

PAPERS
IN
AGRICULTURE.

No. I.

ANGLO-MERINO SHEEP.

The LARGE GOLD MEDAL of the Society was presented to JOSHUA KIRBY TRIMMER, Esq., of Strand-on-the-Green, near Kew, for his Flock of improved Merino Sheep.

SIR,

As the Society have for some time made known their desire to obtain an account of the best system pursued in the treatment of merino sheep in this country, and also as to the winter management of sheep in yards; and having, in the course of twenty years' practice, succeeded in raising a flock of merino sheep of strictly pure blood, the wool of which, instead of degenerating, as has been asserted it would do in this country, is admitted to have become highly improved; and having also, I trust, brought the management of sheep in straw-yards more into a system, and practised it on a larger scale than has been done by others,—I flatter myself that a brief history of the origin and treatment of my flock, accom-

panied with some observations arising from my experience, will meet the object of the Society.

About twenty years ago, the Cortes of Spain presented to the late king a number of sheep, selected from two of their choice flocks—the negrette and the paular; and shortly after their arrival at Kew, it having been determined to draft the oldest of the ewes for sale by private contract, as I was on the spot I had thus an opportunity of purchasing eighty ewes and two rams out of this first draft. I had my choice of either flock; but as the negrette were always deemed the largest merino sheep in Spain, and their wool was in very high estimation; and as I also considered them altogether the more desirable sheep, I selected those in preference to the paulars.

I then resolved to raise a flock from them of strictly pure blood; and knowing that wherever there is a mixture of different varieties of sheep in the possession of the same owner no certain dependence can afterwards be placed on their purity of blood, I consequently determined to part with a few merino sheep which I previously had, as well as with my British sheep also; and from that time I have kept no other kind whatever.

From my thus determining to breed from this stock only, I have every reason to consider that mine is the only strictly pure negrette flock existing; for I know that such of them as were purchased from the king's flock by other persons were afterwards mixed with different varieties of merino, or cross-bred sheep; and the negrette flock, it is admitted, has become extinct in Spain. After the ravages and confusion occasioned by the war in that country, and the consequent admixture of flocks of different sorts, the vacant ranks of the lost sheep in the most esteemed flocks were afterwards filled up with sheep of very inferior qua-

lity, though the names of most of the flocks were kept up, and the several piles of wool still bear the same marks ; but the negrette flock, which belonged to a noble family, is wholly lost, even in name.

For some time after I purchased the eighty ewes and two rams which I have mentioned, I continued to buy a few annually, of the best, from the old negrette ewes drafted from the royal flock, and to draw a supply of rams from the same source. In time, however, I found that my own flock had gained so much upon them in the superior softness and fineness of the wool, that I was losing ground by using the others ; and I therefore parted with the last rams I had purchased, and, for the same reason, did not buy any part of the flock when it was finally sold off. From that time, I have continued to use my own rams only.

I have now about seven hundred select sheep descended from this origin ; viz. about three hundred ewes in lamb, and of young ewes and rams altogether nearly the same number, with about one hundred wethers.

In speaking of the improvements which have been effected in them, I must first observe, that the original merino sheep were very unsightly, having, for the most part, large dewlaps hanging under the throats ; and many individuals possessed a general looseness of skin over the whole body. The fleeces of the best flocks were also very unclean, and the wool was frequently much coarser on the hinder part of the animal. I therefore aimed to improve them in each of these particulars, as well as in the general character of the carcass ; but I made the improvement of the wool my first object.

To accomplish this, I lost no opportunity of acquiring, from manufacturers and other practical men connected with wool, but particularly the foreign trade, such in

formation as I could gain of the quality and properties of the best wools, and endeavoured, by management in breeding, to bring mine to the highest standard. I thus found the wool gradually improve in fineness, softness, and silkiness of hair; that the sheep lost the coarser parts of the fleece, so as generally to possess a much greater uniformity of wool throughout the animal, and in many individuals to such a degree, that there became scarcely any difference between those parts which were before the coarsest and the finest parts, the wool of such being fine even down to the hocks of the sheep.

I must also observe, that from these sheep having, through the several generations, become of much higher blood, the descendants of such produce wool of the best character, almost to a certainty; whereas, in the first instance, many of the lambs, even from some of the best sheep, proved inferior in the quality of their wool.

Whilst this advancement in the wool has been gained, great improvement also in the sheep altogether has taken place. The coarse dewlap and general looseness of skin have been lost; the carcass throughout has become more spread and full, and the form of the sheep of greater symmetry; so that very many of them are beautiful, the fattening quality good, and the mutton highly esteemed as of fine grain and excellent flavour.

Although some individuals are larger than the rest, yet, in general, I have not gained very considerably from the original stock in this respect; for, indeed, I have not aimed at it, as I would not sacrifice other properties for size, being convinced that a wether sheep which, when moderately fattened, reaches from seven to eight stone weight, (which mine do), is of that size best suited to arable, upland, and down farms, in every respect; and that as much mutton

can be grown on a given quantity of land, by more of them being kept on an equal extent of it; and that the carcasses of these smaller will bring a higher price than those of large coarser sheep; and, consequently, that the former must be the most profitable to the farmer. Indeed, I have heard intelligent and unprejudiced men acknowledge, that they often found they had grown two stone weight of mutton on a sheep for nothing, since one of so much less weight would have produced the same price in the market; and that they were satisfied the extra two stone weight of meat was not grown without an additional quantity of food. Butchers, also, admit, that since some varieties of short-woolled sheep have of late been bred on a larger scale, the mutton has become coarser and worse altogether; and I feel entire confidence, that by crossing such sheep with improved merinos of high blood, not only the wool, but the mutton also, would be benefited,—the latter both in fineness of grain and flavour.

Whilst on this head, I must add one more remark, which is, that although mutton suet is generally found to be unfit for culinary purposes, yet that from the merino sheep which are killed from my flock for the family is constantly used for that purpose, and so highly esteemed for its delicacy, as to be preferred to beef suet.

I have now to speak of the treatment and kind of food under which these improvements in my flock have arisen; and as, during the last thirteen years, I have brought the practice more to a system, I shall confine my observations to that period only.

Having a farm entirely arable, and the land in general too tender to carry sheep well in the depth of winter; and being convinced that a general saving of food might be effected, by keeping sheep, like cattle, in straw-yards

during the wettest part of the winter months, (at which time the land gains comparatively but little improvement by their being on it, but rather, in some instances, is injured by it,) I determined to adopt such practice. I therefore formed a sheep-yard, surrounded with slight sheds on posts, and roofed with small poles, thatched over, the outer sides being enclosed with wattling, plastered over, and the inner left entirely open.

The roots are drawn off the land early in autumn, stacked conveniently for use round the yard, and secured from the weather by being thatched with straw, or a slight quantity of straw first placed on them, (the roots being piled up evenly, like the ridge of a house,) and a covering of earth then banked over them, and beat down so as to throw off the rain. With these roots, which are ready even in deep snows, and tender when, during severe frosts, the field turnips are mere lumps of ice, the sheep are fed, together with oat, barley, pea, and bean straw for the store sheep.

The fattening sheep have some hay, and such as can be spared is also given to the ewes after lambing, which is generally in February. The turnips and fodder are given in cribs. The yard is first covered with stubble or straw, and a thin sprinkling is added from time to time, as found necessary, to keep them clean, and the dung is removed at least once during the time the sheep are in the yard, lest it should heat, or become wet or offensive to them. A little clean straw being put at the bottom of the cribs, the sheep will scarcely waste a handful of the roots; whereas in wet weather, when in the fields, they foul and waste a large portion of the turnips.

A yard of this kind, forty yards by thirty, the sheds being about ten or twelve feet deep, will be sufficient for

four hundred dry sheep, (being about three yards to a sheep), provided they can be let out occasionally for part of the day, to exercise on downs, or sound land of any kind, which practice I prefer, where it can be accomplished; but in cases where there is no such opportunity, rather more space in the yards is requisite, to enable the sheep to exercise. Ewes and lambs (couples) also require somewhat more room than I have stated, and in each case it must be remembered, that I am speaking of sheep of the size of merinos; but where straw is plentiful, this difference of space is not an object, since much valuable manure is thus raised, and a little addition of sheds, as they are not costly, need not be a consideration; but if it is, the south side of the yard may remain unenclosed.

As soon as the land will admit of it, the sheep go out, by day at first, to fold off late turnips and rape, or early rye, and they continue to fold off such crops, succeeded by trefoil, rye-grass and clover, tares, early-sown rape, and turnips, throughout the spring, summer, and autumn, except that in the autumn, whilst there is any feed on the stubbles and clover leys, the sheep pasture at large over them, when a fold is pitched on the poorest parts of the fields to enclose them at night, and removed from time to time in the usual way. With this exception, the sheep may be said to live between the hurdles; for, even when in the yards in winter, the several flocks are kept apart by hurdles.

I must here observe, on the different varieties of food in question, that, except the rye, which, from necessity, is given in early spring, I do not object to, or give any preference to, one kind above the other. Rye, however, is a poor, griping food. I therefore would, if possible,—and when the store of roots holds out well, I do, as much as I

can,—avoid giving it. Rape, if very rank and in a growing state, requires to be given with great caution; but where it is fully ripe, (which the lower leaves dying off, and the whole tinge of colour changing from a bright green to a brownish cast, proves to be the case,) it is then safe food, and very nutritious. Whilst, however, it is in the very green growing state I have spoken of, and particularly on good land, if scarcity of other food renders it needful to use it, the safest way is to have it cut, and let it remain a day to wither before the sheep are folded on it.

It would be somewhat out of place here to enter largely into the particulars; but I will just observe, by the way, that I prefer this manner of folding off green crops, even if they be ever so light, to the old practice of pasturing by day and folding the sheep on large fallows by night, since they thus make a return to the same land which feeds them. Where, however, there are downs, or sound poor pastures on or near to the farm, the middle course of letting the sheep feed over those part of the day, and returning to fold off the cultivated crops afterwards, and remain on that land at night, is desirable.

Respecting the influence which different varieties of food are supposed to have on the fineness of wool, my own experience proves that the idea is fallacious, and that the quality arises from the purity of the breed of sheep. By starving, and consequent disease, wool may be rendered shorter and more brittle, (tender, as it is called); but if the sheep inherently possess the property of growing a fine-haired, soft, silky fleece, those qualities will not be lost in the wool, even though the staple be lengthened by higher keep; and I am convinced that sheep like an occasional change of food, and that it is favourable to them.

Since so much has been said about the use of salt for sheep, and such stress laid on the constant use of it, I will add my sentiments as to the extent of its value for that purpose, as I differ, in some degree, from other persons on the subject. Its greatest value, in my estimation, is, that it appears to be a preventive to the rot, if timely given, in wet, ungenial seasons, to sheep on pasture land, particularly at the setting-in of the autumnal rains and fogs, or white frosts, and again in early spring, or, indeed, at any particularly wet seasons, either in summer or winter; and I think no sheep whatever, which are kept on pasture land at such seasons, should be without a supply of rock-salt, if it can be had, or otherwise common salt. The former they will lick, and of the latter they will take no more than will be beneficial to them.

If, however, the practice be followed as some persons recommend, of giving salt constantly to sheep, I think much of its valuable effects, at such seasons as I have recommended, would be lost. In my own practice I seldom give it; not from any objection, for I have none to using it occasionally; but rather from a conviction that sheep, by such a course as I have practised, do not need it; for I am satisfied that, whilst thus folding off uncultivated crops, on arable land fit to carry them, and being kept in winter as I have stated, they are in no danger of the rot; and I have no more idea of salt rendering the wool fine, as some have considered it does, than I have of the different varieties of food altering the quality; for I never grew finer or softer wool than when the sheep have had no salt whatever during the whole growth of the fleece.

I have now, sir, endeavoured to state, as briefly as the subject would well admit of, my sentiments as to the use and value of merino sheep in British husbandry, and

my own treatment of such sheep, under which they have become, in every respect, highly improved; and my practice of twenty years has fully proved that wool of the finest kind can be grown in this country, and thereby render us independent of other nations for a supply of it; whilst our flocks will be more valuable, and our arable husbandry promoted.

If my experience and remarks can in any-wise tend to remove the unfounded prejudices against these sheep, which the self-interest of some persons, and the want of knowing their merits in others, have heaped upon them, I trust that my labours in this cause will not be wholly lost to my country, but that I shall, thus far, have been a benefactor to it; for such, I conceive, must every one be who can lead to an article being produced which will regain the use of British grown wool for our clothing manufactures, from which it is now all but banished; whilst a quantity of coarser kind, far exceeding the consumption, is produced, a great portion of which is accumulating annually, without any chance of its being wanted.

I hereby beg to forward to you a specimen of the shawl cloth manufactured by Messrs. Fryer, of Bridge Street, Blackfriars, with twist spun from the wool of my flock by Messrs. Pease, of Darlington, which, I trust, does credit to British manufacture and British grown wool.

The best proof, however, which I can give of the improvement gained in the wool of my sheep, is by stating, that even in the depressed state of the wool trade last year, the entire fleeces from the whole flock sold at 3s. 6d. per pound, to the same manufacturers who had before used the wool; and so satisfied were they with the su-

perior softness in the working of it, that, having had the promise of it, they examined the wool whilst on the sheep's backs, and agreed for it before it was shorn. This price, I find, as well from the report of the Lords' committee as also from every other source of information, is double that which the entire of the wool from any other flock in the kingdom sold for; and estimating the different weight of the fleeces, which are double the weight of those from the Saxon sheep, (those from my flock, which are chiefly ewes, averaging between three and four pounds each,) the price is also above that which the Saxon flocks produced at the same period.

I am, Sir, &c. &c.

A. AIKIN, Esq.
Secretary, &c. &c.

JOSHUA KIRBY TRIMMER.

No. II.

DRAINING PLOUGH.

The Sum of FIFTEEN POUNDS was presented to Mr. ROBERT GREEN, 57, Ernest Street, Regent's Park, for his Draining Plough, a Model of which has been placed in the Society's Repository.

[The Plough, of which the following is a description, is represented in Plate I.]

FIG. 1 is a geometrical view of the off, or right-hand side, of the plough, with the mould-boards fixed eight inches above the bottom of the plough; fig. 2 is a plan; fig. 3