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**BUCKEYE NURSERIES**  
**TAMPA, FLORIDA, U. S. A.**



CATALOG AND PRICE LIST  
**CITRUS FRUITS**

**M. E. GILLETT, Proprietor**  
ESTABLISHED 1880

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PEPPER PUBLISHING & PRINTING CO.  
Gainesville, Florida

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TAMPA, FLORIDA

## To Our Patrons

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In presenting our annual catalog it shall be our aim to make the subject matter as interesting and instructive as possible, going into details to give our customers the benefit of our extensive experience and exhaustive investigations in Florida, as well as in many other countries where citrus fruits are grown.

Starting as we did in 1880, we believe we can justly claim the honorable distinction of being one of the oldest nurseries in the State, possibly the oldest, when speaking strictly of the citrus fruits which we are now growing exclusively, though for the convenience of our customers we handle all kinds of deciduous and ornamental trees and plants, having a satisfactory arrangement with some of the best growers in the State from whom we secure our supplies.

It has never been our aim to supply the cheapest trees on the market except in this respect, that the *best* is the *cheapest* and the best is never too good. It is this grade of trees we endeavor to supply to our trade.

The constant and increasing demand for immense supplies of citrus trees has encouraged us to enlarge our business until we now have some 800,000 trees in nursery. We moved from Marion county, our former home, to our present location at Winter Haven, Polk county, some four years ago, where with an elevation of 180 feet, combined with the well known protection of this Lake Region, we feel perfectly safe from Jack Frost.

Assuring one and all that it is always our intention to give everybody a square deal, I remain,

Yours respectfully,

M. E. GILLET.



Packing House and Siding

# The Buckeye Nurseries

## TAMPA, FLORIDA

### Location and Shipping Facilities

The Buckeye Nurseries, established in 1880, were originally located at Weirsdale, Marion county, Fla., where we enjoyed comparative immunity from damaging cold until the record breaker in those eventful years of 1894-'05, when we concluded that our location was not the best, and moved to Tampa; but this was no improvement, and after canvassing the State carefully we decided that a location among the many lakes of Polk county's famous lake region was the ideal spot, as, combined with its lake protection and 180 feet of elevation, is an ideal soil for a nursery, being a deep, warm, sandy loam, where it is next to impossible to grow a tree without producing a great mass of fibrous roots, almost unknown on trees grown in rich soils.

Believing that to do good work it was necessary that we have a proper place in which to do it, we built the year the first shipments of trees were made from these nurseries, what is beyond all question the most complete and most conveniently arranged tree packing house in the State. This building is 50x80, two stories. We have a large irrigation plant at a nearby

lake with which we supply water to a 6,000-gallon tank, as well as our seed beds which are nearby under a lattice shed covering one acre, where all our seedlings are propagated.

Water is piped into the packing house so that the roots of trees can be kept constantly moist. We believe a thing worth doing at all should be done in the best manner possible. We do not believe in growing good trees and then allow them to be ruined because of incomplete or, as is often the case, absolutely inadequate facilities for handling them. It is a well established fact among those who have had experience that the wind is as bad on a freshly dug tree as the hottest sun, but when you combine the two you are putting the tree to a very severe test. How often it is that trees are packed in an open shed, protected it may be from the sun, but exposed to a drying wind that weakens the vitality and prepares the tree for an untimely death a little later.

Believing it to be of the utmost importance that every precaution imaginable be used we erected this packing house. The trees are lifted in nursery and taken to the building, care being taken that they are sheltered from sun and wind. Large doors are opened and the load deposited, when the doors are closed and no draft of air can reach them. They are then sprayed and experienced packers put them into the boxes, several car loads of sphagnum moss being available for packing among the roots. As soon as the box is finished it is marked, weighed and trucked into a car on our own private siding. Thus our trees go from nursery to car with a minimum of exposure, and it is because of this careful work that they arrive at destination in such good condition; and we believe that the methods employed bring satisfaction to our friends as well as gratification and new customers to ourselves. Of one thing we are always sure, if a tree dies after planting the fault cannot be laid at our door.

## Stock

“On what stock or root shall I plant?” Every nurseryman has this question asked him many times during the year, but there are so many different opinions even among planters of large experience that one may as well get what seems to be the consensus of opinion and then plant, as the old darkey said “what seems most fitten.”

Four kinds of stocks are in general use: The Sour or Wild Orange, the Rough Lemon, the Grape Fruit Seedling and Trifoliata.

## Sour Stock

During the early years of orange growing in Florida most of the nursery stock came from the seedlings which sprang up in the hammocks where the wild or sour oranges grew. They were budded where they stood, were dug and transplanted. Not being able to get anything else many of these trees were planted on light, thin soils, not at all adapted to this stock, and the poor grower finally despairing of seeing his grove ever get large enough to bear, laid for a tenderfoot, got him, sold and departed.



On either low, wet soils or on strong, heavy soils the sour stock is beyond all question one of the best, but unless you have plenty of time to fool away try Rough Lemon or Grape Fruit root on the light soils.

### Rough Lemon Stock

This like the Sour Orange seems to be indigenous to Florida, Cuba, Porto Rico and Jamaica, as we have seen them growing wild in all these countries. Anyone desiring quick results and heavy crops should tie to this stock, especially on light or sandy soils. It is about the only stock on which the Navel orange will perfect a crop in Florida, and for that very good reason we use it exclusively for the Navel and Navelencia. In Cuba it was for a time said to be more susceptible to "Gumosis," a disease very similar to mal-de-goma, but which attacks the tree higher up and is a distinct disease. In the groves at Ceballos, Cuba, where there are 200,000 trees, we found really a larger proportion of trees on sour root were attacked than on any other, and the disease was confined almost entirely to Grape Fruit buds without regard to what stock they were budded on. We have, therefore, come to the conclusion based on the experience we have had that the Rough Lemon is as disease-resistant as any stock we have, except it be planted in low, wet, badly drained lands, where a man should be prosecuted for making the attempt, though a few years spent under such conditions generally bring its own punishment.

### Grape Fruit Stock

These are obtained by planting the seed of the Pomelo or Grape Fruit, and in some sections of the State, especially the extreme southern, they will have nothing else. One thing is certain, no Grape Fruit holds on the tree as well, or retains its juice and flavor as does the Florida seedling Grape Fruit, and many continue to plant the seedling because of these virtues. Believing the theory a good one we have practiced for some years budding a large proportion of our Grape Fruit on Grape Fruit root, thereby preserving the "hang on" quality, getting the advantage of its rapid growth, as it stands next to the Rough Lemon in that respect and by budding we get the variety we want and all are alike, which cannot be done in a seedling grove. We have tried Grape Fruit root under all conditions and all things considered it can hold its own with any of them as an all-round stock.

### Trifoliata Stock

This stock in our opinion is not to be considered as in the same class with those just mentioned, but owing largely to the fact that it starts so late in the spring, thus escaping late frosts makes it desirable for orange groves in North Florida, Georgia, Louisiana and Texas. The fact that they will resist cold is their greatest recommendation, and this being true it would seem a joke to send them to Cuba where frost is never known, and yet I dare say thousands have gone there. In certain districts in

Texas the Trifoliata Stock is growing in popularity and we are preparing to supply this demand.

### Sweet Stock

Sweet orange stock was at one time used exclusively in California and very largely in Florida but has been discontinued because of Mal-de-goma which attacks and eventually destroys practically everything on this root. The orange has such a faculty, however, of adapting itself to all conditions, we consider it hard except on general principles to lay down any iron clad rule as to just what stock to use, as in a day's travel you will find so many contradictions of what you thought to be fixed rules that by night you will say with the old darkey "use what seems most fitten."

### Grading

As all nurserymen now grade by height it was thought best and has been agreed by all the leading nurserymen of the state to adopt this method; qualifying this, however, by giving the approximate caliper of the different grades. We advise all our customers to let us cut back all trees before packing so that the top and root will be well balanced. We can ship the entire top but will only do so at purchaser's risk, as unless the top is cut back in proportion to the loss of roots a tree cannot be expected to do well.

### Age of Root

It strikes us that planters are often careless or pay too little attention to this very important point. It is an admitted fact that trees as a rule must attain a certain age before they begin to bear, according to the kind of tree or fruit, and the question is not open to controversy. It is also well known that some fruits bear when the tree is very young, as in the case of peaches, while apples, pears and other deciduous fruits require several years longer. We have seen seedling oranges bearing quite full in Cuba at the fifth year, and budded trees two years from planting. The wood growth, however, owing to the rich soil is prodigious. In Florida a good, strong bud on three to four year root may show a few fruit the third or fourth year, but a heavy crop cannot be reasonably looked for till the fifth or sixth year except in the case of Grape Fruit, which grow more rapidly and frequently produce paying crops the third year provided they are heavily fertilized and well cared for. We have furnished over 200,000 trees for one of the largest, and which is destined to be the most famous groves in the world, at Ceballos, Cuba. We planted good, strong buds on 3½ to 4 year roots and when planted only two years they bloomed heavily. From the first 10,000 planted we began shipping before the trees had been in the ground three full years, and they averaged fully one-half box per tree, and some trees bore five packed boxes. Some planters in their zeal to get a cheap tree are satisfied with an age of 1½ to 2 years on the root. No such results as above could be gotten on these young roots, and the older root will bear fruit enough to pay for itself many times over before the young



### Just a Few Hundred Thousand

root gets aged enough to bear at all. We grow our seedlings one year in seed bed. They are then transplanted to nursery rows where they are usually grown for two years, at which time they are large enough to produce a heavy bud growth. They are then budded and the bud is grown a year, thus making the tree or root four years old when ready to dig. We might save a year perhaps by forcing heavily with stimulating manures, but we have never believed it to be best to "stuff" or overfeed a tree or plant, as an unnatural forced condition is created which cannot help tell on the future vitality of the tree. We prefer to wait another year letting them come along in the most natural way as they are at the same time attaining that other desirable quality, Age, so that when we send out a tree it is as near a perfectly grown specimen as our years of experience is able to produce. It stands to reason that grown in this way our trees cost more than forced, quickly grown stuff, as it costs money to work, feed and care for trees an extra year. Still, our prices will on comparison be found no higher, and under our system of grading we believe we are even supplying a better tree for the same money. We believe in forcing and crowding vegetables, but not citrus trees.

### Quality

This is one thing about which no mistake should be made. First feel sure you will get a strictly first-class tree, and secondly buy it from some

one who will give them to you true to name; someone who has built up a reputation by years of honest dealing and who expects to maintain that reputation as long as his nursery is in existence. There are plenty of "fly by nights" and "amateurs" in the nursery business who are here today and "considerably elsewhere" tomorrow, but there are also plenty of good, reliable men in the business who love it and have devoted their lives to it, and to such I recommend you. As a rule shun what we in the business call "back dooryard" nurseries, as they are often a delusion and snare. We have been in the business now for twenty-seven years and the question is often asked the writer: "Why don't you start a nursery in Cuba?" My answer is because I believe the best place in the world to grow a nursery tree of the citrus family is in Florida. Experience has taught that in a light, sandy soil or loam the conditions are nearest perfect for the production of a tree with a great mass of fibrous roots. From the time the seed sprouts it begins to hustle for food, and is compelled to hustle night and day or fare badly, and this constant hustling makes a perfect root system. Contrast this with a young tree on rich soil. Its every want is so completely supplied that it only needs to put out a very few roots, as there is such an abundance of plant food everywhere present that a comparatively few roots suffice to keep this small plant in apparent health, but, put them to the test, and like the son of a poor man who had to hustle early and late, building up thereby a robust constitution, as compared with the pampered son of wealthy parents who had only to ask for what he wanted and his every wish was gratified; you will find that while they may look alike the strong will live and thrive while the weakling will struggle for a time and finally collapse. Therefore, believing that the best tree can be grown in Florida, knowing that we can grow them more cheaply here, being able to secure easily the varieties wanted from bearing trees, thereby insuring them true to name and quick to bear, are a few of our reasons for growing our trees in Florida. It has always been our aim to produce the best tree it is possible to grow and we believe we can best serve the interests of our friends and customers by continuing our nurseries at Winter Haven, and shall endeavor each year to do just a bit better than the preceding one.

## Varieties

Inasmuch as we have furnished several hundred thousand trees for planting some of the largest groves in Cuba, we have had an opportunity to form an opinion from the experience thus obtained, and these ideas of ours may seem as reasonable and practical to you as to ourselves. Unlike California or Florida, Cuba has a "sho nuff" frost proof climate. No fires or smudges are needed there to ward off the unfriendly breath of Jack Frost. It is a well established fact that as a rule fruit that can be fresh cut and put on the market after practically all else is gone brings fine prices. Note the "Old Mission" Valencias bringing \$8.00 to \$11.00 per box in June, July and August. This being true why should not those favored few who in Florida have sheltered locations, as well as practically all of Cuba take advantage of climatic conditions and grow something which can not be safely

grown elsewhere, instead of planting a lot of early fruit which will enter the market with the mass of unripe, unfit stuff which is certain to be sent in from Florida and (more's the pity), it is beginning to come from California. Now, why is this suicidal policy repeated year after year? Simply and almost solely because these growers fear the cold and argue that they prefer to chance the market rather than the climate. Nothing of the kind was done either in California or Florida in the good old days before the freeze, when we fed them well and took pride in letting them hang till they were "fitten to ship." Now, Cuba has not as yet been able to put early fruit on the market ripe and "fitten to eat" any sooner than Florida has, and if this be true why should she rush in where Florida and California angels should "fear to tread?" She may be able to get some new early orange that will fill the bill, but until she does why don't she tie to the very late varieties which ripen during her dry season making not only an ideal time to ship but she gets into market when it is practically bare of citrus fruits. When Grape Fruit bring \$2.50 to \$3.00 in November, December and January, and \$5.00 to \$12.00 in April and May, and there is no risk in holding, tell me why Cuba should ship on the low market, thereby forcing it down still further, instead of sitting back and waiting patiently till the others are out of the way?

Another and a very serious disadvantage which will be experienced in Cuba with the early varieties is that they must be shipped during the rainy season when it will be almost impossible to find the fruit in proper condition, as it will hardly dry out from one rain till it is soaked again and unless fairly dry when picked it is almost certain to reach market in bad condition. You say some of the fruit may drop. All right, grant that it does. What you do ship will bring three times what all your crop would if shipped too early, and the drops cost nothing to pick and pack. Therefore, we should advise the Cuban planter to stick to the late varieties until some exceptionally early sort is found which can be put on the market ripe and desirable, very early. And even then he has an advantage in climate for the late fruit which he should not lose sight of, as it is one of his most valuable assets. We do not believe in planting too many varieties. Decide on what you want of some of the best, but do not try to cover the entire list.

## Prices

Here again the old adage scores that "the laborer is worthy of his hire." We always try to see that every man gets value received, and this might be further attested by scores of testimonials voluntarily sent us which we refrain from publishing as it savors too much of patent medicines. We do not now, nor do we ever expect to run our nurseries as an Elymosynary institution, but we are in the business primarily because the growing of trees appeals to us and we love the work, and, secondly that by careful and economical management we have made it fairly remunerative. We are not selling at cost. We are not a "job lots," "bargain counter" concern. We try to sell as cheaply as we can and yet derive a fair profit on the business and this we feel we are entitled to.

No white fly in or within miles of our nurseries.

## Useful Information

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### Selection of Lands

In selecting land for an orange or grape fruit grove try to get land free from "hard pan" and at least two feet above the high water mark. It is best to have it cleared and cultivated at least six months before planting your trees, and if possible a crop of beggar weed, velvet beans or cow peas should be grown on the land to sweeten or mellow the soil and put it in proper shape to receive the trees. If the soil is sour use a little lime or good grade of hard wood ashes, cultivated or harrowed in lightly. A high, well-drained soil is best for citrus fruits. However, if such land cannot be obtained, and your soil is inclined to be damp, it is very easy to get sufficient elevation by throwing up the soil into ridges in such a way that drainage can be had through the water furrows, and planting your trees on the ridge.

### Distance to Plant

At one time in the history of the orange business in Florida the desire of every planter was for a big tree, but we have outgrown these early ideas and now most growers prefer many smaller trees on an acre rather than a few very large ones. It was found that the fruit on the large tree was much more easily injured by wind storms, the exposure being so much greater, while on the smaller, low branched tree the wind did no harm, and the fruit can all be gathered from the ground or with a twelve-foot step ladder instead of having to use a thirty-foot ladder taking three men to move, as is the case with the big tree. Trees are also better sheltered from both extremes of heat and cold when closer together. We would under no circumstances ever plant wider than 25 feet, about 70 to the acre, but prefer 21 feet, which gives just about 100 per acre, and we believe this to be the happy medium.

### Time to Plant

We believe it to be a generally accepted fact that Dame Nature understands her business, and among other things she seems to have arranged a time for tree-planting which we would advise planters to carefully consider. During the early fall, generally about November 1st, our trees in Florida have completed their growth for the year and virtually go to sleep till spring. There is no sap moving and the bark and limbs are firm and well matured, and this is unquestionably the ideal time to transplant from nursery to orchard. Instead of taking up a tree in a blazing hot sun and scorching, withering wind, you have only the most favorable conditions and your tree is taken with minimum risk of exposure. The weather is cool and the land into which it is to be transplanted is just as it should be, cool and moist, which assists the roots to heal or callous over which must be done



Just a Few More Rows One-Fourth Mile Long

before new roots can start. Some planters argue that they prefer to wait for the rainy season so as to require no water in planting, but the law of compensation is ever at work and you will be repaid many times over for the small expense of watering by the more vigorous condition your tree is in when it starts off in the spring. We, therefore, advise by all means plant if you can while the tree is yet dormant in nursery, November, December, January and you make no mistake. After our trees start to grow and are full of new growth and sap is in our opinion the very worst time to plant, though there is a time if carefully watched when the first growth is hardening up when the tree is semi-dormant, but we prefer to go on record as being opposed to unseasonable planting.

### Treatment of Trees

Unless otherwise ordered we always defoliate and cut back our trees before packing. Many planters fear that if their trees are not planted a few hours after arrival they run a great risk of losing them. In this connection we will say that trees packed at our nurseries have stood in the boxes for nine weeks with practically no loss. We do not, of course, advise this, but it goes to show that undue haste is not necessary. If you expect to begin planting in a few days the trees should be put in the shade and if they have been long in transit water them and they are generally as well

or better off in the box for a short time as they would be if healed out and this is especially true in Cuba where the soil is so stiff that healing out is a difficult process. No pruning is essential unless we are ordered not to prune, in which case we assume the planter has some special reasons for wishing to do it himself, as trees carry better and the freight is much less when trees are pruned at nursery.

## Planting

The tendency seems to be to plant too deep. The orange is a surface feeder and while it may live it will not thrive when too deeply planted; and this is particularly true in Cuba where the soil is more heavy than in Florida. We prefer to have a tree several inches too high than one inch too low. When planted as they should be they stand above the general level of the land and all excess of moisture drains off, while if planted too low a basin or cup is formed about the tree which holds water sometimes for days in the wet season. All broken or bruised roots should be trimmed with a sharp knife, and in planting care should be taken that the roots are spread about as they were before tree was dug. In planting always use plenty of water. Do not forget that in no other way can you so nicely firm the earth about the roots. Use at least one or two buckets of water according to the condition of the ground, making a veritable mud pie about the roots; then when the water soaks away every root is thoroughly encased with earth and there is no chance for air holes. After the water disappears cover lightly with dry earth and tramp well, then cover with more dry earth as a mulch. If your tree needs water it will hang out the distress signals, and when watered it is best to make a large cup about the tree and give two buckets or more; then cover again with dry earth. Remember that one thorough watering is better than a dozen homeopathic doses.

## Cultivation

Some growers believe in and practice clean cultivation, and we have seen this carried on until the top soil closely resembled beach sand, and had been so scorched and burned by the sun that it would hardly sprout a cow pea. We believe in clean cultivation during the dry season when the trees need all the moisture, and frequent stirring of the soil at such a time prevents the immense evaporation of moisture which always takes place in uncultivated fields. When, however, the rainy season sets in and there is moisture and to spare we believe in shading the soil and preferably with a crop which will return to it certain fertilizing elements known to exist in beggar-weed, cow peas and velvet beans, which crops after serving their purpose can be plowed under in the fall leaving the ground fairly clean which will prevent the frequent fires which occur where groves are left all winter full of dead grass and other inflammable matter. No grass or crops should be allowed nearer than eight or ten feet from the tree, and frequent stirring of the soil about the tree with hoe or rake will be found very beneficial. We prefer not to apply any fertilizer at time of planting unless





Propagating Sheds for Seedlings

it can be done two or three weeks before tree is set out, and even then should be thoroughly mixed with the soil as all commercial fertilizers are highly concentrated and liable to burn the young rootlets if they come in direct contact with them. We prefer to wait two or three weeks, then apply on the surface about one pound of high-grade special orange tree manure, well raked in. In the thin, sandy soils of Florida we believe an orange tree will stand much more fertilizer than it generally gets. We believe beginning, say in March, one pound every month or six weeks can be applied to great advantage provided there is but little or, better still practically no organic matter in the manure, as too much of that will cause die back. These applications as above can be kept up till October, when the tree should soon become dormant and take the rest nature has provided for the winter.

## As an Investment

An orange grove like almost any other proposition depends for its success or failure almost entirely on management, as careless, ignorant or improper management either growing trees or handling the fruit will invariably result in failure, giving rise to the oft repeated claim that "oranges don't pay." It is just as true on the other hand that the same careful, business-like attention to the work in all its many ramifications and details as is given by the successful merchant or manufacturer to his vocation will bring success and plenty of it. We know of many practical people who come South to escape the rigors of our Northern winters, who have planted small groves to cultivate and care for which gave them both exercise and congenial employment for the hours when they were not hunting or fishing, and the proceeds of this grove planted more for pleasure than profit is now proving a very agreeable addition to their annual income. The use of fruit is constantly on the increase and will continue so to be. Grape Fruit which but a few years ago was grown only as a curiosity is now or ought to be on every breakfast table in the land. Only a short time since and a few bunches of bananas would supply a good sized town, while now it requires as many carloads. It is a well established fact that fruit is the natural and certainly the most healthful food of the human race, and no one owning an orange grove and producing first-class fancy fruit need ever fear but that a remunerative market and an appreciative public stands ready to absorb it.

The advent of The Citrus Exchange will inaugurate a new era in orange growing. History will repeat itself. Orange groves in California while they were marketing their crops through the medium of the buyer, broker and commission men, were well-nigh valueless; but they finally woke up, organized their Exchange and to-day groves which were absolutely unsalable under the old methods are selling at \$2,000 to \$3,000 per acre because they pay a handsome return on the investment.

The Florida Citrus Exchange will bring order out of chaos; will make our groves as valuable as those of California, and make all our growers rich and independent instead of poverty stricken and helpless. No grower can afford to ship and market as an individual—he is too weak—but as a member of the Exchange you are one of the units that go to make up a powerful organization.

The Exchange has come to stay—don't overlook that "best bet," and to-day a man planting a grove does so knowing his fruit will be handled intelligently and economically by an organization built up by the growers themselves and operated for their special benefit. We believe an orange or grape fruit grove planted to-day is one of the best investments offered to capital.



One Year Bud Branched at Three Feet

## Oranges

We make the growing of the citrus fruits a specialty, and grow nothing else. There are over one hundred listed varieties of oranges but many of them are so nearly alike that we gave up years ago trying to propagate the entire list merely to make a fine catalog showing. There are a number of varieties which are characteristically different, some ripen very early, some in mid season, while others are not eatable until very late in the season and it is to an intelligent and careful selection of these that we have directed our energies, and we classify as follows:

Very early—Parson Brown, Boone's Early, Satsuma.

Early to mid season—Pine Apple, Thompson's Improved Navel, Majorca, Tangerine.

Very late—Valencia Late, Tardiff, Joppa Late, King, Ruby, Blood, Mediterranean Sweet, Navelencia.

## Very Early Varieties

### Parson Brown

Size medium, round or slightly oblong; peel smooth, texture fine; quality good. Keeps and ships well. By many considered the best of the early varieties. It begins to ripen in October.

### Boone's Early

Medium size; skin thin; pulp tender, with very little "rag" and few seeds. Quality excellent. Very late.

### Satsuma

Fruit similar to the Mandarin, but sweeter and nearly seedless. Tree dwarfish and of drooping habit; entirely thornless; very early and an abundant bearer.

## Early to Mid-Season

### Pine Apple

One of the best all-round oranges ever produced in Florida. It originated at Orange Lake and was so much in favor that many old groves were being rebudded to this variety at the time of the great freeze. The tree is a very strong, upright grower and exceedingly prolific. Fruit medium size, thin peel. Might be classed as very early, as it colors as soon as the Parson Brown, but can be held on tree till March or even April, and is an especially fine shipper.

### Thompson's Improved Navel

This is one of the newly introduced California varieties and in great favor among the growers of that State. Fruit medium in size, thin skinned and smoother than the old Washington Navel. Very deep orange color and splendid quality. Very little rag. Ripens early.

### Majorca

Medium size; round; rich, juicy and sweet; equals Jaffa in quality, its characteristics being similar to that variety. It is a good keeper and shipper. Tree a strong, bushy grower, very robust; foliage very distinct; nearly thornless; a fine bearer.

### Tangerine (Dancy's)

One of the well known "kid glove Oranges;" belonging to the Mandarin family. Fruit flat, small to medium; skin separates freely from the flesh; juicy, aromatic and rich, of a deep red color. December, January and February. The tree is a particularly good grower and prolific.

## Very Late

### Valencia Late

An exceedingly late variety, often held on the trees in California till September. Tree is a rapid grower, very prolific and fruit is delicious, the flesh being a very deep red orange, pulp juicy and sweet.

### Tardiff or Hart's Late

Of medium size; round or slightly oval; smooth; very solid and heavy, the flesh being very firm; flavor, when ripe, brisk and racy; peel of lightish cast; few seeds. The tree is a very strong, spreading and vigorous grower; prolific; the foliage is distinct, having few thorns. The fruit ripens in April, and hangs on the tree in good condition until midsummer. One of the best late varieties.

### Joppa Late

This variety was originated by Mr. A. B. Chapman, of San Gabriel, Cal., from seed obtained in Joppa, Palestine. An extremely late Orange—said to be even later than Hart's Late. Tree an upright, vigorous grower, and thornless. Fruit medium to large, oblong, with thin rind; few or no seed; pulp juicy and sweet.

### Ruby Blood

Medium in size, nearly round; skin thin but very tough; pulp melting, rich, juicy and of exquisite flavor; quality unsurpassed. As the fruit ripens it usually becomes streaked or mottled with blood-red; often the entire pulp gets ruby-red, showing through the peel in a redish blush on the outside. One of the best of the Blood Oranges. The tree is vigorous, nearly thornless, and a regular bearer. We esteem this one of the most valuable varieties for general use.

### King

Very large, flattened, and with loosely adhering rind and segments, like all the Mandarin varieties; color orange-red; skin rough, but general appearance fine; its high and peculiar aromatic flavor is very agreeable; it has few seeds; flesh deep red-orange, juicy, meaty; inner lining of rind and membranes bright buff. Quality very best. Tree upright, strong grower, quite thorny; foliage dark and rich. March, April and May; keeps in good condition even later.

### Sanford's Mediterranean Sweet

There are several kinds of Mediterranean Sweet. Sanford's being considered best. Size medium to large, quality exceptionally fine. Ripens late.

### Navelencia

A Hybrid, said to be a cross between the Valencia Late and the Navel, hence the name. This remarkable orange originated in California after many years of careful, patient labor. It is really a Valencia Late Orange with a navel in it and is said to combine all the good qualities of both. Tree is a vigorous grower. Fruit, thin skinned, desirable size, free from rag, a decidedly valuable acquisition.

### Kumquat

There are two varieties, Nagami and Marumi. The Nagami is about an inch and a half long by an inch in diameter; deep orange-yellow; the delicate peel is sweet, spicy; pulp tender, agreeably acid. Tree handsome; branches slender, without thorns; leaf small, narrow, oval, almost lanceolate; very productive. The Marumi differs only in size and shape of fruit; it is round, and about one inch in diameter.

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## Pomelo—Grape Fruit

It was only a few years ago that this fruit was considered worthless, and thousands were allowed to rot on the ground, the tree and fruit being grown as a curiosity. It is now considered by physicians one of the most healthful fruits grown, possessing a tonic peculiarly its own. Big prices for the fruit has stimulated planting until now there are hundreds of thousands in groves.

### Walters

An extra strong grower and regular, heavy bearer. Tree is specially favored, in that it does not bear in clusters; fruit generally hangs single, which is a great advantage; size runs 36 to 54, which seems to best suit the market. There may be others as good but after fruiting them all we place the Walters at the head of the list as possessing more of the desirable qualities in this fruit.

### Gillett's Late

(Late.) This is one of our favorite varieties, and one that is sure to give entire satisfaction. Tree grows to immense size, leaves large and of a dark green color, foliage dense and few thorns; bears young and is prolific; a good variety for light soils, and well adapted to all classes of land. More hardy than any other sort we have had experience with. Originated near Orlando, Florida. Fruit medium to large, very smooth skin, thin and silvery yellow in color, texture all that could be desired. Very little "rag," average about 40 to the box, runs smaller on old trees. This variety we could recommend to those planting in southern locations; because of

its lateness in ripening, is not in best shipping condition until February, and will hang on trees in perfect condition until as late as June.

### Marsh Seedless

This is one of the most popular varieties, and nearly seedless, generally three to six to a fruit. Size large; form roundish, slightly necked at base; surface moderately smooth; color lemon-yellow; heavy; rind thin; very juicy, and of excellent quality. February and March.

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## Limes

### Tahiti

A large handsome fruit; large as a fair-sized Lemon. Tree a strong grower, and nearly thornless. Most desirable Lime grown, in our opinion. We have had four-year-old trees this season fairly breaking down with fruit; many as large as Lemons with an exceedingly thin skin, most delicious flavor and much more juice than an ordinary Lemon.

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## Lemons

Florida at one time produced many thousands of boxes, and of a decidedly superior quality, but "arctic" winters do not agree with them, as they are much more tender than the Orange. In South Florida, however, they can still be grown and always pay better than Oranges. To those who contemplate planting in Cuba or Porto Rico, this fruit should specially recommend itself. Why plant Oranges in Cuba and come into competition with fully twelve million boxes of home-grown fruit from California and Florida, when you can grow Lemons and meet practically no competition except from Europe, from whence we import annually over four millions of boxes?

### Seedless Villa Francha

We now propagate but this one variety as, after fruiting them all we believe this so far superior as to out-class everything else. This Lemon originated near Dunedin, Florida, and has not been generally propagated. It closely resembles the ordinary Villa F., but is somewhat smaller and practically seedless, many specimens having none at all. Absolutely the best of Lemons.

### Curing Lemons

Many growers have not planted Lemons, having been told that the curing process was so expensive and difficult it would not pay to grow them. This is a mistake. Before the freeze 30,000 boxes of beautiful lemons

were shipped annually from the Lake Weir section. The writer had some fourteen hundred trees—we read treatises on how to color lemons—we tried sulphur and then steam, but finally discovered by accident that an air tight dark room was all that is needed. Build a room at one end of packing house, with double walls; that is, ceil it tight on inside, cover with tar paper and then ceil again. Put in vents that can be opened from outside. Have a flat, tin roof if possible. Put in a door similar to one in an ice house—edges lined with felt. Put in a pane of glass so that you can see a thermometer inside. Stack up your fruit in field boxes, close your door and windows and let them sweat. Temperature should not go above 96—if so, open vents. About four days will sweat them thoroughly. They should not be a full lemon color but they are now soft and pliable, though hard as bullets when put in. They are then graded and packed and all bruised or thorned fruit will be easily detected, as it will be rotten. By the time the fruit reaches market it will be fully colored.

Lemons should be picked as tomatoes are—by maturity and color. When they are just changing from a deep green to a light green is the time, as it is better **not** to let them color on the tree. If picked **too** green, however, they will shrink but never color. A picker soon learns the exact shade of green to select. Lemons require three to four pickings to clean the tree, as the blooming period covers several weeks, and the first blooms naturally mature first.

### Number of Trees or Plants to the Acre

Distance apart, feet	No. of trees	Distance apart, feet	No. of trees	Distance apart, feet	No. of trees
1 by 1.....	43,560	10 by 10.....	435	19 by 19.....	120
2 by 2.....	10,890	11 by 11.....	360	20 by 20.....	108
3 by 3.....	4,840	12 by 12.....	302	25 by 25.....	69
4 by 4.....	2,722	13 by 13.....	257	30 by 30.....	48
5 by 5.....	1,742	14 by 14.....	222	35 by 35.....	35
6 by 6.....	1,210	15 by 15.....	193	40 by 40.....	27
7 by 7.....	888	16 by 16.....	170	45 by 45.....	21
8 by 8.....	680	17 by 17.....	150	50 by 50.....	17
9 by 9.....	537	18 by 18.....	134	60 by 60.....	12

### Notice

For all kinds of spray mixtures, send to the Florida Agricultural Experiment Station. Ask for Bulletin No. 76.



## Price List

F. O. B. NURSERY

### Oranges, Lemons, Grapefruit

	Each	10	100	1000
2 to 3 feet.....	\$ .35	\$ 3.00	\$ 25.00	\$220.00
3 to 4 feet.....	.40	3.50	30.00	270.00
4 to 5 feet.....	.50	4.50	40.00	350.00
5 to 7 feet.....	.65	5.50	45.00	400.00
1 and 2 year, branched .....	1.00	8.50	75.00	600.00
3 year, heavily branched .....	1 50	12.00	100.00	800.00

The average caliper of Grape Fruit (Pomelo) and the standard varieties of round Oranges, measured 1½ to 2 in. above the bud will be about as follows:

2 to 3 feet grade from 3-8 to 1-2 inch	1 and 2 year branched 1 to 1 1-4 inch
3 to 4 feet grade from 1-2 to 5-8 inch	3 year heavily branched 1 1-4 inch
4 to 5 feet grade from 5-8 to 3-4 inch	and up in diameter at a point
5 to 7 feet grade from 3-4 to 1 inch	1 1-2 to 2 inches above the Bud.

The Mandarin, King, Tangerine and Satsuma Oranges and Lime Trees, being of a much more slender growth, will not caliper as large as the above.

The prices in this Catalogue are for the trees and plants, carefully packed and delivered f. o. b. cars at nursery shipping points.

Transportation at purchaser's risk and expense. All transportation charges are to be paid by the purchaser, and our responsibility ceases upon delivery, in good order, to forwarding companies. Claims for losses or damages must be made upon the latter. We will, however, start a tracer for delayed shipments, if notified, and use every means at our command to secure prompt delivery, or recovery in case of damage or loss.

Inasmuch as planters are frequently not in a position to arrange for getting shipments through the custom house, either here or in Havana, we will have our brokers at each port attend to everything, prepaying all charges to the nearest port or railroad station, on the following terms:

### On Shipments to Cuba and the Isle of Pines

On orders ranging from \$ 5.00 to \$ 10.00.....	add 30 per cent
“ “ 10.00 to 25.00.....	“ 25 “
“ “ 25.00 to 50.00.....	“ 20 “
“ “ 50.00 to 100.00.....	“ 15 “
On orders amounting to over 100.00.....	“ 12½ “

### On Shipments to Porto Rico and Other West Indian Islands

On orders ranging from \$ 5.00 to \$ 10.00.....	add 40 per cent
“ “ 10.00 to 25.00.....	“ 30 “
“ “ 25.00 to 50.00.....	“ 25 “
“ “ 50.00 to 100.00.....	“ 20 “
On orders amounting to over 100.00.....	“ 15 “

## Business Methods

### Terms

Cash with order if for immediate shipment. If for future delivery 25 per cent. advance payment when order is booked, balance to be payable before trees are shipped.

### Packing

We have been packing so long and extensively for foreign shipment we believe we are safe in saying that it would be hard to improve on it. We guarantee delivery in good condition, as far as packing is concerned.

### Applying Prices

Five, fifty and five hundred of one class at ten, one hundred and thousand rates respectively.

### Substitution

In ordering please state whether we can substitute some similar variety in case those ordered are not in stock.

### Shipping Season

We always prefer to wait until the trees are dormant which ordinarily is about November first, and continues till the last of February. It is possible to plant somewhat earlier or later than the above dates, but we consider the dormant period the time par excellence for citrus planting.

### Proper Labeling

Everything sent out is plainly marked with best quality of printed labels attached with brass wire.

### We Guarantee

all stock sent out to be well rooted, well grown, true to name, properly packed and shipped according to instructions.

### Liability

While we exercise the greatest care to have Trees and Plants true to label, and hold ourselves prepared, on proper proof, to replace any that may prove otherwise, we do not give a warrant, expressed or implied, and

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in case of error on our part, it is mutually agreed between the purchaser and ourselves that we shall not at any time be held responsible for a greater amount than was paid for them.

### Claims

Every precaution is used against errors but if they occur we will promptly rectify same if claim is made as soon as discovered.

All claims must be made within ten days after receipt of trees or the same will not be allowed.

### In Writing Orders

give Postoffice address in full, including county and State. Point of destination, if different from postoffice address. If your Postoffice and shipping addresses are the same, state this fact. Name route by which goods should be shipped, if there is any preference, and they will be marked and billed according to instruction. State whether shipment by freight or express is desired.

# THE MAPES COMPLETE MANURES

Contain the Highest Grade Materials and  
the most soluble and valuable plant  
food forms known

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AVAILABILITY WITHOUT ACIDITY  
NO ROCK OR ACID PHOSPHATE USED

---

BASIS SPECIALLY SELECTED AND PREPARED GRADES OF BONE AND PERUVIAN  
GUANO;—NITRATE OF POTASH, CARBON OF POTASH, NITRATE OF SODA. ETC.

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Mr. H. E. Heitman, of Fort Myers, is an immense user of our Fertilizers. Besides his own large properties, he has over 1,000 acres in charge for non-residents.

Mapes Fertilizer Co., New York, N. Y.  
Gentlemen:

Fort Myers, Fla., July 16, 1907.

Yours received asking about results with your fertilizers. The majority of the vegetable growers and truckers in this section are using Mapes Vegetable goods, as they get better prices and results than from any other fertilizer to be found.

I will state that I superintend something over one thousand (1,000) acres of orange grove property for non-residents, and have used your fertilizers almost continuously. I have tried other brands by the side of your goods, and as your records will show, I have used your goods almost exclusively for the past six (6) years, and I am free to say that I have never been able to find anything that would give the results that your fertilizers give.

I have noticed the groves throughout the country where your Fruit and Vine goods have been used freely on old bearing trees, and the fruit carries and ships better than our neighbors who use various brands of other goods. It makes a tough peel, and it is seldom that I find a creased orange where the above is used.

I predict for you a nice business in this country another season.

Yours very truly, H. E. HEITMAN.

Mr. Heitman in 1908 and the present season has used even more of Mapes than ever before.

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Mr. H. G. Nickerson, who gives us the following, lives at Florence Villa, is a nephew of Dr. F. W. Inman, and has charge of the hotels and the Doctor's extensive groves at that place, over 500 acres.

Mr. J. R. Tysen, Agent, Mapes F. & P. G. Co.,  
Jacksonville, Fla.

Florence Villa, Fla., July 13, 1908.

Dear Sir:

You might like to hear of a little of my experience with the Mapes fertilizers. In April, 1906, I bought a grove of eleven acres. This grove was eight years old, was in a badly run-down condition, the trees in terribly bad shape, many of them with die-back and the weeds were almost as high as the trees. The yield for that season was sixty-nine boxes of very poor fruit. I cleaned up the grove and used the Mapes Orange Tree and Fruit and Vine Fertilizers in liberal quantities, with the result that the next season there was a yield of thirteen hundred and fourteen boxes of good quality fruit. This year, notwithstanding the excessively dry season at our place, the yield will be still larger.

I think it will be difficult to show the equal of these results in the history of Florida fertilization.

Yours truly, H. GUY NICKERSON.

## THE MAPES FORMULA & PERUVIAN GUANO CO.

J. R. TYSEN, Forwarding Agent, JACKSONVILLE, FLA.

Send for circulars, etc., for latest method of treating young and bearing orange groves, and vegetable growing.

“The Mapes Fertilizers have been used exclusively in the Buckeye Nurseries for twenty-five years.”

# UNITED PAPER COMPANY

SOUTHERN OFFICE, 18 NORTH FORSYTH STREET  
ATLANTA, GA.

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**UNITED A**  
PINEAPPLE WRAPS

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PINEAPPLE WRAPS



Have many advantages over the ordinary papers used. It Cushions better. Note the Absorption Qualities. The packer can only lift one sheet at a time. Sheet don't stick.

The Best and Most Economical to use.

FIRST QUALITY.

Labor Saving; Waste Eliminating.

EVERY BUNDLE OF  
**UNITED A PINEAPPLE WRAP S**  
IS LABELED LOOK FOR THE LABEL

If You Want the BEST ORANGE WRAPS, Ask for  
**UNITED PAPER CO'S**

HAVE YOUR  
WRAPS PRINTED

Good fruit, well wrapped in printed paper, establishes a brand and creates a demand. We make no charge for designs, drawings or printing plates.



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LOOK FOR THE LABEL - THE JAPANESE GIRL IN RED.

**United**

**D** Vegetable Paper

FOR WRAPPING TOMATOES, & EGG PLANTS.

The Packer Demands it.

The Consumer Recognizes it.

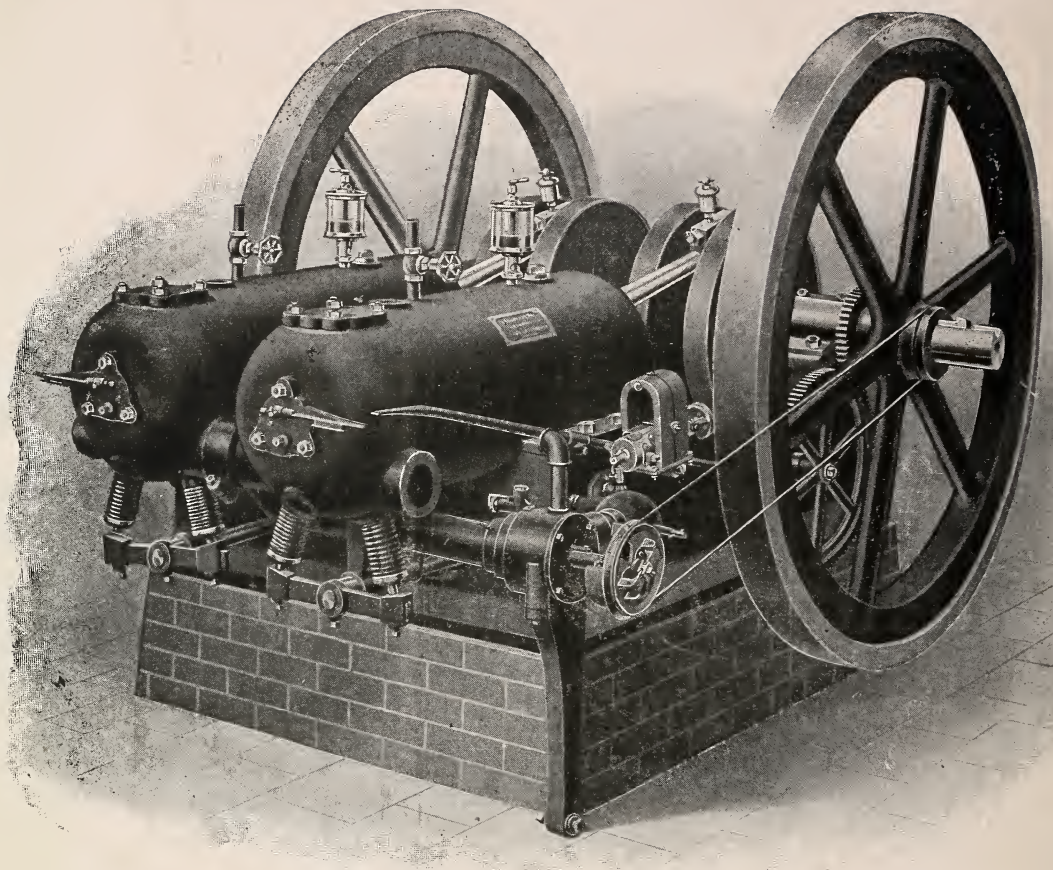
The Competitor Admits it.

OUR REFERENCE: The largest growers and packers in Florida, Cuba, Porto Rico, etc.

WRITE US FOR SAMPLES AND PRICES

**UNITED PAPER COMPANY**

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50 HORSE POWER

# Hagan Gasoline Engine

Operating Irrigating Plant  
at the

Buckeye Nurseries

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Sold and Installed by

**J. P. CAMPBELL,**  Jacksonville,  
Florida