against impostemes, diuers (as Tragus writeth) doe make this composition, they take a handfull of Scabious, the hearbe dried, of Liquerisse cut small an ounce, twelue Figges, Fenell seed an ounce, Aniseed as much, Dras halfe an ounce, these they lay a night in water: the next day they boile them, till a third part be consumed, and after making it sweet with Suger,

Penigrasse

Scabious.

or Honie of Roses, they giue it warme in the Morning and Euening, wherewith they say, the impostume is ripened, made soft, and coughed out.

PVLLARIVS. I remember, that passage by the house of that Honourable Baron, the Lord Cobham (whose house you shall seldome see without great resort, by reason of his noble disposition, and honourable intertainement that hee giueth to all commers) I chanced to see in his Parke at Cobham, a certaine hearbe called Veronica, whereof I haue heard vertues.

Veronica.

MELLISSEVS. That can I also shew you amongst the hearbes that I haue about my Bées: it is called of some Feuriuum, and Veronica, as it is supposed of a certaine French King, who was thought by the iuyce thereof, to be cured of a great Leprosie, it is called in English Fluellin: it creepeth low by the ground, as Penigrasse doth, and beareth a leafe like the Blackethorne, with a blewish speckled flowre, with a seed inclosed in little powches, like a shepheards purse, and groweth commonly vnder Okes, D. Hieron writeth, that the force thereof, is maruellous against the Pestilence, and contagious ayres, and that he himselfe hath oftentimes proued. The water of the hearbe steeped in white Wine and distilled, there withall he hath cured sundry times, hot burning and pestilent Feauers, as well in young men, as in old, Hieron Transchweyg, commended it to be singuler good for all diseases of the Spleene: the shepheards of Germanie giue it with great profit made in powder, and mingled with Salt, to their Cattell diseased with the Tough: beeing steeped in Wine and distilled, it is a most present remedie in all pestilent Feauers: being giuen two ounces thereof with a little Treacle, and after laid warme in bed, and well couered, it expelleth the poison by sweat, and driueth it from the heart. The water of this hearbe taken certaine dates together, two ounces at a time, helpeth the turn-sicke giddinesse of the head, voideth fleame, purgeth bloud, warmeth the stomacke, openeth the stopping of the Liuer, healeth the diseases of the Lungs, and the Spleene, purgeth the Raines, the Matrice, and the Bladder, it driueth out sweat and venome, helpeth the Iandise, the stone of the Reines, and other grieuous diseases. You shall also haue amongst these plants of mine, the good sweet hearbe Cariphilata,

or of some Benedicta : of others, Sanamanda, called in English Auens, whose roote whether it be greene, or old, resembleth the Cloue in sauour : the leafe is iagged, rough, of a darkish greene, and not much vnlike to Agrimony : the flowre is yellow, and after the falling thereof, leaueth a prickly knoppe like a Hedge-hogge : the roote the longer it hath growen, the sweeter it is : the speciall vse of this roote in some countries, is to be put in Wine in the Spring-time : for it maketh the Wine to taste and sauour very pleasantly : which Wine, as many hold opinion, doth glad the heart, openeth the obstruction of the Liuer, and healeth the stomacke that is ouerburdened with cold and grosse humours : this roote boiled in Wine and giuen warme, doth cease the griefe of the stomacke, or the belly, proceeding of eyther cold, or winde. Hard by this hearbe, haue I planted the great water Betony, called of some Ocimastrum, of Mathiolus, Scrophularia Maior : it hath a great square stalke, & bigge leafe indented round about : the flowre is in colour Purple, and in fashion like the shell of a Snaile : it flowreth in June and July, and groweth most by waters in shadowie places. Tragus teacheth to make a speciall oyntment thereof, seruing against all Scabbes and Sores, wherewith he saith, he hath seene people so mangie, as they haue seemed euen Lepers to be cured : his oyntment is this, Take the hearbe, rootes, and all, gathered in May, washed and well cleansed from all filth, stamps it, and straine out the iuyce, and keepe it in a narrow mouthed Glasse well stopped, wherein you may keepe it a whole yeere, and whensoeuer you list to make your oyntment, take of the same iuyce, of Waxe, and Oyle, of each a like quantity, and boyle them together vpon a Chafindish of coles, stirring them well, till they be incorporated, and so vse it. Mathiolus teacheth to make a singular oyntment thereof against Kernels, the Kings euill, and the Hemerodes : his order is this. You must gather the rootes in the end of Summer, and after that you haue made them very cleane, stamp them together with fresh Butter, and putting them into an earthen vessell close couered, set them vp in some moyst and dampish place, suffering it there to remaine for the space of sixteene dayes : afterwards, let the same Butter be melted with a soft fire, and being well strained, lay it vp for your vse. There haue I also another excellent hearbe,

called

Cardiaca. called in Latine Cardiaca, I know no name for it in English, except you will call it Mother-wort: and indeed it is the very true Mother-wort it groweth by high waies, and neere to stone wals, it hath a leafe something like a Nettle, but more indented, the leaues next to the roote being iagged like the Croe-foote: it groweth bushing with many stalkes, I haue seene it plentifully in Surry, and some store of it about Maidstone in Kent: it is of great force against any sicknesse of the heart, whereof it taketh his name: it helpeth Crampes, and Palsies, it cleanseth the breast from fleame, it killeth Wormes in the bodie, openeth cold obstructions, prouoketh vrine, and Womens courses: being made in powder, and a spoonefull of it giuen in Wine, it wonderfully helpeth the hard labours of Women.

Betonie. CHENOBOSCVS. I Meruaile you haue no store of Betony also: for I haue seene the Bees labour diligently vpon it, and haue heard, that it is of great vertue.

MELLISSEVS. I haue great store indeed of it, but that I forgat to tell you of it, it is knowen so commonly, as I neede not to descrie it vnto you: whosoeuer is troubled with breaking of winde, and weakenesse of stomacke, and those whose stomacks retaine not their meate, or whosoeuer feeles sower belching from thier stomacks, and is therewith often troubled, let them continually vse Betony, eyther the hearbe or flowre boyled in Wine, or the water distilled, or the Conserue (as they call it) of the flowres. And if so be you lacke the Conserue, or the water, you may vse the drie hearbe in powder, eyther by it selfe, or with hony: women that are troubled with the Mother, may vse this hearbe for their remedie. To be short, the flowre, leafe, and roote of Betony sodden and drunke, or howsoeuer you will, in Electuarie, Conserue, Sirop, Pocion, or Powder, as you list to take it, is singular good in the diseases of the Stomacke, Liuer, Spleene, Kidnies, and Bladder, it freeth the Matrice from obstruction, and draweth from thence all hurtfull moistures. For consumptions of the Lungs, Coughes, Dropsies, continuall and putrified Feuers, proceeding from the Stomacke, boile the leaues and flowres of Betony in honied water, and you shall haue present helpe. Thus haue I shewed you what kinde of hearbes I haue planted about my Bees, to the end they should haue foode at hand of

the

the swæteſt, and the wholeſomeſt: I haue ſhewed you alſo the vertues of the hearbe, the flowre, and the water, that you may vſe it for your owne commoditie: only this warning I giue you, that you doe not diſtill them, as the vnſkilfull doe, in ſtilles of Lead, Tinne, and Brazſe, which poiſoneth and ſpoileth the water, but in Glaſſe Stils, ſet in ſome veſſell of water vpon the fire, whereby your water ſhall be moſt perfect and wholeſome. The difference of theſe two diſtillings, appeareth plaine: for example, in Wormewood, which if you diſtil in your common Stillatories, the water commeth out ſwæt, hauing gotten a corrupt qualitie by the nature and corruption of the Mettall: whereas, if you doe it in Stils made of Glaſſe, loking that the Glaſſes be well cloſed round about, your water ſhall haue the very taſte, ſauour, and propertie of the Hearbe. With theſe Glaſſe Stils you may ſo order your fire, as you may draw out of euery hearbe, the Water, Spirit, Oyle, and Salt, to the great comfort of ſicke and diſeaſed perſons. I ſet beſides great plenty of Sauory, Heath, Tamariſke, and without the Bæyard, Brome, in whoſe flowres the Bée much delighteth. I kæpe you hére peradventure too long in ſo ſmall a matter.

Small is the thing, yet ſmall is not the gaine.
If gratious Gods permit, and Phœbus not diſdaine.

As the Heathen Poet writeth: but I will hére make an end of my talke, that hath perhaps bæne thought too long.

FINIS.

Soli Deo gloria.

Olde Engliſh Rules, for *purchaſing Land.*

Who ſo will be wiſe in purchaſing,
Let him conſider theſe points following.

FIrſt, ſee that the Land be cleare,
In title of the ſeller.
And that it ſtand in danger
Of no womans Dowrie.
See whether the Tenure be bond or free,
And releaſe of euery feoffee.
See that the ſeller be of age,
And that it lie not in morgage.
VVhether a taile be thereof found,
And whether it ſtand in ſtatute bound.
Conſider what ſeruice longeth thereto,
And what quitrent thereout muſt goe.
And if it be come of a wedded woman,
Thinke thou then on couert baron,
And if thou may in any wiſe,
Make thy Charter with warrantiſe.
To thee, thine heyres, aſsignes alſo,
Thus ſhould a wiſe purchaſer doe.

FINIS.