FACTS AND FIGURES

OR

THE ABC OF FLORIDA TRUCKING

By C. H. Kennerly

Facts and Figures

OR

The A B C of Florida Trucking

By C. H. KENNERLY

Price 50 cents

The E. O. Painter Printing Co.,
De Land, Florida
1913

THIRD
REVISED EDITION

TABLE OF CONTENTS.

Mr. Kennerly Picking Cucumbers on His Farm.

PREFACE.

There has hardly been a day during the past year that I have not received two or three inquiries from parties who have either just moved to Florida or anticipated moving, each one desiring information on this subject, the majority asking if there was not some authority which they could get in book form that would help them with their trucking problems. I endeavored in each case to give them the information asked for, but could not refer them to any work on this subject, as there had not been a book written at the time which treated truck farming in all sections of the State. It was mainly for the benefit of these new settlers that I decided to write this book. I do not claim to know it all about trucking, but, as the greater part of my life has been spent in farming and in the seed business, I hope that I may be able to give some information which will be of assistance to them in making a success of their trucking venture. Let me say right here, that if there is any point in this book which is not plain to my readers, or any other information they desire, I want them to feel that they are privileged to write me and I will cheerfully help them to the best of my ability. When writing address me, Palatka, Florida.

Wishing you the best of success, I am,

Yours very truly,

C. H. KENNERLY.

A Florida Hammock.

INTRODUCTION.

The greatest opportunity in Florida is offered in the line of agriculture or vegetable raising. You will find other occupations filled to the limit. There is hardly a day during the entire year that the Florida farmers cannot be growing or harvesting some crop. As to the markets for this produce, there are hundreds, yes, thousands of cities throughout the country that never see Florida produce on the markets. The reason for this is that the larger markets consume the entire output. The growers will find that as the supply of Florida vegetables increase, new markets will open up for them. The newcomer into Florida must realize that the methods of planting and cultivating differ in this State from any other section of the country, and to make a success of trucking in Florida you will have to farm according to the methods in vogue here. I will endeavor to give you complete directions for each crop, will also give you an idea of the differnt kinds of implements required. The heavy teams and machinery used in the North and West are worse than useless here. We use lighter and less expensive tools, as the work is done on a smaller scale, and is properly described as intensive farming. An acre in the North which will yield $25.00 worth of produce may be made to produce $150.00 worth of potatoes here, $300.00 in cabbage, or perhaps $500.00 in onions, cauliflower, or cucumbers. The Sanford growers make as high as $1,000.00 per acre on celery and lettuce. I am inserting a clipping taken from *The Florida Times-Union* under date of January 1, 1911, showing what vegetables actually sold for in Sanford this season:

"The growers of Sanford celery delta are very jubilant

over the continued high prices for lettuce, peppers and English peas. Sanford lettuce is selling now for $5 per hamper. Mr. Berry shipped some green peppers on which he realized $12 per crate. English peas are now bringing $15 per hamper. Single crops are now realizing from $500 to $1,500 per acre net to the growers. Mr. Hawkins sold three acres of lettuce to a commission man for $1,800. The last named party has sold $6,500 worth off the three acres and has some $800 worth still to be harvested from this small acreage."

The figures given in this book are conservative, as you will find out by making inquiries in the different trucking sections.

If you will come to Florida and give your farm the same careful study and work you would have to give any other business you are bound to succeed.

Facts and Figures or the A B C of Florida Trucking

CHAPTER I.

SOIL.

To grow good vegetables, field crops or fruit in Florida or any where else, you must have good soil, but it is not a hard matter to find this in all parts of the State.

I am going to divide Florida land, suitable for successful truck growing, into three classes—the pine land, the prairie or muck land, and the hammock land. The principal thing to watch in selcting your tract is to see that it is underlaid with clay, marl or hard pan; clay or marl is preferred, but if the hardpan is down about fourteen to eighteen inches, it will work to perfection. The value of this bottom to the land is to hold the moisture and keep the fertilizer from washing down too deep, out of reach of the plants' roots or feeders.

The prairie and hammock land are best, as they contain some fertilizing elements, particularly nitrogen or ammonia, from decayed vegetable matter. You will find some hammock and muck land containing all the nitrogen your crops will require for the first year or two, and if they do, all you have to supply will be the potash and phosphoric acid that the crops will need. One thing I want to impress upon you is that no matter how rich your land is, if you keep planting it, without putting back the elements the plants are drawing out you will soon exhaust it.

The pine land, you might say, does not contain anything but acidity, but if you will pick pine land, with a good bottom as described above, remove this acidity, as directed in the chapter on preparation of land, irrigate, fertilize and work it, you can raise excellent crops. I am speaking from personal experience, as my own farm is all pine land, underlaid with hardpan, and not extra select pine land at that, and I have raised as good vegetables as were ever shipped out of Florida. Another matter that it might be well to speak of here, is that in a lot of Florida pine land you find spots where the hardpan is very close to the surface, and on this class of soil it will be impossible to raise any crops until you build up the top-layer. This can be done in different ways: You can haul muck or hammock soil and put on it or you can cover it with stable manure, putting it on from two to four inches thick, and plow in, but you will have to be careful not to plow deep enough to turn up the hard pan. Another good method to follow is to plant the land in cowpeas or velvet beans and turn them under. After you get this class of land built up, the chances are it will be the best piece you have.

ROOT KNOT.

It might be a good idea to say a word here about this disease. You will find it only on land that has been in cultivation for several seasons. It is caused by a minute insect which can only be seen with the aid of a microscope. This insect causes small knots to form on the roots of the plants, and in some cases ruins the crop, and in others it keeps them from making as perfect specimens as they would on land not infected with it. There are two exceptions to this rule—they are carrots and crabgrass, which are immune to its attack and are one of the remedies for getting rid of the pest. If you will plant your land in these crops

for several seasons you will starve the insect out. The other remedy is to leave the land idle for two or three years. The following vegetables can be grown on infested land and make fair crops: cabbage, cauliflower, lettuce, tomatoes and beets, but okra, cucumbers, cantaloupes and watermelons cannot be grown on it. This disease is usually distributed by plants grown on infested land, therefore if the trucker will be careful not to plant any diseased plants, he should not be bothered with it. You will never find new land infested with it, therefore it should not worry any one clearing or planting this class of land, only using the precautions I have advised, to see that he does not bring it from some infested tract.

CHAPTER II.

PREPARATION OF THE SOIL.

This, I consider, the most important subject for the truck farmer, as everything depends on having the land in a perfect condition. You can have it irrigated, use all the high grade fertilizer your crops can take up, have fine, healthy plants, but if the land is not in proper shape, your time, labor and fertilizer will be lost.

The first thing to do after you have looked up the title to your land is to put a good hog and cattle-proof fence; the American Steel and Wire Co. make an excellent one. If the land has trees on it, you will have to cut these down, saving the best ones to make posts for the fence. Next, remove the stumps, either by pulling them out with a stump puller, blowing them out with dynamite, or burning them out. After you have these removed, take out all the roots, as it is from them, particularly the palmetto roots, that the land is kept acid. When you have all the roots removed, it is time to put in the tile for sub-irrigation, if you wish to use this system (see chapter on Irrigation). Next, plow the land several times, both ways, as deeply as the soil will allow without turning up the subsoil. Now give the land an application of lime or Canadian hardwood ashes, to remove the acidity. Either one will answer, but I prefer the ashes, as they seem to give better results, making up for the difference in price in the quality and yield of the crop raised. If you use lime, get the air-slacked, applying about 1,500 pounds to the acre; if you use ashes apply from a ton to a ton and a half to the acre. Both are applied broadcast and harrowed, not plowed, in. Do not use lime or ashes on land you wish to plant in Irish potatoes, as the acidity in the soil seems to keep the fungus in check that causes potato-

scab. In a week or two after you have applied either the lime or ashes, you are ready to put on the fertilizer, using the kind suited to the particular crop you wish to plant, either broadcasting or drilling it in furrows, as advised in the directions for growing the crop you are planting. Always harrow fertilizer in the ground, when it is broadcasted instead of plowing it in, for if it is plowed in, it will be down so deep the plant's roots or feeders cannot find it. If the land is well drained and can be planted on the level, it is a good idea to go over it with a board drag to level and pack it before planting. If you are planting on beds or ridges do not use the drag, unless they are three feet or more wide, but level as best you can with rakes, and use a roller on the seed drill to pack the soil as the seed are planted. These rollers come on all reliable makes of seed drills.

If you will prepare your land as described here, plowing it as much as possible—it will be impossible to plow and harrow new land too much— have it irrigated, give the plants what work and careful treatment they require, you will not have any trouble making excellent crops.

CHAPTER III.

SEED AND GENERAL DIRECTIONS FOR PLANTING.

To make a success of growing vegetables for shipment, you must not only plant the varieties suited to the Florida soil and climate, but you must know the kinds that sell best on the markets you intend using, and plant accordingly. I have tried to give you all the leading varieties planted for shipping to distant markets, also those for the home garden and local markets.

Another point that truckers do not pay enough attention to, is, be sure the seed you wish to plant is suited to this part of the country. Some truckers think if they buy a certain variety of seed that it will give the same results, no matter where the seed is grown, but such is not the case. Take, for instance, corn. If we are planting field corn and should happen to buy seed that is grown in the North or West, we will not get near the results that we would if we had planted Southern grown stock. But sweet corn is entirely different; if we want the finest sweet corn, plant Connecticut grown stock. Then, again, take Bermuda onion seed—a great many seed men tell us that California grown Bermuda onion seed is equally as good for planting in this part of the country as the genuine Teneriffe grown stock, but such is not the case, as the California grown seed of this variety will prove a complete failure, but if you wish to plant the Australian Globe, Silver Skin or the Prizetaker, the California grown seed is excellent. If you do not understand the seed problem, buy from some good reliable Southern seed house which does.

In planting seed always plant about double the amount you think you will need to produce the number of plants it will require to plant your own acreage, for no matter how

fine a grade of seed you buy there are always conditions that have to be met in growing the plants that may ruin half of them, and you can usually buy three pounds of seed for what several thousand plants would cost you, and then again when you raise the plants yourself you know what stock you have, and this is not always the case when you have to buy them. If you do plant more seed than you will need for your requirements, and have eight or ten thousand left over you can always sell them, and I have often paid for my entire lot of seed from the surplus plants. If you are living in a farming community, try raising a few plants for sale. There is money in this business for you, as someone is always needing plants. It is not only a clean, pretty business, but you get your money out of it in one or two months.

GENERAL DIRECTIONS FOR PLANTING.

I have tried in each culture to give you the time for planting the different crops, but it is impossible to give you directions that will apply to your special case, as there are some localities that have more natural protection than others, and in these the farmers can plant at least two weeks to a month earlier than their neighbors who are not so fortunate. I doubt if there is a State in the Union where the climate in the different parts of it vary as much as it does here. There is as much difference between the climate of Northern and Southern Florida in the winter as there is between North Florida and Virginia. Make inquiries among the old truckers in your locality, and they will be able to give you exact time for planting the different crops.

FIG. I.

CHAPTER IV.

IRRIGATION.

The expression, "You never miss the water until the well goes dry," certainly applies here, even though we have an average rainfall of over fifty inches. The Florida farmer who has not put in irrigation does not know the value of it until he has a fine crop of vegetables dying from the want of water; then he realizes too late that he could more than have paid for an irrigation plant with this one crop.

It is only when crops are short that the growers realize extra high prices, and the dry weather we sometimes have is one of the causes of vegetables being scarce and high. If you have your land irrigated you profit by a drouth, if not, you are the loser. So you can readily see it pays to irrigate, for you are not only more certain of making a crop, but you always get a larger yield and a better quality of vegetables.

There are three systems of irrigation in use in Florida. One, the sub-irrigation, which consists of carrying the water under the surface of the ground, in parallel rows of 3-inch tile. This tiling is laid in narrow ditches, sixteen to eighteen inches deep, with a fall of about two inches to the hundred feet. A cut of this tiling is shown in figure number one. After the tiling is laid in these ditches, with the ends pressed together as closely as possible, cover with about six inches of wood cinders or sawdust; this will allow the water to either come out of the joints, or go into them when the tile acts as a drain, without the sand seeping in; cover the cinders or sawdust with dirt, packing it down well. The distance between the rows of tile varies according to the soil; in sandy loam twenty-four foot rows give excellent results,

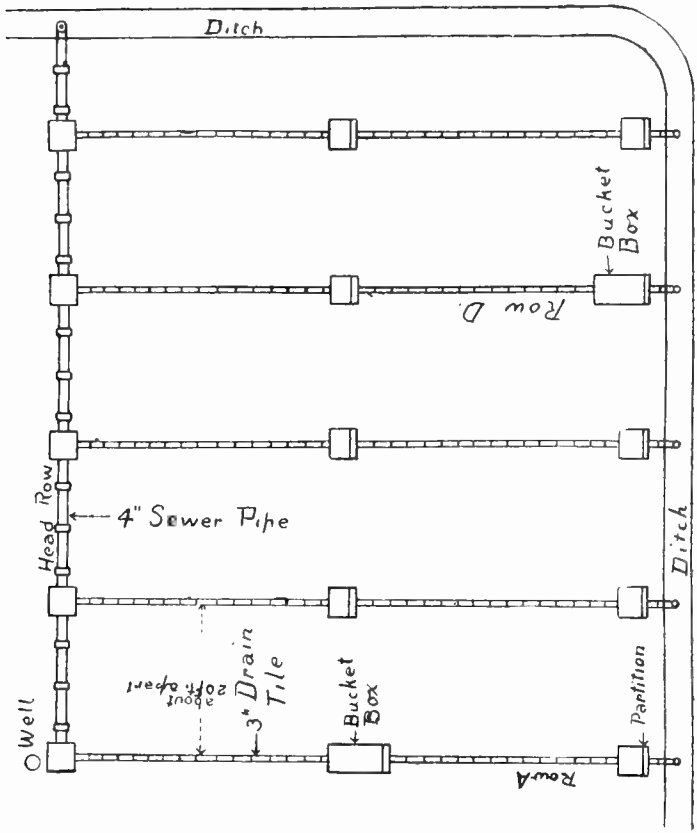

Ditch
Bucket Box
Row D
Head Row
4" Sewer Pipe
Ditch
Well
about 20 ft. apart
3" Drain Tile
Bucket Box
Partition
Row A

FIG. 2.

but if the soil contains much clay, place them about twenty feet apart.

If you will refer to figure number two, you will see I have given you a rough sketch of how this system is put in. The first thing to do is to lay the head row, which extends from the water supply, on one end, which is usually an artesian well, to a ditch on the other. This row is usually made out of 4- or 6-inch sewer pipe, the joints cemented together. The irrigating ditches run in opposite directions from the head row, between these and the head row we put in a tiling box as shown in figure number one, only this figure does not show the hole cut in the side of the box for the sewer pipe to fit in. You can readily see that water going into the head row and running through these boxes can be turned into as few or as many rows as desired, so that you can either irrigate all of the field or a part of it at a time. The lower ends of these tiling rows empty into a ditch which carries off the surplus water. Between the ditch and the head row are placed stop boxes. I have shown one of these (figure number three), with the front out, so you can see the partition which is used for damming the water up to any required level. For instance, if we plug up hole No. one, it dams the water up all along the row of tiling from this box to the head row as high as hole number two; if we plug holes numbered one and two, it forces the water up as high as hole number three. If we wish to overflood the land, which is sometimes done in setting plants, plug up all three of the holes, forcing the water up over the partition. You will note in row A and D we have a bucket box in each, which is double the size of the ordinary stop boxes; the reason for this is that when setting plants you will need a great many buckets of water, and it is best to have these boxes that are large enough to get a bucket into, scattered

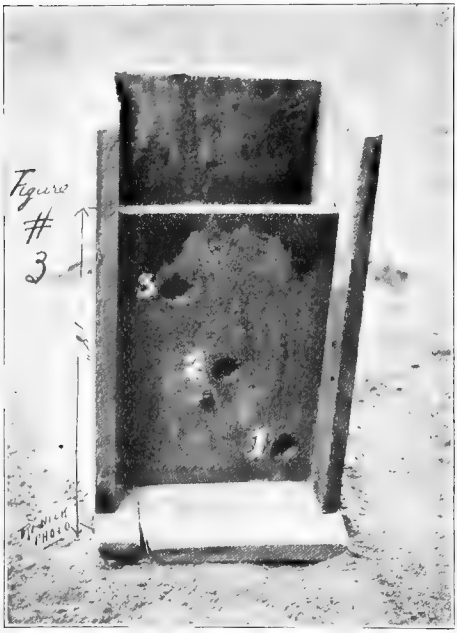


FIG. 3.

throughout the field, to keep from having to go back to the well each time for water. The head row should always be run along the highest part of the field. This system is used very extensively in the Sanford section and gives perfect satisfaction. It cost about $75 per acre to install it.

Another system of irrigation consists of running the water on top of the ground along the side of the vegetable rows, and last but not least, the Skinner or overhead system. I must confess that even though I use the sub-irrigation on my own farm, that if I were to put in any more irrigation, it would be the Skinner system. But I will leave the explanation of this to Mr. T. F. Holdbrook, manager of the Skinner Irrigation Company of Florida, who was kind enough to write a special article on it for use in this book.

If you cannot afford either the Skinner or sub-irrigation, then run the water along the side of the rows in a shallow ditch or trench. This style of irrigation is practiced in the Hastings section and the farmers are well pleased with it, as they get perfect results from their crops. If you use this system you should have a uniform fall of about three inches to the hundred feet, and you will find you get better results if you turn the water into these trenches every five or six days, then in two or three days after give the field a throrough working.

SKINNER IRRIGATION.

The Skinner system of irrigation, which is so largely used in Florida, has been developed to a point where it is probably the most complete and perfect method of watering yet devised.

The efforts of the Skinner Irrigation Company have been directed toward developing an equipment which would prove an absolute uniformity of distribution in a manner best adapted to the fullest development of the crop and by such

SKINNER IRRIGATION SYSTEM.

a method that would place within the hands of the user an absolute control of his water distribution. Not only has this been accomplished, but the more recent installations of the Skinner Irrigation System have entirely eliminated the labor required in irrigation. Inasmuch as no other system has ever been devised which has proved these essentials, a description of the Skinner system and the conditions which demand such a method of watering are worthy of consideration.

Probably few growers realize the importance of watering; but scientific men, who have investigated this problem, are authority for the statement that from 80 to 95 per cent. of every growing crop is water. This means that at least four-fifths of every vegetable which is placed on the market is simply water. It is also worthy of note that from 270 to 600 pounds of water is taken up by the plant and breathed into the air for every pound of solid matter that is added to the plant. These statements are surprising, but they have been verified to a degree which removes all elements of uncertainty regarding their proof. Inasmuch as this is true it emphasizes the importance of the correct application and distribution of water and explains the fact that the irrigated crop yields returns from 200 to 500 per cent above the returns which can be secured from crops which depend solely upon rainfall.

The users of the Skinner system in Florida state that on cabbage, which possibly is regarded as the least susceptible to drought, the average unirrigated crop is possibly worth $150.00 per acre, whereas the average crop irrigated with the Skinner system is worth about $500 per acre. With crops, such as celery and other valuable products, the comparison is even more forcible, and the experience of celery growers of a year ago has brought out the fact that the

celery crop grown under the Skinner system mature from three to four weeks earlier and a proportionately larger yield than the crops which were irrigated by sub-irrigation methods, with the result that they brought a proportionately higher price.

The Skinner system consists of a series of lateral pipes approximately fifty feet apart extending over a field. In these pipes are inserted nozzles from three to four feet apart, the nozzles being arranged in a row with absolute uniformity, this work being accomplished by means of a drilling machine designed and patented by the Skinner Irrigation Company.

All special fittings required by this installation have been developed and patented by the Skinner Irrigation Company, and are devised in a manner to secure the best results and most permanent life. Recently there has been developed a device for rotating these lines from a point in the field, operating them not only together, but in unison. This saves a large amount of labor and secures a uniformity of water distribution not obtainable when each line is operated independently.

One of the most recent developments brought out by the Skinner Company is an automatic turning machine driving the pumping engine, which rotates the pipes uniformly and in unison, eliminating altogether the labor involved in irrigating. In some sections of the country, where the Skinner system developed to meet special conditions, there has been added an equipment for spraying the entire acreage with fungicides, insecticides and commercial fertilizers. A plot of ten acres can be sprayed in five minutes' time, and the work is done better than is possible by hand. A heating device has also been added for raising the temperature of the water in order to secure the fullest degree of frost pro-

GROWING CELERY WITH THE SKINNER SYSTEM.

tection. This feature is especially valuable, and it has been demonstrated that during the last winter, in Texas, crops have been brought through a three days' freeze accompanied by a high wind when the thermometer reached a point 16 below freezing.

The Skinner system costs $150 to $250 per acre to install. It provides a means of water distribution whereby every inch of soil receives the same amount of water. With this system earlier maturity of the crop is secured; the labor of irrigating is eliminated; frost protection is provided, and every inch of soil can be made to produce the maximum crops. Growers are beginning to realize the importance of the correct water distribution, and it is needless to state that in the growing sections, where high priced crops are produced, as is the case in Florida, there is not a crop or a season when the increased returns, as the result of irrigation by means of the Skinner system, will not pay the entire cost of the system. Many growers who have irrigated only a part of their acreage have reached the conclusion that it is not profitable for them to grow crops outside of the irrigated acreage.

The Skinner system can be seen in use throughout the entire State of Florida, as well as in all truck-growing sections of the United States. Its practicability is demonstrated, and although its use originally was intended simply to protect against drought, yet, in more recent experience, it has been shown that the application of water in correct amounts and at proper times, is a most essential factor in producing the best crops with the earliest maturity, and which will obtain the highest market prices.

T. F. Holdbrook.

Since publishing the second edition of this book, I have had my attention called to a new system of irrigation, invented and manufactured by Mr. J. P. Campbell, of Jacksonville, Fla. I have investigated this system very carefully, finding it an excellent one, and I would advise any of my readers to investigate it thoroughly, before deciding which system they will install.

I have had Mr. Campbell get me up a description of the system as follows:

The Campbell System of Irrigation.

The Campbell Automatic Irrigation Sprinkler as illustrated on the back cover of this publication, supplies a demand that has existed since the beginning of time for a method of applying water to crops of all kinds in the form of natural rainfall, which result has heretofore been impossible to obtain.

PRINCIPLE OF OPERATION.

As will be seen from the illustration, there are two discharge tubes to this machine. The water being forced up through the main tube of machine is discharged through the main tube in the same manner as it would be if discharged from a fire nozzle, and is revolved by the reaction produced by the small stream discharged through the tube or nozzle emerging from side of machine. This revolving of the main tube breaks the stream emerging from same up in small drops at a considerable distance from point of discharge, and the discharge from the smaller or driving stream is broken up in the same manner and fills in the space nearest the stand pipe, which is not covered by the discharge from the main stream. In other sprinklers the

discharge stream is broken up at the point of delivery, which reduces the area covered to about one-quarter of that covered by our machine.

POINTS OF SUPERIORITY.

The Campbell Automatic Sprinkler is superior to and different from any other similar device ever placed on the market, for the following reasons:

In that it covers four times the area of any other practical machine, thus saving at least half the usual cost of pipe and fittings.

In that the water is evenly distributed over the entire surface covered.

In that both discharge streams are entirely unobstructed and cannot become clogged by sediment or pipe scale.

In that it is supplied with ball bearings placed on outside of machine where the water does not come in contact with them, and which reduces the friction of operation to a minimum, thus enabling the machine to be operated advantageously on low pressures and with inexpensive pumping machinery.

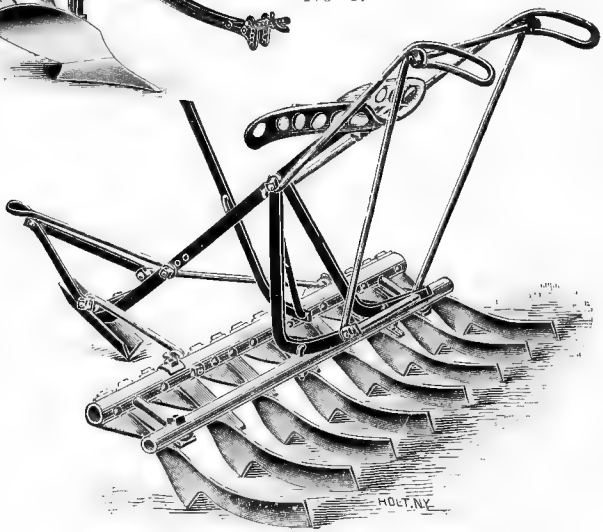
In that the ball races or bearings are made of Tobin Bronze and are readily removable and replaceable in case of wear.

METHOD OF INSTALLATION.

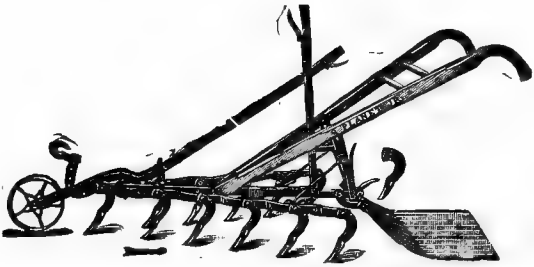
When this machine is used for vegetables or other small crops it is advisable that the lateral pipes be placed 42 feet apart on both sides of a main pipe running through the tract to be irrigated, and that the sprinklers be placed 47 feet apart on these laterals, and not square with each other but staggered, and with this arrangement each sprinkler is exactly 47 feet distant from all others, and the circular

areas covered will fit into and lap over each other so that the entire surface will be covered. It is recommended that all the main and lateral pipes be of standard black painted with asphaltum, and buried deep enough to be out of the way of cultivation. The stand pipes should be 3 to 5 feet high, and preferably should be galvanized. Stop cocks should be placed at the intersection with main so that the entire lateral line can be turned on at one time.

No 1.



No. 2.



No 3.

CHAPTER V.

IMPLEMENTS.

As I have said in a previous chapter, the farming implements used in Florida differ from those used in other parts of the country, therefore I think it a good plan to give my readers some idea of the different implements they will need.

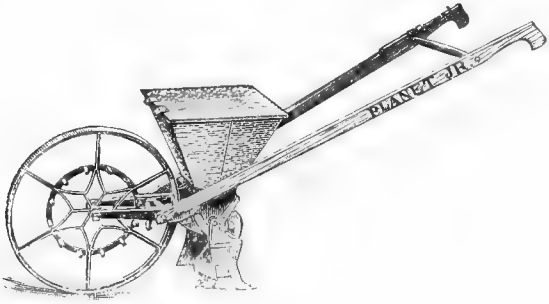
The first one you will have to buy will be a good horse plow, the style shown in cut number 1 works to perfection in our sandy soil. Of course, you understand, a great deal of the cultivation on the intensive truck farms is done with hand plows, but you will have to prepare the land and lay the furrows off with a horse plow.

Cut number 2 shows an Acme harrow. This I consider the best harrow on the market for leveling and pulverizing the land, also for harrowing fertilizer in after it is broadcasted.

The horse cultivator, as shown in cut number 3, is one of the best implements for working the crops which require being worked with a horse cultivator. The beauty of this implement is you can use it in nearly any width row, as the levers make the frame wider or narrower as you wish. You can also regulate the depth the teeth go in the soil by another lever.

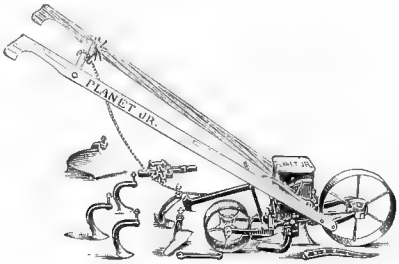
Cut number 4 is one of the handiest tools on the market for the Florida truck farmer. It is a fertilizer drill that not only distributes the fertilizer in the row, but regulates the quantity so you can apply any desired amount. If you wish to plant any kind of small seed or peas and beans, get a seed drill or a combination seed drill and cultivator as shown in cut number 5. This combination tool can be used either as a plow and cultivator, or as a seed drill.

The hand plow, as shown in cut number 6, is an indispensable tool to any truck grower who is raising crops



No. 4.

which require being worked with a hand plow. This cut shows a single wheel plow, but either a double or a single

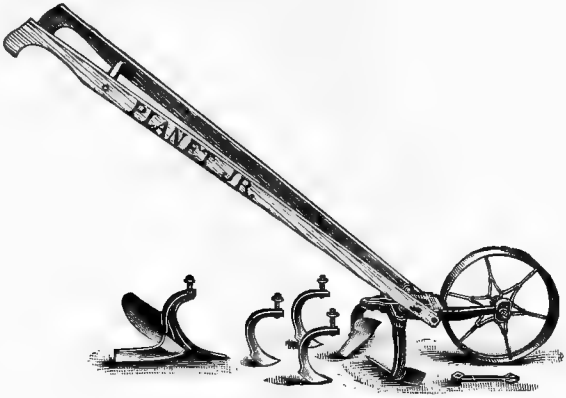


No. 5.

wheel plow will give satisfaction. If I had only money enough to buy three implements for my truck farm, the first would be a single horse plow, the second an Acme harrow and the third a hand plow.

The cultivator, as shown in cut number 7, is a tool which can be used in two ways. You can either remove the handle

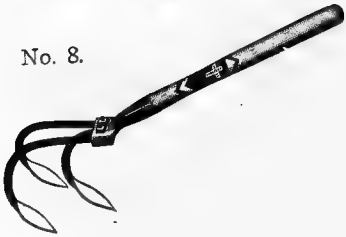
from it and bolt it onto a hand plow, or use it on the handle as shown in the cut. In the Sanford section you will find



No. 6.

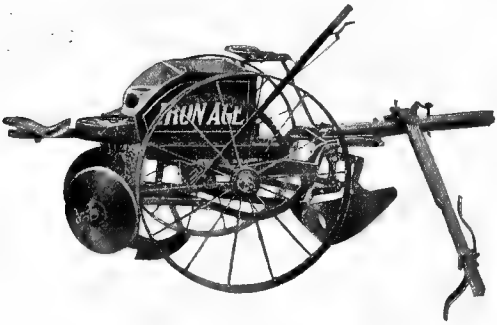
about four out of every five growers using this cultivator attached to their hand plows.

No. 7.



No. 8.

In cut number 8 we have a hand weeder which is made on the same principle as the hand cultivator only on a miniature scale. It makes an excellent tool for working small plants in the home garden, or for use in the seed bed.



No. 9

No. 10

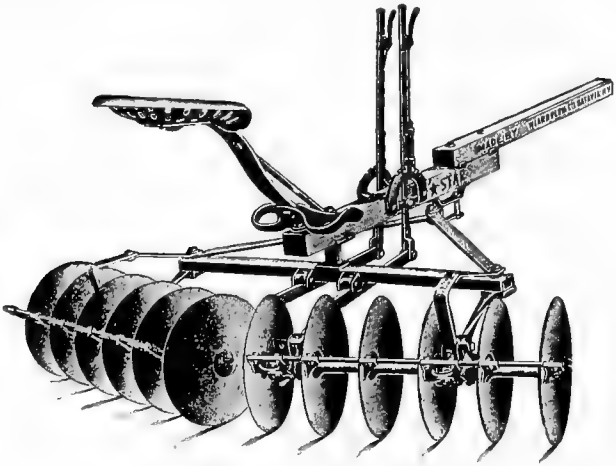
I have recommended in nearly every culture in this book, to spray the crop for either insects or fungous diseases. If you are growing potatoes, beans, cabbage, cauliflower, etc., extensively, you should buy a Four Row sprayer as shown in cut No. 11. This particular make and style of machine has been given a thorough test by leading Florida truckers, and found to be an ideal one. If you are only planting on a small scale the compressed air sprayer, as shown in cut number 10, will answer all purposes.

The potato planter, as shown in cut number 9, is made especially for planting in Florida, where ridges are used. It is used extensively in the potato growing sections and gives perfect satisfaction. If you are going to plant potatoes extensively, one of these planters will soon pay for itself.

No. 11.

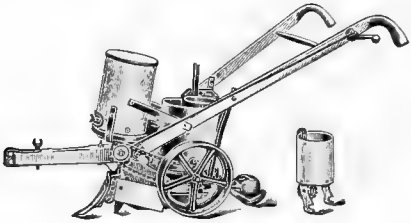
Cut number 12 shows a disc harrow, which should also especially appeal to the potato grower, as it is this tool which is used for making up the potato beds or ridges.

The Cole corn planter, as shown in cut number 13, is one which any farmer who plants a large acreage of corn cannot well do without. It not only plants the corn more



No. 12.

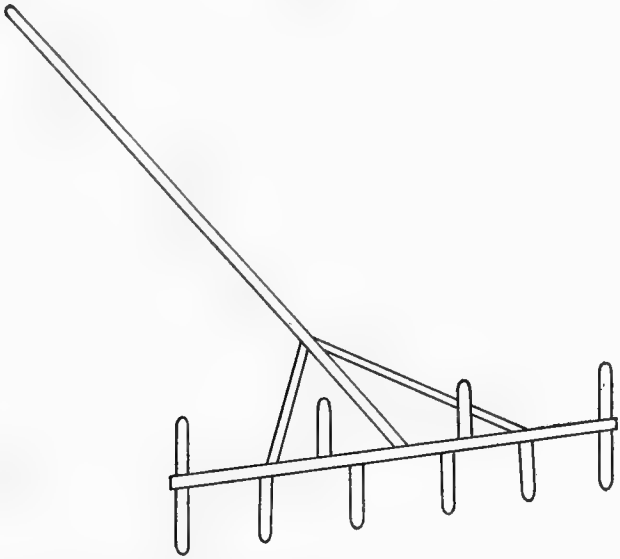
accurately than it can be done by hand, but in just half the time. This planter is so arranged that by changing a disc in the bottom of the seed can, you may plant the corn about



No. 13.

any distance you desire. This machine can be bought with or without a fertilizing attachment.

The double row marker as shown in cut number 14, is used to mark off the rows where seed or plants are to be planted. One side of this marker marks rows one width, and



No. 14.

the other side another width. For instance, if you are planting lettuce, and wish the rows eighteen inches apart, and the plants set twelve inches apart in the row, make the marker with the teeth on one side of it eighteen inches and on the other twelve inches apart. Stretch a line tightly, the length you wish the rows, the outside tooth of the marker is set against it, and the marker drawn to the end of the row, the other rows are marked from these. The distance in the row is made by marking diagonally across these rows already made, using the twelve-inch side of the marker.

CHAPTER VI.

FERTILIZING.

As this book is written more for the benefit of those not experienced in Florida trucking, I am not going to recommend your mixing the fertilizer for your crops, for even after you have had experience in the business unless you plant a very large acreage, you will find it will pay you better to buy ready mixed brands. I have tried to give you an analysis suited to each vegetable which you will be able to buy ready mixed from any of the large fertilizer factories in the State, and their mixtures must be good, as a majority of the most successful truckers in Florida are using them. I have used fertilizer from the following firms, and found their brands all they claimed them to be: The E. O. Painter Fertilizer Co., Independent Fertilizer Co., Armour Fertilizer Co., and Chas. Tyson & Co., all of Jacksonville, Florida, and Ocala Fertilizer Co., Ocala, Florida. Any of these will be glad to give you information concerning their goods and assist you in any way possible with your fertilizing problems.

A large majority of the most successful growers in the different trucking sections use at least a ton of fertilizer to the acre for each crop, and in addition, a ton of Canadian hardwood ashes, and they make it pay. If you are stingy with your crops, they will be stingy with you in their yield.

A complete fertilizer must contain the following elements: nitrogen or ammonia, phosphoric acid and potash. For shipping crops you will find that you will get better results if the fertilizer contains a good per cent of potash, as it is this element that gives the vegetables strength to stand up under their long journey to market.

When you decide what crop you wish to plant, find what kind of fertilizer is suited to make it to perfection, and give it just what it needs.

Stable and barnyard fertilizers are excellent for most crops, if mixed with sufficient potash and phosphoric acid, as they are a little weak in these two important elements. You cannot use too much of them, but it will not pay you to buy stable fertilizer unless you can get it delivered at your farm for $2 per double team load or less. If you save stable fertilizer from your own yards, be sure to see that the pen you store it in has a good cover, as the sun and rain take all the strength out of it. If you can gather oak leaves convenient to your place and compost them with the stable manure, it makes an excellent fertilizer, but you cannot afford to buy them.

Do not take vegetable matter of any kind off of your land, but let it die and plow it under as it all helps to make the soil rich. Cowpeas, velvet beans, rape, vetch and corn stalks are all good. One thing that I should say right here is that in plowing under vegetable matter do not turn anything under that shows the least sign of disease, but pull it up and burn it—the quicker the better.

I know many of my readers who are not experienced in farming as practiced here, will think I recommend using too much fertilizer, and in order to prove it will pay to feed your crops well I will give a little example. Suppose we plant an acre of lettuce, using 1,000 pounds of fertilizer at a cost of $17.00, the labor and other expenses of raising the crop amounts to $50.00; we get a yield of four hundred crates that sell for $1 per crate f. o. b. our station; this will net us a profit of $333.00. Now, if we plant the same acre in lettuce and use a ton of fertilizer at a cost of $34, under the same growing conditions, the yield will not be

less than six hundred crates to the acre, and the cost of labor and other expenses will be the same or even less; for it is easier and cheaper to grow a well fertilized crop than a poorly fertilized one. This lettuce sells for the same price of $1 per crate, netting us a profit of $516.00. Now, we have a profit from one acre of $333.00 and on the other of $516.00, a difference of $183.00. If any of my readers can tell me where I can exchange $17.00 for $183.00, I would like to have them do so at once. Ask yourself if it pays to fertilize.

"Feed your crops well and they will feed you well."

AVERAGE COMPOSITION OF THE MOST IMPORTANT FARM MANURES.

FARM MANURES.	Nitrogen	Ammonia	Potash (K_2O)	Phosphoric Acid (P_2O_5) Total
Cow manure (fresh)	0.34	0.41	0.40	0.16
Horse manure (fresh)	0.58	0.70	0.53	0.28
Sheep manure (fresh)	0.83	1.00	0.67	0.23
Hog manure (fresh)	0.45	0.54	0.60	0.19
Hen dung (fresh)	1.63	1.98	0.85	1.54
Mixed stable manure	0.50	0.60	0.63	0.26

CHAPTER VII.

SEED BEDS.

To raise good crops, you must have good plants. Therefore, it is very important to prepare the seed bed land in the best manner possible. They should be on land that has not been in cultivation for over two years on new land. Of course, you can raise plants on the same land for five or ten years, but you will not get the results you can from one- or two-year-old land. Try and have the beds close to the house or barn, as plants demand constant attention, and if left to themselves for any length of time are apt to ruin; also have them convenient to the well, as they require plenty of water. Give the seed bed tract from one to two tons of Canadian hardwood ashes, and from 1,000 to 1,500 pounds of fertilizer to the acre. The fertilizers should analyze about as follows: Ammonia, 6%; available phosphoric acid, 8%; potash, 2%. Always have the fertilizer you use on the seed bed containing a high per cent. of ammonia, as plants should be grown in a hurry. You will find some plants require more fertilizer than the amount just given; for instance, celery, which needs at least a ton to the acre. A good rule to follow is to decide just how much fertilizer you expect to use in the field where the plants are to be set when taken from the seed bed, and put about half this quantity in the seed bed, as you must always have the field richer than the bed you take the plants from or the crop will not pay for transplanting, much less for the seed and fertilizer. Make the beds just wide enough to reach across, and as long as you wish. You will find some of the most progressive truck growers using about 500 pounds of castor pomace to the acre, applying it as the beds are made up. This is a cheap grade of fertilizer which is poison to the cut worms,

and as they do more damage to young plants than all the other insects put together, I really think it is a good idea to use it. Another point I should add here is never use cotton seed meal as a fertilizer on any land that you wish to grow plants on, as there is nothing the cut worm likes better than cotton seed meal. If you wish to protect the plants in cold weather drive a row of stakes down the middle of the bed about five feet apart, having one at each end. Run a heavy wire on the top of these stakes, stretching it tight. Put up ten or twelve-inch boards, all round the bed, standing them on edge, and drive 10d nails in them, about every three feet. Stretch a cover of either canvas or duck over the wire and fasten it to these nails by heavy strings.

DIRECTIONS FOR MAKING A HOT BED.

The problem of raising plants in a hot bed need not worry the trucker in the southern part of the State. In the northern and central portions, such plants as tomatoes, peppers and egg plants, when planted in November, December and January, will have to be grown in hot beds. To grow these plants in the southern portion of the State during the months named, all that is necessary is to protect the beds as advised in the article on seed beds. In selecting a place for the hot bed, try to get a piece of medium high land as it is necessary to dig a pit nine inches deep under the bed. If the land is very low, first make up a bed about eight feet wide and four feet longer than you wish to make the hot bed, building the frame on top of this. Sash make the best covering for this purpose. The frame should be as wide as the sash are long, which is six feet. The length of the frame depends upon the quantity of seed that are to be planted. Make the bed as air tight as possible, running it from east to west, and sloping it towards the south. The

back or northern side of the frame is usually about eighteen inches high, and the south side from ten to twelve inches high. Dig out three inches of the top soil, place this to one side, next dig out six inches more, banking it against the frame around the outside. Put about six inches of fresh stable fertilizer in the bottom of the pit, wet it thoroughly and pack down. Over this spread the top soil, which you first removed from the bed, leveling and pulverizing it with a rake. Now the bed is ready for fertilizing and planting.

It is necessary to keep the hot bed thoroughly moist, from the time the seeds are planted until the plants are removed from it. Try to keep the temperature about 80 degrees in the bed. If you find it is getting too hot prop up some of the sash.

CHAPTER VIII.

MARKETING YOUR CROPS.

No matter how fine a crop you raise, unless you make some money out of it, your time and labor are lost.

The principal thing is to put your vegetables up in the best shape possible. Grade them very carefully. Pack in standard crates and be sure to have the crates clean. You will find the most successful truckers put their produce up in first-class shape. The majority have a trade mark for their fancy stock, and you will find it advisable to do likewise; but under no conditions pack anything but extra fancy stock uder it. If you will do this, it will not be long before you will have a reputation worked up on your brand, and can get a good price when other stock not so carefully graded is hardly bringing freight charges. Choice produce put up in first-class shape will bring more money than extra fancy stock that is put up in a shoddy manner. It is best to try and plant enough of one kind of vegetable to be able to load a car, for if you have good stock and can load cars, straight or mixed, you can nearly always sell them f. o. b. your station, which is much more satisfactory than consigning your shipments. I always make it a point to sell f. o. b. my station when possible, even taking twenty-five cents a crate less than the market is offering, for if you take chances and ship, you run the risk of your shipments going into market in a poor condition, or having the market drop before they arrive. If you can not plant a large enough acreage to ship this way, get several of your neighbors to go in with you, each planting the same vegetable at the same time, so that when they are matured you can pool the lot. Find one or two good commission houses on each market, and when you find a good one stick to it, no matter what kind

of "hot air" some drummer tries to give you. Stick to the people who have treated you right. Now, a word as to commission men. Don't think all commission merchants are rascals; of course, there are a great many in this business, as it offers a fine field for the rascal, but you will find the majority of them perfectly reliable. Don't take it for granted because a house writes you on swell stationery, or their representatives are nice fellows, and treat you fine, that they are honest; look every house up before you deal with them; the honest houses want to be looked up.

There are some vegetables you can ship by freight, such as Irish potatoes, sweet potatoes, melons, onions, tomatoes and cabbage; but lettuce, celery, okra, cucumbers, egg plants, cauliflower, pepper, cantaloupes, strawberries, sweet corn and beets will either have to be shipped by refrigerator cars or by express. It is always best to ship in refrigerator cars, as your vegetables are sure to carry in perfect condition.

If possible, form an association at your point, elect your most competent men officers, and let them ship or sell all the produce raised there. If you will do this and get a reputation of putting up first-class packages, you will soon have the buyers hunting you instead of your having to hunt them.

Put up a good grade of produce, sell f. o. b. your station if possible, if not, consign only to reputable houses, and you will find at the end of the season, if you have had a good crop and the markets were in any kind of shape, that you have made money.

Make a study of marketing your crop and you will be apt to make a success of your farming venture.

CHAPTER IX.

HOW TO GROW FOUR CROPS TO THE ACRE IN ONE SEASON.

To the average farmer, in and out of Florida, the above statement is apt to be doubted, but I have raised four crops on the same acre of ground at Montrose Farm Trial Grounds in one season, and if you will be a little patient, I will try to prove to you that you can do likewise.

To start with, you should have the land in the best condition possible, and it is better to have it sub-irrigated or irrigated by the Skinner system, if you are going to make a success of the crops.

The crops we will raise will be two of beets, one of sweet corn, and one of cow peas. The last crop will pay best if turned under for fertilizer, as you can use nothing better for enriching the soil.

We will deal with each crop, in the order which it is grown. The first thing that has to be done in raising a crop of beets will be to make up the seed beds. These beds can be made as long as convenient, and just wide enough to reach across. They should be free from any sticks, weeds, stones, or trash of any kind. The best fertilizer to use in the seed beds is a good article of commercial fertilizer, as weeds and grass do not grow as fast on it as on stable fertilizer. It is a good idea to put some castor pomace in the beds. This is a low grade of fertilizer, which is a preventive for cut worms, and as they are the principal enemy of the beet, it is best to use preventives to keep them from getting a start. The seed should be in the ground not later than September 1st. They should be planted in rows six inches apart, and very thin in the rows. Keep them well worked until they are about six inches high, when they can be transplanted to the field. One of the best varieties of beets to

PLANTING BEETS WITH A SEED DRILL.

plant is *Kennerly's Improved Truckers' Perfection.* The Crimson Globe, Eclipse, Early Model and Egyptian are all popular kinds.

Some of my readers will ask: "Why don't you plant the seed where you want the plants to grow?" I will admit it does look like double work transplanting the plants, but it is about as much work thinning them out. Replanted plants make twice as quick, and we are after saving all the time we can.

Now, while we are letting the plants grow, we will get the field ready to set them in. As I have said above, you must get the land in the best condition possible. For fertilizer there is nothing better for beets in the field than good well rotted stable manure, put on as heavy as you can. Let me say right here, when growing a succession of crops, what fertilizer one crop does not get the next one will, and the succeeding ones will make twice as fast. Besides the stable fertilizer you should use about a ton of kainit to the acre, for it not only furnishes what potash the plants require, but is a good cut worm preventive. After the field is well fertilized and plowed, it should be gone over with a home-made board drag to level and pack the ground. When it is level and packed we will proceed to lay it off for planting. The first thing to do is to mark off the land with a wooden rake marker, as advised for laying off the land when setting lettuce plants. The rows should be eighteen inches apart, and the plants set three or four inches apart in the rows. There is one thing to remember in setting any kind of a root plant, and that is, do not get the bulb down too deep in the ground, or your labor will be lost. You must be careful in watering the plant after setting. Do not pour the water on the plant, but on the ground at the side of it, packing the soil well around the roots. It is best to water

them the afternoon they are set, and again early the following morning.

After the plants are in the field, they should be left alone for about two weeks until they are well rooted and have started to grow. Then go through the middle of the rows and give them a light application of nitrate of soda, about 150 pounds to the acre, being careful not to get it on the

TRUCKER'S PERFECTION BEET.

plants. This makes the beets start off and keep on growing, otherwise they will loaf for three or four weeks. The principal thing now is to keep them well worked. There is nothing better for this purpose than a Planet, Jr., Wheel plow. (See chapter on Implements.) It is equal to an extra hand on the farm. About two months after planting in the field the beets should be ready for shipment.

Beets should be packed with the tops on, as these make excellent greens. Some markets require the beets tied in bunches of about four to the bunch; others prefer them loose. The best crate for packing them in is the barrel, cabbage crate or the lettuce hamper. The cabbage crate holds about two hundred beets and the lettuce hamper half as many. There is another flat crate that is used in the Coleman (Florida) section, but I do not like it as well as either of the above named. Care must be taken in packing; shake all the dirt and trash off the beets before they are put in the crates, also pull off all the dead leaves. The best way to pack them is in layers, and be sure to get the crate full, as they will naturally shake down in transit.

Any of the Southern markets will use beets nearly the whole season, paying good prices for them. Washington, D. C., Baltimore, Md., and Philadelphia, Pa., are also good markets for them.

Now that we have the first crop off, we must prepare for the second. About a month before this crop was ready to ship you should have made up the seed beds and sown another lot of beet seed. You will, in all probability, have to cover the young plants this time, in case of frost, as they are very tender until they are about six inches high. This covering can be easily made by putting a frame around the bed and stretching a light quality of duck or canvas over the frame. Treat the second lot of plants the same as you did the first. Before setting them plow the field several times, giving it 1,000 pounds of some good commercial fertilizer that will analyze about as follows: Ammonia, 5%; available phosphoric acid, 7%, and potash, 8%. Mark the land off the same as you did before, only making the rows twenty-four inches apart this time.

When the beets are about half grown, go through the middle of every other row and plant sweet corn, Country Gentleman or Stowell's Evergreen preferred. Treat this crop of sweet corn as advised in chapter on Sweet Corn. Ship the second crop of beets the same as you did the first crop.

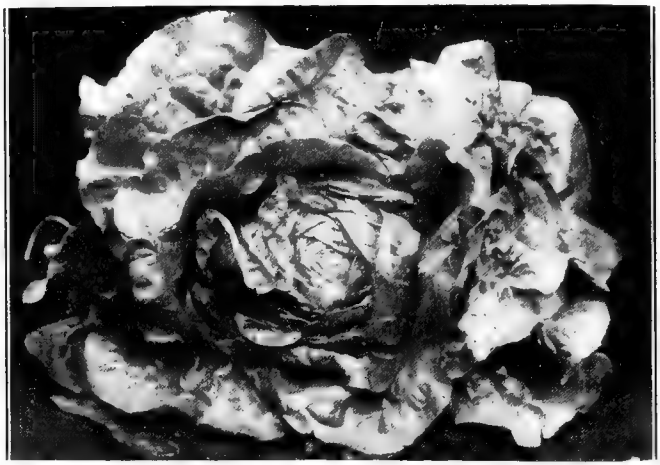
Now that we have taken three crops off the land, we are ready to plant the fourth. First turn the ground over with a good turn plow and broadcast it in cow peas, either harrowing or plowing them in. For further directions for growing this crop, see chapter on Field Crops.

One suggestion I neglected to make in regard to the beet crop is that in case of a freeze, do not get discouraged if the plants are killed to the ground, as they will come out. When they begin to show signs of coming to life, give them about 150 pounds of nitrate of soda to the acre, and you will lose but little time by this backset.

CHAPTER X.

LETTUCE.

This is a winter crop and nearly always a money-maker. It is a quick one, being made in about ninety days from the seed. It seems particularly adapted to our Florida soil and climate. It is raised to perfection in all parts of the State on most any kind of soil, but seems to do best on the gray hammock land. An acre of good lettuce will usually yield



BIG BOSTON LETTUCE.

from five hundred to seven hundred and fifty crates to the acre. Lettuce like the heads in the picture will run at least eight hundred crates to the acre, and you can nearly always get from $1.00 to $2.00 per crate f. o. b. your station. It is planted any time from the first of September until the last of February in the central portion of the State; in the

southern portion from October until January. It requires an ounce of seed to make about three thousand plants, and it takes from 25,000 to 30,000 plants to set an acre.

PLANTING.

Make up the seed beds as directed in Chapter VII, having the rows across the beds six inches apart, and plant not over one-quarter of an inch deep, as the seed should be planted very shallow. Some truckers prefer to sow the seed broadcast, claiming they get better plants, but if you will sow the seed very thinly in the row you can make just as good ones; and where you have them in the rows you can keep the ground stirred, making them grow faster. I prefer to soak lettuce seed over night before planting, then mix with dry sand and sow. This method has two advantages—it not only makes the seed germinate quicker and better, but the ants won't bother seeds that have started to sprout; and any one who has ever tried to raise lettuce in Florida knows that unless something is done to stop them they will carry off the seed as fast as you can put it in the ground, and this is easier said than done. Another method to keep ants from carrying off the seed is to make up the seed beds close to the well, and have ditches all round them, keeping these full of water. In this way you can keep the ants off the beds entirely. Keep the plants growing from the time they come through the ground until you give them the last working in the field. This can be accomplished in the seed bed by constant working with a small weeder. If the plants turn yellow or get a backset from any cause, mix up a solution of nitrate of soda and water, using one quart of soda to fifty gallons of water, and sprinkle the plants with this mixture twice a week until they turn green and start to growing. When the plants are

about three inches high they are ready for setting in the field.

FERTILIZING AND TRANSPLANTING.

Prepare the land as advised in Chapter II, being sure to use not less than one ton of Canadian hardwood ashes to the acre, as this vegetable is very fond of them. In about a week after you have applied the ashes put on the fertilizer. The following makes an excellent analysis for lettuce: Ammonia, 5%; potash, 12%; available phosphoric acid, 9%, using about a ton to the acre, broadcasted and harrowed in. The best way to lay the land off for planting is in checks. Make a wooden rake as advised in the chapter on implements, having the teeth the width you wish the rows apart, marking the first row by a line and the remainder from this one, so as to get them perfectly straight. These rows are usually from twelve to eighteen inches apart. Then mark diagonally across these rows with a similar marker with the teeth the width you wish the plants apart in the row, which is from twelve to sixteen inches.

SETTING THE PLANTS.

Set the plants in the row where the diagonal line crosses it, grade them very carefully, and set only the ones that are chunky and have a healthy supply of roots. The best tool for this work is a plasterer's small pointing trowel or a dibbler, which can be made from a broom handle about six inches long, whittled to a point on one end. Most farmers who plant lettuce very extensively have several men who are expert plant setters. The plants are dropped by children or women who keep about twelve feet in advance of the setters. Following the men come children or women, whose business it is to water the plants. One of them can water as many plants as two men can plant You will have to

be careful to see that the plants are not put in the ground below the bud, for if they are they can not grow. Make the water carriers pour the water on the ground at the root of the plant and not on the top of it. This not only makes the plant live, but packs the dirt well around the root. Of course, the setter is expected to pack the dirt when he sets the plant, but as the old saying goes, "Every little bit helps;" and it is impossible to do this work too thoroughly.

CULTIVATION.

When the plants have been set about a week or ten days, it is time to start working them. Stir the ground very shallow at first with the little hoes that come on your hand plow, being careful not to cover them up. It is impossible to work the lettuce too much, especially if you do not have it planted on irrigated land. But let me say right here that any farmer who attempts to grow lettuce without irrigation will not have near the success with his crop that he would have if he used it. It is a good idea to give the lettuce a little fertilizer at each working or every other working, using about 150 to 200 pounds of the same kind you used at first, to the acre, each time. You will find that a large majority of the best lettuce growers in Florida give their lettuce about 150 pounds of nitrate of soda to the acre just before the last working. I have tried this and find that it works to perfection, not only causing the lettuce to head up quicker, but making it larger.

COVERED LETTUCE.

In the Gainesville section you will find quite a few growers raising their lettuce under cover. Of course, this costs more money, but you run no chance of your crop freezing, and when all of the outside lettuce is killed by a freeze, it will be all right and will net the grower handsome returns.

The beds are made up as shown in the picture. It is advisable not to have the beds over twenty feet wide and ninety feet long, for if wider and longer than this the covers will be hard to handle. Light canvas or duck makes an excellent cover.

COVERED LETTUCE BEDS.

PACKING AND SHIPPING.

Cut the lettuce as soon as it has formed solid, hard heads, as it goes to seed very quickly after maturing if the weather is the least bit warm. In cutting leave the dirty yellow leaves on the stalk; if there should be any left on the lettuce, pull them off before it is packed. Shake the head well to remove any sand sticking to the leaves. Do not cut the lettuce immediately after a rain. In packing pull the outside leaves over the head as much as possible. The one and a half-bushel hamper is the best crate for shipping it in. Pack the first layer in the crate with the heads up and the

next with the butts up, and vice versa until the crate is filled; the top layer should have the butts up. In packing always jar the crate several times, as this packs the lettuce down, so the crate will go into market full, which is a very important thing, as any commission man will tell you that a crate of lettuce three-quarters full will not bring more than half the price that a well packed, full crate will. You should make two grades of the lettuce, packing the extra fancy to itself and marking it either fancy or with your trade mark.

INSECTS AND DISEASES.

The only insect that attacks lettuce in this State is the green cabbage worm or looper, and a solution of arsenate of lead and water, mixed as directed in the chapter on insecticides and applied with a spray pump will stop them.

The greatest drawback to lettuce growing in this section of the country is a disease known among the truckers as "damping off." This is a kind of mold or fungus which attacks the plant from the bottom, and is not particular whether the lettuce is ready to be cut for shipping or half grown, and it is very destructive. I have seen it destroy several acres at a time, but I am thankful to say that there is a remedy for it, which is nearly an absolute preventive. Make the lettuce land up in ridges about one to one and a half inches high, having these ridges the distance apart you wish the rows, and set the plants on top of them, and in this way you can keep the ground under the leaves well stirred until the lettuce is cut, and as long as you keep the soil well stirred under the leaves the fungus can not form under them.

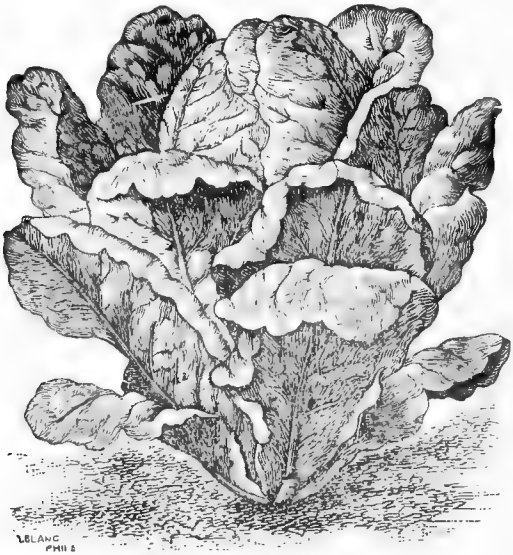
VARIETIES.

There are several kinds of lettuce recommended for planting in Florida for shipping to market, but the Big Boston, California Cream Butter and the Florida Perfect are the

leading varieties in all the trucking centers. They are large, hard heading kinds, and make to perfection here. For the home market and home garden the Hansen is the most popular and can not be beaten.

ROMAIN.

This is a tall, head lettuce, which resembles Chinese cabbage. It is planted, worked and fertilized the same as



ROMAIN LETTUCE.

other lettuce, but will give an immense yield to the acre. I have grown it on my own place that only required eleven heads to fill a bushel and a half hamper, and this is on an average of over 1,500 crates to the acre, but I would not recommend truckers planting it very extensively, as it is not known on all markets and does not always sell well on the markets where it is known. Plant the self-folding varieties.

GROWN ON ORDINARY PINE LAND.

CHAPTER XI.

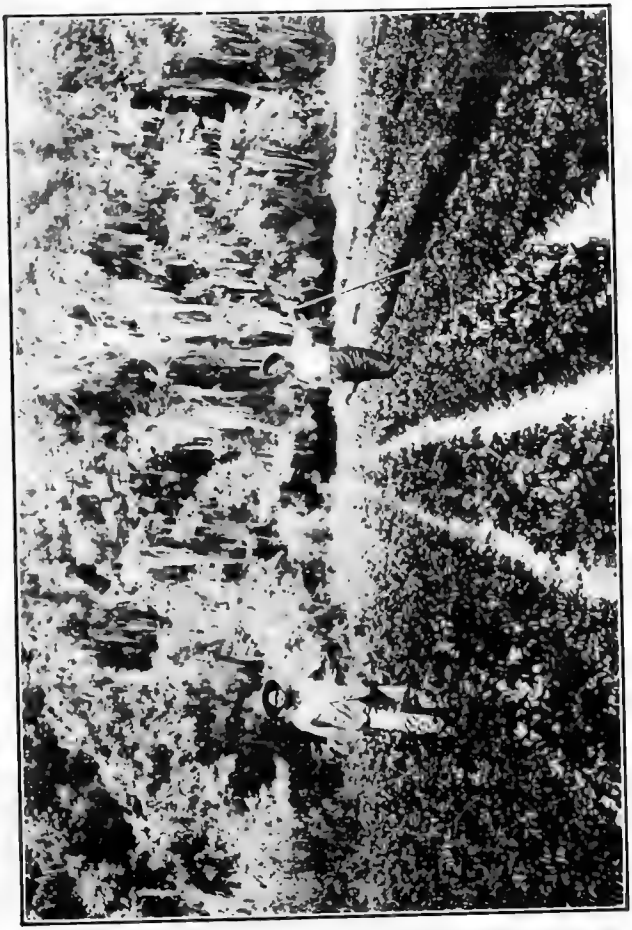
CELERY.

Of all the vegetables that are grown for shipment there is none that will give you the large returns that this one will; but again there is none that requires the labor, fertilizer and careful treatment that this crop does. The Sanford growers are considered specialists in growing celery, and I doubt if you will find one of them who has made a success of it who does not use at least two tons of high-grade fertilizer to the acre, besides having his land irrigated and drained with the sub-irrigation system. I know there are some of my readers who will say that the crop will not pay for this expense, but from personal experience I know that it will, and I feel confident that any one visiting Sanford during the shipping season and seeing the returns which the growers are receiving for their crops will agree with me. Two years ago I was in a ten-acre field of celery at this point which sold in the field for $12,000. I would not advise a person not thoroughly acquainted with the culture of this vegetable to plant it extensively until he has experimented with it on a small scale. You can learn how to grow it by planting an eighth of an acre just as well as you can by planting ten acres, and if you make a failure you will not be out much money.

PLANTING.

Sow the seed any time from the 1st of August until the 1st of November, using only the Golden Self-Blanching variety, and making certain that the seed are French grown. as the American-grown seeds are apt to give you a crop of hollow stalk celery, which is absolutely worthless.

Make up the seed beds as advised in Chapter VII, having



FIELD OF XXX STRAIN FRENCH GROWN GOLDEN SELF-BLANCHING CELERY.

the rows across the bed six inches apart. Sow the seed thinly in these rows, but do not cover with sand. After the bed is all planted cover with ordinary burlap bags, which have been cut open. Wet this covering twice a day until the seed has started to sprout, which is usually from ten to fourteen days after planting. As soon as you notice the seed putting on little white sprouts, remove the burlap bags and cover the beds with a half shade made of laths or cheese cloth put over it in tent shape. I would advise giving the plants a little more sun each day until they become hardened to it, when the shading can be entirely removed. Celery plants are very hard to raise, and the wise grower will plant about three times as much seed as it takes to grow the required number of plants. Under favorable conditions a half pound of seed will make enough plants to set an acre.

REPLANTING OR PRICKING.

This is one subject which it seems impossible for celery growers to agree upon. Some growers claim it does not pay to prick plants, while others, just as successful, claim it is the only method to follow. As for myself, I prefer to prick out the plants. This is done when they are about two inches high. Make the rows across the bed the same as you did when you planted the seed, but set the plants about three-quarters to one inch apart in the row. The best tool for pricking is made from an ordinary piece of wood three or four inches long, whittled round; drive a piece of stiff wire about three inches long, into this stick. With this tool in one hand a celery plant in the other, place the wire on the root, pressing it in the ground as deep as you wish the plant to be set, being careful not to cover the bud. Women and children are more adapted to this work than men. Immediately after you finish pricking them, they should be

watered with a fine sprinkling pot. This kind of setting is usually paid for by the thousand. In about three weeks' time after the plants are pricked out they are ready to be transferred to the field; that is if they have been watered daily and well fertilized. If for any reason your plants do not start growing as quickly as you think they should, make up a solution of nitrate of soda and water, using one quart of soda to fifty gallons of water, and apply to the plants with a fine sprinkling pot twice a week. If you do not care to prick the plants, you should cut them back several times and in this way make them chunky. An ideal celery plant when it is ready for the field should be the size of your little finger and about five inches high, having plenty of white, healthy roots.

FERTILIZING.

The first thing to do is to apply all the stable fertilizer you can get on the land, or if you cannot get the stable fertilizer, give it a ton of pulverized sheep manure, plowing it under well. Next lay the field off in furrows thirty inches apart, and drill a ton of celery special fertilizer in them, mixing thoroughly with the soil as you cover it. The following is an excellent analysis for this vegetable: Ammonia, 7%; available phosphoric acid, 5%; and potash, 10%. In about ten days' time you will be ready to set the plants.

PLANTING.

Make two sizes of the plants, putting the large ones in one row and the small ones in the next, and vice versa through the field. To make the rows straight, stretch a line from one end of the furrow to the other, then run a wheel marker with plugs in the tire the width you wish the plants apart, which is usually three to four inches, down the line. The best tool for setting the plants is a plasterer's

pointing trowel, as advised for setting lettuce plants. Pack the dirt well around the roots. You should be careful to see that the plant setters do not set them too deep in the ground. Water immediately after setting. It requires about 60,000 plants to an acre. Lettuce is often raised between the rows of celery, as it matures very quickly and will not be in the way of the celery plants.

CULTIVATION.

The roots of the celery burn very easily, thus causing the plant to blight; therefore this crop should be cultivated and fertilized deeply to keep the roots from feeding close to the surface. After the plants have been in the field about four weeks give them a second application of fertilizer, using 1,000 pounds to the acre—the same kind as you used before. Apply this fertilizer in a furrow from five to six inches from the plant. The majority of growers give their crops fertilizer every ten days, using one which contains a high per cent. of ammonia, some prefer nitrate of soda; others dried blood or blood and bone. If you see any signs of hollow stalk, give the field an application of high grade potash.

BLANCHING.

When the celery is from ten to twelve inches high it is ready to board, but before doing so I would advise going through the patch and remove any suckers you find growing on the plants. Use pecky cypress boards about twelve inches wide. It is best to have these boards in short lengths standing them on each side of the rows, using stakes to hold them up, or holding in position with cross strips tacked on top of the boards. If you wish to blanch the crop in a hurry, slant the boards toward each other at the top, shutting out most of the light, being careful not to bruise

the tops of the celery. It will require about ten days or two weeks to blanch it perfectly.

PACKING AND SHIPPING.

In cutting the celery leave some roots on the stalk, as this will make it keep better. Remove all the brown or spotted leaves. Ship in celery crates, packing in layers, putting all the butts at one end. Grade the celery very closely. Four to six dozen stalks to the crate is considered fancy, and will bring the highest price; six to eight dozen is classed as choice. When celery is not bringing extra good prices, ship only the choice and fancy sizes; but if it is scarce and wanted badly, also ship the smaller sizes. Always mark on the crate the number of dozen stalks it contains. There are two styles of crates on the market. They are known as the Sanford and the Manatee. I prefer the Manatee, as it only contains a few more stalks than the Sanford crate, but has the appearance of holding several dozen more. It seems to be more popular with both commission merchant and the retailer.

DISEASES.

The greatest enemy of the celery crop is blight; therefore you should use every possible means to try and prevent it. Spray the crop with Bordeaux mixture from the time the plants are pricked out, until it is ready to board. If you find the young plants damping off badly in the seed bed dust them with powdered sulphur. If black heart or, as it is sometimes called, black rot, attacks the celery, the only remedy is to try and get the crop shipped before it can spread; but do not ship any diseased stock, for it will rot before reaching the market.

BLOCK BED CELERY.

A few celery growers in different parts of the State prefer to plant celery in block beds; but I cannot say that I thoroughly approve of this method, although I have seen extra fancy celery grown in this way. To grow block bed celery, raise the plants the same as advised in the first part of this article. Make up the beds four feet wide and as long as you wish. Apply at least three tons of celery special fertilizer to the acre, as they are made up. You will note I am advising you to fertilize very heavily. My reason for this is that you will plant over double the number of plants to the acre; therefore it is necessary to increase the fertilizer in proportion. Another point I wish to bring to your attention is that it will be impossible to raise the celery in block beds unless your land is irrigated. Make the rows six inches apart, either running them lengthwise or across the bed. Set the plants six inches apart in the rows. It is only when the plants are small that you will be able to work them, and for that reason you will have to give them all the cultivation possible at this stage. In blanching, it is only necessary to board the outside rows on the beds. When the crop is matured, pack and ship as already advised.

CHAPTER XII.

TOMATOES.

While the tomato is grown very extensively in all parts of Florida, the lower East Coast is what might be called the tomato section. In this part of the State they can grow tomatoes the entire winter, and make good money out of them. Many a rich East Coast tomato grower came to Florida without a cent in his pockets, and had to get some one to run him until he made his first crop. There is no other

A Field of Duke of York Tomatoes.

Florida crop that will give you as generous returns for the money and labor invested as this one will. Another thing that should make the tomato appeal to the new settler in Florida is that it does fine on new land that has just been cleared, and there are very few crops that can be grown on this kind of land until the sourness is removed from it.

The secret of success in tomato growing is to have the plant unchecked from the time it comes out of the ground until it starts putting on fruit. A check to a tomato vine is never fully overcome. The plants may seem to outgrow it but you will find its productiveness has been lessened. No doubt you have had tomato fields yourself that had fine, healthy looking vines, but would not put on any fruit, and you wondered what was the matter with them. Such conditions are caused either by the plant being checked in its growth or too much fertilizer in the seed bed, and not enough in the field. Tomatoes do better on irrigated land, as there is some time during its growth that it demands a great deal of water, and then there are other times when water will ruin the crop, where if the field is irrigated, you can furnish the water just as it is needed.

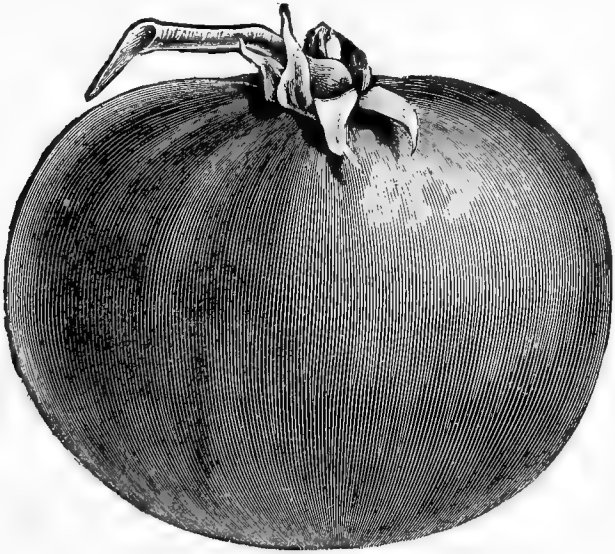
SOIL.

The tomato is not particular as to the kind of land it is planted on. It will thrive on land varying in every degree, from the whitest sand to the blackest muck, provided you have the land in perfect condition, and give it all the fertilizer it requires. Of course, every one has his own idea as to what kind of soil is best suited to this vegetable, but if I were buying land to raise tomatoes on, I would choose a piece with a sandy loam for a top soil, underlaid with a subsoil at a depth of about eighteen inches.

PLANTING.

Sow the seed in beds, either broadcasting them or planting in rows across the beds about six inches apart, sowing the seed very thinly in the row. It requires a quarter of a pound of seed to produce enough plants to set an acre. If you are farming in Southern Florida, you can plant any time from September until January. In Middle and Northern Florida make your fall planting in July and August, and

your spring planting from the middle of December until February. You will have to raise the spring plants either in hot beds or cold frames. When all danger of frost is over transplant the plants to the field. They should be from six to eight inches high and set in the ground nearly up to the bud. Make the rows four or five feet apart, setting the plants from two to three feet apart in the row.



BEAUTY TOMATO.

VARIETIES.

The Florida tomato growers are very progressive and will only plant a variety as long as there is nothing better to be had. At present the Livingston's New Globe seems to be the favorite in all sections, and I really think it deserves its popularity, as it certainly is a beautiful tomato, stands shipment exceedingly well, and seems suited to all sections of the State. The Livingston's Beauty, Redfield's

Beauty, Acme, Stone, Matchless, Paragon, Duke of York, Earliana, Kennerly's Florida Gold Mine, Dwarf Champion and Early Detroit are all popular varieties.

FERTILIZING.

You will find if you give the land where you wish to set the plants a ton of Canadian hardwood ashes to the acre, broadcasted and harrowed in, then lay it off in furrows the width you wish the rows apart, and put about 1,200 pounds of any good brand of tomato special fertilizer, that will analyze about as follows: Ammonia, 5%; available phosphoric acid, 4%, and potash, 9%, in the furrows, mixing the fertilizer and soil well together, that you will make an excellent crop.

CULTIVATION.

Tomatoes do not require the work that some other crops do; they need only shallow cultivation. Keeping the weeds down, and the surface of the soil open, is all that is necessary.

PRUNING.

While I can not say that I fully approve of pruning tomatoes, never having been able to satisfy myself as to whether it pays for the expense or not, I think it is a good idea to give a short treatise on it, in case some of my readers should care to try it. After the plants have recovered from transplanting and started off to growing again, remove all the suckers except the one which you will find just below the first fruit stem. Watch your patch closely, removing any other suckers you should find. As soon as four or five hands of fruit have been set on the sucker and main stalk, top the plant. This checks its growth, allowing all the strength to go into the fruit, which will give you heavier and more perfect specimens. While you will not make as large a crop by pruning, you will find that two-thirds of it

will be fancy stock. Another matter I might speak of here is staking. If you desire to stake the plants, use sticks about three feet long, driving them about four or five inches from the plant and tying to it with soft twine. Staking prevents the fruit from rotting and sun burning, also keeps the cut worms from eating it.

LIVINGSTON'S NEW GLOBE TOMATO.

GRADING.

Grade the tomatoes very carefully. Fruit that runs about twenty-four to a four-quart basket or one hundred and forty-four to the crate is classed as fancy, that is if they are free from spots, cracks or blemishes of any kind. The second grade shoud run about 180 to the six-basket carrier,

and if you will be careful to pack nothing but smooth, choice fruit, this grade should bring nearly as much as the fancy. Always mark on the crates the number of tomatoes they contain. I would not advise shipping culls unless tomatoes are unusually scarce and bringing very high prices.

PICKING AND PACKING.

If you are shipping the fruit any distance, it should be picked before it is fully ripe. During the cold weather leave it on the vines until you notice a faint tint of red on it, but in warm weather pick the fruit as soon as it turns white. You will have to handle the fruit very carefully; if any are bruised, throw them out. Wrap the tomatoes in paper and pack in four-quart baskets, which in turn are packed in six-basket carriers.

INSECTS AND DISEASES.

The principal disease that affects the tomato in Florida is the blight. I do not believe there is any remedy for this after it takes hold of a plant, but if you will spray the plants with Bordeaux mixture from the time they are about four inches high until they begin to form their fruit, after it is formed use ammoniacal copper carbonate, as Bordeaux mixture may stain the fruit, you should not have any trouble. Smutty or black face is another fungous disease you have to contend with in this section, but it is not nearly so common as the other, and the same remedy will help it. Some truckers recommend using as a source of potash fertilizer, muriate of potash, claiming it prevents all kinds of fungous diseases. Do not under any conditions plant tomatoes on land that has had a diseased crop on it. The tomato worm is very troublesome some seasons, but if you will keep the plants sprayed with a mixture of arsenate of lead and water, as directed for spraying cabbage, you can keep them from doing any harm.

CHAPTER XIII.

CABBAGE, CAULIFLOWER AND COLLARDS.

As these three vegetables require about the same soil, fertilizer and general culture, I am going to treat them in the same chapter.

Of the three, cauliflower is the most sensitive to bad treatment, and while it is worked and fertilized the same as the collard and cabbage, it takes more fertilizer, and if given any set back it is apt to yield a poor crop; and a poor crop of cauliflower is as bad as no crop at all. To succeed it should be planted on well prepared land with not less than a ton of fertilizer to the acre. Another point in which it differs from the cabbage is that when it begins to head the leaves should be drawn over the head and fastened with a small wooden pin (toothpicks are excellent for this purpose), so as to protect it from the sun, while the cabbage head takes all the sun it can get—the more the better. In shipping the cauliflower you should be very careful to pull the leaves well over the heads, as it bruises and rots quickly. Pack in lettuce hampers, as they make a nice size package, which are not apt to tear up in transit.

The Old Georgia Collard will grow in all parts of Florida any time of the year, with scarcely, if any fertilizer. It does not pay to ship, but is known as the Colored Man's Cabbage, and if tied in bunches, sells well on any of the Florida markets. It also makes excellent greens for chickens, and the beauty of the collard is that you don't have to take the plant up to sell it; all that is necessary is to pull or cut the leaves off and in a few weeks you can come back to the same plant and pull the leaves again. It comes in fine about the middle of the summer, when all other green vegetables are gone. You can hardly find a home of

a colored man in Florida without seeing collards in the yard. Any of the above named vegetables do better if the plants are raised in seed beds and transplanted when they are about four inches high. In the Northern and Central portions of the State plant the cabbage and collard seed any time from September 1st until February; the cauliflower for a fall crop in September and October, for a spring crop in December and January. In Southern Florida plant any of them from September until January or February. Make the

KENNERLY'S FIRST EARLY CABBAGE.

seed bed as advised in Chapter VII. It requires about a half-pound of seed, of each, to produce plants enough to plant an acre.

Now, as to the best varieties, the Early Snowball seems to be the most popular and makes fine size shipping cauliflower. The Jersey and Charleston Wakefield are the best of the pointed head cabbages and seem to be the favorites with many Florida truckers. If you prefer the flat head

varieties, any of the following will make fine shippers: The Early Flat Dutch, Early Summer, Kennerly's First Early, Succession, Surehead, Large Flat Dutch, Danish Ballhead and the large Late Drumhead. The Old Georgia Collard is the leading variety.

When the plants are ready to set they should be put out immediately, as a stunted plant is sure to make a poor crop. The field where you are going to set the plants should be in the best condition possible. (See chapter on Preparation of the Land.) It should be plowed several times, then harrowed. If you wish to broadcast the fertilizer it should be applied before you harrow it; but I would advise putting the fertilizer under the row where you set the plants. To do this, lay the field off in furrows the width you wish the rows; some prefer them two and a half feet apart, while others prefer the three-foot rows. Apply the fertilizer in these furrows, using about 1,000 pounds to the acre. Of course, you could make a crop with less, but it does not pay to be stingy with fertilizer, as both the cabbage and the cauliflower are rank feeders. I prefer to put 1,000 pounds in the furrows and then drill an equal quantity to them after they start to grow. The following makes a fine fertilizer for either the cabbage, cauliflower or collard: Ammonia, from 4 to 5%; available phosphoric acid, 6 to 8%; and potash 8 to 10%. I always like to have plenty of potash in the fertilizer for these crops. Apply it about two weeks before you are ready to set the plants. If you will do this and give them all the work and water they require, the chances are you will be smiling when you figure up the profits on the crop.

In setting the plants it is well to get them down fairly deep in the ground. I set them up to the first leaves. The best tool for this purpose is a plasterer's small pointing trowel or a round stick or dibbler. (See chapter on Lettuce.)

Pack the dirt well around the roots and water the plants immediately after setting, pouring it at the side of the plant and not on it. The distance to set the plants depends upon the variety of cabbage you are planting, the early and small varieties only requiring about eighteen inches between the plants. The cauliflower and collard are set the same distance as the early cabbage. The other varieties of cabbage require about two feet between the plants.

Start working the plants as soon as they take root, and do not stop until the heads are about formed. Ship both the cabbage and cauliflower as soon as the heads are fully grown, as you may lose the crop by leaving it in the field after it matures.

If the crops do not grow fast enough to suit you or start to turn yellow at any stage of their growth, give them an application of nitrate of soda, about 150 or 200 pounds to the acre, drilling it in the rows about six inches from the plant, being careful not to get it on them, as it burns.

Ship the cabbage in barrels or, better still, barrel cabbage crates. You can get these from any Florida crate manufacturer.

The only insect that will be apt to bother these vegetables is the green cabbage worm or looper, and a solution of arsenate of lead sprayed on the plants will fix them, using about one and a half pounds of arsenate of lead to 50 gallons of water.

CHAPTER XIV.

IRISH POTATOES.

If any one doubts that the Irish potato will grow to perfection in Florida, let him visit the Hastings section during the shipping season. The farmers at this point ship from 200,000 to 250,000 barrels during this time, which lasts about six weeks. Several years ago the majority of the potatoes grown in Florida for shipment were raised in this section, but the growers in different parts of the State have found by experimenting that they can raise just as fine quality of potatoes as can be grown at Hastings, as they seem to do well on most any kind of Florida soil. Of course, like other vegetables, they will do better on soil particularly adapted to their requirements, which, in this case, is a rich, sandy loam.

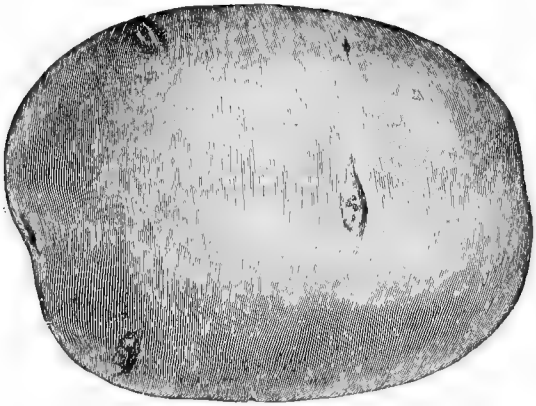
TIME FOR PLANTING.

For a Fall crop in the Northern and Central portions of the State plant in August and September; for a spring crop, from January 1st until the middle of February. For a fall crop in Southern Florida plant in October; for a spring crop from December 1st until the middle of January. One point to be remembered is that the seed you plant in the spring will have to be Northern grown stock, New York and Maine preferred. While in the fall, Florida-grown seed saved from the spring crop should be planted.

PREPARATION OF THE SOIL.

Plow the ground several times; and when I say plow, I mean as deeply as the soil will allow. The potato roots deep and wants the ground stirred to a depth of at least ten inches. If the land is low, as is some of the best potato land in the State, care should be taken to have a sufficient number of ditches to carry off the surplus water in case of

heavy rains. While it is not absolutely necessary to have all the trash removed from the land, the chances are the better you prepare the soil the better success you will have with the crop. Another matter which I might speak of here is irrigation. Of course, a crop can be made without it, but it is best to have the potato land irrigated, for you will find it not only increases the yield, but will make the crop more certain. The Hastings farmers have irrigation ditches through their fields; these answer for two purposes; they carry off the surplus water in wet weather, and during the dry season,



SPAULDING'S ROSE, NO. 4.

if the ends of the ditches are closed up, and the well turned into them, they furnish a perfect irrigation system. If the land is low I would advise planting on beds three or three and a half feet apart. First, partially throw up the beds with a disc harrow leaving a trench or hollow in the top of them; apply the fertilizer, drilling it in this trench, using a ton to the acre that will analyze about as follows: Ammonia, 5%; available phosphoric acid, 8%; potash, 10%. Next finish making up the beds with the disc, covering

the fertilizer well. Do not use lime or ashes on the land you wish to plant in potatoes. If the land will not overflow, it is not necessary to plant on much of a bed; just make a furrow, put the fertilizer in and cover.

SEED.

There are only two varieties of seed that are planted extensively in the potato sections. They are the Spaulding's Rose No. 4, and the Red Bliss Triumph. While other varieties may do all right, but these have been given a thorough test by leading potato growers and found to be the ideal varieties for Florida. In the Hastings section the growers will not plant anything but the Spaulding's Rose No. 4. For a fall crop, as I have said before, plant the Florida grown seed, using the whole potato. While for a spring crop, where Northern-grown stock is used, the seed has to be cut. Be careful to see that each cutting contains two good eyes and is large enough to furnish nourishment for these eyes until the cutting puts on roots or feeders. Care should be taken in selecting seed stock, as everything depends on it Do not use any seed that shows the least sign of blight; or if scabby, it should be treated before it is planted. It will take about four barrels or sacks to the acre.

PLANTING.

This is usually done with a potato planter as shown in the chapter on Implements, but it can be done by hand with the aid of a hoe; although, if you have many acres to plant, a planter will soon pay for itself. Plant the seed about twelve inches apart in the row and cover well.

CULTIVATION.

About a week after the seed has been planted it is a good idea to go through the field and level the top of the beds with a board scrape fastened on a horse plow or with a horse weeder, killing the weeds and grass that have started.

In working the potatoes always throw the dirt to them so that at the last working they will have a good wide bed, as it is in this bed the potatoes are made. In case of a freeze, if the vines are not too large, plow dirt over them, removing it as soon as the cold is over.

DIGGING.

While there are several machines on the market for digging potatoes, there are none that give the results that you can get from the colored man and the potato hoe. One of the advantages in digging by hand is that you can grade them as they are dug.

PACKING AND SHIPPING.

Have the potato barrels in the field, putting the potatoes in them as soon as they come out of the ground. Cover them with grass or potato vines until you are ready to put the head in the barrel. This is done with the aid of a hand barrel press. Be sure that you have the barrel well filled. Make three grades of the spuds, fancy, number 2 and number 3, or culls. Ship only the fancy and number 2, saving the number 3 for eating and fall seed.

SPRAYING.

Some very successful potato growers contend that it does not pay to spray, but you will find a majority of the most successful growers spraying their crops as regularly as they work them, and their fields are always free from blight, which is the greatest enemy of the potato in Florida. The best spray to use is the old reliable Bordeaux mixture. If any eating insects attack the vines, spray with arsenate of lead, but you will hardly have to do this, as the potato has very few, if any, insect enemies in this section of the country. Examine the potato seed very carefully and if you find scabby stock among them, soak for two hours in the following solution: Formalin eight ounces, water fifteen gallons.

CHAPTER XV.

SWEET POTATOES

I cannot say that the sweet potato originated in Florida, but I will say this, that there is no country in the world where they produce better crops or grow them with less work and fertilizer than they can in our own State. The Florida farmer has not given this valuable vegetable the attention as a shipping crop in the past that he will in the future. The Hastings farmers ship them by the car load every season, and many of them have assured the writer that there is no crop they can plant that pays them as well as this one does, taking into consideration that it requires less work and fertilizer than other crops do, and is raised at a time when they are through with their winter and spring crops.

Plant the seed in hot beds, transplanting the draws to the field when they are from tweve to fourteen inches long; cutting the vines from these to plant the acreage.

DIRECTIONS FOR PLANTING

Plant about the first of January in Northern Florida, and December 1st in Southern Florida. Dig a pit 14 inches deep and as large as you wish, according to the number of potatoes you intend to plant. Put about six inches of fresh stable fertilizer in the bottom of this pit; cover with two inches of sand; next comes the potato seed, with a covering of one and a half inches of sand; then two inches of stable fertilizer on top of this. When they start to sprout give them another layer of dirt one and a half or two inches thick, thus completing the bed. As soon as all danger of frost is over, which is about the first or middle of March in the Central portion of the State, transplant these draws to the field.

CULTIVATING AND FERTILIZING.

Make up the field in beds about ten inches high and two feet across, having them rounded from the crown; put about 1,000 pounds of sweet potato special fertilizer in these beds as they are made up, mixing well with the soil. In about two weeks' time the field will be ready for planting. The best way to do this is to drop the plants on the top of the bed, leaving a distance of about eighteen inches between each one, placing a forked stick on the middle of them, pushing them down deep, so as to leave about two inches of each end of the vine sticking out of the ground. As soon as these start to running, cut off slips fourteen inches long and plant the balance of the patch the same as you did the first part. Cultivate just enough to keep the weeds down until the vines start to grow.

VARIETIES.

The Nancy Hall, Providence, Norton Yam and Porto Rican Yam are the most popular varieties.

SHIPPING.

Dig the potatoes when you are ready to ship them. They can be allowed to remain in the ground for quite a while, after they are matured, as they keep well. Ship in sacks or barrels.

CHAPTER XVI.

CUCUMBERS.

This has become one of the leading vegetables for Florida growing. It stands shipment to distant markets remarkably well. In the Central portion of the State, it is one of the principal spring crops.

The time for planting varies according to the section of the State you are farming in. In the Northern and Central portions for a fall crop plant in August; for a spring crop from January until March. In the Southern part of the State from September until January. During the winter months the truckers in this section supply the Northern markets with nearly all the cucumbers used, and realize good profits. Of course there are quite a few hot house cukes raised in different parts of the country during the winter, but these never interfere with the sale of the Florida open air grown cukes. Hardly a year goes by that you will not find cucumbers bringing $6.00 or more per crate, sometime during the season. Of course, you understand this is only when they are very scarce. If a grower can average even $1.00 a crate f. o. b. his shipping point, he can make good quick money out of this crop, as 600 crates to the acre is only an average yield. Some truckers go so far as to claim they can raise 1,000 crates to the acre, but to do this all conditions will have to be perfect and the crop raised on irrigated land.

PREPARATION OF THE LAND.

Prepare the land as directed in Chapter II. As cucumbers are over 90 per cent. water, it is very essential that the land be irrigated. The majority of large growers prefer the Skinner Overhead system, but either this or sub-irrigation will work to perfection. If your land is low, plant on

beds eight feet wide; if not, plant on the level. If you prefer to use hills, do not make them very high. In planting cukes, whether on new land or old, or if following another crop, aways give the field an application of Canadian hardwood ashes broadcasted and harrowed in, using about 1,000 pounds to the acre. In about a week's time, apply the cucumber special fertilizer. If you are planting on beds, apply the fertilizer in rows where you expect to plant the seed. If in hills, work the fertilizer in with the soil, as the hill is being made up, using about 2 pounds to the hill. Use any good make of cucumber special fertilizer, that will analyze about as follows: Nitrogen, 6%; available phosphoric acid, 7%; and potash, 8%.

PLANTING.

If planting on beds, make the rows four feet apart and plant the seed three feet apart in the rows. If in drills, make them three by four feet. You will note that I plant cucumbers closer than the majority of truckers. My reason for this is that you do not get many pickings off a cucumber vine in this State before it is apt to become affected with either blight or mildew and then stops bearing, that is why I prefer to get more vines to the acre, and be contented with fewer pickings. Plant about eight seeds to a hill, as they rot very badly if the weather is not just to their liking. If you should have too many plants, it is much easier and better to thin them out than to replant; for a replanted patch will start bearing at different times, making it hard to get shipments. A good idea is to make three plantings, making the first one the distance given above; the second, which should be about fifteen days later, in the same row, half way between the first plantings; the third planting ten to fifteen days later, in the same row between the first and second plantings. In this way you have three distinct

crops of cucumbers coming on. If the first and second should be killed, the third will be apt to come through all right, and in this way much valuable time is saved. If none of the plants are killed you are that much better off, for when all danger of frost is over you can cut up all but the oldest plants.

VARIETIES.

IMP. PERFECTED WHITE SPINE CUCUMBER READY FOR SHIPPING

The Improved Perfected White Spine is the most popular variety. It has a medium vine, fruit about six inches long, and about two and a half inches in diameter, and spines white. It holds its dark green color a long time after shipping. The Early Fortune is a very popular kind, its color dark green, and is an exceedingly heavy bearer, popular with both truckers and consumers.

The Davis Perfect is another excellent variety, being long and slim. If wrapped and packed in tomato crates these will sell for very fancy prices, as they resemble the hot-house grown stock.

CULTIVATION.

Keep the soil well stirred, working the plants both ways. If you wish to hurry your crop, give it two applications of nitrate of soda, 150 pounds to the acre at a time, fifteen days between the applications.

PICKING AND PACKING.

One of the most important points in growing cucumbers is to keep the fruit picked as fast as it matures, for a matured cucumber left on the vine takes as much strength from it as four or five growing cukes would. Do not pull the fruit, but cut it from the vine with clippers. It is a good idea to go over your patch daily, and do not under any condition let it go longer than three days without picking.

Pack the fruit in bushel hampers, being sure to have them well filled, but do not bruise the cukes. Make two grades of them, fancy and choice. If you have a good home market you should be able to dispose of the culls at a fair price, but I would not advise shipping them under any condition, as they seldom bring freight charges.

INSECTS.

This vegetable has more than its share of trouble from insects and fungous diseases. The aphis is the hardest of the insects to fight, as it gets on the under side of the leaves, where it is hard to reach with an insecticide, but if you will keep the plants well dusted with tobacco dust from the time they put on their third leaf until they finish bearing, you should not have any trouble. Do not use tobacco dust made for fertilizer, as it is too strong; get the kind prepared especially for this purpose. If you have an exceptional case which the tobacco dust will not remedy, spray with whale oil soap solution (see chapter on Insecticides).

Should caterpillars or any kind of worms attack the vines, spray with arsenate of lead and water, using about one and a half pounds of lead to fifty gallons of water.

For fungous diseases keep the plants sprayed with Bordeaux mixture, applying every ten days from the time the

plant puts on its third leaf until your last picking. You will find it much easier to prevent blight and mildew than to cure them.

RAISING THE PLANTS UNDER COVER.

A great many truckers prefer to plant cucumber seed in paper pots or quart strawberry baskets, putting these in hot beds or cold frames, where they can be protected, letting the plants grow there until all danger of cold is over. If you start them in this manner you may plant the seed at least six weeks earlier than you can where you plant them in the open ground, and by maturing the crop from a month to six weeks earlier you are apt to increase your returns from $200.00 to $500.00 per acre.

FORCING.

In case it is impossible to have the cucumber field irrigated, buy a number of fifty-gallon barrels, oil barrels are best for this purpose; scatter these through the patch, four or five to the acre; fill them up with water, using one and a half quarts of nitrate of soda to each barrel. Make a slight depression in the ground about six inches from the cucumber plants, and pour a small cup of liquid into it once or twice a week. Several children with buckets and cups can cover quite a bit of ground in an hour, but you must be careful to see that the solution does not touch the vines. This method will not only furnish the vines what water they need, but will double the yield and make your crop from ten days to two weeks earlier.

KENNERLY'S NEW SHIPPER.

CHAPTER XVII.

MELONS.

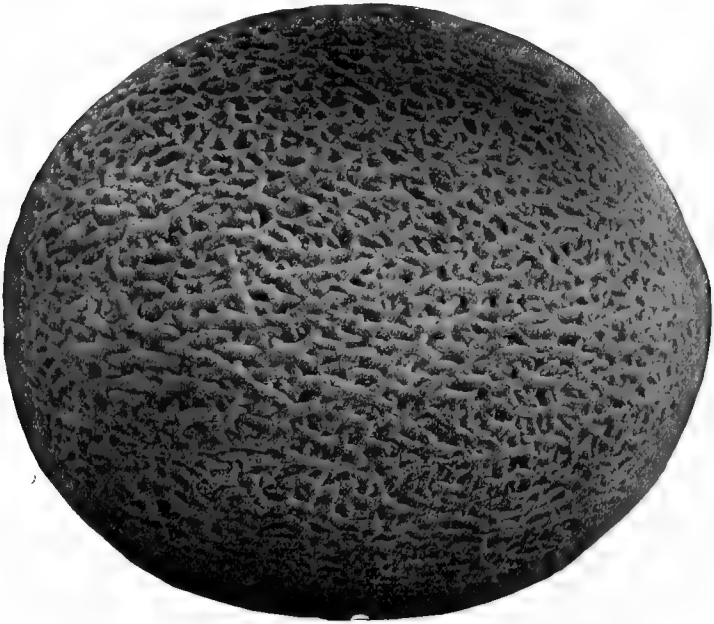
As the culture of the watermelon and the cantaloupe are so much alike, I think it best to treat them in the same chapter.

The South is the home of the melon, and there is no section of it that will produce any better or larger crops than can be grown in our own State. The melon likes a rich, sandy loam soil and plenty of warm sunshine. This kind of soil abounds here, and as to the warm sunshine, there is no country under the sun that has more of it than you can find right here in Florida. This crop is raised very extensively in all parts of the State, but it is only in the Southern portion that it can be grown during the winter months. In the Northern and Central sections it is planted in the early spring. Make your first plantings in January and from then any time until May. If you wish to force the crop, read the directions for forcing cucumbers, as this will apply equally as well to the melon.

PREPARATION OF THE LAND AND FERTILIZING.

Plow the land several times as deeply as possible without turning up the sub-soil, then harrow thoroughly. For cantaloupe lay the field off in beds six feet wide and apply the fertilizer in a continuous line along the middle of the beds, using about a thousand pounds to the acre, which should analyze as follows: 5 to 7% ammonia; available phosphoric acid, 7 to 9%; potash, 5 to 7%. For melons use the same fertilizer, only apply it as you make up the hill, using from two to two and one-half pounds for each one, mixing with the soil. It will be impossible to do this work too thoroughly. As soon as the plants of both the melon and the cantaloupe start to grow give a second applica-

tion of fertilizer, using about five hundred pounds of the same kind, putting it about two feet from the plants to make them reach out after it. Never move the vines after they start to run, as this is apt to bruise them and lessen the yield.



RUST RESISTANT ROCKY FORD CANTALOUPE.

DIRECTIONS FOR PLANTING.

Plant the cantaloupe seeds in a straight row about four feet apart along the middle of the beds, putting about six seeds to the hill. When the plants come up and start to grow, thin them down to two plants to the hill. For planting the watermelons lay your land off in checks eight to ten feet each way and plant in the checks. If the land is low,

plant the seed in hills above the level of the field; but if it is medium high land plant on the level. Put the same number of seed to the hill as you do for cantaloupes, thinning as soon as the plants start to grow. If you wish to have extra early melons and cantaloupes, plant in paper pots as advised for cucumbers.

VARIETIES.

The Florida Favorite and the Tom Watson are the most popular varieties of the watermelons for shipping, although the Duke Jones and the Kolb Gem are well liked in some sections. The first two named are long melons while the last two are round. For the home garden and local markets there is no melon that will give you better results than you can get from the standard oblong melon, Kleckley's Sweet. Florida grown watermelon seeds give the best results here. Since the first issue of this book came out, two new melons have been introduced, and both deserve mention. One is the Invincible or Anti-Wilt, a melon that is proof against the melon wilt, and can be grown on the same land indefinitely. The other, Kennerly's New Shipper, is one of the best eating, shipping and selling melons I have ever seen. As the picture shows it is an oblong round melon, if such a term can be used. Has a thick rind, insuring good shipping qualities, and is so thick through that it really has more meat in it than the thin rind melons. I may be wrong, but I would not be surprised to see this melon take the place of the popular Watson melon.

The genuine Rocky Ford cantaloupe is the standard variety planted in all the trucking sections of the State, and makes to perfection. There is a new Rocky Ford variety, which should be of special value to the Florida growers. It is the rust and blight-resisting Rocky Ford cantaloupe. As its name implies, it is immune to rust and blight, and as

INVINCIBLE MELON.

these are the principal enemies of the cantaloupe in Florida, it should make this new melon the most popular variety ever introduced to the Florida truckers. For home use and local markets, the Redland Giant, Late Large Hackensack, Jenny Lind and Montreal Market are all good. Plant nothing but Colorado grown seed; no matter if you have to pay double the price, the crop will more than make up for the difference in the price of the seed, in the quality of the fruit.

CULTIVATION.

Give the ground frequent shallow cultivation, with a tooth harrow. All that is necessary is to keep the soil well open to let the warm air and sunshine in. It is a good idea when the vines are about three or four feet long, to nip off the ends. This makes them put on laterals which make a larger mass of vines, and causes them to fruit quicker. If you find the vine putting on too many small melons, pinch off some of them; this will make the fruit that you leave larger and better.

SHIPPING.

Ship the melons before they are fully ripe, just as soon as they are matured. Leave about an inch of stem on them, as they will keep better, and when they reach market the merchant can cut off some of the stem, making the melons appear freshly picked. Pack the cantaloupes in cantaloupe crates, packing each size to itself. Great care will have to be used to keep from bruising them. Pack the watermelons in cars, using plenty of pine straw in the bottom and on the sides, also the ends of the cars. Pack carefully to keep them from moving around in transit. Some growers say to pack the small melons on the bottom layer, as they will stand the weight better than the larger ones.

INSECTS AND DISEASES.

The same insects and diseases attack these crops that attack the cucumber, and the remedies advised for that crop apply here. If the plants start to damping off when young, dust them with powdered sulphur. This disease is generally caused by excessive moisture and improper drainage, and if these conditions exist you cannot remedy it, only let it be a warning to you when you plant your next crop to see that the land is thoroughly drained.

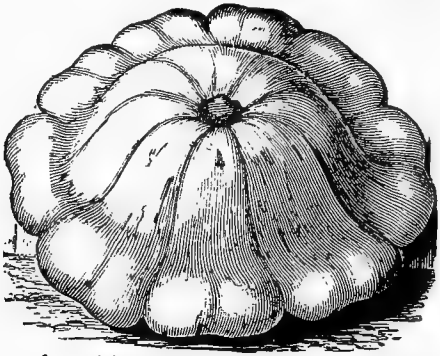
CHAPTER XVIII.

SQUASH.

Both the vine and the bush squash seem suited to our soil and climate, but I would not advise any one to plant them extensively, for it is only when they are very scarce that they pay at all. When plentiful you cannot give them away.

VARIETIES.

The White Bush, Kennerly's Improved Early Prolific White Bush and the Golden Summer Crookneck are the best of the bush kind; the Boston Marrow and the Hubbard of the vine varieties. In the Crescent City section some truckers claim they have made big money raising the Bos-



EXTRA EARLY WHITE BUSH

ton Marrow for shipment to Boston. They plant them in their orange groves, and it costs very little to raise them.

FERTILIZING AND CULTIVATING.

Plant, fertilize and cultivate the bush varieties as directed for tomatoes, and the vine varieties as directed for cantaloupes and cucumbers.

INSECTS AND DISEASES.

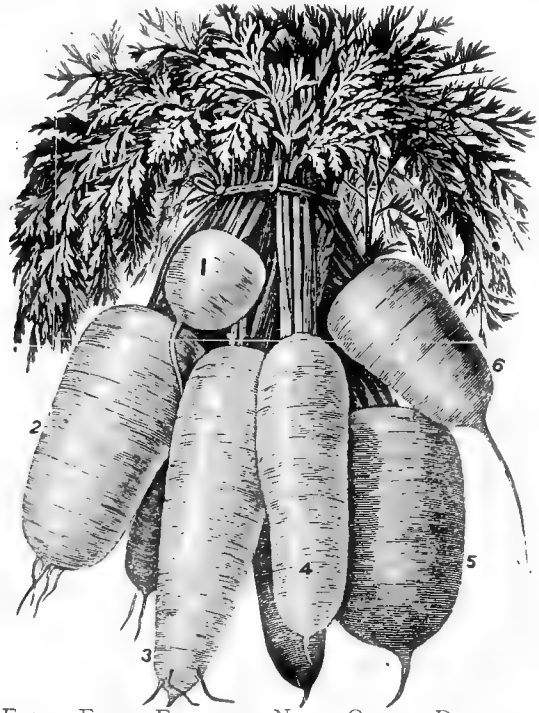
The same class of insects attack the squash that attack the cucumber, and if you will follow the course of treat-

ment advised in the chapter on cucumbers you should have no trouble from them.

CHAPTER XIX.

CARROTS.

Carrots grow to perfection here and take the same cultivation, fertilizer and treatment as the beet. They do not sell as well, although there are times when they will pay if bunched and shipped in lettuce hampers or barrels; but I would not advise anyone to plant them extensively for



No. 1, Extra Early Forcing
No. 2, Blunt Rooted Horn
No. 3, White Belgian (Stock)
No. 4, Orange Danvers
No. 5, Oxheart
No. 6, Early Chantenay

market. They are very healthful and make a fine vegetable for the home garden. They can be grown here the entire season with the exception of the summer months: June, July and August.

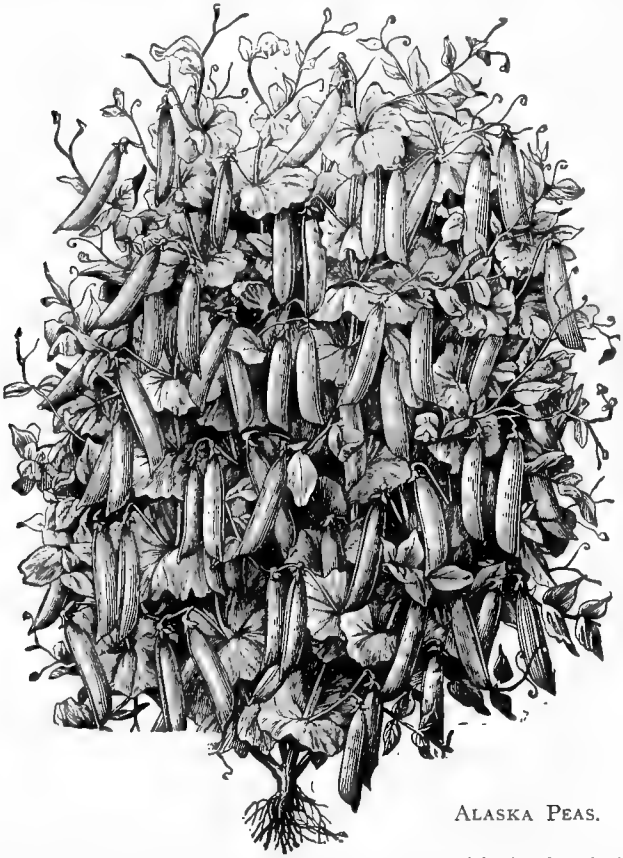
VARIETIES.

The best varieties for both home garden and shipping are the Half Long Danvers, Chantenay and a new kind, the Coreless. It requires about four pounds of seed to plant an acre.

CHAPTER XX.

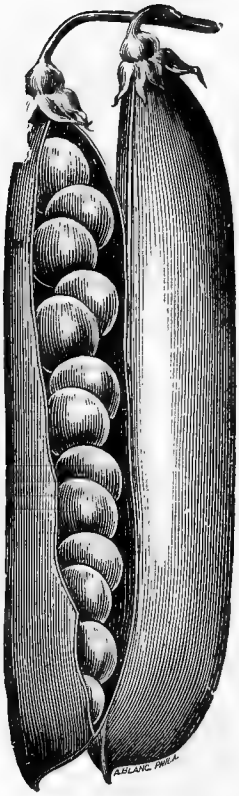
PEAS.

Peas are one of the easiest crops we can raise in this State, and usually pay well. They are planted very extensively in the large trucking sections in the Central portion



ALASKA PEAS.

of the State. They do well on most any kind of soil if it is warm and properly drained.



KENNERLY'S 1ST EARLY

PLANTING.

Prepare the land as advised in the chapter on bean culture, and plant the same as you do beans. I would advise planting the seed in double rows, as the vines support each other. You can plant any time from September first until March. These directions apply to all sections of the State. The only time that cold hurts peas is when they are in blossom, then it only destroys that crop, and if you will give the plants an application of nitrate of soda in the rows, using about 200 pounds to the acre, it will be but a short time before you will have another crop of peas on the vines. It takes about two bushels of seed to plant an acre.

VARIETIES.

For shipping, plant the varieties that do not require staking. The Alaska, Kennerly's First Early, Nott's Excelsior, Premium Gem, Gradus or Prosperity and the Bliss Everbearing are the most popular. For home use plant the tall varieties. The Telephone, Marrow and the Alderman are all good kinds.

FERTILIZING AND CULTIVATION.

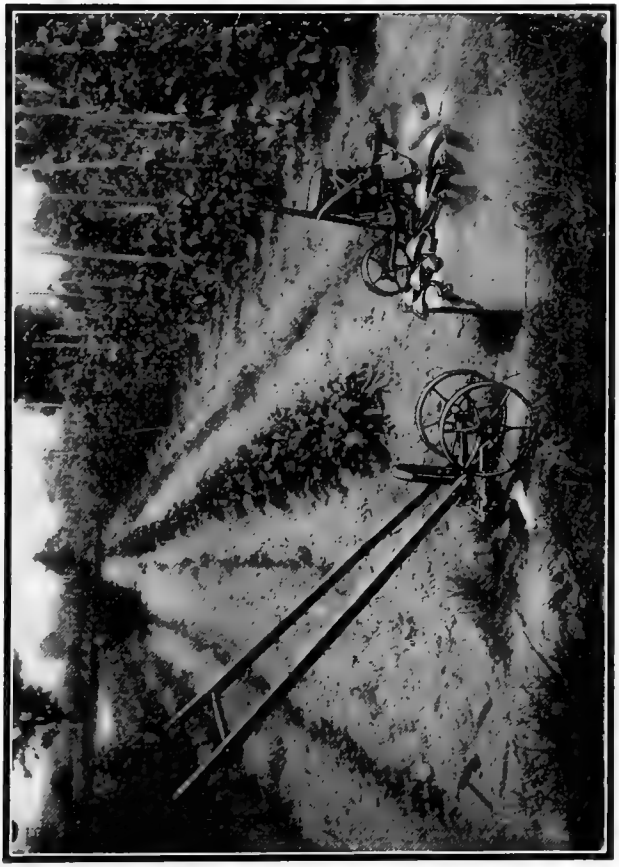
Cultivate and fertilize as advised for beans. (See chapter XXI.)

PICKING AND PACKING.

Do not let the peas mature, but pick them the minute the pods are full, as they get hard very quickly and a hard pea is worthless. Pack in bushel bean hampers, putting them up as nicely as possible. The pea ruins in transit very quickly, and, if possible, should be shipped in refrigerator cars; but if you have not enough to ship in this way send by express, never by freight.

INSECTS AND DISEASES.

The pea is very hardy, but if fungous diseases attack it, spray with Bordeaux mixture; for the worms, spray with arsenate of lead.



A Patch of Pole Beans.

CHAPTER XXI.

BEANS.

During the winter season a large part of the United States is looking to Florida for their supply of fresh snap beans. This vegetable seems specially adapted to our soil and climate and does well in most any part of the State. In the Northern and Central sections they plant beans for the fall crop in August and September; for the spring, from the middle of January until April. In Southern Florida they plant any time from the first of September until February. It requires one bushel of seed to plant an acre.

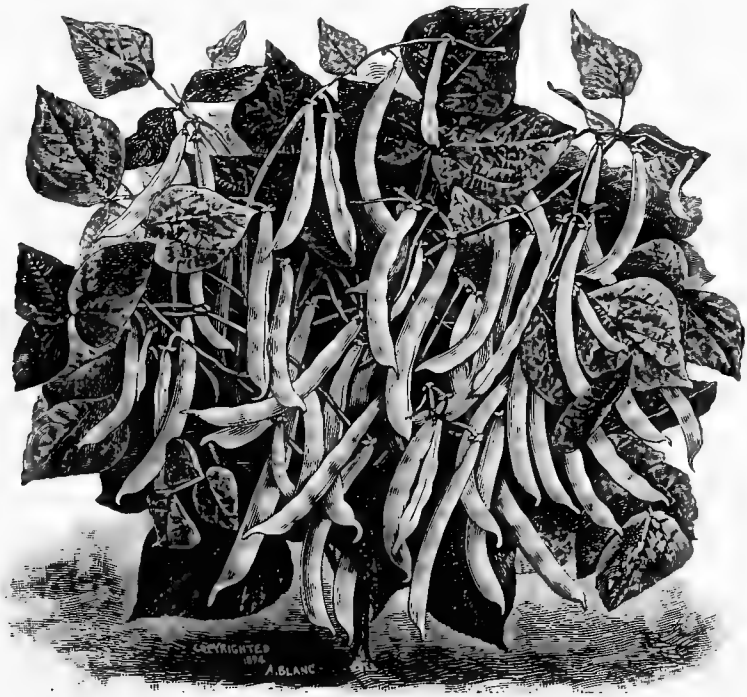
Beans usually sell well and sometimes command extreme prices, selling as high as $5.00 to $9.00 per crate; but this is only when they are very scarce. If the truck farmer can average $1.50 per crate f. o. b. his station straight through for this crop he is making big money.

PREPARATION OF THE LAND.

Prepare the soil as advised in chapter on Clearing and Preparing of the Land for Planting. Plow it two ways, then lay it off in furrows the width you wish the rows apart, which is usually (if to be cultivated with a hand-plow), from two to two and one-half feet. If to be cultivated with a horse plow, about three feet. I prefer to plant beans in double rows, having the doube rows three feet apart, and allowing eight to ten inches between the rows. In this way you not only get more beans to the acre, but the rows shade each other, and give a better yield. Apply the fertilizer in the furrow, using any bean special, which will analyze as follows: Ammonia, 5%; available phosphoric acid, 6%; and potash, 5%, using from 500 to 1,000 pounds to the acre. Cover this fertilizer well, mixing thoroughly with the soil. (See chapter on Implements.) Drill the seed in the furrows, dropping about three inches apart, and packing the soil on top of them.

PLANTING.

You should wait at least a week or ten days after applying the fertilizer before sowing the seed, for if planted before this time the fertilizer will be apt to burn them. It will pay you to buy a seed drill; there are several good



HODSON WAX BEANS.

makes of the combination bean, pea and fertilizer drill which retail for about $13.00, and will be worth ten times as much to you.

VARIETIES.

The principal shipping varieties of beans are the 1,000-to-1 Refugee, which seems to be the most popular of the Green Pod Bush varieties, but the Early Refugee, the Red

and Black Valentine and the Longfellow are also planted extensively. Of the wax varieties I consider the Hodson Wax the finest bean for planting in Florida. It is nearly immune to rust and is a very heavy bearer. The Davis Kidney Wax and the Wardwell Kidney Wax are very popular among the shippers on the East Coast. On the West Coast and in Central Florida they seem to prefer the German Black Wax.

CULTIVATION.

As soon as the plant has formed two leaves, begin to cultivate, being careful to work the beans only when they are dry; for if worked in the early morning while the dew is on them or immediately after a rain, it is apt to cause them to rust. It is a good idea to give them a shallow working every week, and apply a little bean special fertilizer each time, drilling it in the rows about six inches from the plant. If at any stage of the plant's growth it stops growing or turns yellow, give it an application of nitrate of soda, applying it in the rows, being careful not to get it on the plants, as it will burn. Use from 150 to 200 pounds to the acre.

PICKING.

In picking, do not wait until the bean shows in the pod, but pick them when they are well rounded out, which is usually from sixty to seventy days after planting. It is best, if you have to hire them picked, to pay by the crate. If the beans are worm eaten or blighted spread them out in a cool place and pick out the damaged stock. The patch will be apt to require picking about once in every three to five days. Care should be used in pulling them off the bush as it always has blossoms, young beans and matured pods on it at the same time, and if roughly handled, a large part of the immature beans and blossoms will be destroyed.

PACKING AND SHIPPING.

Pack in bushel hampers. If dirty, it is a good idea to wash and drain them before packing. Be careful to see that there are no dead leaves or other trash among them. I prefer to pick beans in the afternoon, packing them in the crate and setting them in the shade until the following morning. In this way the beans shrink all they ever will, and when you fill the crate up again it will go into market full and be apt to net you an extra price. Make two grades of them, marking the best one, if fancy, with your trade mark.

HOME USE.

The Burpee's Stringless Green Pod makes a fine variety for home use or for local market. Limas, both bush and tall, do well in this climate, but do not yield much of a profit when raised for shipment. Of the limas, the Henderson Bush, Jackson Wonder and the Seiva Pole Bean seem better suited to this soil. The pole green beans also do well here and come in fine during the summer if planted in the cornfield when it is too hot to raise the other varieties. The Kentucky Wonder or Old Homestead is the best of this kind.

INSECTS AND DISEASES.

The principal insects that attack the bean crop are the roller worm and the green cabbage worm or looper, but these can easily be destroyed by spraying with arsenate of lead. The principal diseases of the bean are the mildew, rust and blight. Use sulphur and lime dust spray just as the beans are blooming, and again after the first crop is picked, for the mildew. Spraying with Bordeaux mixture will usually check the rust and blight. A great many farmers prefer to spray the plants from the time they form their third leaf, until they begin to put on beans, as it is much easier to prevent the disease than to cure it.

CHAPTER XXII.

OKRA.

While you will not make the money out of this that you will out of some other vegetables you can plant in this section of the country, you will make about as much as you can on any other, taking into consideration that it is nearly a sure crop, and does not require the work, spraying and fertilizer that others do. It can be raised on land that is not irrigated, although you can make a better crop if you have irrigation. It grows on any kind of Florida soil, and in any section of the State. In the Southern part it will grow the entire season, making to perfection in the middle of the summer when it is nearly impossible to grow other kinds of vegetables. In the Northern and Central part of the State plant the seed any time after the first of February. You can keep the plants bearing continuously with a little work and fertilizer until the cold kills them in the fall. Okra is not known on all of the different markets, but you will find all of the Southern markets and a majority of the Northern markets paying a good price for it most of the time. If you are farming near any of the Florida cities, you will not have any trouble in disposing of your entire yield at home.

PLANTING AND FERTILIZING.

Okra does not require transplanting. Plant the seeds in the field where you wish the crop to grow. Prepare the land as directed in Chapter II. Plow deeply, then harrow level and lay the field off in furrows three feet apart, drilling the fertilizer in these, mixing thoroughly with the soil. The following makes an excellent analysis: Ammonia, 4%; available phosphoric acid, 5%; potash 6%, using about 800 to 1,000 pounds to the acre. In about two weeks' time after you have applied the fertilizer, you can plant the seed,

planting in the furrows, two feet apart in the row. It is best to put at least three seeds to the hill.* When the plants are about six inches high thin down to one plant. You can transplant the ones you pull up or sell them to one of your neighbors who wishes to try this crop.

CULTIVATION.

Okra only requires enough cultivation to keep the weeds and grass down. After a heavy rain it is a good idea to run through the patch with a tooth cultivator to open up the soil and let the warm air and sunshine in.

VARIETIES.

The White Velvet and the Perkins' Mammoth are the leading varieties. The Velvet is best for home use, while the Perkins Mammoth is preferred for shipment. Either one makes to perfection here.

PICKING AND PACKING.

Okra will demand your constant attention from the time it starts bearing until it quits, as the pods become hard very quickly. It is best to go through the patch daily. You can tell whether it is too hard by sticking your fingernail into it. Pack in bean hampers.

INSECTS.

The only insect that bothers this crop is the cut worm, and he is easily handled with bran mash (see chapter on Insecticides). Spread this on the ground around the plant about three inches from it.

---

*The trucker's definition of a hill differs from the dictionary definition. We mean a place in the rows where several seeds are planted. It can either be on a level with the row or elevated.

CHAPTER XXIII.

PEPPER.

This crop is being grown more and more extensively in Florida every season and is proving one of the truckers' best money makers. It can be grown on most any kind of soil, and if given a little fertilizer every ten or fifteen days it will bear continuously throughout the season. I have had pepper bushes on my own farm that were one year old and still bore fruit.

PLANTING.

In the Northern and Central parts of the State, for a fall crop, if you prefer, you may plant the seed in the field where you wish the crop to grow, sowing the seed any time from July first to August first. For a spring crop, to have it early the seed must be planted in a hot bed or cold frame, where the plants can be protected, as they are nearly as sensitive to the cold as the tomato and the egg-plant—planting any time in December or January. In the Southern part of the State plant from September first until January first, sowing the seed in the field where you wish the crop to grow. It requires from one-fourth to one-half pound of seed to plant an acre.

VARIETIES.

The Ruby King is really the most popular of all the different kinds, being well liked by both the trucker and the consumer. The Chinese Giant, a new variety which is larger than the Ruby King, is gaining in popularity very fast. The Bull Nose is also a popular kind. If you wish to raise any hot peppers for home use plant the Long Red Cayenne.

FERTILIZING AND CULTIVATION.

Prepare the land as directed for tomatoes, putting the fertilizer in furrows under the rows where you wish the plants to grow, using about 1,000 pounds to the acre. Use

fertilizer that will analyze as follows: Ammonia, 5%; potash, 9%; available phosphoric acid, 4%. Make the rows two and one-half to three feet apart, setting the plants from one to one and a half feet apart in the row. Cultivation should be carried on thoroughly and deeply until the plants begin to put on fruit, after which time cultivate just as constantly, but not so deeply; all that is necessary is to keep the top layer of soil well stirred. It is a good idea to give the plants from 300 to 400 pounds of fertilizer to the acre every fifteen days from the time they start to bear until they finish. Being a continuous bearer, they require constant feeding. An acre of peppers well worked and fertilized will yield a thousand crates or more to the acre, and $1.00 per crate f. o. b. your station is considered a fair average price, although at times when they are scarce they will easily bring as high as $6.00 per crate.

PICKING AND PACKING.

Pick the fruit as soon as it is plump and hard; but under no condition pick it before it is well developed, for one or two undeveloped peppers in a crate hurts the sale of the entire lot, as they wither and rot very quickly. Do not pull them from the plant, but cut them with a pair of shears. Sort the peppers carefully, throwing out any which show defects. If they are bringing high prices on the markets pack in six-basket tomato crates, but if they are only bringing $1.50 or less, pack them in bushel hampers. In packing jar the crate frequently to shake them down, then fill it up again so it will go into market full.

INSECTS AND DISEASES.

The principal disease which affects the pepper is known as the black rot, but if you will spray the plants frequently with Bordeaux mixture this can be prevented. If the green worm or caterpillars attack the plants spray with arsenate of lead and water. (See chapter on Insecticides.)

CHAPTER XXIV.

ONIONS.

I consider this crop the best one to plant in Florida for shipment to market. Many of the writers in the agricultural books and papers say that it is one of the hardest crops to raise, but for my own part, I fail to see it. Of course, it has its drawbacks; if it did not have, everybody would be planting them, and the markets would become overstocked. The principal drawback to this crop is having to weed it very carefully several times, but if you will raise the plants in seed beds, transplanting them when five to six inches high, using only commercial fertilizer on the ground where you set them you will find that one weeding will suffice. A number of the best writers in the country and a great many of the truck growers claim that transplanting is too expensive, but I have found from personal experience that it does not cost any more to transplant the plants than it does to thin them out and weed them; besides when you transplant you can grade them to a uniform size; and another thing I know to be a fact is, that onions and beets which are transplanted will mature from a week to ten days sooner than those which are not transplanted. To prove this I will give one instance which occurred on my own farm. I planted one-half acre in beets in the field where I wished them to mature. In thinning them out I transplanted some of the plants in rows adjoining the half-acre patch, the fertilizer and soil being exactly the same. These transplanted plants not only made more perfect roots but matured at least ten days before the other patch.

The principal advantage that the onion has is that it seems suited to the Florida soil in general, being found growing in all parts of the State. Cold weather does not kill them. I have seen onions survive a blizzard when the

CRYSTAL WAX BERMUDA ONION.

temperature went as low as seventeen degrees, which is very extreme weather for this State, the only damage to them being that the tops were frozen a little, which did not hurt them at all, as they recovered quickly and made a first-class crop. Another very valuable point in their favor is that they do not go to seed until after the bulb is matured unless grossly neglected and allowed to stop growing.

An acre of well worked and well fertilized Bermuda onions grown from genuine Teneriffe seed will give a yield that will surprise you. Some Florida growers claim to have made a thousand bushels to the acre, but an average crop is from five to seven hundred bushels to the acre, and there is scarcely a time during any season that they will not net $1.00 per bushel f. o. b. your station.

At present Texas leads the South in the production of this variety of onion, but there is no reason why Florida cannot excel her. We raise as fine quality of Bermuda onion as it is possible to produce; besides this, we can market our crop at least ten days before the Texas growers. The reason for this is that we have warmer and more favorable weather during the growing season. I do not claim to be a prophet or the son of a prophet, but I believe the time is not far distant when Florida will be known as the "Bermuda Onion State." To the new-comer, let me say that there are thousands of acres of uncleared land in Florida which can be bought very reasonably that will produce Bermuda onions equal to the finest Texas or Bermuda Island grown stock.

PLANTING.

You may plant the seed any time from the middle of August until January, but it is better to have them in the ground not later than December first. As I have said above, you can either plant the seed in the field where you wish the plants to mature, or plant them in seed beds. When

sown in beds you will only need from two and a half to three pounds of seed to the acre, while if you plant them in the field five pounds are necessary to insure a stand. Make the seed beds up as directed in Chapter VII, having the rows across the beds about six inches apart. Do not plant the seeds very deep, and you need not sow them as thinly as you do lettuce. Keep the plants well stirred. If the cut worms attack them, use a mixture of bran, syrup and paris-green as directed in the chapter on Insecticides.

When the plants are about six inches high they are ready to be transplanted to the field, or if the seed was sown in the field they are ready for their first working and thinning out.

FERTILIZING AND TRANSPLANTING.

Prepare the land as advised in Chapter II. It should have been broken up about the middle of August and all trash removed; then gone over every ten or fifteen days with a harrow or cultivator, killing the weeds and grass that had started. Two weeks before the plants are ready for transplanting you should apply the fertilizer, using at least a ton to the acre, that will analyze about as follows: Ammonia, 6%; available phosphoric acid, 5%; potash, 10%, broadcasting and harrowing in. I give my onion land 1,000 pounds of kainit along with the other fertilizer, applying it in the same manner. This is one of the cheapest potash fertilizers and the only remedy for the onion maggot, which is the principal enemy of this crop in Florida.

It might be well to give my experience with this little pest. Several years ago I planted two acres in Crystal Wax Bermuda onions. I do not believe any one ever had better prospects for a crop than I had. When my onions were about one-third grown I noticed the tops drooping, and upon examining the plants, found a little white worm in

the stem where the bulb and stem join. I immediately made inquiries among my trucker friends to try and find out what this worm was, as I had never seen anything like it. They could not enlighten me on the subject, but upon writing the experiment station at Miami, Florida, I found out what it was, also the remedy to check them. In the meantime they had destroyed about half of my crop. The remedy which the experimental people gave me was to apply kainit broadcast before planting, but, as my onions were already in the field, this was impossible. As an experiment, I tried drilling the kainit on each side of the rows in the part of the field that was not affected; and I am thankful to say, the experiment proved a complete success, for as soon as the insects reached the rows to which I had applied the kainit they stopped working. I have planted onions since, and always apply kainit as directed. I have advised many of my friends who plant onions to try it and have yet to learn of a case where it was not a complete success.

Lay the land off in rows twelve inches apart; next, run a wheel marker with plugs in the tire three or four inches apart down these rows. For direction for making this marker, see chapter on "How to Grow Four Crops to the Acre." Now you are ready to start setting the plants, which can be done as directed in the chapter on setting lettuce plants. It may be a good idea to add, if the plants are very large, cut off the tops about two inches above the bud. In ten days' time they are ready for cultivation. Do not stir the ground too deep, as onions only require shallow cultivation.

It is a good idea to give the crop about three applications of nitrate of soda fifteen days apart, using 150 pounds to the acre each time.

VARIETIES.

There are only two kinds of onions that have proven a success for growing in Florida for shipment to markets. One of these, the Creole, is a native of Louisiana and makes a very good shipper, being an excellent keeper, but is not as popular with the truckers here as the other variety, which is the Bermuda. There are three different kinds of this onion: the Crystal Wax, which is a pure white waxy color; the White, which is more of a straw color; and the Red. If you want to make a success of your crop plant nothing but the genuine Teneriffe grown seed. There are many houses which sell California grown seed, claiming it is just as good, but, from personal experience, I know it will not pay to use anything but the imported seed. For home use any of the following varieties make good onions which will keep well: Australian Brown, Red Weathersfield, Prizetaker, White Pearl and the Silver Skin.

PACKING AND SHIPPING.

As soon as the onion tops begin to turn yellow and dry up, the crop is matured, which is usually from the middle to the last of April. Pull up the onions, leaving them in the field in piles so the bulbs will not be exposed to the sun, as sun-burn is apt to cause them to rot. If the weather is rainy the onions should be placed under a shed and spread out to dry. Clip the tops off close to the bulb before packing. Sheep shears are excellent for this purpose. If you wish to keep the onions, it is a good idea to leave the tops on until you are ready to market them. The most satisfactory crate for shipping them in is the Owosso or the Cummer crate. It is best to grade the onions, packing each size to itself, throwing out any damaged ones. Bermudas are very tender and have to be handled carefully. Many a trucker has had his profit turned into loss through the carelessness of his help in gathering and packing them.

CHAPTER XXV.

SWEET CORN.

Very few of the truckers in Florida realize the value of this crop for shipping to markets out of the State. Some of the farmers, if asked about it, will say that it does not pay, but if you will question them closely you will find they have been planting the extra-early small-eared varieties, which very seldom pays. If you are going to plant this crop, make up your mind that you will give it plenty of fertilizer and work, planting a large-eared variety, one that even if the ear-worm does eat a little there will be enough left to sell when it arrives at market.

With good cultivation an acre of sweet corn will yield at least 250 to 300 crates, with six to eight dozen ears to the crate. I have planted corn for a good many years for shipment to Northern and Southern markets. The average price per crate f. o. b. your shipping point is from $2.00 to $2.50, never going lower than $1.00, and often as high as $3.50. In the Southern part of the State you may plant any time from September first until January first. In the Northern and Central sections plant only in the Spring, starting about January fifteenth, and if you wish to have corn the entire season plant every fifteen days until about April first.

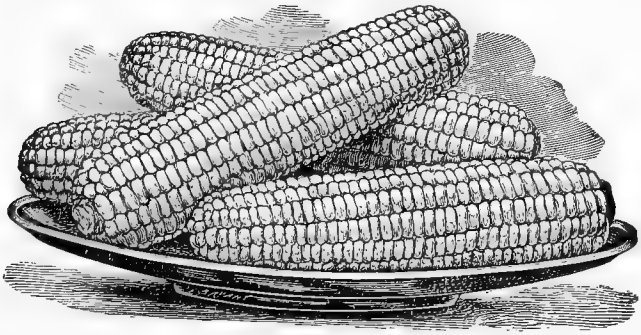
PREPARATION OF LAND AND FERTILIZING.

Prepare the land as directed in Chapter II. Lay it off in furrows the width you wish the rows apart, usually three feet, drilling the fertilizer in the furrow, mixing it and the soil well together. Use 1,000 pounds to the acre, which will analyze about as follows: Ammonia, 5%; available phosphoric acid, 8%; potash, 10%.

PLANTING.

It is well to allow from ten days to two weeks after applying fertilizer before planting the seed. The best machine

for planting corn with is the Cole's Planter (see chapter on Implements). If you use this or any other planter, be sure to see that the plow in front of the drill is set deep, so as to open up the furrow, allowing the seed to be put at least three inches in the ground, for if the seed is planted shallow or on a ridge and you are not fortunate enough to have irrigation, you are apt to lose the crop in dry weather. Some farmers who cannot use irrigation prefer to broadcast the fertilizer, plowing the land up in ridges or very narrow beds three feet apart and plant the corn in the trench between. This method is fine if the land is not low or apt to overflow



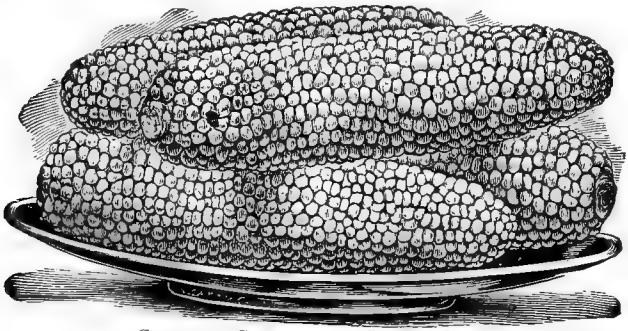
KENNERLY'S EXTRA-EARLY SWEET CORN.

from excessively wet weather, but on low land do not use it under any condition. On very low land it is best to plant on beds. Plant the corn about eighteen inches apart in the row, putting four or five seed to the hill. If the black birds or crows are bad, it is best to soak the corn seed in a solution of coal tar and warm water. If it makes the corn too sticky to plant, mix with dry sand.

VARIETIES.

The best varieties for market are Kennerly's First Early, a large-eared extra-early kind, which is very popular among the truckers in all parts of the State. It usually gives three

good ears to the stalk; Country Gentlemen, a main crop variety with irregular grains, which is considered by many truckers the fiuest corn planted in this part of the country. With good cultivation it will give you from four to five ears to the stalk. Stowell's Evergreen is my favorite for shipping to market, either North or South. It is one of the largest varieties, equal in size to some of the field kinds, and its flavor is very fine. One of the best features about this corn is that you can leave it in the field ten days after it has matured before it becomes too hard for use. The large late Mammoth is a good variety and well liked in some sections, but I do not think it compares with any of the above mentioned.



COUNTRY GENTLEMAN SWEET CORN.

CULTIVATION.

Start working the corn as soon as it is two or three inches high, to keep the grass down. When it is six to eight inches high thin it out to two stalks to the hill. The oftener you work this crop the better, throwing the dirt towards the rows, thus forming a bed. It is a good idea when the corn is about half grown to give it an application of nitrate of soda, using 150 pounds to the acre; and another application of about the same quantity when the corn begins to silk.

This may seem expensive to persons who have not tried it, but it will not only double the yield of corn and fodder, but will make the crop at least ten days earlier. As soon as the ears begin to form, go through the patch and dust powdered sulphur in the silks of each ear. This is the best preventive I know of for the ear-worm.

PACKING AND SHIPPING.

Watch the corn closely and as soon as the grains are full it is ready for shipment. There are several packages on the market for shipping corn in. Some truckers prefer barrels and some lettuce hampers, but after trying them all I find the Sanford celery crate is the best. It makes a strong package which is not apt to tear up in transit and holds about eight dozen large size ears. The principal thing in selecting a package for corn is to get one which has plenty of openings for ventilation, as corn heats quickly. Make two grades of it, shipping the best and selling the second grade on the local market, as it will not pay to ship anything but fancy stock.

INSECTS.

The principal insect which attacks the crop is the bud worm. One remedy which is very popular among the farmers in hot weather is to take a handful of dry hot sand and pour in the bud, but for my part I prefer to spray with a weak solution of arsenate of lead, using one and one-half pounds to fifty gallons of water. I have already given the best remedy for the ear-worm.

CHAPTER XXVI.

EGG PLANTS.

While I cannot say that egg plants are hard to grow, they are the most tricky crop the trucker can plant. They will not only fail for the amateur, but will sometimes fail for the experienced egg plant grower; but they pay well for taking the risk, and are certainly a pretty clean crop to raise.

PLANTING.

In Northern and Central Florida they are planted for a fall crop in July and August, raising the plants in seed beds and transplanting them when from six to eight inches high. You can raise the fall plants in the open air, using a half-shade of laths to keep the full strength of the sun off of them. For a spring crop, to have them early, they should be planted in December or January, sowing the seed in hot beds or cold frames to protect the plants from the slightest frost, as they are very easily killed. In Southern Florida plant the seed any time from September first until January. It will not be necessary to raise the plants in hot beds, although it is well to have the beds so that a cloth cover can be stretched over them in case of a cold spell. (See chapter on Seed Beds). It will take from 4 to 6 ounces of seed to raise enough plants to set an acre.

SOIL.

The egg plant is adapted to a sandy soil, but prefers it rich and deeply cultivated. High hammock land is excellent for them. This is one crop which stands dry weather exceedingly well; in fact, I think it will stand more than any crop we plant in this State. It is impossible to get the land in too good a condition for them.

VARIETIES.

The Florida grown seed of this vegetable is the finest obtainable, and if you care to go to the trouble you can save your own seed, but it will hardly pay you to do this. The New York Improved Large Purple is the most popular variety, although the Florida High Bush is planted extensively, and seems to be gaining in popularity each season. Its best feature is that the fruit is set well above the ground, therefore it does not rot as badly as the other varieties which are apt to touch the ground, but I do not like the color, size or shape of this fruit as well as the New York Improved Large Purple. Another variety which is well liked in all parts of the State is the Black Beauty, and the more it is planted, the better it is liked.

FERTILIZING.

This is one crop which requires plenty of potash fertilizer and you will find it will pay to broadcast the field with a ton of kainit, harrowing it in. Next lay the field off in furrows the width you wish the rows apart, which is from four to five feet, setting the plants about three feet apart in the row; using 1,500 pounds of fertilizer in these furrows which should analyze about as follows: Ammonia, 5%; available phosphoric acid, 4%; potash, 9%. Cover it well and see that you get it mixed thoroughly with the soil.

TRANSPLANTING.

After the fertilizer has been in the ground about two weeks you may set the plants. This should be done with great care, as the egg plant will not stand rough handling. Water immediately after planting, pouring it on the ground by the side of the plant and not on it.

CULTIVATION.

This vegetable requires less work than any you can plant. All that is necessary is to keep the ground well stirred and the weeds down, giving the plants from 200 to 300 pounds of fertilizer, the same as you used the first time, at each working, until you have used about 1,000 pounds to the acre. The best way to apply this is with the Iron Age fertilizer drill (see Implements), drilling it about six inches from the plant and working it in the ground with a hand plow.

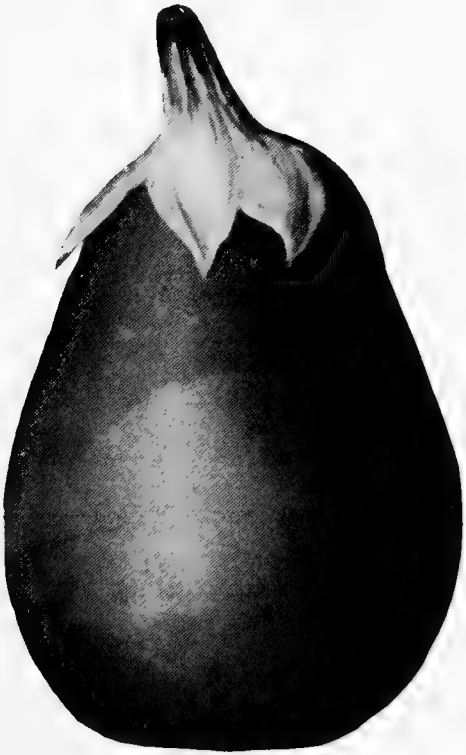
PACKING AND SHIPPING.

Gather the fruit as soon as developed, cutting from the plant with a pair of clippers, the same that are used for pruning orange trees, as the stems are tough, and will require a pair of strong ones for this work. Clip the stem about two inches from the egg plant; but before packing, take a sharp knife and trim off close to the fruit to keep them from bruising each other in transit. Look the fruit over very carefully to see that there are no spots on it as it is from these spots that they start to decay and the damaged ones must be thrown out. Have a paper or feather duster and dust each egg plant very carefully; then wipe them off with a soft cloth. You will find egg pants will carry to market better if wrapped in strong brown paper. Pack tightly in the crate, but do not bruise. There is no other vegetable or fruit that requires the careful handling that this one does.

INSECTS AND DISEASES.

Fungous diseases are the greatest drawback to egg plant growing, and you should do everything possible to prevent them. Some of the best growers claim if you will broadcast the land with a ton of kainit to the acre, as I advised doing

it will prevent blight. Spray the plants with Bordeaux mixture from the time they put on three leaves until they start bearing. After the fruit is formed use ammoniacal copper carbonate, as Bordeaux is apt to stain them. I consider these the best preventives on the market for any kind of fungous diseases. If worms attack the plants spray with arsenate of lead every ten days. (See chapter on Insecticides.)



CHAPTER XXVII.

FLORIDA CRANBERRY OR ROSELLE.

This is an annual plant that has been sufficiently tested to prove it will grow to perfection in this climate. The fruit resembles Scarlet Podded Okra, and is used for making a jelly which is a perfect substitute for cranberry jelly. It is a native of Australia, and great quantities of it are shipped from this point to all parts of Europe every season and net a handsome profit. Any land that will grow okra will grow the Florida cranberry.

PLANTING.

In Northern and Central Florida start planting about the middle of February and from then any time until June. I would not advise planting after this date, as it would hardly have time to bear fruit before the cold weather would kill it. In Southern Florida plant any time during the year. Roselle is planted, worked and fertilized the same as okra, only making the rows five feet apart, and planting the seed three feet apart in the rows.

DIRECTIONS FOR MAKING THE JELLY.

Pick the pods that grow at the junction of each leaf, boil them and strain through a cloth or sieve, add a pint of sugar to each pint of juice, and boil again until it thickens and set aside to cool, when it will form a perfect jelly.

CHAPTER XXVIII.

STRAWBERRIES.

This delicious fruit is found growing in all parts of Florida. It seems to adapt itself to the soil and climate of every section. At Starke, Lawtey and Lakeland they are raised very extensively for shipment to market, and the growers at these points have realized large profits from them, but there is no reason why other parts of the State can not start raising the berries for shipment and do as well as the above named points.

While the strawberry does well on all kinds of Florida soil, it prefers good flat-woods land, with a clay subsoil, that will hold sufficient moisture. It is a good idea to give the land an application of Canadian hardwood ashes, about a ton to the acre, applying it broadcast and harrowing it in about a month before you are ready to set the plants. The same rule applies to the land that you wish to plant strawberries on, that does to other crops, and that is you can not get the land in too good a condition, as most of the work with the crop is done before you set the plants.

FERTILIZER.

The first application of fertilizer is applied broadcast before the plants are set, using one that is heavy in ammonia, to make plenty of bush. The following will make a good mixture: Ammonia, 6%; available phosphoric acid, 7%; potash, 6%. Wait until this fertilizer has been in the ground for at least ten days before setting the plants, to keep from burning them. When the plants are ready to bloom give another application of fertilizer that is strong in potash and phosphoric acid. The following will make a good mixture: Ammonia, 3%; available phosphoric acid, 8%; potash, 12%. Use a thousand pounds at each application.

SETTING THE PLANTS.

October is the best time for setting plants in all parts of the State. If possible use Southern grown plants, as they are better suited to the soil and climate. Make the rows 18 to 20 inches apart, setting the plants 12 to 16 inches apart in the row. Cultivate the plants often when they are small, and then less and less as they grow larger, running the cultivator just deep enough to break the top crust of the soil.

MULCHING.

Pine straw or wire grass will do fine for mulching. Do not put the mulch on too soon; get your plants to growing good before you use it.

PICKING AND PACKING.

Try not to handle the fruit, but catch hold of the stem and pinch it off. The best time to pick the berries is in the early morning, but they must be dried off before they are shipped. Sort the berries very carefully, throwing out any small or deformed fruit. The appearance of your berries when they reach market tells whether you get a top market price, so it will not do to put them up in a careless or shoddy manner.

VARIETIES.

The Excelsior, Klondyke and Lady Thompson are the leading varieties that are planted very extensively in the large shipping districts. The Excelsior is an extra early kind, the Lady Thompson medium late, and the Klondyke a main crop berry.

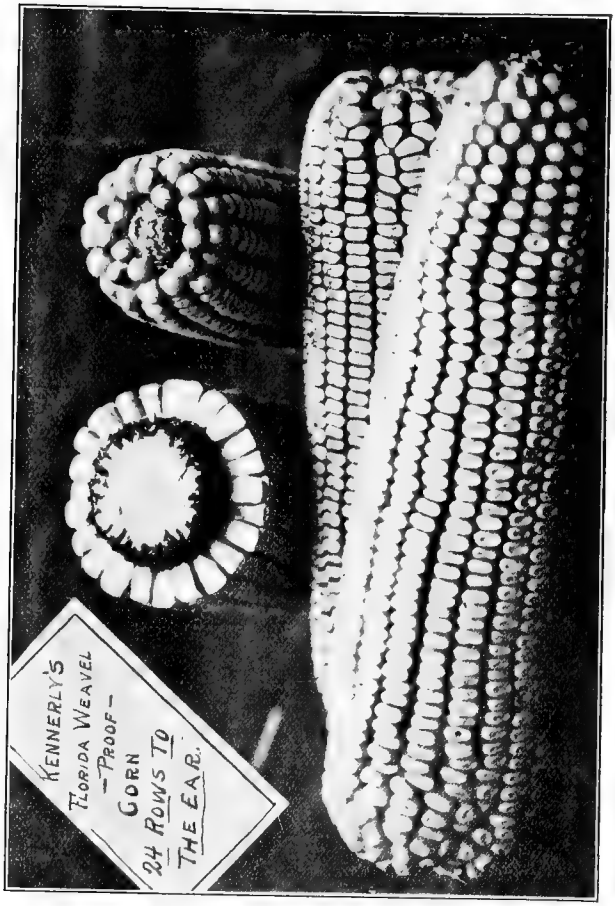
CHAPTER XXIX.

FORAGE CROPS.

Several years ago you would have found the Florida farmer buying all of the feed for his stock and poultry, but what do you find today? If he is an energetic farmer, you will not only find him saving all the feed for his own stock, but selling it to others. In this State there are so many different kinds of forage crops that you can find some of them growing at all seasons of the year. You can supply your stock and poultry with green food both winter and summer, and as you can see this is a big saving. If the northern farmer can make money out of his chickens and stock when he has but one short season to raise their food in, what should the Florida farmer make when he can supply them with fresh grown green feed the entire year?

FIELD CORN.

Corn is one of the most important of the forage crops. It is grown in all sections of the State. In the Hastings section the farmers plant it after their potatoes, raising large crops which they ship by the car load. It can be grown on any kind of Florida soil with a small amount of fertilizer, about 600 pounds to the acre, that will analyze as follows: Ammonia, 4%; available phosphoric acid, 5%; potash, 6%. Follow directions for growing sweet corn as found in Chapter XXV, only giving field corn about three and a half feet between the rows. If you wish to follow a crop of Irish potatoes with corn, it should be planted immediately after you give the potatoes their last working, and when you are ready to dig the potatoes, the corn will be large enough for the first working. The best variety for this climate is Kennerly's Florida Weevil Proof. This is a new variety which is very valuable to the Florida planters


KENNERLY'S
FLORIDA WEAVEL
-PROOF-
CORN
24 ROWS TO
THE EAR.

as the weevils are the greatest enemy to the corn crop and this variety is too hard for them to do much with. It is a very large eared kind with long narrow grains that run about twenty-four rows to the cob. It makes two good ears to the stalk. Hasting's Prolific, Cook's Prolific, Hickory King, Golden Dent and White Dent are all good varieties.

BEGGARWEED.

This is a valuable forage crop, also a great soil restorer. Some farmers claim it is even more valuable as a fertilizer than cow peas or velvet beans. Besides these advantages it has another, which is a very important one, in that it does not have to be replanted, for when once established in the soil it comes up annually without further attention. Beggarweed does not interfere with any other crop which you may care to plant, as it is easily kept down by cultivation and can be totally destroyed by two years' successive pasturing. This plant is a rank feeder, its long roots reaching down deep into the ground and bringing up fertilizing elements which were too deep for the other plants to reach and depositing them on the top soil, when it sheds its foliage in the fall. There is plenty of land in Florida which five years ago would not yield over ten bushels of corn to the acre, really not paying for the labor and seed, but now, when planted in beggarweed, easily yields twenty-five bushels to the acre with very little if any other fertilizer. Hogs, cows and other stock fatten on it when nothing else will bring them out. They will even refuse all other kinds of food when they can get beggarweed. It is usually planted in the northern and central portions of the State in May and June; in the southern part, from March until May. One thing to remember is that it will not germinate until the soil warms up. It requires from five to eight pounds of seed to plant an acre. It is sown broadcast and harrowed in.

HAIRY VETCH.

For a winter forage crop, to cut for hay, there is none more valuable than hairy vetch. It can be planted on any kind of soil without fertilizer and is a great soil improver. Sow broadcast any time from August until January. The best way to plant it is with oats, as they help to hold the vetch off of the ground, using about 35 pounds of vetch to 3 pecks of oats.

VELVET BEANS AND COW PEAS.

These two vine crops are leaders as soil renovators and forage crops. They seem particularly adapted to our soil and climate. All you have to do is to plant them, then stand off and watch them grow. If you wish to build up worn-out land, plant either one of these, and when the crop is matured plow it under. You will find it necessary, if you have a very heavy crop of vines, to first go over them with a board drag; then cut them up with a cutaway harrow before they can be plowed under. For removing the sourness from new land you can find nothing better than these crops. They cannot be planted before the middle of February in the Central and Northern portions of the State; in the Southern portion they can be planted any time of the year. The beans are planted in rows, five feet apart, and require one and a half pecks to plant an acre. They will only require cultivation until they start to run. Broadcast the peas, using about a bushel to the acre. For table use, plant the California Blackeye, but for a forage crop plant either the Whippoorwill, Unknown, Clay, Iron and Red Ripper.

DWARF ESSEX RAPE.

Rape is a most satisfactory quick-growing green food for any kind of stock. It can be used for pasture from six to eight weeks after sowing, and is excellent for fattening

cattle or swine. It will not only increase the supply of the cow's milk, but makes it very rich. Rape grows on any kind of soil most any time of the year, from September 1, until hot weather. It does not require any fertilizer as it is a great soil improver itself. If you wish to plant in rows, make them about three feet apart, drilling the seed with a seed drill, using from four to six pounds to the acre. If planted broadcast, which is the most popular way, it will take in the neighborhood of ten pounds of seed to the acre.

OATS.

During the winter you will find the Florida farmer raising oats very extensively. They grow to perfection on most any kind of well drained soil. They are planted broadcast, requiring about one bushel of seed to an acre. Use only Florida grown seed, it will cost you a little more, but is worth the difference. Plant any time from October to March. The One Hundred Bushel, the Burt 90-Day and the Texas Rust Proof are the standard varieties.

RYE.

During the winter season rye makes an excellent feed for chickens and stock. If you wish to cut this crop, plant Florida grown seed, but if you are planting for grazing purposes, sow Southern grown rye, as it makes just as good pasture and is less expensive. A great many dairymen throughout the State plant the Florida grown seed with oats, using one bushel of oats to a half-bushel of rye. If you are raising chickens, plant a patch of Italian rye for them. This is also planted extensively for winter lawns, and makes a beautiful green lawn when all other kinds of grass are dead. All varieties are sown broadcast any time from September until March. One bushel of seed will plant an acre.

SORGHUM, MILLET AND KAFFIR CORN.

For a combination stock and poultry food there is nothing grown that can surpass these. You can use the green feed for the stock and the top or seed head for the chickens. The Sorghum and Pearl Millet, when planted in rows three feet apart and given a little commercial fertilizer or stable manure, can be cut several time during the season. Any one not familiar with these crops would be surprised at how much fodder you can get from a few rows of them. In the Northern and Central portions of the State they are planted from February until July, but in the Southern section they can be planted any time of the year. The principal varieties of millet are the Pearl and German. It will take about one bushel of German, planted broadcast, to the acre, and about five pounds of Pearl, when planted in rows, which is the best way to plant this variety. The Early Orange and the Amber are the leading varieties of sorghum. Either the White and Red Kaffir Corn are popular kinds. Some farmers prefer to plant them with cow peas, using one peck of the corn and one bushel of peas to the acre; in this way the corn holds the peas up off the ground, causing a larger growth of vine.

CHUFAS AND PEANUTS.

For a hog food these are without an equal and should be grown by every hog breeder in the State. They do well on any kind of land. The peanut does better on land that has been given an application of lime, but the chufa will grow without any fertilizer. If the hogs are turned in the patch they will dig them out for you. Plant either one in rows about three feet apart any time from March until July. Most of the farmers say peanuts do better if planted in June. These directions apply to the Northern and Central portions; in the extreme southern portion of the State they

can be planted any time during the year, except midsummer. It takes about one peck of chufas to the acre, and from ten to twenty pounds of shelled peanuts. The large improved Spanish, Florida and the Small Spanish are the best varieties.

MAMMOTH RUSSIAN SUNFLOWER.

If you are raising chickens you cannot afford to neglect planting a patch of sunflower. It grows to perfection here and is without a superior as a chicken food. It is planted in rows three feet apart and two feet apart in the row. They can be grown without fertilizer, but if you will give them a light application of stable fertilizer they will pay you for the trouble. In the Southern portion of the State plant any time of the year; but in the Central and Northern sections from the middle of February until hot weather. It will take about three pounds of seed to an acre.

THE WONDERFUL RHODES GRASS.

This is a new grass that is receiving praise from all parts of Florida where it has been tried. One of the strongest points in favor of this new forage, is that it is a great drouth resister, growing and remaining green after nearly every other grass is burnt up. From what I can find out about Rhodes Grass I doubt if there is another grass that will give as good results under adverse or trying conditions. The seed is very light and fine, and germinates readily with a small amount of moisture. Four or five pounds of seed should be sufficient to plant an acre of ground. After the seed germinates, the plant throws out strong vigorous runners, which root at each joint, after which the shoots grow erect to a height of three or four feet. It spreads rapidly and presents a splendid waving mass of fine feed, ready to cut and feed

green or to cut for hay. It yields according to the soil and climate five to ten tons of the most nutritious fodder to the acre, which in feeding value ranks with sorghum, which is one of our best forage crops. There is nothing you can give your stock, that they will like better than Rhodes Grass. One feature that will make it specially appeal to the Florida Farmer, is that it can be easily destroyed, if the farmer wishes to plant the land in something else.

CHAPTER XXX.

A FEW CROPS FOR THE LOCAL MARKETS AND HOME GARDENS.

My readers will notice I have not given any culture on turnips, rutabagas, mustard, spinach, parsley and radishes. My reason for this is they do not pay to plant for shipment, and I would not recommend your planting them except for selling on the local markets and for the home garden. They all make to perfection here and you will not regret having them in the home garden. If you have a good local market, you can always dispose of them at a price that will net you a good profit.

They are all planted, worked and fertilized like the beet, and you will find if you will follow the directions for growing beets, in the chapter on "How to Grow Four Crops to the Acre in One Season," that you can make excellent crops.

VARIETIES.

Turnips—The Red Top White Globe, White Egg, Cowhorn, White and Purple Top Flat Dutch, Seven Top, and the Egyptian, are all popular varieties.

Rutabagas—The Breadstone and Improved Purple Top seem to be the most popular kinds.

Mustard—The Southern Giant Curled, Chinese, and Elephant Ear are all planted very extensively.

Spinach—The Palmetto, Long Standing and Bloomsdale are the kinds that seem to give the best results here.

Parsley—For decorating dishes either the Moss Curled or the Double Curled will give perfect satisfaction.

Radishes—If you are planting for home use any of the following varieties can be planted: the Turnip Shaped White Tipped, French Breakfast, Crimson Globe, Long Scarlet, Icicle and Florida Red Ball. But if you are planting

for the local market it is best to make inquiries among the merchants and find out the particular kind that sells best on that market and plant accordingly.

CHAPTER XXXI.

Formulas for Sprays and Insecticides.

ARSENATE OF LEAD.

Arsenate of Lead ----------1½ to 2 pounds
Water ----------50 gallons.

WHALE OIL SOAP.

Whale Oil Soap ----------1 pound
Water ----------6 gallons

BORDEAUX MIXTURE.

Copper sulphate (bule vitriol), 3 to 4 pounds;
Quick or stone lime, 3 to 4 pounds; Water, 45-50 gallons

Dissolve the copper sulphate in an earthen or wooden vessel with three gallons of hot water; or preferably, put it in a coarse sack (burlap or cheese cloth) and hang this in 4 to 6 gallons of water near the surface. When dissolved pour into spraying barrel and fill the barrel about half full of water. Slack the lime, dilute it in 10 to 15 gallons, and pour this milk of lime into the barrel through a wire strainer. Do not mix the copper sulphate and lime when less diluted than this, as the resulting Bordeaux is likely to be lumpy; it will settle quickly, and is more liable to burn the foliage. Add water to fill the barrel and stir the mixture well for a few minutes. Agitate frequently while it is being applied. If spraying peaches or Japan plums, use 2 pounds of copper sulphate instead of 6, and add an excess of lime. Bordeaux will adhere better to such smooth surface plants as cabbage and cauliflower, if about one pound of hard soap dissolved in hot water is added. This mixture should always be made fresh for each application, but a stock solution of lime and copper sulphate may be kept separately and will be good economy when the spraying operations are extensive. A stock solution of copper sulphate sufficient for a day's spray-

ing in most cases, may be made by dissolving 36 pounds of blue vitriol in 36 gallons of water. For each barrel of Bordeaux use 2 or 6 gallons of this solution, according to the plants to be sprayed. Keep this stock solution tightly covered to prevent evaporation. In the same way 36 pounds of quick lime may be slacked in as many gallons of water, and used as the copper solution; or it may be slacked with just enough water to make a putty, which will keep indefinitely if covered with water, and is to be used with the ferro-cyanide test; if the lime in the Bordeaux mixture is deficient a drop of saturated solution of ferro-cyanide of potassium, added to the mixture, will turn brown. Add lime till the drop remains colorless and the mixture is ready to use.

AMMONIACAL COPPER CARBONATE.

Copper carbonate	5 ounces
Ammonia (26° Beaume) about	3 pints
Water	45-50 gallons

Make a paste of copper carbonate with a little water and dilute the ammonia with 7 to 8 volumes of water. Add the diluted ammonia to the paste, but be careful to use only enough to dissolve all the copper carbonate. Allow the solution to settle and use only the clear blue liquid. This loses strength on standing in open vessels, but may be kept indefinitely in a stoppered bottle. For spraying dilute to 45 to 50 gallons.

LIME-SULPHUR SOLUTION.

For winter and early spring use.

Quick Lime	20 pounds
Sulphur	15 pounds
Water to make	50 gallons

Boil one to two hours with a small quantity of water, then dilute to 50 gallons with boiling water. Do not let mixture become cold. Spray while yet warm.

Formula for Brilliant Whitewash.

I give herewith receipt for a good whitewash for both inside and outside work. It will retain its brilliancy for years.

Half a bushel of unslacked lime, slack with warm water, cover it during the process to keep the steam, strain the liquid through a fine sieve or strainer; add a peck of salt previously well dissolved in warm water; three pounds of ground rice boiled to a thin paste and stir in boiling hot; half pound of powdered Spanish whiting and a pound of glue which has been previously dissolved over a slow fire, and add five gallons hot water to the mixture, stir well and let it stand for a few days, cover up from the dirt. It should be put on hot. Coloring matter may be put in and made of any shade, Spanish brown, yellow ochre, or common clay, etc.

It is well to always strain before using in order to prevent any gritty substance from getting into the valves of the sprayer and interfering with its proper operation. With whitewash thin and smooth no difficulty will be experienced.

Bran Mash for Cut Worms.

This is made by mixing molasses, bran and paris green together, using one-quarter pound paris green, one quart of cheap molasses and ten pounds of bran. Either scatter over the land before planting, or put on the ground around the plants. You will have to be careful not to allow any animals around when you are using it, as it is deadly poison.

CHAPTER XXXII.

Useful Tables.

LENGTH OF TIME FOR VEGETABLE SEEDS TO GERMINATE.

The following periods are about the time it takes seed to sprout after being sown; of course, these periods vary somewhat according to the age of the seed, but more so upon the conditions of the weather and the soil.

Beans	from 4 to 8 days
Beets	from 8 to 15 days
Cabbage and cauliflower	from 4 to 8 days
Collards	from 4 to 8 days
Carrots	from 14 to 20 days
Celery	from 12 to 20 days
Corn	from 5 to 9 days
Cukes	from 4 to 10 days
Egg plants	from 7 to 20 days
Lettuce	from 3 to 5 days
Muskmelon and cantaloupe	from 5 to 10 days
Watermelon	from 6 to 12 days
Mustard	from 3 to 5 days
Onions	from 6 to 12 days
Parsley	from 20 to 30 days
Peas	from 5 to 10 days
Pepper	from 8 to 15 days
Radishes	from 3 to 5 days
Spinach	from 8 to 15 days
Squash	from 6 to 9 days
Tomatoes	from 6 to 12 days
Turnips	from 3 to 5 days

THE AVERAGE TIME IN FAVORABLE SEASONS FOR PLANTS TO MATURE, FROM THE SOWING OF THE SEED.

Bush beans	from 40 to 50 days, according to variety
Pole beans	from 60 to 90 days, according to variety.
Beets	from 60 to 75 days, according to variety.
Cabbage	from 90 to 100 days, early varieties.
Cabbage	from 100 to 120 days, medium early varieties.
Cabbage	from 150 to 190 days, late varieties.
Carrots	from 60 to 75 days, according to varieties.
Cauliflower	from 100 to 150 days, according to varieties.
Celery	about 150 days, Golden Self Bleaching variety.
Corn	from 70 to 90 days, according to variety.
Cucumbers	from 60 to 80 days, according to variety.
Eggplants	about 120 days.
Lettuce	from 60 to 90 days, according to variety.
Melons	from 80 to 90 days, according to variety.
Mustard	about 35 days.
Okra	about 70 days.

Onions	from 120	to 130	days,	according to variety.
Peas	from 60	to 70	days,	according to variety.
Pepper	from 100	to 120	days,	according to variety.
Potatoes	from 85	to 100	days,	according to variety.
Radishes	from 25	to 35	days,	according to variety.
Squash	about 60		days	for early varieties.
Squash	about 120	to 150	days	for late varieties
Spinach	from 50	to 60	days.	
Tomatoes	from 110	to 130	days,	according to variety
Turnips	from 60	to 90	days,	according to variety.

QUANTITY OF SEED REQUIRED FOR A GIVEN NUMBER OF HILLS.

Pole beans	1 pint	to	100 hills
Corn, sweet	½ pint	to	100 hills
Cucumbers	1 ounce	to	50 hills
Watermelons	1 ounce	to	30 hills
Okra	1 ounce	to	100 hills
Pumpkins	1 ounce	to	30 hills
Squash	1 ounce	to	30 hills
Muskmelons	1 ounce	to	50 hills

QUANTITY OF SEED FOR A GIVEN LENGTH OF DRILLS.

Beets	1 ounce	to	60	feet of drills
Beans, bush	½ pint	to	50	feet of drills
Carrots	1 ounce	to	150	feet of drills
Okra	1 ounce	to	75	feet of drills
Onions, seed	½ ounce	to	100	feet of drills
Onions, sets	1 quart	to	40	feet of drills
Parsley	1 ounce	to	150	feet of drills
Peas	1 quart	to	100	feet of drills
Radishes	1 ounce	to	100	feet of drills
Spinach	1 ounce	to	100	feet of drills
Turnips	1 ounce	to	175	feet of drills

QUANTITY OF SEED REQUIRED FOR GIVEN NUMBER OF PLANTS.

Cauliflower	1 ounce	for	2,000 plants
Cabbage	1 ounce	for	2,000 plants
Collards	1 ounce	for	2,000 plants
Celery	1 ounce	for	7,500 plants
Eggplant	1 ounce	for	1,500 plants
Lettuce	1 ounce	for	3,000 plants
Pepper	1 ounce	for	1,500 plants
Tomatoes	1 ounce	for	3,000 plants

NUMBER OF PLANTS TO THE ACRE AT GIVEN DISTANCES.

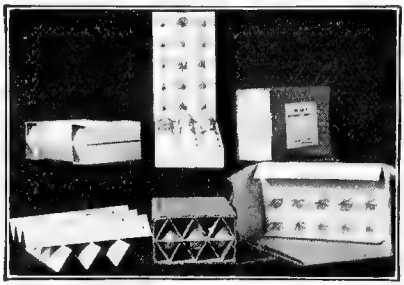
12 inches by 3 inches	174,240 plants
12 inches by 12 inches	43,560 plants
18 inches by 3 inches	116,160 plants

18 inches by 12 inches	29,040 plants
18 inches by 18 inches	19,360 plants
24 inches by 18 inches	14,520 plants
24 inches by 24 inches	10,890 plants
30 inches by 12 inches	17,424 plants
30 inches by 20 inches	10,454 plants
30 inches by 24 inches	8,712 plants
30 inches by 30 inches	6,970 plants
36 inches by 3 inches	58,080 plants
36 inches by 12 inches	14,520 plants
36 inches by 18 inches	9,680 plants
36 inches by 24 inches	7,260 plants
36 inches by 36 inches	4,840 plants
48 inches by 24 inches	5,445 plants
48 inches by 30 inches	4,356 plants
48 inches by 36 inches	3,630 plants
48 inches by 48 inches	2,723 platns
60 inches by 36 inches	2,901 plants
60 inches by 48 inches	2,178 plants

My Stock of Poultry Supplies is the Most Complete in this Part of the State.

I buy Poultry Feed, Oystershell, Grit and Charcoal in car load lots, and for this reason I can save you money on your poultry supplies.

If you are thinking of buying an incubator, send for my catalogue of incubators and brooders, suited to Florida, before buying. When you get ready to build your poultry houses and fences, remember I carry roofing, poultry wire, nails, in fact everything you will need in fitting up an up-to-date Poultry Plant.



DIAMOND EGG BOXES

If you could go through my four large warehouses, you would readily see how I can make prices that are money savers to the Poultry Breeder. By buying in car lots I can sell cheaper than your local merchant, who buys in small lots.

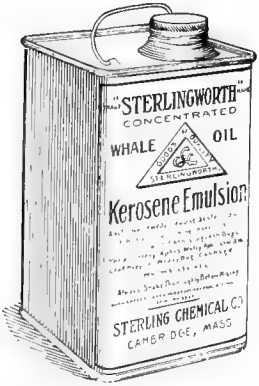
Send for my poultry supply and Incubator Catalogues

C. H. KENNERLY

The Seedsman

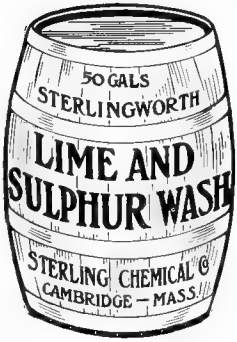
PALATKA, : : : FLORIDA

KILL THE BUGS AND BLIGHT



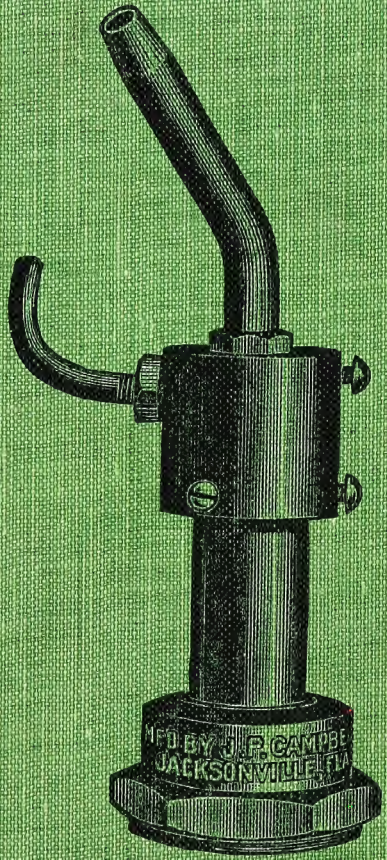
I carry a complete stock of insecticides and fungicides, also Spray Pumps of all kinds, from the small hand pump to the large gasoline power sprayer, and can save you time and money on your order.

Write for Catalogue



C. H. Kennerly ..*The Seedsman*..

PALATKA, FLORIDA



THE CAMPBELL
AUTOMATIC
IRRIGATION SPRINKLER

This is the machine that solves the irrigation problem. When properly operated on short stand pipes 20 of them in a run of 4 hours, and with only 25 pounds pressure will distribute perfectly and evenly one inch of water in the form of fine rain.

MANUFACTURED AND SOLD ONLY BY

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