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BUCKEYE NURSERIES



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Tampa, Florida
ESTABLISHED 1880

Buckeye Service to Customers



THE early care given to an orange or grapefruit tree fixes its whole future. Buckeye trees bear early, regularly and heavily because they are grown right.

The soil of Buckeye Nurseries is particularly adapted to the growing of citrus-fruit stocks. It was selected after long investigation of the soil of the entire citrus-fruit belt. Surrounding it are thousands of acres of bearing groves, among them our own big plantings.

In the deep, warm, sandy loam of Buckeye Nurseries the trees produce great masses of fibrous roots, in which vigor and vitality are stored. With constant cultivation, proper fertilizing, and increasing experienced care, Buckeye trees develop in the way that they should grow.

Buckeye seedlings are started in beds, transplanted to the nursery row, and then cultivated *two years* before they are budded. The buds are selected from bearing trees that have distinguished themselves by large and regular yields. In no other way is it possible to secure trees with fixed bearing habits.

Buckeye trees are dug as carefully as they are grown. The roots never are exposed to sun or drying winds. The trees are packed and boxed under cover, loaded in cars directly from the packing-house, and reach the purchaser in perfect growing condition.

To further assist our customers in bringing citrus groves to maturity, Buckeye Nurseries keep experts in the field. They are traveling citrus Florida constantly, visiting the trade, inspecting groves, offering advice or suggestions when requested, and rendering any other assistance possible to planters who are bringing Buckeye trees to maturity. Very often our men find conditions existing which are easily corrected, and which, when corrected, save planters considerable time and money in producing a grove.

When we sell to a customer, we do not forget him. His success as a fruit-grower means our success as nurserymen. We find many planters in the dark as to proper methods of cultivation, fertilization and spraying. The benefit of our thirty-five years of experience in the citrus industry is at the disposal of our patrons. Ours is strictly a citrus nursery, and we cater only to the citrus-fruit planter. This enables us to specialize on the orange, grapefruit, lemon and lime, and our time is devoted entirely and exclusively to citrus-fruit trees.

*Largest Nurseries in
the World Devoted Exclusively
to Citrus Fruits*

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ESTABLISHED 1880

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Offices: Suite 1015, Citizens Bank Building

TAMPA · FLORIDA

Cable Address, Gillett, Tampa



Three-year-old Buckeye grapefruit tree

Foreword

AS FOR many years the orange and grapefruit trees propagated in the Buckeye Nurseries have been the standard of quality among growers in Florida and elsewhere, the catalog of Buckeye Nurseries has come to be regarded as a text-book of citrus-fruit culture. The present edition is intended to maintain the reputation established by previous issues, and to be, if possible, even more helpful.

Buckeye Nurseries take a pride, which their owners believe to be justifiable, in the intimate relation between their growth and the development of the citrus industry. From their establishment, more than thirty years ago, Buckeye Nurseries consistently and persistently have manifested their faith in Florida and in citrus-fruit growing as its most important agricultural pursuit. They have contributed, freely and willingly, their moral and financial support to every movement for the upbuilding of the citrus industry, and for the development of Florida along broad, sane lines. For the recognition of their work in these connections, represented by the patronage that has made Buckeye Nurseries for years the largest and most important citrus nurseries in the world, the owners are properly appreciative. It shall be their endeavor in the future, as in the past, to fully justify the confidence of their friends through absolute adherence to this policy of growing only quality trees.

The foundation principles of Buckeye Nurseries are as much in evidence in their management today as thirty-odd years ago—faith in the future of the citrus-fruit industry, confidence in the proper recognition by the public of strict integrity in business dealings, and determination that every Buckeye tree shall be representative of the very best of its type. By reason of the practical working out of these ideals, in the little details as in the larger operations of tree propagation, by Buckeye Nurseries, grove-owners have learned to depend upon anything bought of them for vigor, fidelity to name, and all the good qualities in trees which are required to make them the foundation on which can be builded success in growing oranges and grapefruit. The maintenance of the reputation that has been attained by the Buckeye Nurseries during the third of a century of their existence means more to their founder and his sons than any element of profit that might be involved in the lowering of the standards which have given them their standing. Buyers of trees are assured that, notwithstanding the tremendous increase in the productive capacity of Buckeye Nurseries, therefore, there has been no slightest deviation from the methods proved by long experience to be best, and that every care will be exercised to maintain and increase the quality of Buckeye trees.





The Citrus Industry of Florida

NEVER were the citrus-growers of Florida so prosperous; never was there such a bright outlook for the great industry they have developed. The superiority of Florida oranges, in juiciness, sweetness and tastefulness, and the unequalled quality of Florida grapefruit, in texture, flavor and lusciousness, have been so impressed upon the public that these increasingly are in demand everywhere among discriminating consumers.

It only remains for the citrus-fruit growers of Florida to perfect their organization, the Florida Citrus Exchange, to maintain and improve the methods of cultivation, picking, packing and shipment which have been adopted through its instrumentality, and to continue the aggressive campaign of the past two or three years for the information of the people of the rest of the world regarding the merits of our fruits, and in due time they will dominate the markets, not only of the United States but of foreign countries.

Time and again during the season just ended, Florida fruit, bearing the brand of the Florida Citrus Exchange, was sold in the great auction markets of the North at a handsome advance over the best and most select of that produced in other sections of the country. The illustration at the bottom of this page shows the New York auction market, the great center of activity in the sale of citrus fruits. Every visitor to this auction during the winter and spring must have been impressed with the degree to which the most acute buyers recognized the superior quality of Florida fruit.

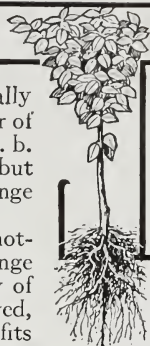
Admittedly the salvation of the citrus industry of the state, which was confronted by grave dangers at the time of its organization, the Florida Citrus Exchange has become a power for good. Equally it protects the best interests of the grower, the dealer and the consumer. While the average price obtained for Florida citrus fruits in the year preceding its organization generally is believed to have been considerably less than one dollar per box f. o. b., the average price for oranges secured by the Exchange for its growers during the first

Display of Florida Citrus Exchange fruit in New York Auction Market





TAMPA, FLORIDA



season of its existence was \$1.34 per box f. o. b. This figure gradually has been increased until the average for oranges during the year of 1912-13 obtained by the Exchange growers was \$1.95 per box f. o. b. This catalog goes to press before the end of the 1913-14 season, but at the present writing there is every indication that the Exchange prices for the year will average in excess of \$2.00 per box f. o. b.

Honest and reputable fruit distributors have found that, notwithstanding they have been paying the Florida Citrus Exchange more than the ruling price under the old order, the better quality of the goods, and the greater facility with which they have been moved, are factors which contribute to give them equal, if not greater, profits on transactions of the same volume. Retail dealers even more have found that they can handle the Florida Citrus Exchange fruit profitably with a smaller margin on the overturn than that to which they had been accustomed. In the communities where the Exchange has advertised Florida fruits, these largely sell themselves, so that the dealer who carries them finds his stock all the time moving rapidly. The careful pack and good quality of Exchange fruit not only reduce the dealer's loss from decay and similar factors, but give the consumer so much satisfaction that it is easy to sell the same brands week after week and month after month. Careful investigation has shown that the consumer seldom pays for Florida Citrus Exchange fruit an advance of more than 10 per cent over the retail price which prevailed before the organization came into existence, and through the superior quality of Exchange fruit a great deal more is obtained in almost every instance for the \$1.10 than could have been secured formerly for the dollar.

There has never been a time in the history of Florida when groves could be planted with so much assurance as to the financial outcome of the investment, provided proper care is exercised in the selection of the soil and location, the choice of varieties, the cultural methods employed, and the picking and packing processes made use of. The specter of over-production cannot cause alarm to growers of citrus fruits who give the present situation careful study. More and more, as scientific methods of growing and marketing are employed, it

New York fruit-buyers paying top prices for Exchange fruit





BUCKEYE NURSERIES

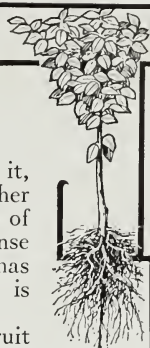


will become practicable to offer the product of our Florida groves to the fruit-consuming public in such a way as to lead ultimately to the making of oranges and grapefruit a popular necessity, rather than the luxury or the enjoyment of the few that they have so long been regarded. As this changed condition in the great consuming centers of the North and West becomes apparent, the demand for Florida oranges and grapefruit must increase more rapidly than can be kept pace with by production. Even should there come a time when as much citrus fruit of the Florida quality is grown as can be absorbed by present markets at fair prices, there will remain the vast possibilities of foreign consumption.

Throughout good and evil report, in times of stress and storm, as well as in days of prosperity and promise, Buckeye Nurseries have believed in the ultimate destiny of the Florida citrus-fruit grower. The temporary setbacks which have interrupted the progress of the citrus industry they have never regarded as at all serious, and when difficulties have been encountered it has been the Buckeye idea that they were but tests of the ability to overcome of those who, in the end, would profit most largely through the citrus greatness of Florida. Their faith in the industry is greater today than ever before, as evidenced by the extensive additions that have been made to Buckeye Nurseries proper, by the large grove plantings in which their owners are interested, and by the willingness of the latter to even more firmly associate their business reputations with the future of citrus Florida. Feeling that, in proportion as the millions of orange and grapefruit trees that will be planted in the state during the next few years are of the well-known Buckeye standard, the grove experiences of the planters will be satisfactory and profitable, Buckeye Nurseries will continue to extend their operations just as rapidly as can be done without the slightest lowering in the quality of the product; but, first, last and all the time quality remains the Buckeye watchword, and only so many trees will be grown in any one year as can be given the elements of vigor, strength and dependability that have given Buckeye trees such an honorable position among the growers of citrus fruits in Florida and elsewhere.

Buying Florida fruit by the box, and waiting for its delivery





GILLETT'S LATE GRAPEFRUIT

This is one of our favorites, and wherever we have introduced it, reports have been most enthusiastic. It is hardier than any other sort; for this reason it is especially adapted to the northern limits of the grapefruit belt. The tree grows to an immense size, with dense foliage and few thorns. It is adapted to all classes of land, and has made a remarkable showing on light soils. It bears young and is exceedingly prolific.

Gillett's Late has won for itself an enviable reputation. The fruit is medium to large, with very smooth skin of silvery yellow. The skin is thin, and the texture all that could be desired. There is very little "rag." The average size is about 54 to the box, running a little lower than this on old trees. Because of its lateness in ripening it is not in the best shipping condition until February, and will hang on the trees in perfect condition until as late as June. Many of the best producing groves in Florida are composed of Gillett's Late Grapefruit.

INMAN LATE GRAPEFRUIT

See illustration in color on page 8

This magnificent grapefruit is remarkable in many respects, and in introducing it we take a very great pleasure because of the fact that the original tree was secured by the late Dr. F. W. Inman, after whom we have named the fruit. Florida owes much to Dr. Inman for the position in which her citrus industry now is, and we feel that every citrus-grower will join us in the feeling that no better monument to his work can be reared than by naming so splendid a fruit after him.

Dr. Inman watched and cared for the original tree very carefully, and repeatedly told the writer that he considered it the best late grapefruit he had ever seen. On several occasions he shipped the fruit in June, and they arrived as fresh and sound as February shipments. We were fortunate in securing the buds from this original tree, and are now in a position to offer strong trees on four-year-old roots. The Inman is a regular bearer. It rarely clusters, the fruit being well distributed all over the tree, especially inside. The size is medium to large, with smooth, tough skin of very bright yellow, particularly on sprayed trees. The shape is flat, which makes it a good seller, and the size is medium to large, running from 46 to 64 to the box, the bulk being from 54 to 64. It is a splendid shipper, and can be held safely until mid-July or August, and even later. It blooms at the usual time, but possesses to an exceptional degree the "hang-on" qualities. The flesh is delicious, a blend of all the qualities which have made Florida grapefruit the breakfast-fruit of the world.

For any location where late fruit is desired we unhesitatingly recommend the Inman. We know of no other variety to compare with it. These statements are not based upon guesswork. The Inman was introduced year before last for the first, but it has been under close and careful observation for several years. It will prove of great value to those who can safely hold it until the late spring or summer for market. Like the Lue Gim Gong orange, it will go on the market at a time when there is no other fruit, which means an extra-good price to the grower. We urge every grower to plant the Inman.

Do not fail to plant the Inman this year. It is the coming grapefruit of Florida, and ultimately will have a place in every grove and garden. The best informed men in the citrus industry agree with us that this is true—many of them are planting Inman Late and some are rebudding trees of other varieties to this new kind. The demand for Inman Late this year almost certainly will be greater than our supply of trees, so it will be well to get your order in early to avoid disappointment.

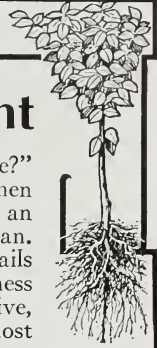


*Inman
Late
Grapefruit*
(See description
preceding
page)

The Bureau of Plant Industry of the United States Department of Agriculture writes under date of March 7, 1913, concerning the famous Inman Grapefruit (Pomelo) as follows:

"We are glad to bear such favorable report of the Inman Pomelo. This remarkably fine fruit created much favorable comment in this office. We found this to be one of the best pomelos that we have received here, and it is certainly promising for the pomelo industry in Florida."

A well-known grower who has made a careful investigation of Inman Late says that in his judgment it is the one late kind that will be generally planted five years hence.



Citrus Groves as an Investment

WHAT profits may I reasonably expect from my grove?" This question has been put to us times innumerable by men who were just starting groves. It is at once a fair and an unfair question. The largest factor in the question is the man.

Given suitable land for a starter, thorough attention to the details of cultivation, fertilizing and spraying, and ordinary sound business sense in packing and marketing the fruit, and a citrus grove will give, year in and year out, larger returns on the investment than almost anything of which we know.

Continually we are having pointed out to us groves which are losing money or, at best, are not more than paying for their upkeep. There are hundreds of such groves in Florida. Examine any one of them. Inquire into its history and the character of the man who owns it. Nine times out of ten you will find that it is either owned by a non-resident of the state, and suffers from lack of care, or by one who is lacking in energy or business ability.

The so-called risk in the citrus business is no more to be judged by the poor groves than is the stability of any grocery business by the tremendous annual list of failures. The growing of oranges and grapefruit is a business—just as much a business as the selling of silks and calicoes over a counter. The same principles apply. The citrus grower can no more sit down with idle hands and expect his trees will fill his coffers with gold than the manufacturer who knows nothing about his business or product can expect to pay dividends.

The following table will give a conservative estimate of the profits which may reasonably be expected from a well-situated, well-managed and well-cared-for grove of grapefruit or oranges. This table is based on an acre unit, seventy trees to the acre. The calculations assume, of course, that the trees will be of Buckeye quality, preferably of the 5- to 7-foot grade, and that the right fertilizer will be used and applied at the times which the experience of successful growers has shown to be best.

Early fruiting of a well-kept grove—Photograph made December 3





BUCKEYE NURSERIES



FIRST YEAR.—Cost of clearing and plowing one acre.....	\$30 00	
Cost of 70 5-7-foot trees, at \$1 each.....	70 00	
Fertilizer.....	6 00	
Labor.....	50 00	
Returns.....		None
SECOND YEAR.—Labor in care and cultivation.....	50 00	
Fertilizer.....	12 00	
Returns.....		None
THIRD YEAR.—Labor in care and cultivation.....	50 00	
Fertilizer.....	18 00	
Returns.....		None
FOURTH YEAR.—Labor in care and cultivation.....	50 00	
Fertilizer.....	21 00	
Returns, one-half box per tree, 35 boxes at \$2.....		\$70 00
FIFTH YEAR.—Labor in care and cultivation.....	50 00	
Fertilizer.....	24 00	
Returns, 2 boxes per tree, 140 boxes at \$2.....		280 00
SIXTH YEAR.—Labor in care and cultivation.....	60 00	
Fertilizer.....	30 00	
Returns, 3 boxes per tree, 210 boxes at \$2.....		420 00
SEVENTH YEAR.—Labor in care and cultivation.....	70 00	
Fertilizer.....	35 00	
Returns, 4 boxes per tree, 280 boxes at \$2.....		560 00
EIGHTH YEAR.—Labor in care and cultivation.....	80 00	
Fertilizer.....	40 00	
Returns, 5 to 7 boxes per tree, 350 boxes, at \$2.....		700 00
Total expense, not including price of land.....	746 00	
Probable returns.....		\$2,030 00

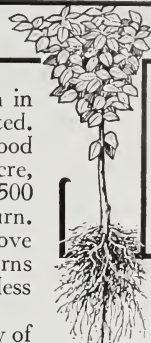
Thus the net profit on an acre in seven years is \$1,284, an average of \$183.00 a year, including double the expense usually incurred for fertilizer. Grapefruit has brought as high as \$6 to \$8 and even \$12 a box in the last year or two, so that the price at which this table has been computed, namely \$2 per box, is ultra-conservative. We have been equally conservative in our estimate of the probable yield. A citrus tree, either orange or grapefruit, does not get into full bearing until it is eight to ten years old, and then often bears twenty to

Laden branches of ripening fruit—Photograph made December 13





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twenty-five boxes of fruit yearly. The estimates of yield, as given in the foregoing table, are far short of what may reasonably be expected. In compiling this table the cost of land was not figured in. Good citrus land in a raw state can be bought for \$50 to \$200 an acre, according to location. A mature grove is worth from \$1,000 to \$2,500 per acre, and on the latter valuation will pay a handsome return. Growing good fruit solves but half the problem of making a grove pay. A man may be an expert grower and still not reap the full returns to which he is entitled. The best fruit in the world is worthless unless it is put on the market at the right time and in the right way.

In the Winter Haven district, where perhaps the citrus industry of Florida has reached its highest development, as high as \$50,000 has been offered for twenty acres of mature grove, and the offer refused. The man who made the offer, of course, expected a fair annual interest on his investment. The grove in question has averaged almost, if not quite, 25 per cent on \$50,000, for a period of several years. It is hardly necessary to say that this grove is planted to varieties which come in when the markets are at their best, and that it is particularly well cared for. Further, the product of its trees is sold through the Florida Citrus Exchange, and the fruit is so picked and packed that it commands for itself the favorable attention of dealers wherever offered. In the immediate vicinity is another grove, containing seven and a half acres of orange and grapefruit trees, which, for the past five years, has given its owner an average net profit of considerably over \$4,000 annually. The 1912 earning of this grove was about \$5,000 above expenses, and its 1913 net income in excess of \$7,000.

It is not unfair to mention these instances of extraordinary profits in citrus-fruit culture, because almost, if not equally, as good results can be secured by any grower who will select the proper location, plant the right kind of trees, and give them the care that they deserve. Just as the young man starting into business life may be influenced in the way of right methods by the example of older men who have so taken advantage of their opportunities as to make themselves successful, we consider it eminently proper to mention

Some fruit ready to pick—Photograph made January 5





BUCKEYE NURSERIES



orange and grapefruit profits that are out of the ordinary as an incentive to the great mass of growers to make their groves equally good. To further illustrate our point in this connection, we have had photographs made, throughout the past season, of the famous grove, near Winter Haven, of "Diamond K" Koplin, and these pictures are reproduced in half-tone engravings, with which about a dozen pages of this catalog are illustrated. A little study of these illustrations will show the splendid fruiting capacity of a grove that receives the special care and attention which Mr. Koplin gives his. They will serve as an inspiration and example to every planter of citrus-fruit trees who receives this edition of the Buckeye Nurseries catalog. When Mr. Koplin recently planted five acres of new grove, it may be said in passing, Buckeye trees were used.

In connection with over-production of citrus fruits, we are reminded of the pessimistic prophecies made regarding wheat production at the time that the vast grain fields of the Northwest were just coming into their own. The croakers croaked and the economists argued and the statisticians figured that if the millions of acres of then virgin territory were turned into wheat fields, the production of this grain would so exceed the possible consumption that the growers would cease to obtain any return for their labors. How different has been the actual working out of things is now a matter of history. When citrus fruits come to be generally regarded as a family necessity rather than as a luxury, we believe even the vast productive capacity of Florida and other states will be taxed to supply the demand. In a recent newspaper interview, Dr. Harvey W. Wiley, perhaps the world's greatest authority on foods, said: "I have frequently made public statements and given interviews recommending Florida oranges, and advising people that they could not find a healthier article of food." Dr. Wiley's words are suggestive of the coming of the time when citrus fruits generally will be regarded as food. When oranges and grapefruit are commonly used as a part of the everyday bill of fare of the average American home, the number of boxes which will be consumed annually promises to be so great that any present estimate of it would be regarded as the work of a dreamer.

Branches scarcely able to their task—Photograph made January 24





The Future of Grapefruit

Every year adds to the number of persons who use grapefruit regularly. New uses for the fruit are found each season, and it has come to serve an important part in many culinary operations. The juice is a most refreshing drink and various methods of preserving it for out-of-season use have been experimented with, and some of them promise to be successful.

We have devoted many years to the propagation of grapefruit, and in offering a select list, made up of Gillett's Late, Inman Late, Marsh Seedless and Walters, we believe that we have shown the very best varieties now in the market. We especially call the attention of every grower to the new Inman Grapefruit, which we believe is destined to be the greatest money-maker in Florida.

MARSH SEEDLESS GRAPEFRUIT

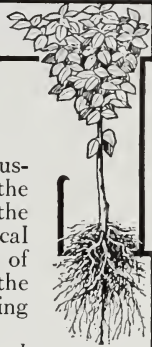
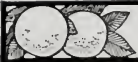
This is one of the most popular varieties, largely because it is nearly seedless, there seldom being more than three or four seeds to the fruit—frequently none at all. The fruit is of large size, of roundish form and slightly necked at the base. The color is lemon-yellow, and the surface of the skin is smooth. The flesh is very juicy. The flavor is excellent. It is ready for shipping in February and March, and always finds a ready market.





WALTERS GRAPEFRUIT

A most vigorous grower, making a large, strong tree, and a regular, heavy bearer. The fruit hangs singly, a decided advantage inasmuch as the branches are not over-strained. It can be shipped in November, and is frequently held on the tree until May. Sizes run from 46 to 64 to the box, which are the most desirable. In flavor, thinness of skin and other market qualities it is unsurpassed.



Proper Grove Methods

In considering the question of how to make profitable a citrus-fruit grove in Florida, one is impressed with the application of the biblical phrase, "The last shall be first." For, however carefully the fruit may be picked and packed, no matter how scientific and practical may be the methods of culture, and notwithstanding the planting of trees which have been secured from the best sources available, in the most improved manner, the enterprise will not prove wholly a paying one unless the fruit is properly marketed.

Too much emphasis cannot be laid on the fact that growing good fruit solves but half the problem of making a grove pay—a man may be an expert grower and still not obtain anything like a fair return on his investment and labor. The best fruit in the world will not sell at a price which justifies its production unless it is put on the market at the right time and in the right way. Let us again commend to every citrus-fruit grower the Florida Citrus Exchange, the only sensible and business-like solution of the marketing problem of the citrus-grower of Florida. It has brought order out of chaos in five short years, has placed the citrus industry on a sound business footing, enhancing meanwhile the value of grove property at least 100 per cent. No matter how broad or how restricted the scale of his operations, there is not in Florida a grower of citrus fruits but that would be profited through affiliation with the Exchange. These facts have become so thoroughly established in the minds of progressive growers, who have been in the state long enough to know the real conditions, that it seems hardly necessary to further emphasize them here. To new-comers who may not fully understand the situation, however, Buckeye Nurseries desire to urge the earliest possible affiliation with the nearest local association operating under the Florida Citrus Exchange.

Between the tree and the final market profits may be conserved or thrown away faster than in any other stage of the growing of citrus fruit. Carelessness in picking and handling and a slovenly pack are fatal to profits, and the grower

Trees after several pickings—Photograph made February 24





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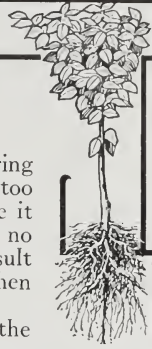


who does not fully recognize this fact in his practice is committing financial suicide. All pickers should be supplied with gloves to prevent finger-nail abrasions—through this simple expedient California growers saved 10 per cent in rot, and members of the Florida Citrus Exchange have had a similar experience. Only clippers which cut a short stem without harming the fruit should be used. Picking receptacles which will hold the fruit without pressure, and which can be emptied into the field boxes without jarring the fruit should be provided. The field boxes should be high enough at the ends to rest one on top of another without bringing the fruit in the under box in contact with the bottom of the box above. Spring wagons should be used for hauling the fruit from the grove to packing-house. No fruit showing an abrasion of any kind should be tolerated—the watchword of the Florida Citrus Exchange is, "Regard every doubtful orange as a cull."

Packing is a study in itself, and the relation of pack to profits is very close. Visit the nearest good packing-house—one which has won a reputation for its brands, and study the subject under an expert there. If there is no Florida Citrus Exchange house in your vicinity, hustle around among your fellow growers, and organize a local association to be affiliated with this organization. In Florida, the old packing-shed is rapidly becoming a thing of the past. Its place has been taken by modern packing-houses, supplied with every facility for rapid and careful handling of the fruit, and in its operations machinery plays no small part. The human hand is not allowed to touch the fruit, as all persons who have occasion to handle it are compelled to wear white gloves. Ninety per cent of the improvement in packing methods and packing-house equipment which has revolutionized the citrus industry in Florida for the past five years must be credited to the Citrus Exchange. This organization has had the consistent and helpful support of Buckeye Nurseries from the beginning of its existence. Mr. M. E. Gillett took the time from his many other interests to serve as its manager for the first and most difficult year of its history. The Exchange is stronger today than ever before, and is now a permanent factor in the business life of Florida.

Still plenty of fruit on the trees—Photograph made March 24





Best Methods of Cultivation

Clean cultivation during the dry season, with a cover-crop during the wet season, is the best practice. There is such a thing as too much cultivation. Under the direct rays of the sun, as we have it in Florida, soil may become so scorched and burned that there is no life in it. In other words the humus is burned out of it. This result will often follow too frequent cultivation. The best cultivator then is a mowing-machine.

During the dry season the trees need every bit of moisture in the ground, and the frequent stirring of the soil prevents evaporation. The dust-mulch which forms on top prevents the moisture below from reaching the air and evaporating, and the trees have the opportunity to draw upon this. During the wet season, however, conditions are reversed. The soil is then filled with moisture, many times in excess of the amount needed by the trees. It is our practice to sow beggarweed, velvet beans or cowpeas as a cover-crop at this season—preferably beggarweed. These crops should be allowed to ripen before being plowed in. If plowed in green they are likely to make the soil acid. Not only do they give nitrogen to the soil, but form humus in the most available form.

After the cover-crop has been turned under in the fall the ground is left fairly clean, preventing the frequent fires which occur where groves are left all winter full of dead grass and other inflammable material. No grass or crops should be allowed nearer than 10 feet to the tree, and frequent stirring of the soil about the tree with hoe or rake will be found very beneficial. On the whole, cultivation should be shallow rather than deep. Its principal purpose in a citrus grove is the conservation of moisture. The degree to which a grove may be kept thrifty and vigorous even during periods of extremely dry weather by constant cultivation, is indeed remarkable. Frequent stirring of the surface of the soil is as important in a grove as it is in the famous "dry-farming" of the West, and the best growers cultivate often.

A good deal of fruit remains—Photograph made April 24





Fertilizers and Their Use

The subject of fertilizers is a broad one. No hard and fast rule that will fit all localities can be laid down. In general, it is best to go about among the growers in your vicinity and find out what they are doing in the matter of fertilizer, and what results they are attaining under conditions similar to those which prevail on your own place. It makes a difference whether your land is high hammock, high pine, low hammock, flat woods or prairie. Study the methods used by the successful growers among your neighbors, and use a complete fertilizer—one-sided fertilizers are bad. While your horse eats oats or corn it also needs hay; your tree, likewise, needs a complete ration.

As a rule we do not apply fertilizer when the young tree is set out. We prefer to wait two or three weeks and then apply on the surface about one pound of high-grade commercial fertilizer, well raked in; this is the safe method for the beginner. Many take issue with us on the amount of fertilizer we use. Our experience extends over thirty years, and carefully conducted experiments have convinced us that in the thin, sandy soils of Florida an orange tree will stand much more fertilizer than it usually gets. We refer now to the light, sandy soils overlying yellow subsoils. Of course on richer soils, such as hammock lands, not so much is required.

The very nature of the citrus soil is such that it cannot well hold for any length of time the fertilizer applied, and there must be loss by leaching. We believe that, beginning in March, one pound of chemical fertilizer should be applied to each tree every six or eight weeks. It should be practically free from organic matter, as too much of this will cause "die-back." These applications can be kept up until October, when the tree should become dormant and take the rest nature provides. The amount of fertilizer should be increased from year to year, and the formula changed, as the age and requirements of the tree demand. Read the farm papers of Florida and Experiment Station bulletins for further suggestions about fertilizers for citrus fruit.

Last picking in the spring—Photograph made May 10





Valencia Late Oranges
(For description see page 20)

ORANGES

The general trend of the orange business has been to concentrate more and more upon a few tested varieties which have proven money-makers in the markets. There are over a hundred listed varieties of oranges, but the difference between many of these is so slight that there is little use in propagating all of them—and we do not.

We have, therefore, confined our attention wholly to those varieties which are characteristically different. We have selected what the test of years has proved to be the best early varieties, the best midseason varieties, and the best late varieties. We can unhesitatingly recommend these named varieties to the grower who desires a long-continued crop. Some one of them will fill every need of the orange-grower, whether the grove in which the trees are planted is located well up the state or far down in the south portion—whether on sandy soil or heavy land.



VALENCIA LATE ORANGE

See illustration in color, page 19

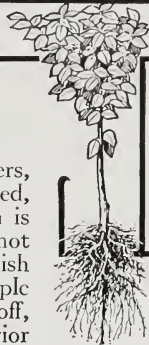
This is one of the best of all the very late varieties, and we cannot too highly recommend it for those sections where the crop can be held on the trees without fear of frost. Valencia Late comes into the market when practically all other Florida fruit is out, and before the California fruit comes in. The tree is a rapid grower exceedingly prolific, and the fruit is hard to equal. The flesh is a deep red-orange with delicious flavor, and as for juice we know of no other variety with which to compare it. Shrewd grove-men have been increasingly giving place to Valencia Late, and have found this to pay, as the fruit almost always sells well.

PARSON BROWN ORANGE

No other orange in Florida has become more popular than the Parson Brown. It is of fine texture, pleasant flavor, keeps well and ships well. It begins to ripen as early as October, and the crop comes on in a uniform way. It is one of the few oranges which is ripe when it is green in color. In this respect it has suffered during the recent agitation against Florida green fruit. Unscrupulous growers, in order to hit the early market and high prices, shipped thousands of oranges other than Parson Brown under the Parson Brown label. Enforcement of this law will cause the true variety to again come into its own.

The Parson Brown form is round, slightly oblong, medium to good size. It is juicy, with small pith and small seeds. We unhesitatingly recommend the Parson Brown as the best of the very early varieties, especially for locations where danger from cold necessitates early shipment. Buckeye Nurseries offer only the true type of Parson Brown trees, and the fruit they will bear can be depended upon for all the qualities that have made this variety so popular. No grove-owner who has the kind of soil in which they will thrive and who wants early oranges should fail to plant some Parson Browns.





Irrigation and Spraying

In many sections irrigation is sometimes necessary. In others, notably in the high lands of the lake region, irrigation is not required, although often desirable. In the flowing-well section this problem is a comparatively easy one. In those sections where the rainfall is not sufficient, and where irrigation is impossible or difficult, it is foolish to attempt to start a citrus grove. Unless an orange tree has ample water it will not make a normal growth, and the young fruit falls off, while such as is brought to maturity is deficient in juice and of inferior flavor and quality.

The northerner, coming into Florida to start an orange grove, often fails to take into his calculations the fact that with the citrus tree transpiration is taking place the year round. With deciduous fruits there is practically no transpiration during the season of rest. The citrus tree, however, retains its full complement of foliage, and this, of course, means continual transpiration.

Sub-irrigation by means of tile or perforated pipe is in use in some groves. But because of the tendency of the fibrous roots to plug the drain-tile used, it is customary in most places to use iron pipe. Soils provided with a compact clay subsoil, 18 to 24 inches below the surface, may be well irrigated by the furrow system.

Pests and Diseases

One of the most widely distributed diseases in Florida is the "die-back." No locality is exempt from it—no variety free from its attack. It is easily recognized and handled. The young twigs die back several inches. On the fruit the disease is manifested by the appearance of dark brownish blotches and by cracking or splitting. It is most frequently produced by unsuitable fertilizer or by poorly aerated soil. The appearance of this disease should be the signal for a thorough study of the soil and the methods of fertilization.

Beauty of a well-kept citrus grove—Photograph made January 24





BUCKEYE NURSERIES



As compared with many other families of fruit trees, the citrus group has few diseases. There are enough to keep the grower constantly on his guard, however, and continual watchfulness is the price of success, as it is in every other business. Many of the diseases are due to the attacks of fungi, to which all parts of the tree are subject—roots, stems, branches and leaves. Most of these fungous diseases may be reached by spraying, but to be effective this must be done at the proper time. The State Experiment Station at Gainesville will furnish, on application, bulletins containing all necessary information.

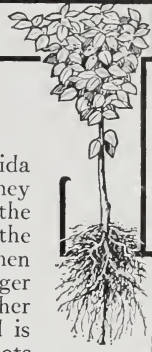
The number of times a grove should be sprayed is largely a matter of local conditions, the diseases or pests which have a foothold in the vicinity, and the frequency of rains during the spraying season. It is obvious that rain, especially such heavy rains as prevail in Florida, will quickly wash off any spray. The grove should be watched closely for this reason, and spraying done often in periods of unusual precipitation.

As is the case with all vegetable and animal life, the more vigorous the individual the more easily is disease warded off and a check put on the ravages of insect pests. In almost every grove of citrus-fruit trees some of the common insects can be found. Yet, if the trees are vigorous and robust specimens, with splendid circulation, they can successfully resist attack. But starve trees, refuse them the attention they require, and at once the pests begin to multiply. Feed your trees intelligently, cultivate them properly, and the ordinary insects need have no terror for you.

Buckeye trees are as clean as it is possible to grow them; all have been passed by the state inspector of nursery stock, after a critical examination. Yet every tree we ship, before it goes to the packer, is washed with a solution which insures that it will go to the buyer absolutely free from any animal life. When you plant your grove, start with this clean, vigorous stock, be watchful, feed generously, cultivate properly, spray at the right times, and insect pests will give you no worry. The national and state departments of agriculture keep closely after newly introduced pests and help to overcome their ravages.

Ornamental planting at the home of citrus-grower George E. Koplín, Winter Haven





When and How to Plant

During the late fall, generally about November 1, trees in Florida have completed their growth for the year. As a matter of fact, they virtually go to sleep until spring. There is no sap moving, and the bark and limbs are firm and well matured. This is unquestionably the time to transplant from nursery to grove. It is the one season when conditions are favorable for the handling of young trees. The danger from exposure to sun and wind is reduced to a minimum. The weather is cool, and the land into which the trees are to be transplanted is just as it should be—cool and moist. These conditions assist the roots to heal, or callous over, which must be done before new roots can start.

Some planters argue that it is best to wait for the rainy season, as then no water is required during planting. Our own long experience proves to us conclusively that the small expense of watering at the time of setting out is repaid many times over by the more vigorous condition of the tree when it starts its spring growth. We have experimented extensively with these conditions, and the results have proved that young trees, full of new growth and sap, as they are in the summer, are not in the best condition for setting out.

Location should determine also the time of planting. In Cuba, for instance, a tree could safely be planted in November, as the climatic conditions do not have to be taken into consideration; but the same tree planted at that time in Florida would make a small top-growth before winter, and a light frost, which would not injure the mature tree either in nursery or grove, might nip this tender growth. For this reason, late December, January or February plantings are safest. Trees planted during the rainy season run about the same risk, as it stands to reason that the wood cannot ripen and mature in three months so much as it can when it has a full season's growth. We do not guarantee summer-planted trees.

An orange or grapefruit tree should not be planted too deep. The orange is a surface feeder; the same thing is true of the grapefruit. It is better to have

Attractive entrance to Buckeye Lodge, the home of "Diamond K" Koplín





BUCKEYE NURSERIES



the trees set several inches too high than one inch too low. When planted as they should be, they stand slightly above the general level of the land, and all excess moisture drains off. When planted too low, a basin or cup is formed about the tree. This will hold water for days in the wet season, and water held about the roots of the orange tree is disastrous. A tree should never be set deeper than it stood in the nursery.

The surface-soil and subsoil should be kept separate, the latter being put back first when filling up the hole. As before stated, we believe in watering plentifully at the time the trees are set, as nothing can pack the soil around the fibrous roots as well as water. Of course, this is absolutely necessary in certain seasons; but we believe that the trouble and expense is amply repaid in results even when the ground is wet. It is a good plan to mulch the surface about the tree with grass and dead leaves to prevent evaporation.

The distance apart at which orange and grapefruit trees should be set is still a mooted question. There should be ample room for the harvesting operations, and the greater the distance the more room each individual tree has for its growth. There seems to be now a general tendency to plant oranges and grapefruit at from 25 to 30 feet. A few are still planting at 20 feet, but this is, in our opinion, too close. We believe that an acre planted with trees 25 feet apart will give larger returns than an acre planted 20 feet apart.

As heretofore stated, we prefer to ship trees cut back before packing. We know what the root-growth was, and what the proper balance of top should be. If you buy your trees with a full crown they must be cut back and defoliated (which defoliation is now required by state law) before taking them from the ground. Do not work in such haste that the work is not well done. If your trees are forced to stand a day or two after arrival, do not worry. Trees packed at our nurseries have stood in the boxes for nine weeks with no loss. This is, of course, an excessively long time, and we quote the incident only to emphasize the fact that undue haste in getting the trees into the ground is not necessary.

Mr. Koplin among his pets—Notice how the tree requires support





PINEAPPLE ORANGES Slightly reduced

From our experience with this orange, extending over a long period of years, we are convinced that this is one of the best all-round oranges ever produced in Florida. It originated at Orange Lake. The tree is a strong, vigorous, upright grower, and is exceedingly prolific. The fruit is medium to large. The color is a deep orange, with a reddish tinge showing in fully ripe, well-colored specimens. The flesh is of medium grain, with abundant juice. The flavor is hard to surpass, being rich, vinous and spicy. Has some seeds, and the rind is thin. This variety might almost be classed as among the very early, for it colors as soon as the Parson Brown, but it has the advantage that it can be held on the tree until February and sometimes till March, and it is a fine shipper.

For the convenience of our customers, we handle all kinds of deciduous and ornamental trees and plants for the South, having arrangements with the best growers in the state from whom to secure our supplies. If you have need of such for your home grounds, we shall be glad to serve you.



BUCKEYE NURSERIES

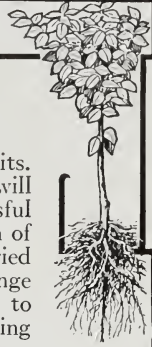


Buckeye trees are "quality" trees. It is on the "quality"—the vigor and absolute trueness to name—of the trees sent out in the past that has grown the reputation which has resulted in a demand that requires more than a million trees to meet. And every one of this vast number has been grown as carefully and painstakingly as when our nurseries held less than a tenth of that number.

TARDIFF, or HART'S LATE ORANGE

The fruit is of medium size, round or slightly oval. It has a smooth skin and is very solid and heavy. The juice is abundant and the acidity and sweetness are well combined. The flavor is distinctive and there are few seeds. The tree is a strong, vigorous grower, spreading in character; the foliage is distinct and it has few thorns. The fruit does not ripen until April, and hangs on the tree in good condition until midsummer. We consider Hart's Late one of the very best of the late varieties. Many authorities claim that the Tardiff of Florida became the Valencia Late of California; at any rate they are very similar. There are some sections of Florida in which Tardiff seems to succeed better than almost any other late kind, and it has many friends among growers.





Location of the Grove

THE ORANGE is one of the most adaptable of all fruits. While to do its best it requires certain soil conditions, it will do fairly well under radically differing conditions. Successful commercial groves are to be found in almost every section of Florida except in the extreme north. The soil conditions are as varied as the other characteristics of these sections. Despite this the orange and grapefruit are doing well. They have adapted themselves to the changed conditions and, with care and attention, are proving profitable.

In general, it may be said that oranges do best on high hammock and high pine lands. They do almost equally well on flat woods land and low hammock, providing that the latter is well drained. This matter of drainage is one of the most essential things in the selection of citrus land. Wet feet are almost as fatal to citrus fruits as to the man with pneumonia. As a rule, oranges and grapefruit do best in a light, sandy loam, not too rich, with a subsoil through which the tap-root can penetrate.

High pine land, whereon the stand of long-leaf pine is of large size and shows vigorous growth, is almost always good citrus land. High hammock land, which will almost always have a vigorous growth of water- or live-oaks, along with pines, is equally good. In both cases it is well to make borings to find out if there is any hardpan underneath. Unless the hardpan can easily be broken up, it is a mistake to set a grove where this prevails to any extent within 2 feet of the surface. We are aware that, in offering these suggestions as to the selection of land we are quite beside the mark with many of our customers, inasmuch as many of them may have already secured their land and are seeking trees adapted to the conditions which confront them.

It is best, under all conditions, to clear the land wholly before planting. We know that this is contrary to the practice of a few growers; but we believe, nevertheless, that the best results are obtainable when the land is thoroughly

Citrus grove one year from planting—Buckeye trees, of cours





cleaned. In our own commercial groves we follow this practice absolutely. Furthermore, it is best that the land should be put under cultivation for at least six months before setting to trees. Our plan is to clear the land of all timber and brush as long as possible before the grove is to be set out. The ground is plowed, harrowed and leveled, and then, wherever possible, a cover-crop is planted. By adopting this plan the soil is opened up, nitrogen is added if the cover-crop be a legume, and the soil is put into a mechanical condition which will insure a rapid growth of the young trees when they are set. At the same time, while the above practice is best, thousands of acres have been planted on newly cleared land, which are today among the best groves in the state. Beggarweed, velvet beans or cowpeas are the cover-crops we prefer. If it develops that the soil is a little sour, use lime or good-grade hardwood ashes harrowed in lightly. If it chances that your land is not high, try throwing up the soil into ridges in such a way that drainage can be had through the water furrows, planting trees on the ridges.

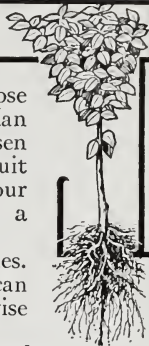
The Varieties to Plant

We do not believe in any man putting all his eggs in one basket. It is not sound business. Therefore we advise not only several varieties of a given fruit, but more than one kind of fruit where the soil is adapted for it. Thus, we do not believe in planting the full acreage in either grapefruit or oranges. We have been making extensive commercial plantings in Polk County, where the grapefruit grows at its best. Where our advice has been heeded, these plantings have been made half in grapefruit and half in oranges. With the present trend of the market, a given area of grapefruit undoubtedly will give a larger net return than a like area in oranges. But, take it year in and year out, we believe that the man who splits up his planting will have less to worry over, and will average up in net returns with the planter who sticks to one thing only. The latter assumes twice the risk of the former.

As to choice of varieties, here, again, locality is a governing factor. In

Two-year-old citrus grove—Equally, of course, Buckeye trees





regions subject to frost the earlier varieties are best, particularly those which combine early ripening with hardiness of tree. The wise plan is to find out what varieties do best in the locality you have chosen and be guided by this. If you are in a locality which will carry fruit through the winter with a minimum risk, by all means divide your planting into medium-early and late varieties, thus giving you a marketable crop the season through.

We advocate a small planting of Tangerines with other varieties. These little "kid-glove" oranges are in staple demand, and they can be handled with the remainder of the crop so easily that we advise setting out a few trees.

Varieties of both oranges and grapefruit are fully described elsewhere in these pages.

In the old days, before the famous freeze, most of the orange groves were what is known as "seedling groves." Today, nearly all new groves are budded or grafted trees. The question at once arises with the grower, "On what stock or root shall I plant?" Opinions on this matter are as varied as on the politics of the day. Planters of large experience, with groves running into many acres, not infrequently are on opposite sides of the fence on this important question of root-stock. It is a question which every man must settle for himself, after a study of the conditions of the location where his grove is to be.

Four kinds of stocks are in general use: The rough lemon, the grapefruit seedling, the sour or wild orange, and the *Trifoliata*. Each of these has distinctive characteristics. Each is adapted to special conditions. No nurseryman can honestly come forward and say that any one of these stocks is adapted to all conditions or universal use.

Rough Lemon Stock

This is, like the sour orange, native to Florida, Cuba, Porto Rico and Jamaica. We have seen it growing wild in all of these countries. After over thirty years' experience with the various stocks, we have come to the con-

Three-year-old grapefruit—More Buckeye trees—surely





clusion that it is as disease-resistant as any stock we have, and that the man having light or sandy soil should tie to it absolutely if he desires quick results and heavy crops.

Some growers claim that this stock has a marked influence on the fruit, but that this is true the best authorities find it difficult to say. Be this true or not, a great body of growers prefer it to all other stocks for grapefruit and oranges of all kinds. It is fully as resistant to maldigomma, or foot-rot, as is the sour orange, and hardy enough to be planted safely where any root except *Trifoliata* will thrive. We want to emphasize the fact that under no conditions should rough lemon stock be planted in low, wet or badly drained lands, but for the matter of that neither should any other stock.

Grapefruit Seedling Stock

This stock is obtained by planting the seed of the pomelo, or grapefruit. In many sections, notably in the extreme southern end of the state, growers will have nothing else. One advantage this stock has over all others is its ability to hold its fruit. No grapefruit holds on the tree so well, or retains its juice and flavor so late, as does the Florida seedling, and these facts commend it to a great body of growers.

There are, however, so many good reasons for not planting seedlings in a grove that we have for years practised budding a large proportion of our pomelos on grapefruit seedling roots, thereby getting rid of the objectionable thorns, reproducing the particular variety wanted, and getting the advantage of rapid growth, as in this respect it stands next to the rough lemon, and also preserving the "hang-on" quality. We have tried grapefruit stock under all conditions, and, all things being considered, we find that it holds its own with any—about as hardy as the sour orange stock, an exceedingly quick grower, makes a strong root-growth, and is in every way satisfactory. Many of the best groves of the state are living evidences of the superiority of this stock for the purposes it is recommended by us.

Four-year-old Buckeye trees—Notice the strong development





LUE GIM GONG ORANGE

A new orange of recent introduction in Florida, and if half of what is claimed for it by the originators is true, it should prove one of the greatest money-makers which Florida has ever produced. It originated in the grove of Mr. Lue Gim Gong in De Land, and is supposed to be a cross between Hart's Late and Mediter-



KUMQUATS

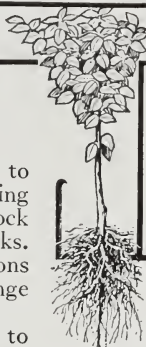
There are two varieties of these little fruits, the Nagami and the Marumi. Of the two, Nagami is generally considered the more desirable. It is oblong in shape and about an inch and a half in diameter. It is deep orange-yellow in color, and the delicate rind is sweet and spicy, while the pulp is tender, with an agreeable acid flavor. The Marumi differs only in size and shape of fruit. The latter is round, being about an inch in diameter. The Nagami makes a most delicious preserve, being preserved whole, the rind adding a most exquisite flavor.

A cordial invitation is extended to you to visit our nurseries at Winter Haven, and see for yourself just how Buckeye "quality" trees are grown, packed and shipped.

LUE GIM GONG ORANGE, continued from preceding page

reanean Sweet. The peculiar quality which promises so much for this fruit is its ability to hang on the tree. It is claimed for it that fruit will hang perfectly sound and juicy for two or three years, and that, in the meantime, the tree will go on blossoming and bearing. The tree is a strong grower, and it is claimed that it is exceedingly resistant to cold. There seems to be no question that the Lue Gim Gong is an exceedingly valuable acquisition, inasmuch as the hanging quality of the fruit will enable the grower to put the fruit on the market at a time when all other citrus fruit is out.

The size is medium to large, averaging about 150 to the box. It is oblong, rounded at the ends. The color is deep red, and it holds this color until picked. The skin is smooth and thin, but thickens somewhat when the crop is held on the trees more than a year. The flesh is divided into ten to twelve sections, easily separated, and is of a deep orange-color, somewhat resembling the Tardiff. Those who have been fortunate enough to sample the Lue Gim Gong cannot say too much in its praise. It is juicy, with few seeds, and the flavor is just the blend to suit the most critical taste. Being firm and well balanced, it is a good keeper and shipper. A leading citrus-fruit grower of Florida, who has been watching this new orange for several years, knowing the discoverer very well, recently has rebudded several hundred seedling trees to it, though they were of a good kind and the grove had been quite productive of fruit which sold at good prices.



Sour Orange Stock

The sour orange is a native or wild seedling. It is indigenous to many parts of Florida and to Cuba, Porto Rico and Jamaica. During the early years of orange-growing in Florida most of the nursery stock came from these seedlings, which were found chiefly in the hammocks. Groves started from this seedling stock, on soil and under conditions similar to those from which the stock was taken, thrive. Sour orange transplanted to light, thin soils was a disappointment.

The sour orange stock today has the advantage of being, next to Trifoliata, the hardiest of all the varieties or species of citrus trees. It produces abundant root-growth, penetrating well into the soil. It is strongly resistant to the attacks of the mal-di-gomma, to which the sweet orange is, on the contrary, very subject. On high and low hammocks, and all soils liberally supplied with moisture, it is a good stock, especially in such sections as may be subject to frequent light frosts. On low wet, or on strong and heavy soils, the sour orange stock is one of the best; but on light soils (and soils of this character predominate in Florida), it is a failure because of the extreme slowness of growth.

Trifoliata Stock

This is the hardiest member of the citrus family. It reaches its maximum development in a comparatively cold climate, and has been known to withstand a temperature below zero. It has the power to transmit, to a certain degree, its frost-resistant powers to the bud, and for this reason it is a favored stock for those varieties which are grown in the northern limit of the citrus belt, as in north Florida, Georgia, Louisiana and Texas. As a stock for the southern citrus belt we find nothing in it to recommend. In those sections where only the Satsuma, or equally hardy oranges, can be grown, Trifoliata stock is a success, inasmuch as it tends to increase the cold-resistant powers of the bud, in that it remains dormant when frosts are most to be feared.

An indication of the vast production of Buckeye Nurseries





How Our Stocks Are Grown

All of our stock is grown by us with the utmost care to produce strong, vigorous root-systems. The seed is sown in beds in rows much as other seeds are sown. They are given frequent cultivation and then, when one year old, are transplanted to the nursery row proper. These rows are sufficiently far apart to allow of easy cultivation. The young stock is grown by us for two years in the nursery row before budding. Many nurserymen offer trees not over one and one-half to two years old from the seed, and these are taken readily by inexperienced buyers who are influenced by the low price, but have yet to learn the difference in results. It is not the first cost of a tree that usually counts, but how soon it comes into bearing and how thrifty it is found to be.

Age of Rootstock Important

It is a rule of nature that a tree must be of a certain age before it can bear fruit. This age varies according to the kind of fruit. Thus peaches bear very young, while apples and pears require several years longer in which to become productive. In the case of budded citrus trees, it must be obvious to everyone that the tree itself cannot be stronger than its root-system. Therefore, one cannot expect the young tree to blossom and bring forth fruit when it has a rootstock of only two to three years of age. On the other hand, given a rootstock three and a half to four years old, the young tree will bear a year or two sooner and in greater profusion. We have seen seedling oranges bearing quite full in Cuba at the fifth year, and budded trees bearing two years from planting. This early bearing, however, is due to the richness of the Cuban soil, and to the fact that both roots and trees make prodigious growth in a short time and grow continuously, there being no really dormant period, as in Florida. In Florida a good, strong bud on four-year root will show a fair crop the third year, but a heavy crop cannot reasonably be expected until the fifth or sixth year.

Showing the splendid vigor and fine health of Buckeye trees





Grapefruit, which is a more rapid grower, will frequently produce a paying crop the third year after planting, if heavily fertilized and well cared for. Many planters, especially beginners, make the mistake of buying a small tree because it looks cheaper; but experience has proved that the larger tree is in the end much cheaper.

To illustrate: We have in mind a forty-acre grapefruit grove which we planted for a customer. Four thousand trees were planted; 2,300 were small buds, 2- to 3-foot grade; the remaining 1,700 were strong, 5- to 7-foot and 2-year buds. The third year after planting 1,400 boxes were shipped from the 1,700 trees. The next year the grapefruit crop was short, but the 1,700 trees produced 1,000 boxes, and in the fifth year were loaded with an enormous crop. The 2,300 trees are just showing some scattering fruit, and, while it cost just as much per acre to care for and fertilize these small trees, the results are all in favor of the larger and, what has proved to be, the cheaper tree. Our more than thirty years' experience forces us to reiterate that in planting citrus trees the best is always cheapest.

Our seedlings are grown one year in the seed-bed; they are then transplanted to nursery rows and grown there 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. The strong, vigorous character of our rootstocks is shown in one of the accompanying illustrations, where budded stock tied to a stake is shown. It will be noted that this stock is already 4 feet high, yet, at the time the photograph was made, it represented not over three months' growth. Please bear in mind that this splendid growth is not the result of forcing with fertilizer.

How Buckeye Trees Get Strength

It has always been a cardinal principle with us never to "stuff" or over-feed a tree. Believing that by such processes a tree is weakened in vitality, we prefer to let our trees come along in the more natural way. It takes a year longer to put them on the market, but we have the satisfaction of knowing that that

Fifteen thousand rough lemon seedlings in Buckeye Nurseries





BUCKEYE NURSERIES



year of age is bound to tell in the future development of the tree. It costs us more to grow our trees as we do than if we should force them and market early. The extra time that they are in our nurseries is a direct expense to us in care, cultivation and feeding. Still, our prices will, on comparison, be found no higher than those of our competitors, and, under our system of grading, we believe that we are supplying a better tree for the same money, and the quality of the trees planted has as much to do with the ultimate success of the grove as anything else—indeed, on this point often depends success.

How We Grade Our Trees

Grading of nursery stock is done by height, qualified by giving the approximate caliper of the different grades. This method is now universal among the leading nurserymen of the state. When so desired, we ship trees with tops left on, but do so at the purchaser's risk. We advise all our customers to allow us to cut back all trees before packing, so that top and root will be well balanced.

A tree can do well only when the top is cut back in proportion to the loss of roots when the tree is dug. This loss is always considerable, and it is absolutely essential that there should be a corresponding reduction of top. No one is better able to judge the right proportion between crown and root than the nurseryman who has dug the tree, and knows what the root-loss in the digging actually is. Buckeye Nurseries have earned an enviable reputation in this respect as in so many others—and it will be lived up to.

We cannot too strongly urge attention to quality in trees. On the trees of today is staked your entire investment of the future. In price it may be a matter of a few cents per tree today. Five years from today it will be a matter of dollars per tree. Don't forget this. Insist upon quality, deal only with nurserymen of established reputation, whose honesty and reliability no man may question. Never under any circumstances buy a tree because it is offered to you cheap. Deal with the men who guarantee their stock, and whose business reputation makes that guarantee good.

A hint of the clean cultivation that makes Buckeye quality





KING ORANGE

This is the largest of the mandarin family. The fruit has loosely adhering rind and easily separated segments. It is very large and flat, and the skin is exceedingly rough. It has few seeds and the flesh is deep red-orange, juicy and meaty. The peculiar aromatic flavor is very agreeable. The season is late, coming in March and April. The tree is an upright, strong grower, with wood inclined to be brittle. The foliage is dark and rich, and the fruit, when fully ripe, is wonderfully beautiful.



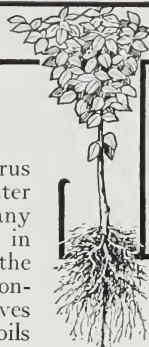
DANCY'S TANGERINE

No grove should be without a few trees of the tangerine. The color is a deep orange-red, approaching a tomato-red. This orange belongs to the Mandarin family, and the size is small to medium. The rind separates so easily from the flesh as to seem hardly attached at all. The flavor is rich and spicy. There are a few seeds, rather small. The flesh is of a deep color and very juicy. The tree is prolific and a strong, vigorous grower. As we said before, no grower can afford to be without the Tangerine in his grove. Tangerines are shipped chiefly in straps or half-boxes, and prices have ruled good.

TANGELO, THE SAMPSON

This is a cross between the tangerine and pomelo, or grapefruit, and has many unique qualities to commend it to popular favor. The skin is smooth like a grapefruit, but the pulp has the attributes of the tangerine. Its flavor is unusual and very delightful and the fruit is becoming a favorite for breakfast use. In size the tangelo is larger than a tangerine but smaller than the average grapefruit. The United States Department of Agriculture calls attention to this fruit as a new and highly flavored type of orange, showing little of the grapefruit or tangerine in its qualities.

The prices in this catalog are for the trees and plants, carefully packed and delivered f. o. b. cars at nursery shipping points. No charge for boxing or packing. 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.



How Buckeye Trees Are Grown

From the beginning we have devoted our attention wholly to citrus fruits, believing that, in this way, we could give our customers better trees and better service than if we divided our efforts over many different lines. We have studied the commercial groves, not only in every part of Florida, but in Cuba, Jamaica and California, for the sole purpose of producing those varieties best adapted to Florida conditions and the demands of the northern markets. We are ourselves commercial growers of oranges and grapefruit. We know the soils and the climatic conditions in all parts of the state, and are, therefore, in a position to aid the beginner with advice as to varieties and the stock best adapted to the location which we may have chosen.

In locating our nursery at Winter Haven we found what we believed absolutely the best location in America for the growing of citrus nursery stock. We have not changed that opinion. For years we have done a tremendous business in Cuba, and the question has many times been asked us, "Why don't you start a nursery in Cuba?" Our reply invariably is, "Because we believe that we already have the best nursery location in America." The reasons for this belief are as follows: In Cuba the soil is naturally rich. From the day the seed sprouts it has ample food within easy reach. The result is a small root-system. The young tree is like the pampered and over-fed child. Its every want is right at hand. It does not have to struggle and, therefore, it becomes weak in its powers of resistance, lacking in vitality and vigor.

On the other hand, in the warm, sandy loam of Polk Country there is sufficient food for vigorous, healthy growth, but the roots have got to go after it. The result is that the young plant begins to hustle from the day it bursts from the seed. There is not food-supply enough within reach of a mere dozen roots; it must put forth a multitude of roots in order to secure all that it needs. The result is a perfect root-system, a mass of fine rootlets penetrating the ground in every direction. The tree itself becomes strong and vigorous. Its vitality en-

Buckeye budded seedlings—Each tree tied to a stake





BUCKEYE NURSERIES



ables it to resist disease and insect attacks. Its activity, in order to live, gives it the vitality which makes for long life and productiveness. Transplanted to richer soils the tree is in a position to make the most of the favorable environment, and do it with a vigor which shows its result in heavy crops.

No matter how good your soil may be, no matter how perfect your climatic conditions may be, no matter how much attention you give to fertilizing and spraying, you cannot have a good citrus grove if you start with poor stock. There is an old saying, "blood will tell." This is just as true in plant-life as in the animal world. Blood will tell. If you set inferior stock, no amount of care and attention will ever make of those trees anything but an inferior, undesirable grove.

It is as essential for you to know the character of the young trees you are putting in your grove, as it is for the stock-breeder to know the pedigree of his animals. A grove of young trees of good quality in a poor location, with every condition against them, is a better proposition than a young grove of poor trees with every other condition in their favor.

The History of Buckeye Nurseries

It is perfectly proper in this connection, we believe, to refer to the history of Buckeye Nurseries, as illustrative of the way in which a solid business institution may be built, even though it encounters adverse conditions at times. To the intending planter of orange or grapefruit trees, this history is important in that it shows how have been gathered together the experience and facilities which are behind the production of Buckeye trees.

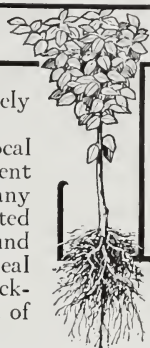
Buckeye Nurseries were first established in 1880, at Wiersdale, in the southern part of Marion County. The business grew rapidly, and in a few years Buckeye trees became known all over the state for high quality, strength and vigor. The freeze of 1894-5 showed that this location was too far north, however, and the nurseries were removed to a point considerably to the southward. We believed then, as we believe now, in the splendid future of the citrus

The new packing-house of Buckeye Nurseries—Thoroughly modern





TAMPA, FLORIDA



industry, and were not discouraged by an abnormal condition likely to happen not oftener than once in a century.

A systematic search of the state was begun, and a study of local conditions of climate and soil was made, looking to a permanent location for our business. This involved growing experiments in many locations—we were not content to take any man's word—we tested for ourselves. Finally, among the lakes of Polk County, we found what we believed, and since they have proved to be, the most ideal conditions in Florida for the growing of citrus nursery stock. Buckeye Nurseries were moved to Winter Haven, which is in the heart of the lake region, in 1903, where they have remained.

The elevation, over 200 feet above sea-level, combined with wonderful air-drainage, directly due to the many lakes on all sides, have proved from the beginning an absolute insurance against frost, not so much as one tree having been lost from this cause since the nurseries were established here. Moreover, the soil is peculiarly adapted for the best growth of citrus stock. It is deep, warm, sandy loam—the kind of soil wherein a young tree produces a great mass of fibrous roots. Such a root-system is the first requisite in young trees for planting. Given this, and reasonable care after they are set out, an immediate, vigorous growth is certain to follow.

With the increase of new plantings the demand upon the Buckeye Nurseries became so great that each year additional acreage was set to young stock. Believing that the production of the stock itself is only the first essential in a nursery business, and that packing and shipping are equally important, these two subjects were given the closest study. The year the first shipment of trees was made from the Winter Haven Nurseries we built the most complete and best-arranged tree packing-house in the state, a two-story building, 60 by 80 feet. Last year, it became apparent that this packing-house was no longer adequate to the needs of the situation, and a much larger and more complete one was constructed to take its place.

Water is piped into the packing-house from a six-thousand-gallon tank, supplied from an irrigation plant at a nearby lake. By this means it is possible

Inside of packing-house—Note the cleanliness and the root development





BUCKEYE NURSERIES



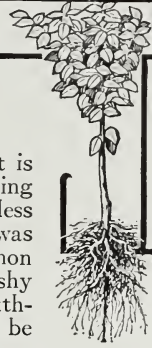
for us to keep the roots of trees constantly moist. The most vigorous trees in the world may become so damaged by carelessness in handling that they will be years in recovering, or may never recover at all. Citrus roots cannot stand exposure to the sun; no more can they stand exposure to drying winds. When you have the combination of both, as is so often the case in Florida, an exposed tree may be damaged beyond measure in a very little while. It was with this knowledge in mind that this modern packing-house was built.

With the utmost care to shelter them from sun and wind, the trees are lifted in the nursery and rushed to the building. As soon as they are within, the doors are closed that no draft of air may reach them. They are then sprayed, and experienced packers put them into the boxes. The roots are carefully packed in damp cypress shavings, the latter having proved to be the best packing-material with which we have ever come in contact. As soon as a box is filled it is marked, weighed and trucked into a car on our own private siding. Thus Buckeye trees go from the nursery to car with a minimum of exposure. Our method of handling is more costly than the old method, but it's the "Buckeye Way," and we have the satisfaction of knowing that our trees go out in the best possible condition; the proof of this lies in the fact that it is seldom we receive a complaint.

Buckeye trees are grown to live, and if, after planting, one of them dies, it will usually be found that the cause lies in the conditions which the tree is called upon to meet, and not in any lack of vitality in the tree itself. The splendid root-system, which is a distinguishing feature of every Buckeye tree, guarantees that it will live if it has anything like a fair chance. From the first steps in the propagation until the trees are placed on the cars for shipment to buyers, every operation in Buckeye Nurseries is for the creation and maintenance of a root-system on the trees grown that enables them to contend with adverse conditions and to respond splendidly to favorable ones. The illustration below shows how well our efforts to produce this type of trees have succeeded. The picture was made of trees of the various sizes noted, taken at random from regular stock, and trimmed back for shipment in accordance with our established custom.

3- to 4-foot size, 4- to 5-foot size, 5- to 7-foot size, Buckeye trees—Note root-systems





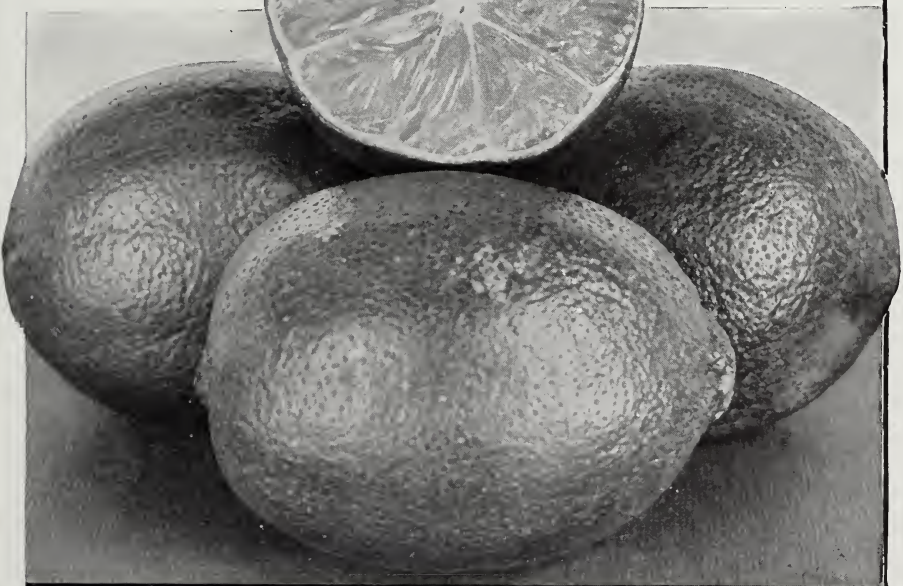
LEMONS

What the future of the lemon industry in Florida may be it is difficult to say. Before the "great freeze" of 1894-95 lemon-growing had obtained an important place in Florida fruit-growing, no less than 140,000 boxes being shipped in a single season. The freeze was a blow from which the industry has never recovered. The lemon is more tender than the orange, and for this reason growers fight shy of it. However, this fruit is being grown to some extent in the southern part of the state, and there is no reason why it should not be made to pay handsomely in this section, even better than oranges. Growers have been turning their attention so exclusively to grapefruit that the lemon has been neglected. Cuba is splendidly adapted to lemon-growing, and there is no reason why growers there should not compete successfully with California for the market which Europe has so long controlled, sending us annually over four millions of boxes at high prices. Our lemon stock has been carefully selected, and the trees we offer are strong and full of vitality. None better grown in Florida.

SEEDLESS VILLA FRANCA

We now propagate this one variety only. We have fruited all of the leading varieties, and have found this one so far superior to all others that we grow no other. This lemon originated near Dunedin, Florida. It closely resembles the Villa Franca, but is somewhat smaller and practically seedless. In fact, many specimens have no seeds at all. We regard this as, beyond question, the best of all varieties of lemons and the one kind to plant.

Where lemons can be grown it is well for every grove to contain at least a few trees—the fruit is mighty useful in the home even if none is marketed.



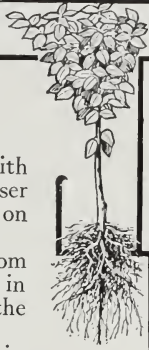


LIMES

Limes have not received the attention in Florida which they merit. They are even more tender than the lemon, but there are many sections of the state in which they may be successfully raised at a good margin of profit. For some years we have grown them at Winter Haven, and cannot begin to supply the demand at \$5 per box. Limes are coming into favor rapidly, especially for summer drinks.

TAHITI, or PERSIAN

This is one of the best, if not the best, of the limes. The fruit is handsome and as large as a fair-sized lemon. It is of a most delicious flavor, thin-skinned and contains more juice than a lemon. The trees are strong, vigorous growers, and are nearly thornless and seedless. In our opinion this is the most desirable of all the limes.



Buckeye Planting Service

FOR many years Buckeye Nurseries have been confronted with the problem of bettering conditions and getting in closer touch with the planter—the man whose future depends on our trees.

The most serious problem of the new-comer is to decide of whom he shall purchase his trees, to whom he shall look for experience in planting, or who shall plant the trees and get him started on the right road to success.

We have always guaranteed our trees to arrive at destination in good condition, and very often stated we would guarantee them to live after planting if we were assured that they were properly planted and would receive proper care thereafter. It requires no science or secret process to produce a citrus-grove, provided the planter starts with strong, vigorous hearty, true-to-name stock, and that his stock is properly planted.

One can readily understand that, in doing business with thousands of customers annually, we find our trees are handled in as many different ways. Many growers plant their trees too low, and trees thus planted do not do well. Often the nurseryman is blamed for furnishing inferior stock, when really he is not at fault. To overcome all this, we have inaugurated our guaranteed planting service, which briefly is as follows:

When any one customer purchases a large number of trees, or a number of customers in the same locality club together and book their order for a sufficient number of trees to warrant it, to be planted at the same time, we will send our planting crew to their lands and plant their trees—and with each tree so planted goes our guarantee that this tree will grow.

Our charge for this service is nominal, barely covering cost of labor—depending on distance land is situated from Winter Haven, Polk County. Planters are required to have their land in readiness and staked. We dig the holes, plant the trees, and leave a cup around tree ready for watering.

Planting Buckeye trees in the right way—Buckeye Planting Service





Price-List

Oranges, Lemons, Limes and Kumquats

Grade	Each	10	100	1,000
1 to 2 feet.....	\$0 35	\$3 00	\$25 00	\$200 00
2 to 3 feet.....	45	4 00	35 00	320 00
3 to 4 feet.....	55	5 00	45 00	420 00
4 to 5 feet.....	75	6 50	60 00	550 00
5 to 7 feet.....	85	7 50	70 00	650 00

Grapefruit, Tangerines, King Oranges and Tangelos

Grade	Each	10	100	1,000
1 to 2 feet.....	\$0 50	\$4 50	\$40 00	\$350 00
2 to 3 feet.....	75	6 50	50 00	450 00
3 to 4 feet.....	1 00	8 50	65 00	600 00
4 to 5 feet.....	1 50	12 50	85 00	750 00
5 to 7 feet.....	2 00	15 00	125 00	1,000 00

Lue Gim Gong Oranges

Grade	Each	10	100	1,000
2 to 3 feet.....	\$0 70	\$6 50	\$60 00	\$600 00
3 to 4 feet.....	90	8 00	75 00	750 00
4 to 5 feet.....	1 10	10 00	90 00	900 00
5 to 7 feet.....	1 40	12 00	115 00	1,150 00

The average caliper of grapefruit trees and the standard varieties of orange and lemon trees is about as follows:

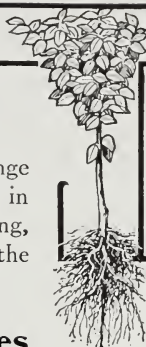
- 1- to 2- and 2- to 3-foot grades sold by height alone.
- 3- to 4-foot grade will caliper $\frac{1}{2}$ to $\frac{5}{8}$ inch.
- 4- to 5-foot grade will caliper $\frac{5}{8}$ to $\frac{3}{4}$ inch.
- 5- to 7-foot grade will caliper $\frac{3}{4}$ to 1 inch.
- 2-year, branched, will caliper 1 to $1\frac{1}{4}$ inch.
- 3-year, heavily branched, will caliper $1\frac{1}{4}$ to 2 inches.

We reserve the right to sell either by caliper or height. The Mandarin, King, Tangerine and Satsuma oranges as well as lime trees, being of much more slender growth, will not caliper so large as the above.

Additional Information on Sizes of Trees and Grades

The different grades of all trees—oranges, grapefruit, lemons and limes—consist of the following ages of roots and buds:

- 1 to 2 feet carries 10-month bud, 30-month root.
- 2 to 3 feet carries 10-month bud, 30-month root.
- 3 to 4 feet carries 12-month bud, 36-month root.
- 4 to 5 feet carries 12-month bud, 48-month root.
- 5 to 7 feet carries 15-month bud, 51-month root.
- Two-year carries 24-month bud, 60-month root.



Shipments

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 to \$10.....add 30 per cent
- On orders ranging from \$10 to \$25.....add 25 per cent
- On orders ranging from \$25 to \$50.....add 20 per cent
- On orders ranging from \$50 to \$100.....add 15 per cent
- On orders amounting to over \$100.....add 12½ per cent

On Shipments to Porto Rico and Other West Indian Islands

- On orders ranging from \$5 to \$10.....add 40 per cent
- On orders ranging from \$10 to \$25.....add 30 per cent
- On orders ranging from \$25 to \$50.....add 25 per cent
- On orders ranging from \$50 to \$100.....add 20 per cent
- On orders amounting to over \$100.....add 15 per cent

If the above estimate exceeds the actual cost of transportation, port and custom-house charges, we agree to return the excess to our customers.

Number of Trees or Plants to the Acre

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

Notice

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



Our Terms and 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.

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

Packing. We have been packing so long and extensively for foreign shipment that it would be hard to improve on our pack. We guarantee delivery in good condition, so far as packing is concerned.

Substitution. In ordering please state whether we may 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 to the last of February. It is possible to plant somewhat earlier or later than the above dates, but we ship during the growing season only at purchaser's risk.

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

Our Guarantee. 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 true to label, and hold ourselves prepared, on proper proof, to replace any that may prove otherwise, we do not give a warranty, expressed or implied, and 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 the trees.

Claims. Every precaution is used against errors, but if they occur we will promptly rectify them if claim be made as soon as the error is discovered. All claims must be made within ten days after receipt of trees.

In Writing Orders give Post-Office address in full, including County and State. Also point of destination, if different from Post Office. Name route by which to ship, if there is any preference. State whether by freight or express.

Making cups and watering trees when planted—Buckeye Planting Service



To Grow Citrus Fruits Profitably, You Should Read the Florida Grower

THE FLORIDA GROWER is the leading agricultural paper of the state. It devotes special attention to citrus fruits, and is the recognized exponent of the idea of organization among growers. The pages of The Grower are not exclusively devoted to citrus culture, but devote much space to other fruits, to general farming, to home-ground planting, to poultry and to all other topics which have to do with the permanent development of Florida.

The Truth About Florida

The Florida Grower believes in the future of the State—believes that in its borders are to be found greater opportunities than exist elsewhere in this territory. It recognizes the fact that the Florida of today has drawbacks, however, and its columns tell the truth without fear or favor. Persons who are considering the purchase of land in Florida need The Grower, and it is indispensable to those who have taken up their residence in the State.

Trial Subscription, Four Months for Fifty Cents

The Florida Grower is published weekly, at \$1.50 a year. It will be sent four months on trial anywhere in the United States. If you are not already a subscriber, use the coupon herewith and become one immediately.

**THE
FLORIDA GROWER**
Lucerne Avenue
TAMPA, FLORIDA



For the in-
closed fifty cents
you will send me The
Florida Grower four
months on trial.

Name _____

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State _____

QUALITY COUNTS

Use MAPES and Get That Quality

There is an interesting editorial in The Florida Star of March 20, 1914, comparing the merits of California and Florida oranges.

*From the New York Auction Sheet,
February 24, 1914*

On that day 72 lines of California Navels were sold, and 52 lines of Florida oranges. The average price for Navels was slightly less than \$2 per box.

Florida fruit averaged a little better than \$2.61 per box.

The highest price for any grade of Navels was \$2.50 for Royal Navels, acknowledged one of the best brands of Navels that come to the market.

At this sale Nevin's Brand of India River oranges sold at \$3.37, Mocking Bird Pineapple Oranges \$3.35, and Castle Brand ordinary oranges \$2.86, some sizes of the latter selling up to \$3.15. The article winds up as follows:

"This showing should be a source of pride to Florida orange-growers, and especially to our Indian River friends, as it will be noticed Nevin's "Merritt Island" fruit brought the highest of any among the 124 brands noted. We frequently notice Edmund Day, Pioneer, Deerfield, Garvey and other Indian River brands quoted considerably above any other on the list.

Quality always tells in all the markets of the country

It is certainly interesting that all the parties mentioned above use the Mapes Fertilizers on their groves. It is, therefore, small wonder that the Mapes Manures are rapidly getting all the best business in that section.

The Mapes Manures have been used in the Buckeye Nurseries for twenty-eight years.

J. R. TYSEN, Agent
JACKSONVILLE **FLORIDA**

Soil for Citrus Trees Should be Well Limed

Soil deficient in lime is acid, or sour, and will not yield really successful crops until the deficiency has been supplied. Citrus trees will not thrive on soil that is lacking in lime—they will not grow so strong or be so vigorous as when lime is supplied. Nor will the fruits be so perfectly formed or of so good a quality as a well-limed soil will yield.

Limestone is known to increase soil fertility. It sweetens the soil by neutralizing the acids, and gives life and vitality because of its stimulating effect on the plant-food elements. Limestone is not a substitute for fertilizers—its functions primarily are to sweeten the soil and, in accomplishing this, it greatly increases the efficacy of fertilizers.

Suwannee Brand Ground Limestone Makes the Soil Fully Productive

It will remove soil acidity, or sourness, quickly and effectively, and is especially valuable in preparing soil for citrus trees. The chemical analysis of Suwannee Brand Ground Limestone shows 99 per cent carbonate of lime—it contains no injurious elements whatsoever.

Suwannee Brand Ground Limestone is ground sufficiently fine so that it is convenient to apply and will readily mix with the soil, but coarse enough to avoid unnecessary loss from leaching. It is not caustic, and can be freely used without burning the humus in the soil.

Suwannee Brand Ground Limestone is manufactured at Live Oak, Florida, from an immense deposit of natural lime rock. Write for delivered prices.

LIVE OAK LIMESTONE COMPANY

218 Heard Building

JACKSONVILLE, FLORIDA



BOUNTIFUL CROPS

*Are Always Assured by
Using*

Campbell Automatic IRRIGATION SPRINKLERS

Why lose your crops or grow inferior fruit or produce when you can get rain when you want it and like you want it, by using this wonderful invention?

Placed on $\frac{3}{4}$ -inch stand-pipes 7 ft. high, attached to an underground pipe system, and 47 to 50 ft. apart (requiring 18 to 22 to the acre), these sprinklers, with only 20 lbs. pressure, will distribute perfectly and evenly an inch of water in the form of fine rain in four hours. Price, \$3.00 each, postpaid, or \$30.00 per dozen, f. o. b. Jacksonville.

Special Introductory Offer

Send us money order for \$1.50, mentioning this publication, and we will mail you a sample sprinkler and our booklet, "Modern Irrigation." One sprinkler only to each applicant at this price. Offer expires October 1, 1914.

J. P. CAMPBELL

Union Terminal Bldg.

Jacksonville, Florida.

Largest stock Gas Engines, Power Pumps and Supplies in the South. Manufacturer Modern Fruit Packing-house Machinery and Equipment, and Campbell Automatic Irrigation Sprinklers.

BOOK FREE

"The Soil
and
Intensive
Tillage."

CUTAWAY
Disks Are
Forged Sharp



Follow Our Advice—It Pays

Practice intensive tillage. Our new 48-page book, "The Soil and Intensive Tillage," tells why and how. And it is free for the asking.

Cutaway
CLARK'S

IMPLEMENTS are made expressly for intensive tillage. They are designed and constructed with that one point always in view. The CUTAWAY GROVE HARROW, shown to the left, is only one of a hundred styles and sizes that we make. There is a CUTAWAY for practically every tillage purpose. Ask your dealer to show you CUTAWAY disk plows and harrows. If he can't supply your needs with a CUTAWAY, write us. Under no consideration accept a substitute.

CUTAWAY HARROW CO., Main St., Higganum, Conn.
Makers of the original CLARK "cutaway" disk harrows

LOOK to us for all your implements for the farm.

We stock a complete line of "Planet Jr." Plows and Cultivators, "Brinly-Hardy" Plows, "John Deere" Implements, "Acme" Harrows and ("Clark's" Cutaways, shown in cut).

Many needed articles on the farm can be supplied from our Mechanics' Tools, Sporting Goods, Paint, Kitchen Furnishings, Cutlery, and Mill Supply Departments.

*No Order Too Small for Our Attention
or Too Large for Our Capacity*

KNIGHT & WALL CO.

HARDWARE MILL SUPPLIES

TAMPA, FLORIDA

SEED—SERVICE

THIS is more than a Seed Selling House—it is a Seed Service House.

We maintain a corps of experienced experts on all seed matters, both for our benefit and for yours.

The business of these men is to know seeds, soils, and everything that you want to know about planting.

If you use this service, which is absolutely free, you need not worry as to the harvest.



Crenshaw Seeds are tested seeds—every pound we sell is tested for purity and strength.

Use Crenshaw Seed

Use Crenshaw Service

Put your problem up to us and write us for prices on seeds you need.

Now, if it is your Citrus Grove, let us tell you about that cover crop, or spraying. We keep a full line.

CRENSHAW BROS. SEED CO., TAMPA, FLA.

JOHN TRICE, President
 C. E. ALLEN, Vice-President DR. L. A. BIZE, Vice-President
 E. M. HENDRY, Vice-President W. W. TRICE, Cashier
 D. H. LANEY and W. W. BLOUNT
 Assistant Cashiers

THE CITIZENS BANK AND TRUST CO.

Organized October, 1895

TAMPA, FLORIDA

Capital, \$250,000

Surplus (earned) \$500,000

Resources, \$3,000,000



4%

INTEREST

Paid on Savings Accounts of

ONE DOLLAR

and Upwards

Business entrusted to us will receive prompt and accurate attention.

Every facility and accommodation in keeping with the account will be extended. We cordially invite a personal interview or correspondence.

Interest Paid on Time Deposits

Directors

JOHN T. DISMUKES

C. E. ALLEN

ENRIQUE PENDAS

JOHN TRICE

S. R. MOREY

W. W. TRICE

JOHN SAVARESE

ED. M. HENDRY

FRANK BENTLEY

E. B. LUCAS

DR. L. A. BIZE

W. E. DORCHESTER

W. B. GRAY

A. L. CUESTA

IKE MAAS



A Square Deal for Everybody The Citrus Exchange Motto

The foundation of the Florida Citrus Exchange is a square deal for all the factors connected with the citrus industry.

It believes that the interests of the grower, the distributor and the consumer are identical and that in serving one all are served.

The Exchange is a coöperative organization of growers that seeks to advance the interests of the producers of citrus fruits by playing fair with dealers and consumers.

Members of the Exchange work on the principle that when they send good fruit to the market in good condition good dealers will be glad to distribute it at a reasonable profit to a good class of consumers who will pay fair prices for it.

Wholesale or retail dealers in fruits do not ask nor expect as large a margin on fruit that reaches them sound and well packed as they must have on fruit that comes to them in such condition that a considerable risk is taken that it will decay before it can be sold. The care with which the Exchange packing-houses handle the fruit they put into the market is appreciated by the trade.

And dealers more and more will push freely and handle with a minimum profit to themselves any line of goods which is so well advertised that it moves freely and which is of such good quality that the persons who buy are satisfied and will come back for more.

Consumers want the best they can get for the money; to know that they can obtain under the same brand name goods of equal quality all the time. For the assurance that these things are true of any goods offered them, there is perfect willingness to pay more than the price at which can be obtained less dependable goods.

The Florida Citrus Exchange has consistently endeavored to establish and maintain the highest quality in Florida fruits. It has persistently assured dealers of this fact and it has insistentlly told consumers the same thing. Dealers and consumers alike have come to depend on the "red mark on the box" of the Florida Citrus Exchange as the emblem of quality and the shield of protection. Growers who wish their fruit marketed under this policy are invited to become affiliated with the Exchange.

FLORIDA CITRUS EXCHANGE

Some Things We Have Done For the Advertisers of Florida

We handle probably two-thirds of the national advertising which originates in Florida and is placed in periodicals of general circulation.

The most successful of the high-class land advertising so far done by Florida firms has been under the direction of members of our staff.

Three of the four nurseries of the State which advertise on an extensive scale and the biggest seed-house of the South are clients of ours.

Practically all the resultful advertising of Florida fruits and vegetables has been conducted by men now connected with us—one of our campaigns in this field has attracted international attention by its unusual efficiency.

The strongest agricultural papers of Florida use our service freely in advertising at the North for subscribers. Boards of Trade and Chambers of Commerce are aided in their propaganda work by advertising planned and placed by us. Hotels employ us to secure the most effective handling of their publicity.

Our clients are our very best boosters. Many of them have voluntarily written strong letters recommending our service to other advertisers. We can refer to any of them with full assurance as to the testimony that will be given regarding the effectiveness of our work. Names and addresses will be supplied on request.

Our success has been due largely to the fact that we have on our staff some of the most experienced and successful advertising men of the country. It has been further contributed to by the original and aggressive methods used by these men in the selling effort under their direction. An important factor also has been the close and intimate knowledge of Florida conditions possessed by them. They *know and believe* in Florida.

Booklet, "The Thomas Idea," for the asking. Write on your firm letterhead

The Thomas Advertising Service

603-4-5 Florida Life Building

Jefferson Thomas, *President*
D. G. Haley, *Secretary*

Jacksonville, Fla.

Fred W. Kettle, *Vice-President*
Geo. W. Ford, *Treasurer*

BUCKEYE NURSERIES



Tampa, Florida

ESTABLISHED 1880