

VOLUME 22

NUMBER 4

FLORIDA QUARTERLY BULLETIN

AGRICULTURAL DEPARTMENT

For. Ex. R. Filmt.

JULY 1, 1912

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COMMISSIONER OF AGRICULTURE
TALLAHASSEE, FLA.

Part 1—Peanut Growing, Hog Cholera Control, Additional Rules and Regulations by State Nursery Inspector and Board of Control.

Part 2—Crop Conditions.

Part 3—Fertilizers, Feed Stuffs and Foods and Drugs.

Entered January 31, 1903, at Tallahassee, Florida, as second-class matter under Act of Congress of June, 1906.

THESE BULLETINS ARE ISSUED FREE TO THOSE REQUESTING THEM

T. J. APPLEYARD, State Printer,
Tallahassee, Florida



COUNTY MAP OF STATE OF FLORIDA



PART I.

Peanut Growing, Hog Cholera Control, Additional Rules and Regulations by State Nursery Inspector and Board of Control.

THE PEANUT:

ITS CULTURE AND USES.

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INTRODUCTION.

Very little is known regarding the early history of the peanut in the United States except that it was brought into the country during the period of slave importation and became established along the James River in Virginia. It is not until after the Civil War that we find any record of peanuts becoming a commercial crop, and then only on a small scale. Prior to this time peanuts were grown in gardens for home use, and the nuts when parched were considered a great treat by the children. Soon the value of peanuts as a money crop was recognized and farmers began growing an acre or two for the market, and upon this beginning has been built an industry that represents ten or twelve millions of dollars annually. During the early days of the peanut industry only one or two varieties were recognized, those having the largest pods being known as "Virginians" and the smaller podded sorts as "Africans." Soon the farmers observed that among the large-pod variety there were certain plants that were of a more compact or bunch habit than the general crop, which spread or ran upon the ground; also that these bunch plants produced larger pods than the runner type. Accordingly the two sorts were separated, and the names of "Virginia Bunch" and "Virginia Runner" given them.

The habits of the peanut render it especially adapted to cultivation on the sandy soils throughout the Southern States, and the wide ranges of uses to which it may be put makes it a desirable addition to our farm crops. During past years the greater part of the commercial peanut crop has been produced in Virginia, North Carolina, South Carolina, Georgia, and Tennessee. With the boll weevil injuring the cotton crop of the Southwestern States the peanut promises to become an important money crop and a part of the regular farm rotation of this section. In many cases the peanut has proven fully as profitable as any other farm crop. The production of peanuts has not kept pace with the increased demand, and there is little danger, for the present at least, of overstocking the market. Spanish peanuts can be grown for $2\frac{1}{2}$ cents a pound, and when the general market becomes supplied the oil mills can handle the surplus, making therefrom one of the finest cooking oils that can be produced. The cake resulting from the manufacture of oil is valuable for stock feeding and fertilizer. There is always the opportunity to convert peanuts into pork that will bring fancy prices. The famous Smithfield hams and bacon, which sell at from 30 to 40 cents a pound, are made from hogs that are partly fed on peanuts. All kinds of live stock will eat and thrive on peanuts and peanut hay.

The peanut belongs to the same family of plants as do the clovers, alfalfa, beans, and peas, but has the peculiar habit of developing its seeds underground instead of on top, as do most of the legumes. During the early days when peanuts were first cultivated it was thought necessary to cover the blossoms with soil in order to secure well-filled pods. It is only necessary, however, that there should be a bed of loose soil surrounding the plants and they will then care for themselves. The blossoms of the peanut appear above ground, shooting out from where the leaf joins the stem, and after fertilization takes place the flower withers and the little stem or peg elongates and

pushes down into the earth, where the pod develops. This habit of the peanut has an important bearing upon the production of the crop in that peanuts should be planted only upon loose, sandy soils, and the soil must be well cultivated and loose in order that the pegs may enter the soil and form pods.

In common with other legumes the peanut has the power, through the agency of bacteria upon its roots, to draw the nitrogen from the air and not only use it for its own growth but to store it for the use of other plants as well. An illustration of this may be had by pulling up a peanut plant and noting the immense number of nitrogen-gathering nodules upon its roots.

THE SOIL AND ITS PREPARATION.

Peanuts thrive best on a rather loose, sandy loam soil, such as is found in abundance throughout the Southern States. The soil should be well drained, or what is ordinarily termed a "warm" soil. Peanuts can be grown on the heavier alluvial soils, but are easier to cultivate and mature better on the light, sandy loam soils. It will pay to prepare the land for peanuts in a most thorough manner, and much of the difficulty in keeping the crop clean will be avoided by harrowing or disking the land two or three times before planting. The Spanish variety may be grown on much heavier land than the Virginia Bunch or Runner.

CROP ROTATION IN PEANUT CULTURE.

Peanuts should not be grown exclusively on any farm, but in rotation with other crops. Peanuts are adapted to growing in a system with corn, cowpeas, oats, cotton, and Irish potatoes, the cropping arrangement being made to conform to local requirements. The crop of peanuts should invariably follow some crop that has been kept

cultivated and reasonably clean, as this decreases the labor required to keep the weeds under control.

When fitting land for peanuts it should be plowed about the same depth as for corn, broadcast plowing being preferable to bedding. If the land has been in corn the previous season it should be plowed in ample time to allow the materials that are turned under to thoroughly decay before planting time. Some growers prefer to bed the land and then drag down almost level before planting, but on the whole it is better to keep the surface smooth and then work the soil toward the rows in cultivating.

FERTILIZERS REQUIRED BY PEANUTS.

Commercial fertilizers, if any are used, should be applied about the time the land is given its last harrowing before planting. A crop of 60 bushels of peanuts will require about 85 pounds of nitrogen, 15 pounds of phosphoric acid, 32 pounds of potash, and 48 pounds of lime. It would be difficult to secure a fertilizer that would supply these elements in the above proportions; in fact, it would not be profitable to return all of these elements, especially the nitrogen, to the soil by means of commercial fertilizers. A fertilizer containing about 2 per cent nitrogen, 8 per cent phosphoric acid, and 8 per cent potash is recommended for peanuts, and this may profitably be applied at the rate of 200 to 400 pounds to the acre. This will add the necessary phosphoric acid and potash to grow a crop, but only a small part of the nitrogen; the remaining nitrogen can be secured more cheaply through the agency of cowpeas, crimson clover, and the peanuts themselves if they are properly handled.

Stable manure is not a desirable fertilizer for peanuts unless applied about a year in advance. The objections to manure are that it carries with it too many weed seeds and also produces a rank growth of peanut vine at the expense of the peanuts.

Lime is essential to the proper ripening of the peanuts, and where not already abundantly present should be applied to the soil. Marl is often used as a substitute for lime, being hauled and spread upon the land during the winter months. Ordinary lime may be used at the rate of 300 to 600 pounds to the acre on land being planted to peanuts. In many cases the soils of the Southern States are pretty well supplied with lime. Where there is any doubt about the matter lime should be applied to a portion of the field at least and its influence upon the yield and ripening of the peanuts observed. The lime should be applied to the surface after plowing and while sitting the land for planting.

Wood ashes are an excellent fertilizer for peanuts, as they contain both potash and lime. Unfortunately, the supply of wood ashes is quite limited and only small quantities may be secured. Where obtainable, unleached wood ashes may be applied to peanut land at a rate not exceeding 1,200 pounds to the acre.

Several methods are followed in distributing the fertilizers for peanuts, and while some growers employ a one-horse distributor and sow the fertilizer where the row is to be, others scatter it broadcast and harrow it into the soil. The roots of peanuts do not spread like those of corn, and it may be more economical to apply the fertilizers to the row rather than broadcast.

PLANTING PEANUTS.

SELECTION OF SEED.

Careful selection of seed is just as important with peanuts as with any other farm or garden crop. Our best varieties have originated by selection, and it stands to reason that they may be still further improved by the same process. The best of the crop should always be saved for seed, and wherever a particularly fine plant is found it should be saved separately and the peas plant-

ed in a row to themselves, or in a small patch where they can be closely observed. If several extra fine plants were selected and the peanuts from each saved separately, this seed might be planted in a special seed plot, a row being devoted to the product of each plant; in this way comparisons may be made from time to time and the best saved for further selection. The ideal plant should not only produce a large number of pods, but the pods should be well filled, uniform in size, smooth, and of bright color. The peas themselves should be plump, bright, uniform in shape, and well filled. If a grower does not have a good strain of seed, he should purchase from someone who has given the matter attention; then in future years give especial care to the matter of saving good seed.

PLANTING SHELLED OR UNSHELLED PEANUTS.

The seed of the large varieties of peanuts are practically all shelled by hand for planting. In the case of the Spanish the peas practically fill the pods, making it difficult to remove the shell by hand. The machines used in the factories for shelling peanuts break the peas more or less, and even when the peas are not broken the germination is often injured by the rough usage in shelling. For this reason it has been found safer to plant the Spanish peas in the shell almost exclusively. The shelled peas will sprout a little more quickly than those in the shells, but a few days' time will not make any material difference. If desirable, the pods may be soaked in water for a few hours before planting, in order to hasten germination.

PLANTING MACHINERY.

The machines now upon the market for planting peanuts are constructed somewhat upon the plan of the one-horse cotton planter. These machines are well adapted to planting the shelled peas, both of the large and small

varieties, and, if the peas are clean and free from stems, are quite satisfactory for planting the Spanish nuts in the shells.

In using the one-horse machines the land is first laid off in rows one way by means of a marker similiar to that used in laying off corn rows. The planter is then run in this mark and it drops, covers, and rolls at one operation. The different distances of planting are regulated by changing a gear wheel on the machine.

PLANTING BY HAND.

For hand dropping, furrows or marks are made with a sweep-stock or single shovel just a little in advance of the droppers to prevent drying out. The seed peanuts are hauled to the field in bags, and close-woven baskets of about half-bushel size have been found desirable to drop from. The droppers simply take a small handful and work them between the thumb and first finger, at the same time stooping slightly in order to drop the pods at regular distances. Behind the droppers the seed is covered by means of a cultivator having the center teeth removed and a notched board placed across the rear portion, the notch coming directly over the row. The horse that draws the covering cultivator or harrow should be hitched with a side draft so that it will not walk directly upon the row.

DISTANCES TO PLANT.

The planting distances will depend upon the variety being grown; also upon the strength of the land. For the Virginia Bunch variety the usual distances are 30 to 36 inches between the rows and 10 to 12 inches in the row; for Virginia Runners the rows are placed 36 to 40 inches apart and the plants 12 to 16 inches apart in the rows. For Spanish and other similiar varieties the rows are

placed from 32 to 38 inches apart and the plants 8 to 12 inches apart in the rows.

DEPTH TO COVER THE SEED.

The depth to cover the seed will depend somewhat upon the compactness of the soil. If the soil is of a light sandy nature and in good condition the seed should be covered about an inch deep. Should the soil at planting time be quite dry it will be desirable to cover the seed at least $1\frac{1}{2}$ or 2 inches to insure germination.

PROTECTION OF SEED FROM ENEMIES.

After planting, seed peanuts are often molested by moles, crows, and pigeons; blackbirds are also accused of destroying the young plants just as they come through the ground. For the protection of the seed in the shell from moles it is permissible to coat the shells very lightly with pine tar thinned with kerosene. It would hardly be permissible to coat the shelled seed with tar, although a few peas might be tarred and mixed in with the regular seed. For protection against crows stretch lines of white string across the field; also scatter a few tarred peas over the surface of the ground. Pigeons are perhaps the most difficult to either frighten or repel, and the use of a shotgun is the most certain remedy. If the seed are all securely covered in planting there will not be so great danger of crows or other birds getting a start upon them.

CULTIVATION.

TOOLS REQUIRED.

The tools adapted for the cultivation of peanuts are practically the same as those required for corn. Shortly after planting the peanut field may be gone over once

or twice with a weeder of the King or Hallock type, or with a light harrow; to loosen the surface and destroy weeds that are starting.* In using these tools very little attention need be paid to the rows; in fact, many growers prefer to go directly across the rows. Later, after the plants appear and the rows can be followed, one or two teeth can be removed from the weeder, and this type of cultivation continued until the plants are large enough for working with regular corn cultivators. A two-horse spring-tooth riding cultivator is one of the best implements for handling the peanut crop, and after the plants attain considerable size the spring teeth can be changed for the regular shovel teeth. A one-horse cultivator having five teeth is also an excellent implement, as the size of the shovels can be increased as the crop becomes larger, or hillers can be attached for working the soil toward the rows of plants.

METHOD OF HANDLING THE CROP.

Throughout the growing of a crop of peanuts it should be the aim to keep the entire surface of the soil fine and loose, and a bed of loose soil near the plants in which the pods may form. It is scarcely necessary to add that the crop should be kept free from weeds. At the final cultivation it is considered a good practice to throw the soil well toward the plants, forming a bed, at the same time leaving a small furrow in the center of the alley to provide drainage in case of heavy rains. It is not necessary to cover the blossoms or to throw soil over the vines. Some growers follow the practice of rolling the peanuts to make the pegs go into the ground and form pods. The best method is to provide an abundance of loose earth near the plants and they will have no difficulty in plants setting pods. Care should be taken, however, that the pegs that are already rooted be not disturbed by the final cultivation. Hand hoeing may be necessary;

especially during a rainy season, when the grass grows rapidly.

HARVESTING.

Peanuts are harvested by lifting the vines from the ground with the pods attached and then stacking them around small poles to cure. Proper harvesting and curing is the most important part of the handling of the peanut crop. Many persons who are growing peanuts for the first time have an idea that the crop may be handled in some easier and cheaper way than by stacking, but many years of practice has shown that stacking around poles is the simplest and best method. By placing the vines and peas in the small stacks they are permitted to dry slowly and at the same time are in so small quantity that they will not become musty.

The proper time for harvesting the peanut crop is indicated by a ripening appearance of the vines. This consists of a slight yellowing of the foliage and a drooping of the stems. A few days later some of the lower leaves will begin to fall, especially if the weather is dry. To the northern limits of the peanut territory the harvesting should be done just before frost. Many beginners insist upon digging their peanut crop too early and before the peas have fully matured. It is true that there may be a pod now and then which bursts and sends forth a sprout, but the number of these are few as compared with those of later formation which are rapidly filling. Where good peanut hay is especially desirable the crop should be harvested in time to secure the best quality of vine and leaf.

LIFTING THE PEANUTS FROM THE SOIL.

The usual custom in the older peanut sections has been to simply run a plow under the roots and lift them from the ground. Sometimes a specially designed plow is used

having a share or point with a broad wing to extend beneath the plants; in other cases an ordinary plow is used, but the turning or moldboard is removed to prevent the furrow being turned, the idea being to simply loosen the plants. This practice of plowing out the crop has been responsible in a great measure for the general depletion of soil fertility throughout the peanut belt. To maintain soil fertility these roots must be left in the soil. By the old method of plowing out the crop almost all of the roots are removed, and as they have not subsequently been returned to the soil, depletion of fertility has been the result. The proper method is to employ a tool which will cut off the greater portion of the root and leave it in the soil. In several sections the farmers have had special tools made for running under the peanut vines, and some of these are worthy of more general use.

MACHINES FOR DIGGING PEANUTS.

Some of the regular machine potato diggers have been found quite satisfactory for harvesting peanuts, but as a rule these implements have not sufficient clearance to allow a heavy growth of peanut vines to pass through. At present very much larger machines are being perfected and especially adapted to the work in the peanut fields. The machine or elevator potato diggers require about four strong mules to pull them, but may be so regulated that the sharp point of the digger will cut off the roots just below where the peanuts are formed, carry the vines with the peas attached up and over the elevator device, and deliver them on the ground behind the machine with practically all of the soil shaken from them. An outfit of this kind will dig from 8 to 12 acres daily and require about 20 hands to stack the vines behind it. In land that is weedy there is always difficulty in harvesting the crop, regardless of the kind of implement used for digging.

METHOD OF STACKING PEANUTS TO CURE.

As already mentioned, the proper method of curing peanuts is to stack them, vines and all, around stakes set in the field where the crop is grown. Before starting to harvest the crop provide the small poles to be used as stakes around which to stack the peanuts. These stakes should be 7 feet in length by about 3 or 4 inches in diameter, and may be either split out of large logs or simply small saplings with the bark upon them. From 12 to 35 of these poles will be required for each acre, according to the stand and growth of vine; the rule, however, is about 22 stacks to the acre. Have the poles hauled and piled where they can be conveniently distributed through the peanut field when the rush of harvesting comes on.

As a rule 11, 13, or 15 rows of peanuts are placed in a single row of stacks. The digging machine is started in the center, on the row where the stacks are to stand, and is worked outward until the necessary number of rows are lifted. After the machine has gained sufficient headway the poles are distributed at distances varying from 12 to 20 paces and set in the ground by means of a pointed bar, a peg and a maul, or by a post-hole digger, and tamped in place. The stake should be set into the soil sufficiently deep to prevent the stack blowing over. On the other hand, they should not be set so deeply as to prevent their being easily lifted with the stack at thrashing time.

Peanuts should not be handled when there is dew or rain upon the foliage, but, aside from this, they may be stacked within an hour or two after digging. Before starting to build the stack nail a couple of short pieces of lath at right angles across the stake about 8 inches from the ground, then simply build the stack upon these, keeping the peas or roots close around the pole and giving the outer part of the stack a downward slope to carry off the water during rains. As the stack is nearing com-

pletion it should be kept higher in the center and drawn in to a point. If convenient, the top of the stack may be finished with a bundle of dry grass, or a few peanut vines may simply be rolled together and pressed down over the top of the pole. Wet or green hay should never be placed on top of the stack. When completed, the stack should be about 6 feet in height and 30 inches in diameter.

LENGTH OF TIME THAT PEANUTS SHOULD REMAIN IN THE STACKS.

Once the peanut vines are in the stacks they will be comparatively safe for 5 or 6 weeks, or until they are dry enough to pick from the vines. As a rule the curing period will require at least 4 weeks, and if the peas are not molested by birds, field mice, rats, or thieves they may remain in the stacks for 3 or 4 months without injury. The crop will not be ready to pick from the vines until the stems have become brittle and the peas have attained a nutty flavor.

PICKING PEANUTS FROM THE VINES.

Formerly peanuts were all picked from the vines by hand, the work being done largely by negro women and children. Recently there have been developed several machines for doing this work. These peanut-picking machines are of two types, one having a cylinder like the ordinary grain thrasher, and in the other a picking mesh of diagonally woven wire is employed.

PEANUT-PICKING MACHINERY.

The essentials of a satisfactory peanut-picking machine are, first, that the pods should be picked clean from the vines without breaking or cracking the shells, and, second, that the peanuts be cleaned of all the coarser dirt and

separated from the pieces of stems. There is always a small quantity of very fine dirt adhering to the hulls of the peanut which must be separated from them in the cleaning factory. The greatest objection to the work of peanut thrashers in the past is that they broke too many of the shells, in many cases breaking the kernels as well and rendering them unsalable. This breaking of the shells is a **more serious damage** than might appear at first thought, as the keeping qualities of the nuts depend upon their not becoming broken. There are a number of insects which attack peanuts while in storage, especially during the summer months, and these cannot injure the kernels unless the shell is cracked or broken.

The picking of peanuts is paid for at so much per bag of about 4 bushels; 35 cents a bag being the ruling price. In some sections the owners of the picking machines do the work for every tenth bag, or where they provide a baling machine and press the peanut hay into bales they take every eighth bag, but none of the hay. Hand picking is paid for at the rate of from 40 to 50 cents a hundred pounds.

SACKING AND HANDLING PEANUTS AFTER PICKING.

As the peanuts come from the picker they are placed in sacks and either hauled direct to the cars or stored for later delivery. The standard peanut bag is about 4 bushels, 90 or 92 pounds of Virginias and 110 to 120 of Spanish. As the bags are filled they are sewed and tied at the corners to facilitate handling. If the peanuts are not to be sold immediately, they are often taken from the bags and stored in bins or in slatted cribs where they will get air. The storage room should be proof against rats and mice.

The peanut vines, if properly cared for after the removal of the peas, make an excellent hay. The best plan is to have a baling press working while the thrashing or

picking is being done and press the vines into moderate-size bales.

The peanut-picking machines break the hay considerably, but by careful handling in baling the leaves and stems can be worked into the bales together in the proper proportions. The feeding value of peanut hay renders it worth while to take special precautions in curing and handling it. One important point in curing peanut hay is to get the vines into the small stacks soon after digging them; also to avoid having the hay become wet by rains.

VARIETIES OF PEANUTS.

At present about five varieties of peanuts are grown in the United States, these being known as Virginia Runner, Virginia Bunch, African (or North Carolina), Spanish, and Valencia, commonly known as Tennessee Red. The Virginia Runner and Bunch produce peas that are practically alike, these being the Jumbo or parching peanuts of our markets. The African, or North Carolina, as it has come to be called in this country, has a spreading vine and produces a medium-size pea, which is used for shelling purposes and for the smaller grades of parching stock. The Spanish variety is the small peanut, with only two peas in a pod, which is used so extensively for the manufacture of salted peanuts, peanut butter, etc. The Spanish has an upright or bunch habit of growth, with the peanuts clustered about the base of the plant. The Valencia, or Tennessee Red variety, has rather large and sometimes very long pods, with anywhere from two to seven small red peas crowded together in the pods. The Valencia is in demand for use in the manufacture of salted peanuts and peanut butter. A form of the Valencia known as Georgia Red or Red Spanish is extensively grown for hog and cattle feeding in parts of the Southern States. However, this variety is not desirable for the market. For the present, the true Spanish, or white

Spanish as it is sometimes called, is the proper variety to grow throughout the Southwestern States, as it is easy of cultivation and contains a high percentage of oil.

MARKETING OF PEANUTS.

The peanuts as they come from the picking machine on the farm are generally bagged, and either hauled direct to the cars or stored for a short time in barns or sheds until they can be shipped. It should be the aim of every grower to have his crop go into the bags in just as clean a condition as possible, free from stones, sticks, dirt, and pieces of stems. Where the peanuts are not properly cleaned the buyers are compelled to dock the weights, and this always results in dissatisfaction to both parties. If the peas are not clean as they come from the thrasher they should be run through a fanning mill to blow out the dirt, and afterwards picked over by hand if necessary.

Peanuts are comparatively light to handle and can be transported considerable distances, and it is not necessary to have a factory in every section where peanuts are grown. As a rule the buyers from the factories come to the various shipping points to inspect, purchase, and load the peanuts into cars as they are hauled in by the farmers. Another method is where the factory is represented in a town by a merchant who buys the peanuts from the farmers and stores them until wanted for shipment to the factory.

WEIGHT OF PEANUTS.

The unit in handling peanuts is the pound rather than the bushel or bag. The large Virginia peanuts weigh about 22 pounds to the measured bushel, while the Spanish weight about 30 pounds to the bushel. Two and one-half cents a pound for farmers' stock would mean about

75 cents a bushel for Spanish, while $3\frac{1}{2}$ cents a pound, or 77 cents a bushel, would be the ruling price for Virginias. By using the pound as the unit in buying and selling peanuts the troublesome question of weight per bushel will be avoided. Peanuts grown in one section may weigh more to the bushel than those grown in another or even an adjoining territory.

THE CLEANING FACTORY PROCESS

In the factory the peanuts are fanned and polished to remove the dirt, and are separated into a number of different grades. During the process they are all carefully picked over by hand and cleaned until the finished products would scarcely be recognized as coming from the rough stock that was shipped in by the farmer. All of the shelled or broken peas must be separated from the whole ones and worked into shelled stock of various grades.

In the factories where the Spanish are handled the process is not so complicated, yet even here there is the same careful hand picking to remove inferior peas and refuse not taken out by the cleaning machinery. The peas are passed over a fan, then are shelled and the hulls blown out. Next the peas are run through a machine which separates the split or broken peas from the whole ones. The different grades are then run on what are termed picking belts beside which a large number of women are seated and pick out every inferior pea or particle of foreign matter. The refuse from a peanut factory often contains practically every waste or cast-off article that may be found on the farm. After the cleaning process is completed the peanuts are bagged in clean, new burlap bags and marked with a stencil showing the brand, grade, and name of the cleaner.

USES OF PEANUTS.

USES OF PEANUTS AS FOOD.

Peanuts now find uses in a great many ways aside from being roasted and sold in packages. There is a great and ever-increasing demand for peanuts to be used in the preparation of salted peanuts, peanut butter, peanut candies, peanut flour, and vegetarian meat substitutes. Owing to the high nutritive properties of peanuts they are rapidly assuming an important place as a standard human food, ranking in this respect with other legumes which they resemble in composition. The consumption of peanut butter alone amounts to hundreds of carloads of the product annually.

PRODUCTION OF OIL FROM PEANUTS.

In France and Germany millions of bushels of peanuts are annually crushed for oil, the oil being used for cooking, for salad making, and in the place of butter, while the cake resulting from the manufacture of the oil is used as stock food. In this country we have many oil mills that are either idle or running on short time on account of the shortage of cottonseed, and it is only a matter of a little time until our production of peanuts will enable us to build up a great industry in the manufacture of peanut oil. In general the oil from the peanut has the same culinary and table uses as olive oil, cottonseed oil, and some other vegetable oils, and, like them, is considered a wholesome and valuable food product. Thirty pounds, or a bushel, of Spanish peanuts will yield 1 gallon of oil and about 20 pounds of cake. A gallon of this oil is worth 75 cents wholesale and the cake is worth 1½ cents a pound, or 25 cents, making a total of \$1 from a bushel, from which the working cost must be taken. Assuming that an average of 40 bushels of Spanish peanuts can be grown to an acre, we have a very promising

proposition in the manufacture of peanut oil, especially when the peanut hay will almost pay the cost of growing the crop.

VALUE OF PEANUTS AS STOCK FEED.

All of the inferior or refuse peanuts can be used to advantage on the farm for feeding to hogs and also to the general farm animals. There is not a pound of the entire peanut crop, including roots, stems, leaves, and peas, but that has some value, and not an ounce should be wasted. The tops when used as hay have a feeding value equal to the best clover, alfalfa, and cowpea hays; in fact, peanut hay is one of the best dairy feeds for milk production. As a result of the handling of peanuts in the cleaning factories there are quantities of finely broken and shriveled peas that are sold for hog feed, and sometimes ground into meal and sold for feeding to cows. The cake resulting from the manufacture of peanut oil is equal to the best cottonseed meal for feeding purposes.

COST OF GROWING PEANUTS AND RETURNS.

The total average cost of growing an acre of peanuts in the Southern States is about \$12 where no commercial fertilizers are used. Add to this the cost of 200 to 300 pounds of fertilizer and the total will not exceed \$16 an acre. On a block of land consisting of 54 acres in northern Louisiana during the season of 1910 the itemized cost per acre of production was as follows: Plowing and fitting the land, seed, and planting, \$5.35; cultivation, \$2.80; harvesting and stacking, including the cutting and hauling of poles, \$3.87; thrashing and hauling to car, \$4.80; bags and twine, \$1.05; total cost, \$17.87. This land produced an average yield of 60 bushels to an acre and 1 ton of hay. The peanuts sold for \$1 a bushel of 30 pounds and the hay for \$12 a ton, making a total return of \$72 an acre. Deducting the cost of growing, which in-

cluded the foreman's time, the grower received a net return of about \$54 an acre, or \$2,916 from the 54 acres.

Doubtless a great many more peanuts will be grown in the future than in the past; but the demand is also increasing and there is money to be made so long as the price for Spanish peanuts remains above $2\frac{1}{2}$ cents a pound for farmer's stock. There is great interest in hog raising throughout the Southern States, and peanuts are a valuable adjunct to corn for the production of high-grade hams and bacon.

HOG CHOLERA.

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Perhaps the greatest obstacle that hog raisers in Florida have to contend with, is the disease known as hog cholera. A conservative estimate places the direct loss from hog cholera throughout Florida for 1910 at a quarter of a million dollars. Furthermore, this disease is responsible to a large extent for the inferior hogs that are found too generally in the State. Many farmers who would otherwise have purchased improved stock to build up their herds, have hesitated and in most cases chosen not to do so because of the danger of loss from hog cholera. Since the greater part of Florida is without a well-defined stock law, the average farmer is powerless to keep his herd free from such an infectious disease as hog cholera.

SYMPTOMS OF HOG CHOLERA.

All the animals may not show similar symptoms when affected with hog cholera, but generally speaking the following are typical symptoms.

The hog is sluggish; has little appetite; a desire to drink much water; some diarrhoea; inflamed eyes, with a sticky discharge often gluing the eye-lids together; usually a hacking cough; a weak uncertain walk; and red blotches, which afterwards turn purple, over the body. Usually the hogs live only from 3 to 10 days after the first sign of disease. Few recover, and the recovery in such cases is slow, while frequently the hair comes off and ulcers appear on the body.

TREATMENT.

It is the general opinion among those who have had most experience with this disease, that ordinary medicines are of little or no value in curing it, and that the only treatment that has been effectual is the serum treatment prescribed by the Bureau of Animal Industry, Washington, D. C. To describe in detail the method of obtaining the serum and the precautions that must be observed in its manufacture, would require too much space. It is, however, sufficient to state that the manufacture of this serum must be under the control of a competent Veterinarian. It must be produced under sanitary conditions, and then judiciously distributed.

HOG CHOLERA SERUM.

From Florida Health Notes.

(Official Bulletin State Board of Health.)

METHOD OF DISTRIBUTION.

In accordance with Chapter 6167, Laws of Florida, 1911, the State Board of Health last August commenced the administration of hog cholera serum, sending its Veterinarians to such points as requests came from; but the number of calls for this service increased so rapidly that it was found impracticable to attempt to detail men oftentimes a long distance to perform this work, and in many cases the Veterinarians were so busy that compliance with requests was delayed and the owners dissatisfied because of the loss of hogs from cholera.

At the 1912 annual meeting of the State Board of Health the compliance with this statute and methods to be followed were thoroughly gone into, and the work has been placed upon an entirely new basis. The Board now furnishes the serum free to hog cholera agents of

the Board. These agents, one or more to the county, administer the serum at a specified cost to the owner, and make reports of their work to this office. The Board also retains its present staff of field Veterinarians who attend to inquiries from those counties in which there is no cholera agent and who are always seeking to find men in such counties to recommend for this appointment.

QUALIFICATIONS AND DUTIES OF HOG CHOLERA AGENTS.

The duties of these agents consist in the administration of the serum to hogs for the prevention of hog cholera. In making such appointments the Board requires that prompt and reliable reports of work done shall be made to this office upon forms to be furnished for the purpose, and that the work will be done in strict accordance with the rules to be issued by the State Health Officer and the State Veterinarian.

It should be distinctly understood that the administration of serum to well hogs does not prevent the disease, and to sick ones does not cure it. What it does do is this: When administered to hogs soon after they are exposed to hog cholera and before they have developed the disease it so modifies the course of the disease that few cases die, after which these hogs are permanently immune. But to administer it in the absence of the disease, or to administer it to the sick with the hope of curing is that much waste of energy.

The Board furnishes to these agents, free of charge, such quantities of serum as are necessary for the work of each such agent, but it is required that the disposition of one lot of serum shall be reported upon before another is furnished. The agent is expected to furnish his own hypodermic syringe for the work, and where proper syringes can not be had conveniently or otherwise, the Board assists in procuring these.

CHARGES.

The following scale of charges for administering hog cholera serum when the work is done at a reasonable distance from the residence of the agent, is suggested by the Board, and any radical departure therefrom is to be considered an imposition upon the owner of the hogs and will be sufficient reason for withdrawing the agent's appointment.

10 hogs, \$1.50; 15 hogs, \$1.75; 20 hogs, \$2.00; 25 hogs, \$2.25; 30 hogs, \$2.50; 35 hogs, \$2.75; 40 hogs, \$3.00; 45 hogs, \$3.25; 50 hogs, \$3.50; 55 hogs, \$3.75; 60 hogs, \$4.00; 65 hogs, \$4.25; 70 hogs, \$4.50; 75 to 85 hogs, \$5.00; 90 to 100 hogs, \$5.00; or over 100 head, add the stated charge for each number.

In cases where the distance is great, special arrangements as to charges may be made between the owner and the agent for doing the work.

INSTRUCTIONS.

The hypodermic syringe for administering hog cholera serum should be of about 20 to 30 cubic centimeters capacity and should have rubber fittings so that it can be thoroughly disinfected by boiling.

It is suggested in all cases where the agent is preparing to comply with an owner's request for the administration of serum, that arrangements be made beforehand so that the work may proceed with the greatest dispatch. The owner should be requested to have his hogs penned previous to the arrival of the agent and should furnish at least two men to catch and hold the hogs, as the operator must keep his hands and syringe clean and free of dirt. This he can not do if he handles the hogs.

The serum is to be injected according to the following dosage:

Weight of pigs.	Dose to be given.	Weight of pigs.	Dose to be given.
Small pigs	10-15c.c.	225-275 pounds	45c.c.
30-50 pounds	20c.c.	275-325 pounds	50c.c.
50-75 pounds	25c.c.	325-375 pounds	55c.c.
75-125 pounds	30c.c.	375-425 pounds	60c.c.
125-175 pounds	35c.c.	425-475 pounds	65c.c.
175-225 pounds	40c.c.	475-525 pounds	70c.c.

For sick hogs double the dose. In all cases of large doses, small quantities in several places.

The injection is made under the skin on the inside of the thigh where the skin is loose and where there is least fat. The serum should be poured into a cup which has been previously sterilized with boiling water. This cup should be covered to keep out dirt and flies. Before each puncture with the needle the same should be dipped into a solution of formalin, one to four parts of water, so as to disinfect the wound made by the needle and thus prevent abscesses. When the day's work is done, the syringe and needles should be thoroughly washed free of all blood and then boiled for a minute or two. The syringe, however, should not be suddenly immersed in hot or boiling water. After this boiling, it should be taken apart, the rubber plunger and needles dried and greased with carbolized vaseline. By careful attention to these details a syringe will last indefinitely.

PROCEDURE.

When an owner finds or suspects that any of his hogs have hog cholera, he should communicate at once with the State Board of Health at Jacksonville, or with the hog cholera agent in his county, furnishing information as to the number of hogs, status of the disease, location of animals, etc., as prescribed by the application form issued by the Board.

Where there is a hog cholera agent in the county arrangements can be made at once for the work. In other cases the Board will detail one of its Veterinarians to the point and the work expedited as much as possible.

In applying for serum or its administration, or in reporting outbreaks of cholera, if the telegraph is used, the message should not be sent collect. This expense is to be borne by the owner or agent.

AGENTS.

Names and Post Office addresses of Agents of State Board of Health and who are authorized to supply and administer Hog Cholera Serum.

County.	Name.	Postoffice.
Alachua	G. A. Byles,	Windsor.
Alachua	J. O. Frederick,	Alachua.
Alachua	M. F. Studstill, R. F. D. no. 3,	Alachua.
Alachua	Dr. E. R. Flint,	Gainesville.
Alachua	J. B. Smith,	Newberry.
Baker	R. C. Crews,	Macclenny.
Baker	W. E. Schoch,	Macclenny.
Bradford	L. J. Wynn,	Hampton.
Bradford	Theo Tison,	Starke.
Calhoun	J. L. Griffin,	Blountstown.
Columbia	Dr. B. D. Jordan,	Lake City.
Citrus	Dr. Puterbaugh,	Hernando.
DeSoto	A. K. Albritton,	Limestone.
DeSoto	Jas. S. Goff,	Punta Gorda.
DeSoto	Dr. C. A. Gavin,	Fort Green.
DeSoto	H. B. Rainey,	Wauchula.
Escambia	Walter H. Johnston,	Pine Barren.
Escambia	J. L. Godwin, R. F. D. No. 1,	Atmore, Ala.
Gadsden	D. D. Edwards,	Greina.
Gadsden	J. B. Ball,	Quincy.
Gadsden	W. D. Richards,	Express Greensboro, Juniper.
Gadsden	M. E. McCorquodale,	Havana.
Gadsden	J. L. Shepard,	Greensboro.
Holmes	H. D. & J. K. Brock,	Bonifay.

County.	Name.	Postoffice.
Holmes	Dr. D. G. Milton,	Westville.
Hamilton	Dr. J. H. Corbett,	Jasper.
Jackson	Dr. J. G. Phillips,	Marianna.
Jackson	W. W. Wester,	Inwood.
Jackson	A. J. Brunson,	Sneads.
Jackson	A. M. Singeltary,	Grand Ridge.
Jefferson...Dr. W. H. Walker,	Express Aucilla,	Lamont.
Jefferson	S. V. Coxetter,	Lloyd.
Jefferson	G. C. McCall,	Monticello.
Jefferson.....Dr. W. N. McLeod,		Aucilla.
Lafayette	M. J. Fowler,	Day.
Lafayette	J. D. Johnson,	Steinhatchee.
Lafayette.....J. M. Gornto,		Mayo.
Lake	J. M. Walton,	Lady Lake.
Lee	W. H. Towles,	Fort Myers.
Leon	T. M. Atkinson,	Tallahassee.
Levy	W. E. Brown,	Raleigh.
Madison	A. B. Sever,	Ebb or Sirmana.
Marion	S. H. Gaitskill,	McIntosh.
Marion...C. R. Tydings,	Dist. Agt. for Emergency,	Ocala.
Marion	Dr. W. H. Counts,	Ocala.
Marion	W. L. Martin,	Sparr.
Marion	R. F. Rogers,	Conner.
Marion	Dr. S. H. Blicht,	Blichton.
Orange	Dr. B. D. Wienenga,	Orlando.
Pinellas	Dr. W. T. Tanner,	St. Petersburg.
Polk	A. O. Gradley,	Bartow.
Polk	R. L. Young,	Mulberry.
Putnam	J. P. Newbeck,	Palatka.
St. Johns	Dr. Dolan,	Hastings.
St. Johns	H. B. Paris,	St. Augustine.
St. Johns	Dr. F. S. Whitney,	Elkton.
Santa Rosa	J. W. Urquhart,	Milton.
Santa Rosa	J. R. Miller,	Milligan.
Suwannee	M. A. Best,	Branford.
Suwannee	C. P. Odom,	Branford.

County.	Name.	Postoffice.
Suwannee	A. S. Hogan,	Wellborn.
Suwannee	Dr. J. H. Reynolds,	O'Brien.
Taylor	Barney O'Quinn,	Perry.
Walton	Alex McRae,	Floral, Ala.
Walton	Prof. H. J. Rogers,	DeFuniak Springs.
Waukulla	C. K. Allen,	Sopchoppy.

ADDITIONAL

Rules, Regulations, and Modifications Adopted by the Board of Control in Accordance with Chapter 6156, Laws of Florida, at a Meeting Held in Jacksonville on April 8, 1912. In Force After June 1, 1912.

MEXICAN COTTON BOLL WEEVIL.

MANGO WEEVIL.

IRISH POTATOES.

FRUIT FLIES.

EXCEPTIONS TO RULE 1 (NURSERY INSPECTION CIRCULAR 1.)

RESOLUTION OF BOARD OF CONTROL.

Jacksonville, Fla., April 8, 1912.

Under the provisions of Chapter 6556, Laws of Florida, 1911, the Board of Control considered the Additional Rules and Regulations and Modifications for Nursery Stock hereinafter set forth. The said Additional Rules and Regulations and Modifications were read section by section and as a whole. On motion of Mr. Wartman, seconded by Mr. King, and unanimously carried, the Board of Control hereby makes, adopts and promulgates the following just and reasonable Additional Rules and Regulations and Modifications for the government of the inspection, certification, sale, exchange, transportation and introduction of nursery stock, trees, shrubs, plants, vines, cuttings, scions, grafts, buds, seeds, pits, bulbs, roots, or parts thereof, infested or infected, or suspected of being infested or infected, with injurious insects or other plant pests, or injurious fungus, bacterial or other plant diseases; and the Board of Control hereby declares the said Additional Rules and Regulations and Modifi-

cations necessary to prevent the introduction, increase or dissemination of said insects, pests and diseases, and that the same shall be in force after June 1, 1912.

MEXICAN COTTON BOLL WEEVIL.

Rules and Regulations Governing the Transportation, Importation and Exchange of Articles Infested or Suspected of Being Infested with the Mexican Cotton Boll Weevil.

17. That in order to prevent the introduction of the Mexican Cotton Boll Weevil (*Anthonomus grandis*) into non-infested territory in the State of Florida, from any region in Florida or from any other States and countries where the same is known to exist, the articles listed in Rule 18, during the period of prohibition applying to each, shall not at any time be brought into non-infested territory in the State of Florida from infested territory, or from any point situated within 20 miles of the area known to be infested by the boll weevil.

Provided that, between January 15th and July 15th of any year, shipments of the hereinafter named articles, whether by public or private conveyance, originating within or giuned within a zone 20 miles in width immediately adjoining, but outside of the area of the weevil infestation, may be made to points not more than 40 miles outside of the known line of infestation as last officially determined and announced.

18. *Articles prohibited.†

1. Seed Cotton;

*This list of items was unanimously recommended by the Association of Cotton States Entomologists at a meeting held at Atlanta, Ga., December 6th, 1911. No 8 was added to list by Florida.

†Articles not prohibited.

In order to remove a l doubt upon a number of points, it is particularly stated that there is no restriction upon any of the following list of nine items at any season. Unanimously rec-

2. Cotton Seed;
3. Seed Cotton Sacks, cotton seed sacks and cotton-pickers' sacks, any of which have been used within eight months for any of the purposes indicated;
4. Cotton Seed Hulls between August 1st and December 31st;
5. Spanish Moss and Corn in Shuck between October 1st and June 30th;
6. Living Weevils or weevil stages or weevil work in possession of any person outside of infested territory except a qualified Entomologist;
7. Household goods containing any of the foregoing during the period of prohibition applying to each;
8. Sugar Cane when not cut back and stripped of its leaves;

Where no time limit is specified, the restriction is continuous.

19. (a) That shipments of the articles prohibited in Rule originating outside of territory infested by the Mexican Cotton Boll Weevil and outside of the 20-mile safety zone, may be made at any time, without certificate or affidavit, to any part of Florida.

(b) That these Rules and Regulations shall not apply to shipments into counties of Florida in which cotton is being grown at the time the shipments are made. A list

recommended by the Association of Cotton States Entomologists.

1. Baled Cotton, flat or compressed;
2. Linters and loose cotton lint;
3. Cotton seed meal, cake or oil;
4. Corn shelled or in the ear with shuck removed, oats or any other seed except cotton seed;
5. Cotton seed shown by affidavit to have been sacked continuously for nine months or more;
6. Cotton seed for planting purposes after fumigation with carbon di-sulphide by a competent entomologist;
7. Hay;
8. Empty freight cars;
6. Sugar cane when cut back and stripped of its leaves (Added to list by Florida).

of the counties in Florida in which cotton is grown is herewith appended.†

20. That, in order to meet the requirements of shippers of quarantined articles located in non-infested territory, and outside the safety zone of 20 miles, but who may find it necessary to have proper credentials to accompany their shipments to other States and portions of States not infested by the Mexican Cotton Boll Weevil, the system of affidavits and certificates recommended by the Association of Cotton States Entomologists in session at Atlanta, Ga., on December 5 and 6, 1911, and in use by the State of Alabama, is hereby adopted. Applications for certificates and forms of the affidavits to be employed should be made to the Inspector of Nursery Stock, Gainesville, Fla.

Affidavit Form A. No. _____

**AFFIDAVIT AND AGREEMENT RELATING TO
THE MEXICAN BOLL WEEVIL.**

(To be executed by oil mill representatives.)

State of Florida,

County of _____

Before me, _____

a Notary Public (Justice of the

Peace) in and for said State and

County,

personally appeared this day _____,

who, after being by me duly sworn, deposes and says as follows:

†Counties in Florida growing cotton. Compiled from the Eleventh Biennial Report of the Commissioner of Agriculture of Florida, pp. 217-2-18 and 331; and other sources. This list is subject to revision by the Inspector of Nursery Stock.

Alachua, Baker, Bradford, Calhoun, Clay, Columbia, Duval, Escambia, Gadsden, Hamilton, Holmes, Jackson, Jefferson, Lafayette, Lake, Leon, Levy, Liberty, Madison, Marion, Nassau, Orange, Pasco, Putnam, Santa Rosa, St. Johns, Sumter, Suwannee, Taylor, Volusia, Wakulla, Walton, Washington.

That he is (title) _____ of (mills) _____
 located at _____, County _____ Fla.
 and that to his certain knowledge said oil mill has used
 to date during this oil mill season of 191____, cotton
 seed grown or ginned at or shipped from points or places
 in the following counties only: _____

In consideration of the issuance to said mill of a certificate allowing shipments of seed and cotton seed hulls to be made to points in territory not yet infested by the boll weevil, this party hereby agrees to the following conditions: 1. That upon request he will furnish the party issuing this certificate with a full and complete list of all localities from which seed has been secured this season. 2. That, during the life of said certificate, said oil mill will not draw seed from other territory that may be nearer to the area of weevil infestation than that mentioned in the foregoing statement of counties without first informing the party signing said certificate as to the proposed action. At all times seed may be drawn from counties located north and east of that in which said oil mill is located. 3. He will immediately surrender said certificate at the call of the party issuing same. Certificate will expire July 31, 191_____.

(Signed) _____

(Position or title) _____

Seal of Notary Sworn to and subscribed to before me this _____ day of _____, 191____
 _____, Notary Public.
 My commission expires _____, 191____

This form is used only by oil mills in application for a certificate.

OFFICIAL CERTIFICATE: BOLL WEEVIL No.....

Issued to..... Date.....
 Located at..... County,, Fla.

To Whom It May Concern:

This is to certify that

The
 located at....., State of Florida,
 through....., has filed
 in this office an affidavit (File No.) stating that
 since August 1, 191....., said oil mill has used only cotton
 seed grown or ginned at or shipped from, points or places
 located in the following counties:.....

The maker of this affidavit furthermore agrees that said oil mill will at any time furnish upon request a complete list of all localities from which seed has been secured and that said mill will not draw seed from other territory which may be nearer to the area of weevil infestation than that mentioned above, without first informing the Inspector of Nursery Stock regarding the proposed action.

To the best of our knowledge and belief the territory from which this oil mill draws seed is safely outside of the area where the boll weevil is known to occur or is likely to occur this season.

In accordance with said affidavit, I hereby certify that cotton seed products of said oil mill are not liable to contain, or to aid in disseminating what is known as the Mexican Cotton Boll Weevil, and may therefore be safely admitted into uninfested States or territory. Such shipments are, however, always subject to the State Quarantine Regulations existing at point of destination.

This certificate should be kept on file by the party to

whom it is issued. It becomes INVALID AFTER July 31, 191____, and may be revoked or recalled, for cause.

(Signed)_____

Inspector of Nursery Stock.

Shippers should provide an affidavit to accompany each WAY-BILL with every shipment made into any State quarantining only against INFESTED AREA. Blank forms for these affidavits may be obtained by requesting the number desired of the Inspector of Nursery Stock.

This form of certificate is issued only to oil mills.

AFFIDAVIT RELATING TO MEXICAN COTTON BOLL WEEVIL.

Based on Florida Certificate No._____

WAY-BILL No._____ Car (Initials & No.)_____

Shipped to _____, at _____

Shipped by _____, from _____

Nature of shipment _____

State of Florida, _____

County of _____

Before me, _____

a Notary Public (Justice of the

Peace) in and for said State and

County,

personally appeared this day _____, who, after

being by me duly sworn, deposes and says as follows:

That he is _____ of _____

located at _____, County _____ Fla.

and that to his certain knowledge said oil mill has used

to date during this oil mill season of 191____ 1____, cotton

seed grown or ginned at or shipped from points or places

in the following counties only: _____

He further states that said oil mill has filed with the

Florida Inspector of Nursery Stock an affidavit setting

forth the above facts and that said oil mill has received

from said Inspector of Nursery Stock, and now has on

file BOLL WEEVIL CERTIFICATE No. _____,

which is dated at Gainesville, Fla., _____, 191____

Signed with (position or title) _____

Sworn to and subscribed to before me this

Seal of _____ day of _____

Notary _____, Notary Public.

My commission expires _____, 191____

This Way-bill affidavit form is used only by oil mills holding certificate.

Affidavit Form B, No. _____

**AFFIDAVIT IN APPLICATION FOR CERTIFICATE RELATIVE TO
BOLL WEEVIL.**

Describe fully
nature of shipment _____

Offered for
shipment by _____ from _____ State of _____

Ship to _____ at _____ State of _____

State of Florida,
County of _____

Before me, _____
a Notary Public (Justice of the

Peace) in and for said State and

County,
personally appeared this day _____, who,

after being by me duly sworn, deposes and says as follows:

That to his certain knowledge the shipment described and
addressed as above shown originated within _____

miles (direction) _____ from shipping point shown
above, or was grown entirely within the following de-

scribed area: at _____, County of _____
State of _____, or within counties of _____,

State of _____, and that said shipment contains
no seed cotton or cotton seed grown nearer to the area

infested by the Mexican Cotton Boll Weevil than the
territory described above, or beyond a radius of _____

miles South, Southwest or West of shipping point mentioned above.

In case of HOUSEHOLD GOODS offered for shipment at points within counties wholly or partly included within the quarantined area, the shipper deposes as follows: That said shipment does not contain any of the following items: Seed cotton; cotton seed; seed cotton sacks; cotton seed sacks and cotton pickers' sacks, any of which has been used within eight months preceding date hereof; cotton seed hulls between August 1st and December 31st; Spanish moss or corn in the shuck between October 1st and June 30th, whether used as packing or in any other way; or any living stage or stages of the Mexican Cotton Boll Weevil or any specimens of their work, or sugar cane when not cut back and stript of its leaves, according to the best of his knowledge and belief.

(Signed).....

Sworn to and subscribed to before me this

Seal ofday of....., 191...

Notary

....., Notary Public.

My commission expires..... 191...

This affidavit must be fully executed and then mailed to the Inspector of Nursery Stock in order to secure a CERTIFICATE authorizing shipment.

This form is used for individual shipments of household goods or cotton seed oil mills, etc.

OFFICIAL CERTIFICATE: BOLL WEEVIL No.

Issue to....., Date....., 191...

Located at.....Co.,, Fla.

For shipment of.....

Billing Address

Accompanying

Way-Bill Car (Initials & No.).....

To Whom It May Concern: This is to certify that
(Name) of, Fla.,
has filed in this office an affidavit Form B (File No.)

stating that shipment described and addressed as above shown originated within _____ miles (direction) _____ from shipping point shown above, or was grown entirely within the following described area:

With HOUSEHOLD GOODS, there is not included any of the following items during periods specified: Seed cotton; cotton seed; seed cotton sacks, cotton seed sacks and cotton pickers' sacks, any of which has been used within eight months preceding date hereof; cotton seed hulls between August 1st and December 31st; Spanish moss or corn in the shuck between October 1st and June 30th, whether used as packing or in any other way; or any living stage or stages of the Mexican Cotton Boll Weevil, or any specimens of their work, or sugar cane when not cut back and stript of its leaves, according to the best of his knowledge and belief.

In accordance with said affidavit, I hereby certify that the above described shipment is not liable to contain or to aid in disseminating the Mexican Cotton Boll Weevil, and may be accepted and transported as shown above.

(Signed) _____

Inspector of Nursery Stock.

NOTICE: This certificate must be attached by railway agent to Way-Bill of shipment for which issued, and is **INVALID** for any other use. Agents should fill in Way-Bill and car numbers above.

This form is issued for all individual shipments and accompanies Way-Bill with shipment.

21. That shipments of household goods originating in infested territory when offered for transportation whether by public or private conveyance into non-infested territory, during the period of prohibition applying to each, must be accompanied by an affidavit stating that they contain none of the articles named under Rule 18. With railroad or boat shipments, this affidavit shall be attached to Way-Bill.

22. That interstate shipments of quarantined articles

passing through an on-infested territory in the State of Florida, shall be made in tightly closed box cars, and the carriers shall exercise every reasonable precaution during transit and in making transfers to avoid the possibility of disseminating weevils thereby.

23. That no person except the Inspector of Nursery Stock at Gainesville, his authorized deputies, Entomologists and investigators of insect problems at the Experiment Station and University of Florida, the Woman's College, the Colored School, the United States Department of Agriculture, and other Entomologists and investigators of insect problems connected with institutions of learning and investigation, of this State and the United States, may lawfully receive, transport, have or keep in his possession outside of the weevil infested area, any living stage (egg, larva, pupa, or adult), or any weevil work containing such stages of the Mexican Cotton Boll Weevil.

Provided that any person may send living specimens of the Mexican Cotton Boll Weevil or its work, when enclosed in strong, tightly wrapped and sealed packages, preferably of metal or glass, not easily broken, to any Entomologist or investigator of insect problems, qualified and permitted by the preceding paragraph to have such in his possession.

24. That all railroad, steamboat and express companies, or other common carriers, and all private parties operating vehicles, boats, and all other means of transportation, in the State of Florida, are especially enjoined to comply with the requirements of these Rules and Regulations and of the Laws of the State of Florida governing the same.

25. That a zone of 20 miles in width, immediately adjoining but outside of the area of actually known weevil infestation, is hereby established, which shall be known as the "20 Mile Safety Zone," and all Rules and Regulations herein promulgated shall apply to this zone,

exactly as though it were known to be actually infested by the weevil; except as provided in Rule 17.

26. *That the Inspector of Nursery Stock shall at least once each year, or oftener if necessary, issue a circular of information to the Press of the cotton-growing counties, and others interested, setting forth the area and line of actual weevil infestation as determined by the United States Bureau of Entomology in cooperation with the States infested.

27. All shipments, as hereinabove specified, shall be subject to inspection and examination at the discretion of the State Inspector of Nursery Stock or of any duly authorized deputies, whenever such shipments shall be known or suspected to be infested with the Mexican Cotton Boll Weevil.

THE MANGO WEEVIL,

Rules and Regulations Governing the Importation, Transportation, and Exchange of Mango Seeds and Mango Fruit Infested or Suspected of Being Infested with the Mango Weevil.

28. That, in order to prevent the introduction into Florida, of the Mango Weevil (*Cryptorhynchus mangifera*), the importation of Mango Seeds, except as hereinafter provided, is hereby prohibited.

29. That, since the seeds from imported mango fruit are frequently used for planting, the importation of mangoes infested with the Mango Weevil or with any other injurious insect, or infested with any injurious disease, is hereby prohibited. Healthy mango fruit may be imported without inspection and without certification.

30. That, in order to meet the needs of growers of

*The present line of weevil infestation in Florida extends due south from Pollard, Alabama. At the end of the dispersion period of 1911 (October), Escambia County and part of Santa Rosa County were found to be infested. The establishment of the "20 Mile Safety Zone" (Rule 25) locates the danger line 20 miles further to the east.—Inspector.

young mango trees, importation of mango seed from countries not infested with the Mango Weevil may be made by special permit of the Inspector of Nursery Stock.

31. That all railroads, steamboat and express companies, and other common carriers, and all private parties operating vehicles, boats, etc., in the State of Florida, are especially enjoined to comply with the requirements of these Rules and Regulations, and of the Laws of the State of Florida governing the same.

32. All shipments of mangoes and mango seeds shall be subject to inspection and examination at the discretion of the State Inspector of Nursery Stock or of any of his duly authorized deputies, whenever such shipments shall be known, or suspected, to be infested with the Mango Weevil. (See also Rule 11, Nursery Inspection Circular 1.)

IRISH POTATOES.

Rules and Regulations Governing the Transportation, Importation and Exchange of Irish Potatoes.

33. That in order to prevent the introduction of the "wart disease" (*Chrysophlyctis endobiotica*) of Irish potatoes into the State of Florida, the importation of Irish potatoes, affected with said disease, whether for planting or eating, from English, Wales, Scotland, Ireland, Germany, Hungary and New Foundland, or any State of the United States or foreign country as soon as it becomes infected with the "wart disease," is hereby prohibited.

34. That all potatoes intended for planting (so-called "seed potatoes"), when imported into Florida from another State or foreign country or from any locality not prohibited, shall have been immersed for at least one and one-half hours in a solution of formaline (made by mixing one pound 4% formaldehyde solution and 30 gallons water) for the purpose of destroying the spores of the potato scab (*Oospora scabies*) and other injurious diseases frequently found infecting potatoes. Any other

treatment of equal effectiveness, such as fumigation with formaldehyde gas or dipping in corrosive sublimate solution, may be substituted for the formaline treatment, at the discretion of the proper Government or State Official under whose jurisdiction the treatment is made.

35. Each and every package of a shipment of "seed potatoes" shall have a certificate attached as per Rule 6 (Nursery Inspection Circular 1). This certificate shall also state that the potatoes have been treated with formaline, formaldehyde gas, or corrosive sublimate as previously directed.

36. Each and every package of a shipment of "seed potatoes" shall have conspicuously marked upon it the place where potatoes were grown, shipping point, consignor, consignee, and destination.

37. Until further notice is given, potatoes grown in Florida need not be inspected or treated, but may be exchanged and transported without a certificate; provided, however, that they are free from injurious insects, pests and diseases. See also Section 4, Chapter 6156, Laws of Florida (Nursery Inspection Circular 1).

38. Transportation companies and private carriers are especially enjoined to aid in making these Rules and Regulations effective by refusing shipments not properly certified and by reporting uncertified shipments received, according to Rule 8 (Nursery Inspection Circular 1).

39. All shipments of Irish potatoes shall be subject to inspection and examination at the discretion of the State Inspector of Nursery Stock or of any of his duly authorized deputies, whenever such shipments shall be known, or suspected, to be infested with any injurious insect or pest, or infected with any injurious disease. See also 11 (Nursery Inspection Circular 1).

FRUIT FLIES.

Rules and Regulations Governing the Importation, Transportation, and Exchange of Fruit Infested, or Suspected of Being Infested, with Fruit Flies.

40. That in order to prevent the introduction of the Morelos Fruit-fly (*Anastrepha (Trypeta) ludens*) from Mexico or from any other State or country, or of the Mediterranean Fruit-fly (*Ceratitis (Halterophora) capitata*) from the Mediterranean Countries, Africa, Australia, Hawaii, or from any other State or country, the importation of any and all fruit infested with the injurious Morelos Fruit-fly, the Mediterranean Fruit-fly, or any other fruit-fly, is hereby especially prohibited. Provided, that healthy fruit may be imported without inspection and without certification.

41. It is further provided, that when, in the discretion of the Inspector of Nursery Stock, the safety of the fruit industry in the State is endangered, he may, through the publication of a circular so stating, altogether prohibit the importation of fruit from any State or country infested with any of the injurious fruit-flies mentioned in Rule 40. Such prohibition shall remain in effect until revoked by the State Board of Control.

42. All shipments of fruit infested, or suspected of being infested, with any fruit-fly, whether in transit, or in hand of the purchaser or consignee, shall be subject to inspection and stoppage in transit, and if found infested shall be deported and destroyed, upon the order of the Inspector of Nursery Stock, at the expense of the owner, consignor or consignee, or the person, firm or corporation transporting the same.

43. Transportation companies and private carriers are especially enjoined to comply with the requirements of these Rules and Regulations and of the Laws of the State of Florida governing the same.

EXCEPTIONS TO RULE 1**(Nursery Inspection Circular 1.)**

Provided, that, until further notice is given, or at the discretion of the Inspector of Nursery Stock, the plants and parts thereof listed herewith, when apparently free from injurious insects, pests and diseases, need not be inspected, but may be exchanged and transported without a certificate attached. These exceptions do not apply to any plants or parts thereof imported from foreign countries, nor from the possessions of the United States on the mainland of North America. These exceptions do not imply that any less importance shall be placed upon the other Rules and Regulations, or upon Section 4 of the Law, Chapter 6156*.

EXCEPTIONS.

Forest trees and forest shrubs when not grown in a nursery; seeds (except mango seed, and cotton seed in localities infested with the Mexican Boll Weevil); vegetable plants and other herbaceous plants; the roots, bulbs and tubers (for Irish potatoes see Rules 33 to 39) of vegetables and other herbaceous plants; cut flowers; pineapple plants when not grown in a regular commercial nursery and when free from mealy-bugs and other injurious insects and diseases.

*Violation of any Rule or Regulation adopted by the Board of Control in accordance with Chapter 6156, Laws of Florida, constitutes a misdemeanor, punishable by a fine not to exceed \$500.00, or by imprisonment not to exceed six months, or both, in the discretion of the court (Sections 4 and 5, Chapter 6156, Laws of Florida, Nursery Inspection Circular 1).

Violations of all Rules and Regulations should be reported to the County Prosecuting Attorney and to the Inspector of Nursery Stock, setting forth the facts in the case.—Inspector of Nursery Stock.

PART II.

CROP AND LIVE STOCK CONDITIONS.

DIVISION OF THE STATE BY COUNTIES.

Following are the divisions of the State, and the counties contained in each:

Northern Division.

Franklin,
Gadsden,
Hamilton,
Jefferson,
Lafayette,
Leon,
Liberty,
Madison,
Suwannee,
Taylor,
Wakulla—11.

Western Division.

Calhoun,
Escambia,
Holmes,
Jackson,
Santa Rosa,
Walton,
Washington—7.

Northeastern Division.

Alachua,
Baker,
Bradford,
Clay,
Columbia,
Duval,
Nassau,
Putnam,
St. Johns—9.

Central Division.

Citrus,
Hernando,
Lake,
Levy,
Marion,
Orange,
Pasco,
Suwannee,
Volusia—9.

Southern Division.

Brevard,
Dade,
DeSoto,
Hillsborough,
Lee,
Manatee,

Monroe,
Osceola,
Palm Beach,
Polk,
St. Lucie—11.



DEPARTMENT OF AGRICULTURE

W. A. McRAE, Commissioner.

H. S. ELLIOT, Chief Clerk

CONDENSED NOTES OF CORRESPONDENTS.

BY DIVISIONS.

NORTHERN DIVISION.—The reports from our correspondents throughout all of this division are discouraging, to say the least of it, as regards standard crops. Last year there was an increase in almost every crop of from 25 to 35%. This year the reverse seems to represent the true condition. Last year at this time the condition of cotton in this division was 115, showing 15 points above what is usually considered perfect condition. This season 63 represents the comparative condition with 100 as the unit of condition, of course. The same relative condition can be stated as regards Sea Island cotton. It is a little better, but not much. Corn is also in bad shape, not only from the effects of excessive rainfall, but unusually late and cold seasons to begin with, which is really the principal cause of the poor condition of both cotton and corn. Complaint is universal of deterioration through some cause with almost all of the standard crops. It seems also to have affected live stock conditions as far as hogs are concerned, there apparently being more losses from cholera than for many years. Our correspondents attribute these conditions to the unusual unfavorable seasons making unusual conditions as regards animals unsanitary. Undoubtedly, unless there is a change in climatic conditions in the very near future, the cotton crop will be a very bad failure. The corn crop is already demonstrating a very short one, and in its present condition there is little chance for it to improve before maturity.

WESTERN DIVISION.—The conditions in this division are practically the same as in the one just noted. The climatic conditions have been the same and the effect on crops and live stock has not differed materially, consequently both cotton and corn are not only in poor condition, but are practically certain to be very far short of a normal crop. As to the condition of live stock, horses and cattle are reported in excellent condition, while the hogs have suffered quite as much from cholera, etc., as in the preceding division. Favorable climatic changes are unquestionably necessary, not only to the health of the live stock, but to the maturity of the crops.

NORTHEASTERN DIVISION.—Practically the same conditions exist in the counties forming this division as in the preceding ones. If anything, in some respects the condition of the crops are lower. In some counties it is reported that both cotton and corn in some sections will be a total failure, and this condition is ascribed chiefly to the excessive rainfall, primarily produced by wet and late spring. It will be noted by comparison that the condition of the cotton last year at this time in this division was 100. At this time it is 59 and our correspondents state positively that this is not in the least overdrawn. Corn is almost as bad, and most of the other crops equally so. The condition of hogs is slightly better than in the preceding divisions, but still very poor. In this connection it is proper to say that the work of the agents of the State Board of Health in the distribution and administration of the hog cholera serum is doing a vast amount of good and undoubtedly the administration of this serum is saving thousands of hogs to the farmers which, of course, means hundreds of thousands of dollars.

Note.—In another part of this Bulletin a list of agents and an article containing much information on the subject of hog cholera will be found.

CENTRAL DIVISION.—Reports of crop conditions in this division are somewhat better than in the preceding ones and with reference also to the conditions of live stock as well, and though the rainfall has been excessive in this district also, it has not had the same effect on the growing crops, they not being so subject to excessive moisture as the principal farm crops of the farming districts. Citrus fruit trees and others have apparently been benefited by the rains. Attention is also called, not only in this district, but in all the others, to the conditions of pastures. About the only thing that the excessive rainfall has benefited is the grass. The conditions just referred to in this division will assist greatly in the production of a large citrus fruit crop if the investigations of our correspondents are correct. The favorable season has enabled the trees to hold a large amount of fruit which would have dropped off the trees had there been a shortness of moisture. Our reports also indicate that good crops of citrus fruits of all kinds are to be expected. Live stock in this district is also in excellent condition.

SOUTHERN DIVISION.—As far as climatic conditions are concerned there is little difference between this division and the foregoing one. This being the great fruit and vegetable producing section of the State, it naturally requires greater amounts of moisture than other portions and the effects of evenly distributed rains are showing up well in the large crops of fruit set on the trees. Live stock is also in good condition in this section and all crops appear to be better than in any other section of the State. If no climatic disturbances in the way of storms, etc., should visit this section, there will be fine crops of fruits of all kinds.

Note.—A reading of the tables in this report will give a considerable amount of interesting information by comparison, and we offer the suggestion to farmers and growers of forage crops in all sections of the State that they

can do no better than to grow as much of the forage crops as it is possible for them to produce. It is a certainty that the corn crop in the northern section of the State will hardly afford a supply for much more than half or two-thirds of the season to come, and with indications of a short crop in the West, the Florida farmer who is short of corn and forage will have \$1.50 a bushel corn looking him in the face before March or April next and, therefore, can do no better than to plant every surplus acre that he can in forage crops.

**REPORT OF CONDITION AND PROSPECTIVE YIELD OF
CROPS, FRUIT AND FRUIT TREES, AND CONDITION
OF LIVE STOCK, FOR QUARTER ENDING JUNE 30,
1912, AS COMPARED WITH SAME PERIOD LAST YEAR**

COUNTY.	Upland Cotton.	Sea Island Cotton.	Corn.	Sugar Cane
Northern Division.	Condition.	Condition.	Condition.	Condition.
Gadsden	65	70	60	90
Hamilton .....	.....	50	65	40
Jefferson	80	85	75	90
Lafayette .....	.....	70	75	90
Leon	70	.....	75	85
Liberty	70	.....	60	90
Madison	45	45	55	75
Suwannee .....	.....	80	90	90
Taylor .....	.....	90	75	100
Wakulla	50	.....	50	100
Div. Av. per cent.....	63	70	68	85
Western Division.				
Calhoun	40	40	35	85
Escambia	65	.....	75	75
Holmes	85	.....	60	90
Santa Rosa	90	.....	75	100
Walton	85	.....	75	100
Washington	70	.....	70	90
Div. Av. per cent.....	73	40	65	90
Northeastern Division.				
Alachua .....	.....	65	75	100
Baker .....	.....	58	65	55
Bradford .....	.....	55	75	75
Clay .....	.....	60	60	90
Panama .....	.....	.....	95	90
St. John .....	.....	.....	.....	75
Div. Av. per cent.....	.....	59	74	81
Central Division.				
Citrus .....	.....	.....	75	75
Hernando .....	.....	.....	75	75
Levy	50	50	80	100
Marion .....	.....	100	105	105
Orange .....	.....	.....	100	100
Pasco	90	90	100	100
Sumter	90	90	85	90
Volusia .....	.....	.....	110	110
Div. Av. per cent.....	77	82	91	94
Southern Division.				
Brevard .....	.....	.....	.....	85
Dade .....	.....	.....	.....	.....
DeSoto .....	.....	.....	100	80
Hillsborough .....	.....	.....	80	95
Osceola .....	.....	.....	90	90
Palm Beach .....	.....	.....	.....	.....
St. Lucie .....	.....	.....	.....	95
Div. Av. per cent.....	.....	.....	90	89
State Av. per cent.....	71	63	78	88

REPORT OF CONDITION AND PROSPECTIVE YIELD—Continued.

COUNTY.	Rice.	Sweet Potatoes.	Field Peas.	Eggplant.
Northern Division.	Condition.	Condition.	Condition.	Condition.
Gadsden	90	90	95	.....
Hamilton .....	.....	100	90	.....
Jefferson .....	.....	90	90	.....
Lafayette .....	.....	90	95	.....
Leon .....	.....	95	100	16
Liberty .....	.....	100	40	.....
Madison	30	90	80	.....
Suwannee	60	80	80	50
Taylor	80	100	80	.....
Wakulla .....	.....	75	50	.....
Div. Av. per cent.....	65	91	80	72
Western Division.				
Calhoun	65	90	85	50
Escambia	50	75	50	75
Holmes .....	.....	95	75	.....
Santa Rosa	90	75	90	.....
Waltou	100	100	100	100
Washington	40	100	100	.....
Div. Av. per cent.....	69	89	83	75
Northeastern Division.				
Alachua .....	.....	100	100	100
Baker .....	.....	65	55	.....
Bradford	75	75	70	.....
Clay .....	.....	100	100	.....
Putnam .....	.....	85	85	85
St. Johns	100	65	75	.....
Div. Av. per cent.....	81	82	81	92
Central Division.				
Citrus	105	100	100	.....
Hernando	95	100	100	.....
Levy	100	100	100	.....
Marion .....	.....	100	110	.....
Orange .....	.....	100	100	.....
Pasco .....	.....	100	90	.....
Spauter	75	90	90	75
Volusia .....	.....	100	100	.....
Div. Av. per cent.....	94	100	99	75
Southern Division.				
Brevard .....	.....	75	90	.....
Dade .....	.....	100	100	100
DeSoto	100	100	100	100
Hillsborough	80	100	90	60
Osceola	100	100	80	70
Palm Beach .....	.....	60	.....	90
St. Lucie .....	.....	95	.....	.....
Div. Av. per cent.....	93	90	92	84
State Av. per cent.....	82	90	87	80

REPORT OF CONDITION AND PROSPECTIVE YIELD—Continued.

COUNTY.	Cassava.	Tobacco.	Peanuts.	Pasture.
Northern Division.				
	Condition.	Condition.	Condition.	Condition.
Gadsden .....	.....	115	95	100
Hamilton .....	.....	.....	85	100
Jefferson .....	.....	.....	100	100
Lafayette .....	.....	.....	100	100
Leon .....	.....	100	100	100
Liberty .....	.....	.....	90	100
Madison .....	.....	80	95	100
Suwannee .....	.....	.....	100	100
Taylor .....	.....	.....	90	100
Wakulla .....	.....	.....	100	100
Div. Av. per cent....	.....	102	96	100
Western Division.				
Calhoun .....	.....	.....	100	100
Escambia	75	100	100	100
Holmes .....	.....	.....	95	85
Santa Rosa .....	.....	.....	75	80
Walton .....	.....	80	100	100
Washington .....	.....	.....	100	100
Div. Av. per cent....	75	95	95	96
Northeastern Division.				
Alachua .....	.....	.....	75	100
Baker .....	.....	.....	65	85
Bradford .....	.....	.....	65	85
Clay .....	.....	.....	100	100
Putnam .....	.....	85	85	100
St. Johns	75	.....	.....	.....
Div. Av. per cent....	75	85	78	94
Central Division.				
Chiefs .....	.....	.....	90	95
Hernando .....	.....	.....	.....	100
Levy .....	.....	.....	110	100
Marion .....	.....	.....	100	110
Orange .....	.....	.....	.....	75
Pasco .....	.....	100	90	100
Sumter	65	.....	90	90
Volusia .....	.....	.....	110	100
Div. Av. per cent....	65	100	98	95
Southern Division.				
Brevard .....	.....	.....	.....	100
Dade .....	.....	.....	.....	100
DeSoto .....	.....	.....	.....	100
Hillsborough	90	.....	60	95
Osceola .....	.....	.....	125	90
Palm Beach .....	.....	.....	.....	.....
St. Lucie .....	.....	.....	.....	100
Div. Av. per cent....	90	.....	92	98
State Av. per cent....	76	95	92	97

REPORT OF CONDITION AND PROSPECTIVE YIELD—Continued.

COUNTY.	Velvet Beans	Alfalfa.
Northern Division.		
Gadsden	Condition.	Condition.
Hamilton	95	.....
Jefferson	100	.....
Lafayette	95	.....
Leon	100	.....
Liberty	90	.....
Madison	100	.....
Suwannee	90	.....
Taylor	90	.....
Wakulla	90	.....
Div. Av. per cent	90	.....
Western Division.		
Calhoun	75	.....
Escambia	75	.....
Holmes	80	.....
Santa Rosa	80	.....
Walton	80	.....
Washington	80	.....
Div. Av. per cent	80	.....
Northeastern Division.		
Alachua	85	.....
Baker	90	.....
Bradford .....	.....	.....
Clay	100	.....
Putnam	90	.....
St. Johns	75	100
Div. Av. per cent	90	100
Central Division.		
Citrus	100	.....
Hernando	100	.....
Levy	100	.....
Marion	95	.....
Orange	100	.....
Pasco	100	.....
Sumter	100	.....
Volusia	100	.....
Div. Av. per cent	95	.....
Southern Division.		
Brevard	100	.....
Dade .....	.....	.....
DeSoto	120	.....
Hillsborough	90	.....
Osceola .....	.....	.....
Palm Beach .....	.....	.....
St. Lucie	100	.....
Div. Av. per cent	92	.....
State Av. per cent	90	100

REPORT OF CONDITION AND PROSPECTIVE YIELD—Continued.

COUNTY.	Guavas.		Bananas.	
	Condition.	Prospective Yield.	Condition.	Prospective Yield.
Northern Division.				
Gadsden .....	.....	.....	.....	.....
Hamilton .....	.....	.....	.....	.....
Jefferson .....	.....	.....	.....	.....
Lafayette .....	.....	.....	.....	.....
Leon .....	.....	.....	.....	.....
Liberty .....	.....	.....	.....	.....
Madison .....	.....	.....	.....	.....
Suwannee .....	.....	.....	.....	.....
Taylor .....	.....	.....	.....	.....
Wakulla .....	.....	.....	.....	.....
Div. Av. per cent.....	.....	.....	.....	.....
Western Division.				
Calhoun .....	.....	.....	.....	.....
Escambia .....	.....	.....	.....	.....
Holmes .....	.....	.....	.....	.....
Santa Rosa .....	.....	.....	.....	.....
Waton .....	.....	.....	.....	.....
Washington .....	.....	.....	.....	.....
Div. Av. per cent.....	.....	.....	.....	.....
Northeastern Division.				
Alachua .....	.....	.....	.....	.....
Baker .....	.....	.....	.....	.....
Bradford .....	.....	.....	.....	.....
Clay .....	.....	.....	.....	.....
Putnam	100	90	.....	.....
St. Johns .....	.....	.....	.....	.....
Div. Av. per cent.....	100	90	.....	.....
Central Division.				
Citrus .....	.....	.....	.....	.....
Hernando .....	.....	.....	.....	.....
Levy .....	.....	.....	.....	.....
Marion .....	.....	.....	.....	.....
Orange	100	100	.....	.....
Pasco .....	.....	.....	.....	.....
Sumter	100	100	90	90
Volusia	100	100	.....	.....
Div. Av. per cent.....	100	100	90	90
Southern Division.				
Brevard	100	100	80	75
Dade	100	100	95	95
DeSoto	100	100	.....	.....
Hillborough	100	100	.....	.....
Osceola	150	120	150	100
Palm Beach	100	100	100	100
St. Lucie	100	110	100	90
Div. Av. per cent.....	107	104	105	92
State Av. per cent....	102	98	97	91

REPORT OF CONDITION AND PROSPECTIVE YIELD—Continued.

COUNTY.	Orange Trees.		Lemon Trees.	
	Condition.	Prospective Yield.	Condition.	Prospective Yield.
Northern Division.				
Gadsden .....	.....	.....	.....	.....
Hamilton .....	.....	.....	.....	.....
Jefferson .....	.....	.....	.....	.....
Lafayette .....	.....	.....	.....	.....
Leon .....	.....	.....	.....	.....
Liberty	100	100	.....	.....
Madison .....	.....	.....	.....	.....
Suwannee .....	.....	.....	.....	.....
Taylor .....	.....	.....	.....	.....
Wakulla .....	.....	.....	.....	.....
Div. Av. per cent.....	100	100	.....	.....
Western Division.				
Calhoun	100	95	100	100
Escambia .....	.....	.....	.....	.....
Holmes .....	.....	.....	.....	.....
Santa Rosa .....	.....	.....	.....	.....
Waton .....	.....	.....	.....	.....
Washington .....	.....	.....	.....	.....
Div. Av. per cent.....	100	95	100	100
Northeastern Division.				
Alachua	80	80	.....	.....
Baker	100	100	100	100
Bradford	95	75	.....	.....
Clay .....	.....	.....	.....	.....
Putnam	100	90	100	100
St. Johns	100	100	.....	.....
Div. Av. per cent.....	75	80	100	95
Central Division.				
Citrus	100	120	100	95
Hernando	100	100	.....	.....
Levy	100	100	.....	.....
Marion	110	100	110	100
Orange	100	50	.....	.....
Pasco	50	80	.....	.....
Sumter	100	100	90	90
Volusia	80	50	.....	.....
Div. Av. per cent.....	97	88	100	95
Southern Division.				
Brevard	100	85	.....	.....
Dade	100	80	90	75
DeSoto	100	130	85	75
Hillsborough	100	100	100	100
Osceola	100	70	100	70
Palm Beach	80	75	.....	.....
St. Lucie	100	90	.....	.....
Div. Av. per cent.....	97	90	92	80
State Av. per cent...	94	92	98	92

REPORT OF CONDITION AND PROSPECTIVE YIELD—Continued.

COUNTY.	Lime Trees.		Grapefruit Trees.	
	Condition.	Prospective Yield.	Condition.	Prospective Yield.
Northern Division.				
Gadsden .....	.....	.....	.....	.....
Hamilton .....	.....	.....	.....	.....
Jefferson .....	.....	.....	.....	.....
Lafayette .....	.....	.....	.....	.....
Leon .....	.....	.....	.....	.....
Liberty .....	.....	.....	.....	.....
Madison .....	.....	.....	.....	.....
Madison .....	.....	.....	.....	.....
Suwannee .....	.....	.....	.....	.....
Taylor .....	.....	.....	.....	.....
Wakulla .....	.....	.....	.....	.....
Div. Av. per cent.....	.....	.....	.....	.....
Western Division.				
Calhoun .....	.....	.....	100	85
Escambia .....	.....	.....	.....	.....
Holmes .....	.....	.....	.....	.....
Santa Rosa .....	.....	.....	.....	.....
Walton .....	.....	.....	.....	.....
Washington .....	.....	.....	.....	.....
Div. Av. per cent.....	.....	.....	100	85
Northeastern Division.				
Alachua .....	.....	.....	80	80
Baker .....	.....	.....	100	100
Bradford .....	.....	.....	.....	.....
Clay .....	.....	.....	.....	.....
Putnam	100	90	100	90
St. Johns .....	.....	.....	100	100
Div. Av. per cent.....	100	90	85	83
Central Division.				
Citrus	100	95	100	120
Hernando .....	.....	.....	100	100
Levy .....	.....	.....	.....	.....
Marion .....	.....	.....	110	100
Orange .....	.....	.....	100	50
Pasco .....	.....	.....	90	80
Sumter .....	.....	.....	90	90
Volusia .....	.....	.....	80	50
Div. Av. per cent.....	100	85	96	85
Southern Division.				
Brevard .....	.....	.....	90	80
Dade	100	100	100	90
DeSoto	100	90	100	100
Hillsborough	100	100	100	100
Osceola	100	80	120	65
Palm Beach	90	95	85	80
St. Lucie .....	.....	.....	100	60
Div. Av. per cent.....	98	93	90	82
State Av. per cent.....	99	93	97	88

REPORT OF CONDITION AND PROSPECTIVE YIELD—Continued.

COUNTY.	Plums.		Pears.	
	Condition.	Prospective Yield.	Condition.	Prospective Yield.
Northern Division.				
Gadsden .....	.....	.....	.....	.....
Hamilton .....	.....	.....	.....	.....
Jefferson	100	100	20	20
Lafayette .....	.....	.....	.....	.....
Leon	100	100	20	15
Liberty .....	.....	.....	25	70
Madison	80	80	25	25
Suwannee .....	.....	.....	.....	.....
Taylor .....	.....	.....	.....	.....
Wakulla	100	100	50	35
Div. Av. per cent.....	95	95	28	33
Western Division.				
Calhoun	75	80	50	150
Escambia	50	50	25	25
Holmes	70	70	65	40
Santa Rosa .....	.....	.....	.....	.....
Walton	80	80	40	50
Washington	75	75	.....	.....
Div. Av. per cent.....	70	71	45	63
Northeastern Division.				
Alachua .....	.....	.....	.....	.....
Baker	100	100	90	85
Bradford .....	.....	.....	.....	.....
Clay .....	.....	.....	.....	.....
Putnam .....	.....	.....	.....	.....
St. Johns	100	100	100	100
Div. Av. per cent.....	100	100	95	92
Central Division.				
Citrus	100	110	.....	.....
Hernando .....	.....	.....	.....	.....
Levy	100	115	10	10
Marion	100	95	100	90
Orange .....	.....	.....	100	25
Pasco	100	100	.....	.....
Sumter	85	85	75	60
Volusia .....	.....	.....	60	40
Div. Av. per cent.....	97	101	69	45
Southern Division.				
Brevard .....	.....	.....	.....	.....
Dade .....	.....	.....	.....	.....
DeSoto .....	.....	.....	.....	.....
Hillsborough	85	75	.....	.....
Osceola	110	100	150	110
Palm Beach .....	.....	.....	.....	.....
St. Lucie .....	.....	.....	.....	.....
Div. Av. per cent.....	97	87	150	110
State Av. per cent.....	92	91	77	67

REPORT OF CONDITION AND PROSPECTIVE YIELD—Continued.

COUNTY.	Peaches.		Watermelons.	
	Condition.	Prospective Yield.	Condition.	Prospective Yield.
Northern Division.				
Gadsden	125	80	100	95
Hamilton	50	60	75	65
Jefferson	100	100	75	75
Lafayette .....	.....	.....	75	75
Leon	100	45	90	80
Liberty	100	100	100	100
Madison	100	100	90	90
Swannoe .....	.....	.....	90	90
Taylor .....	.....	.....	.....	.....
Wakulla	100	100	50	50
Div. Av. per cent.....	96	84	82	80
Western Division.				
Calhoun	125	85	50	85
Escambia	100	75	75	75
Holmes	80	90	85	80
Santa Rosa	100	100	100	100
Walton	100	60	85	85
Washington	75	75	50	50
Div. Av. per cent.....	97	81	74	79
Northeastern Division.				
Alachua	100	100	50	45
Baker	80	75	85	85
Bradford	65	65	75	70
Clay .....	.....	.....	.....	.....
Putnam	100	90	85	80
St. Johns	100	100	.....	.....
Div. Av. per cent.....	89	86	74	70
Central Division.				
Citrus	100	120	100	100
Hernando	100	100	90	80
Levy	70	80	90	90
Marion	105	100	90	90
Orange	100	100	100	100
Pasco	80	80	100	100
Sumter	75	75	90	90
Volusia	100	50	75	50
Div. Av. per cent.....	91	88	92	88
Southern Division.				
Brevard .....	.....	.....	.....	.....
Dade .....	.....	.....	.....	.....
DeSoto	100	100	100	100
Hillsborough	100	100	50	50
Osceola	120	120	80	90
Palm Beach .....	.....	.....	75	65
St. Lucie .....	.....	.....	.....	.....
Div. Av. per cent.....	107	107	76	76
State Av. per cent.....	96	89	79	79

REPORT OF CONDITION AND PROSPECTIVE YIELD—Continued

COUNTY.	Cantaloupes.		Pineapples.	
	Condition.	Prospective Yield.	Condition.	Prospective Yield.
Northern Division.				
Gadsden	100	90	.....	.....
Hamilton .....	.....	.....	.....	.....
Jefferson	75	75	.....	.....
Lafayette .....	.....	.....	.....	.....
Leon	70	50	.....	.....
Liberty	90	90	.....	.....
Madison	90	90	.....	.....
Suwannee	40	40	.....	.....
Taylor .....	.....	.....	.....	.....
Wakulla .....	.....	.....	.....	.....
Div. Av. per cent.....	78	73	.....	.....
Western Division.				
Calhoun	40	60	.....	.....
Escambia	75	75	.....	.....
Holmes	90	85	.....	.....
Santa Rosa .....	.....	.....	.....	.....
Walton	70	70	.....	.....
Washington .....	.....	.....	.....	.....
Div. Av. per cent.....	62	73	.....	.....
Northeastern Division.				
Alachua	15	15	.....	.....
Baker	80	80	.....	.....
Bradford .....	.....	.....	.....	.....
Clay .....	.....	.....	.....	.....
Putnam	75	75	.....	.....
St. Johns .....	.....	.....	.....	.....
Div. Av. per cent.....	57	57	.....	.....
Central Division.				
Citrus .....	.....	.....	.....	.....
Hernando .....	.....	.....	.....	.....
Levy	50	40	.....	.....
Marion	85	90	.....	.....
Orange .....	.....	.....	.....	.....
Pasco	90	80	.....	.....
Sumter	50	50	.....	.....
Volusia .....	.....	.....	.....	.....
Div. Av. per cent.....	65	65	.....	.....
Southern Division.				
Brevard .....	.....	.....	.....	.....
Dade .....	.....	.....	100	100
DeSoto .....	.....	.....	100	100
Hillsborough	50	50	.....	.....
Osceola	70	70	110	110
Palm Beach .....	.....	.....	95	85
St. Lucie .....	.....	.....	90	75
Div. Av. per cent.....	60	60	81	94
State Av. per cent.....	67	66	81	94

REPORT OF CONDITION AND PROSPECTIVE YIELD—Continued.

COUNTY.	Grapes.	
	Condition.	Prospective Yield.
Northern Division.		
Gadsden .....	.....	.....
Hamilton .....	.....	.....
Jefferson	100	100
Lafayette .....	.....	.....
Leon	100	90
Liberty	100	100
Madison	75	75
Suwannee	80	80
Taylor .....	.....	.....
Wakulla	100	100
Div. Av. per cent.....	93	91
Western Division.		
Calhoun	100	120
Escambia	75	75
Holmes	85	85
Santa Rosa .....	.....	.....
Walton .....	.....	.....
Washington	75	75
Div. Av. per cent.....	80	91
Northeastern Division.		
Alachua	100	100
Baker	50	50
Bradford .....	.....	.....
Clay .....	.....	.....
Putnam .....	.....	.....
St. Johns	100	100
Div. Av. per cent.....	80	80
Central Division.		
Citrus	100	110
Hernando	100	100
Ley	100	110
Marion .....	.....	.....
Orange .....	.....	.....
Pasco	90	90
Sumter	75	75
Volusia	100	100
Div. Av. per cent.....	94	94
Southern Division.		
Brevard .....	.....	.....
Dade .....	.....	.....
DeSoto .....	.....	.....
Hillsborough	100	100
Osceola	120	120
Palm Beach .....	.....	.....
St. Lucie .....	.....	.....
Div. Av. per cent.....	110	110
State Av. per cent.....	93	94

REPORT OF CONDITION AND PROSPECTIVE YIELD—Continued.

COUNTY.	Horses and Mules.	Cattle.	Hogs.	Sheep.
	Condition.	Prospective	Condition.	Prospective
Northern Division.				
Gadsden	80	90	90	100
Hamilton	95	100	40	.....
Jefferson	100	100	90	.....
Lafayette	100	90	85	.....
Leon	90	95	90	95
Liberty	100	100	100	80
Madison	75	110	80	100
Suwannee	90	90	90	.....
Taylor	100	100	80	.....
Wakulla	100	100	50	100
Div. Av. per cent.....	93	98	80	107
Western Division.				
Calhoun	95	95	70	90
Escambia	80	75	50	50
Holmes	100	100	60	100
Santa Rosa	100	100	50	100
Walton	100	100	40	90
Washington	100	100	100	100
Div. Av. per cent.....	96	95	62	88
Northeastern Division.				
Alachua	95	100	75	75
Baker	90	90	65	90
Bradford	100	100	70	.....
Clay	100	100	90	100
Putnam	100	100	100	90
St. Johns .....	.....	.....	.....	.....
Div. Av. per cent.....	97	98	80	80
Central Division.				
Citrus	110	110	110	110
Hernando	100	100	90	.....
Levy	100	80	120	100
Marion	100	105	100	100
Orange	75	75	.....	.....
Pasco	90	90	90	.....
Sumter	100	100	90	75
Volusia	100	100	100	100
Div. Av. per cent.....	98	95	100	97
Southern Division.				
Brevard	90	80	95	.....
Dade	100	100	.....	.....
DeSoto	100	100	60	60
Hillsborough	100	80	75	90
Osceola	100	110	100	95
Palm Beach	105	110	100	.....
St. Lucie	95	90	90	.....
Div. Av. per cent.....	99	94	87	82
State Av. per cent.....	97	96	82	90

REPORT OF CONDITION AND PROSPECTIVE YIELD—Continued.

COUNTY.	Tobacco.	Honey.	Wool.
	Pounds.	Pounds.	Pounds.
Northern Division.			
Gadsden	1,500,000	2,000	.....
Hamilton .....	.....	.....	.....
Jefferson .....	.....	3,000	.....
Lafayette .....	.....	.....	.....
Leon	150,000	.....	.....
Liberty .....	.....	50,400	5,000
Madison	100,000	.....	.....
Suwannee .....	.....	.....	.....
Taylor .....	.....	.....	.....
Wakulla .....	.....	30,000	1,000
Total	1,750,000	94,400	6,000
Western Division.			
Calhoun .....	.....	120,000	.....
Escambia	8,000	20,000	5,000
Holmes .....	.....	45,000	85,000
Santa Rosa .....	.....	20,000	50,000
Walton	3,000	5,000	75,000
Washington .....	.....	20,000	45,000
Total	11,000	230,000	200,000
Northeastern Division.			
Anchusa .....	.....	.....	.....
Baker .....	.....	1,000	1,500
Bradford .....	.....	.....	.....
Clay .....	.....	.....	.....
Putnam .....	.....	.....	.....
St. Johns .....	.....	.....	.....
Total .....	.....	1,000	1,500
Central Division.			
Citrus .....	.....	.....	.....
Hernando .....	.....	.....	.....
Levy .....	.....	3,000	1,500
Marion .....	.....	.....	.....
Orange .....	.....	5,000	.....
Pasco	10,000	.....	.....
Sumter .....	.....	750	900
Volusia .....	.....	75,000	20,000
Total	10,000	83,750	22,400
Southern Division.			
Brevard .....	.....	25,000	.....
Dade .....	.....	.....	.....
DeSoto .....	.....	10,000	1,000
Hillsborough .....	.....	.....	.....
Osceola .....	.....	3,000	25,000
Palm Beach .....	.....	150,000	.....
St. Lucie .....	.....	.....	.....
Total .....	.....	188,000	26,000
State Total	1,771,000	597,150	315,400



PART III.

Fertilizers,
Feed Stuffs, and
Foods and Drugs.

MOLDY, MILDEWED, STOCK FEED.

Caution to Owners of Live Stock.

The attention of owners of live stock—particularly horses and mules—is called to the frequent cases of Blind Staggers, Grass Staggers, Spinal Meningitis, occurring at present in the State, notably in those sections of the State where practically all stock feed is imported.

The cause of this usually fatal disease is attributed to the use of mouldy, mildewed, fermented, damaged grain and feed stuff.

There is no economy in purchasing damaged feed, while there is great danger of the loss of the animals fed thereon.

The State Board of Health, as well as the Agricultural Department, have issued circulars on the subject, calling attention to the danger of using any spoiled, damaged feed stuff, cautioning dealer and consumer that the use of such damaged feed stuff may result in great damage to the owners of live stock in the State—damages far in excess of the value of the damaged feed stuff.

Florida imported from other States in 1911 more than 20,000 tons of mixed feeds, to say nothing of whole grains, oats, corn, barley, wheat and hay.

By far the greatest part of this stock feed was consumed in the Peninsula counties—the vegetable and fruit-growing counties.

It is not economy to pay freights on inferior feed stuff. The profits to dealers and transportation companies are as large on a ton of inferior feed stuff as on a ton of choice material. Hence, in the purchase of feed stuffs—as in the purchase of fertilizer—it is economy to buy only the best and highest grade of material. The actual cost of first-class material, either stock feed or fertilizer, is less than

the cost of inferior material. There is no more economy in purchasing "cheap," low grade feed, than in purchasing "cheap," low grade fertilizers. At the same time there is great danger of loss of valuable live stock, by the use of damaged, moldy feed.

R. E. ROSE,
State Chemist.

STATE OF FLORIDA
DEPARTMENT OF AGRICULTURE

Tallahassee, Fla., June 7, 1912.

CIRCULAR NO. 4.

THE USE OF "PEAT," "PEAT MULL," "PREPARED HUMUS," NOT PERMISSABLE IN STOCK FEEDS.

THE SALE OF MOULDY AND DAMAGED FEED STUFF PROHIBITED BY LAW.

TO MANUFACTURERS, DEALERS AND CONSUMERS OF COMMERCIAL STOCK FEED.

The attention of the Agricultural Department of the State of Florida has been called to the use of Peat Mull (muck, or partly decomposed vegetable matter) as a "filler," or adulterant, for stock feed. The sugar or molasses feeds in particular.

Under the Commercial Feed Stuff Law—Chapter 5452—Laws of Florida, Section 3:—

"Any manufacturer, importer, jobber, agent or seller, who shall sell, offer or expose for sale * * * * or who shall adulterate any feeding stuff with substances such as rice hulls or chaff, peanut shells, corn cobs or other similar material of little or no feeding value, * * * shall be guilty of a violation of the provisions of this Act, and the lot of feeding stuff in question shall be subject to seizure, condemnation and

sale or destruction by the sheriffs under the direction of the Commissioner of Agriculture."

Under the Pure Food and Drug Law, Chapter 6122, Laws of Florida, Section 4:—

"That for the purposes of this Act, an article shall be deemed to be adulterated—

"In the Case of Food—(which includes stock feed) First—If any substance has been mixed or packed with it so as to reduce or lower or injuriously affect its quality or strength.

"Second—If any substance has been substituted wholly or in part for the article."

Under both the "Commercial Stock Feed Laws" and the "Pure Food and Drug Law," the use of "Peat Mull"—"Prepared Humus" (muck, partly decomposed vegetable matter) as an ingredient in stock feed, or as a "filler," is clearly illegal, it being of "little or no feeding value" and tends to "reduce or lower or injuriously affect its quality or strength" and "has been substituted wholly or in part for the article."

Complaint has recently been made to this Department of "mouldy and damaged feeding stuff" being sold and offered for sale in the State.

The attention of both the dealer and the consumer is called to the provisions in Section 3, Chapter 5452, Laws of Florida (The Commercial Stock Feed Law), as follows:

"The sale of mouldy and damaged feeding stuff is prohibited in this State, except on full notice in writing to the purchaser of the nature and extent of the damage."

Several instances have been called to the attention of the Department of the death of live stock, caused pre-

sumably by the use of mouldy, damaged grain and mixed feed stuff.

There have been several outbreaks in recent years of "Blind Staggers" (Spinal Meningitis) among work animals, traced directly to the use of mouldy, damaged feed stuff, containing the specific bacteria (*Micrococcus Meningitis*), the cause of this generally fatal disease.

All mouldy, worm-eaten, damaged grain or feed is harmful to live stock and often contains the specific poison causing "Blind Staggers" or Spinal Meningitis.

The ruling of the Agricultural Department—the Commissioner of Agriculture and the State Chemist—under Section 15, Commercial Stock Feed Law and of the Pure Food and Drug Law, is that "Peat," "Peat Mull," "Prepared Humus" (muck, or partly decomposed vegetable matter) can not be legally used as an ingredient or as a filler in commercial stock feed. That all manufacturers, importers, jobbers, agents or sellers, who manufacture, import, distribute, sell, or offer for sale any stock feed so adulterated with "Peat," "Peat Mull" or "Prepared Humus" will be liable to the penalties of the said laws, and the offending material subject to seizure, sale, or destruction, as the law directs.

Also that "the sale of moldy, damaged feeding stuff is prohibited in this State, except on full notice in writing to the purchaser of the nature and extent of the damage."

Therefore "any manufacturer, importer, jobber, agent or seller, who shall manufacture, sell or offer for sale any such damaged, moldy feed stuff, without due notice in writing to the purchaser of the nature and extent of the damage, will be liable to the penalties of the law, and the moldy, damaged feed stuff subject to seizure, condemnation, and destruction by the sheriff, under the direction of the Commissioner of Agriculture."

The attention of Inspectors of the Chemical Division and Sheriffs is especially called to Section 3, of Chapter

5452, Laws of Florida—"The Commercial Feed Stuff Law"—prohibiting the sale of moldy, damaged feeding stuff, or the adulteration of "Commercial Feed Stuff— with * * * * substances of little or no feeding value or with substances injurious to the health of domestic animals." Also to Section 4, Chapter 6122, Laws of Florida—"The Pure Food and Drug Law"—"in the Case of Foods" (Stock Feeds)—("Second," "Third" and "Seventh" clauses, under the head of adulterations,) and their duties as prescribed in Section 3, Chapter 5452—"The Commercial Stock Feed Law"—and to Section 9 and 12, of Chapter 6122—The Pure Food and Drug Law."

W. A. McRAE,

Commissioner of Agriculture.

R. E. ROSE,

State Chemist.

STATE OF FLORIDA,
DEPARTMENT OF AGRICULTURE.

Tallahassee, Fla., June 19, 1912.

CIRCULAR NO. 5,

AMENDMENT TO

CIRCULAR NO. 3, SEPT. 21, 1911

PURE FOOD AND DRUGS LAW, 1911.

Notice to Manufacturers, Dealers, Brokers and Consumers
of Foods and Drugs in the State of Florida.

**The Provisions of the Pure Food and Drugs Law, Chapter 6122
Approved June 5, 1911, Became Effective August 3, 1911.**

Numerous letters of inquiry having been received from manufacturers, jobbers and dealers in package goods, in the State of Florida, and also from other States, asking an extension of the time allowed to make the necessary changes in labels on goods now on hand, and disposition of such goods now legally in the State, or contracted for for future delivery to the wholesaler, jobber or retailer prior to Aug. 3, 1911, that do not comply with the amended Pure Food and Drugs Law.

A conference was held at the office of the Commissioner of Agriculture in Tallahassee, Florida, June 18, 1912, at which time the various commercial organizations—Wholesale Grocers Associations of Tampa, Jacksonville and elsewhere, retailers, brokers, manufacturers and representative wholesale and retail merchants from other points in the State, were represented.

After due consideration, discussion, and statement of facts, the concensus of opinion was that the law was both reasonable and just—fair to the manufacturer, dealer and consumer; and necessary for the protection of the legitimate manufacturer and dealer in honest goods, and the consumer from the unfair competition of "light weight,

short measure," or diluted and adulterated foods and drugs.

That its provisions should be enforced at the earliest possible time consistent with the protection of the legitimate business of the State, and the protection of those manufacturers, dealers, brokers, wholesale and retail merchants, who have now on hand, legally, under the State and National Laws, stocks of package goods, and contracts for fall delivery of canned goods—the pack of 1911. After due consideration of all the facts, and the interests of all parties concerned—the manufacturer, the dealer, and the consumer, the following ruling has been adopted:

NET WEIGHT AND MEASURE.

1st—The net weight or measure shall be "conspicuously, legibly and correctly" stated on the outside of all packages of grain, flour, meal, butter, lard, cottolene (or similar compound), cooking oils, syrups, and similar staple groceries; that printed "stickers" will be allowed on such goods on hand, to which they are applicable, which will protect the same till sold. See Regulation 29.

2nd—That stocks of canned goods, vegetables, pickles, baking powders, jellies, preserves, etc., in cans, bottles or cartons, on hand August 3, 1911, or contracted for fall delivery, if in full compliance with the State and Federal Laws, and regulations, prior to August 3, 1911, may be disposed of till February 1, 1913. That printed "stickers," showing the "net weight or measure" of such goods, shall be applied before February 1, 1913, and shall protect such goods actually delivered in the State, or bona-fidely contracted for, for future delivery, prior to August 3, 1911, until sold.

This ruling shall apply only to such goods as were legally on hand Aug. 3, 1911 (at which time the law went into effect) and to those contracts as were entered into prior to Aug. 3, 1911, for future delivery to wholesaler, jobber and retail merchant—and shall not apply to any

goods purchased or contracted for subsequently to the date the law went into effect, Aug. 3, 1911. All goods purchased subsequent to Aug. 3, 1911, or contracted for, shall fully comply with the Pure Food and Drugs Law of 1911, in every respect.

NOTE—*Net weight shall be stated in pounds or ounces avoirdupois or fractions thereof. The unit being the pound—all packages containing one or more pounds shall state the weight in pounds. Weights less than a pound shall be stated in ounces—i. e. "1 lb. net," "2 lbs. net," "50 lbs. net," or, "3 lbs. 2 oz. net," "8 lbs. 4 oz. net," "47 lbs. 6 oz. net," " $\frac{1}{2}$ lb. 2 oz. net."*

Net measure shall be stated in U. S. standard gallons, or in quarts, or fluid ounces, (a fluid ounce being one thirty-second of a quart by measure)—i. e. "one gal. net," "One qt. net," "30 fl. oz. net," "7 fl. oz. net," or "3 qts. 8 fl. lbs. 6 oz. net," " $\frac{1}{4}$ lb. 2 oz. net."

To express one pound or more in ounces, or one quart, or more in fluid ounces, will not be permissible.

BENZOATE OF SODA.

3rd—That goods actually on hand Aug. 3, 1911, containing not more than 1-10 of 1 per cent. benzoate of soda, and otherwise complying with the State and Federal Laws, prior to Aug. 3, 1911, may be disposed of till Feb. 1, 1913. That bona fide contracts for such goods existing before Aug. 3, 1911, will be respected, and the material allowed to be sold till Feb. 1, 1913, after which date no goods containing benzoate of soda can be legally sold in the State.

SACCHARIN.

4th—Goods actually on hand in the possession of the trade, within the State Aug. 3, 1911, may be disposed of, *Provided*, the same are plainly labeled "sweetened with saccharin," as now provided by law. The manufacture or importation of any food containing saccharin after Aug. 3, 1911, is not permissible legally, in the State.

DILUTE STANDARD DRUGS.

5th—No "drug sold under or by a name recognized in the United States Pharmacopœia or National Formulary, that differs from the standard of strength, quality, or purity as determined by the test laid down in the United States Pharmacopœia, or National Formulary," can be legally manufactured or imported into the State after Aug. 3, 1911. Such stocks of dilute standard drugs, that may be actually on hand, in the State, Aug. 3, 1911, in the hands of dealers, may be sold till Jan. 1, 1912, *Provided*, They comply fully with the State and Federal Laws and Regulations in force prior to Aug. 3, 1911. After Jan. 1, 1912, dilute standard drugs cannot be legally sold in Florida.

6th—All manufacturers and dealers complying with the letter and spirit of the foregoing rules, will be exempt from prosecution for misbranding or adulteration. Evasion of this regulation will be considered a breach of faith, and the goods subject to seizure, sale or destruction, as provided by Law and Regulations.

7th—It is recommended that the labels of all packages of food received after Aug. 3, 1911, have the necessary "stickers" applied to show "net weight or measure," that they may be in shape to protect such goods till sold. The application of "stickers" after Feb. 1, 1913, will not be legally permissible. All packages of food not having the net weight or measure of the contents thereof, plainly stated on the label by "sticker," as provided, or printed on the label, after Feb. 1, 1913, will be considered in violation of the "Pure Food and Drug Law" and subject to condemnation as the Law directs.

Approved June 20, 1912.

R. E. ROSE,
State Chemist.

W. A. McRAE,
Commissioner of Agriculture.

STATE OF FLORIDA,
DEPARTMENT OF AGRICULTURE.

Tallahassee, Fla., July 9, 1912.

CIRCULAR NO. 6.

BLEACHED OATS AND BARLEY.

**The Sale of Grain, Bleached With Sulphur Fumes
(Sulphur Dioxide) Prohibited by the Florida Law.**

**Notice to Manufacturers, Jobbers, Dealers and
Consumers of Feed Stuff.**

The bleaching of damaged, mildewed, weather or soil stained grain, particularly oats and barley, by the use of Sulphur fumes (Sulphur Dioxide) by which process such damaged, mildewed and stained grains are caused to appear sound and of better quality or grade, is clearly in violation of the Commercial Feed Stuff Law, which prohibits;

"The adulteration of any feeding stuff with foreign, mineral or other substances of little or no feeding value or with substances injurious to the health of domestic animals."

And also in violation of the Pure Food and Drug Law.

"First"—in that "a substance has been mixed or packed with it so as to reduce or lower, or injuriously affect its quality or strength"—(added Sulphur Di-Oxide and water).

"Fourth"—in that it has been coated or stained in a manner whereby damage or inferiority is concealed.

Notice is therefore given to all dealers, jobbers, and consumers that grains bleached with sulphur fumes (Sulphur Di-Oxide) cannot be legally sold in the State of Florida, and that such adulterated bleached grains will be subject to seizure and destruction as the law provides.

Regulation 15-(d) is modified to conform to this order.

Inspectors and Sheriffs are directed to attach such adulterated bleached grains, wherever found, sending samples with full report of all facts, regarding the offering for sale of such bleached grain, to this office.

W. A. McRAE,
Commissioner of Agriculture.
R. E. ROSE,
State Chemist.

SPECIAL SAMPLES.

Florida is the only State in the Union that provides for the "special sample," drawn by the consumer or purchaser, under proper rules and regulations fixed by law—to be sent to the State Laboratory for analysis free of cost. Any citizen in the State who has purchased fertilizers or feeds for their own use may draw a sample of the same, according to law, and have the same analysed by the State Chemist free of cost. And in case of adulteration or deficiency he can, on establishing the fact, receive double the cost of price demanded for the goods.

The law requires the "special samples" to be drawn in a manner to prevent the submission of spurious samples; rules and regulations are published in every Bulletin for drawing and transmitting "special samples."

This special sample has been a most potent factor in enforcing the law and discouraging the sale of adulterated or misbranded goods.

Special samples of foods and drugs may also be sent to the State Laboratory for analysis free of cost, when the sample is properly drawn according to law. The necessary instructions and blanks required to properly draw and transmit samples of "food and drugs" will be sent to any citizen requesting the same.

"THE SPECIAL SAMPLE FURNISHES THE CONSUMER WITH THE SAME PROTECTION DEMANDED BY THE MANUFACTURER, WHO BUYS HIS MATERIALS ONLY UPON GUARANTEE AND PAYS FOR THEM ACCORDING TO ANALYSIS, AND IS PAID FOR BY THE CONSUMER OUT OF THE FUNDS DERIVED FROM THE INSPECTION FEE OF TWENTY-FIVE CENTS PER TON PAID ON FERTILIZERS AND FEEDS SOLD IN THE STATE."

REGULATIONS GOVERNING THE TAKING AND FORWARDING OF FERTILIZER OR COMMERCIAL FEEDING STUFF SAMPLES TO THE COMMISSIONER OF AGRICULTURE.

SECTION 15 OF THE LAWS.

Special samples of Fertilizers or Commercial Feeding Stuffs sent in by purchasers, under Section 9 of the laws, shall be drawn in the presence of two disinterested witnesses, from one or more packages, thoroughly mixed, and a fair sample of the same of not less than eight ounces (one-half pound) shall be placed in a tin can or bottle, sealed and sent by a disinterested party to the Commissioner of Agriculture at Tallahassee. Not less than eight ounces, in a tin can or bottle, will be accepted for analysis. This rule is adopted to secure fair samples of sufficient size to make the necessary determinations and to allow the preservation of a duplicate sample in case of protest or appeal. This duplicate sample will be preserved for two months from the date of certificate of analysis.

The State Chemist is not the proper officer to receive special samples from the purchaser. The propriety of the method of drawing and sending the samples as fixed by law is obvious.

The drawing and sending of special samples in rare cases is in compliance with law. Samples are frequently sent in paper packages or paper boxes, badly packed, and frequently in very small quantity (less than ounce); frequently there are no marks, numbers or other means of identification; the postmark in some instances being absent.

I would call the attention to those who desire to avail themselves of this privilege to Sections 9 and 10 of the law, which are clear and explicit.

Hereafter, strict compliance with above regulations will be required. *The samples must not be less than one-half pound, in a tin can or bottle, sealed and addressed to the Commissioner of Agriculture. The sender's name and address must also be on the package, this rule applying to special samples of fertilizers or commercial feeding stuff.*

A one-pound baking powder tin can, properly cleaned, filled with a fairly drawn, well mixed sample taken from several sacks, is a proper sample. *It should be sealed and addressed to the Commissioner of Agriculture at Tallahassee. The sender's name and address should also be placed on the package. If more than one sample is sent, the samples should be numbered so as to identify them. All this should be done in the presence of the witnesses and the package mailed or expressed by one of the witnesses.*

The tags off the sack should be retained by the sender to compare with the certificate of analysis when received, and not sent to this office. *The date of the drawing and sending the sample, and names of the witnesses, should also be retained by the sender; not sent to this office.*

INSTRUCTIONS TO SHERIFFS.

The attention of Sheriffs of the various counties is called to Section 3 of both laws, defining their duties. This Department expects each Sheriff to assist in maintaining the law and protecting the citizens of the State from the imposition of fraudulent, inferior or deficient Commercial Fertilizers or Commercial Feeding Stuffs.

MARKET PRICES OF CHEMICALS AND FERTILIZING MATERIALS AT FLORIDA SEA PORTS, JULY, 1, 1912.

AMMONIATES.

	Less than ten tons.
Nitrate of Soda, 17% Ammonia.....	\$ 56.00
Sulphate of Ammonia, 20% Ammonia.....	76.00
Dried Blood, 16% Ammonia.....	60.00
Cyanamid, 18% Ammonia.....	60.00
Dry Fish Scrap, 10% Ammonia.....	45.00

POTASHES.

High Grade Sulphate of Potash, 90% Sulphate, 48% K ₂ O	\$ 50.00
Low Grade Sulphate of Potash, 48% Sulphate, 26% K ₂ O	30.00
Muriate of Potash, 80% ; 48% K ₂ O.....	48.00
Nitrate of Potash, imported, 15% Ammonia, 44% Potash K ₂ O.....	120.00
Nitrate of Potash, American, 13% Ammonia, 42% potash K ₂ O.....	94.00
Kainit, Potash, 12% K ₂ O.....	13.00
Canada Hardwood Ashes, in bags, 4% K ₂ O Potash	19.00

AMMONIA AND PHOSPHORIC ACID.

High Grade Tankage, 10% Ammonia, 51½% Phosphoric Acid	\$ 40.00
Tankage, 8% Ammonia, 10% Phosphoric Acid.....	37.00
Low Grade Tankage, 6½% Ammonia, 14% Phosphoric Acid	33.00
Hotel Tankage, 6% Ammonia, 7% Phosphoric Acid	28.00

Sheep Manure, ground, 3% Ammonia.....	24.00
(Figures subject to revision.)	
Imported Fish Guano, 10% Ammonia, 10% Phosphoric Acid	52.00
Pure Fine Steamed Ground Bone, 3% Ammonia, 22% Phosphoric Acid.....	31.00
Raw Bone, 4% Ammonia, 22% Phosphoric Acid.....	35.00
Ground Castor Pomace, 5½% Ammonia, 2% Phosphoric Acid	26.00
Bright Cotton Seed Meal, 7½% Ammonia.....	28.00
Dark Cotton Seed Meal, 4½% Ammonia.....	26.00

PHOSPHORIC ACID.

High Grade Acid Phosphate, 16% Available Phosphoric Acid	\$ 15.00
Acid Phosphate, 14% Available Phosphoric Acid	14.00
Bone Black, 17% Available Phosphoric Acid.....	25.00

MISCELLANEOUS.

High Grade Ground Tobacco Stems, 2% Ammonia, 8% Potash.....	\$ 28.00
High Grade Ground Kentucky Tobacco Stems, 2½% Ammonia, 10% Potash.....	28.00
Tobacco Dust No. 1, 2% Ammonia, 2% Potash.....	24.00
Cut Tobacco Stems, in sacks, 2% Ammonia, 4% Potash	20.00
Dark Tobacco Stems, baled, 2% Ammonia, 4% Potash	19.00
Land Plaster, in sacks.....	12.00

The charges by reputable manufacturers for mixing and bagging any special or regular formula are \$1.50 per ton in excess of above prices.

NEW YORK WHOLESALE PRICES, CURRENT
JULY 1, 1912—FERTILIZER MATERIALS.

AMMONIATES.

Ammonia, sulphate, foreign, prompt.....	\$ 3.40	@	—
futures	3.35	@	—
Ammonia, sulphate, domestic, spot.....	3.35	@	—
futures	3.26	@	3.28
Cyanimide, f.o.b. Baltimore.....	2.50	@	—
f.o.b. Niagara Falls.....	2.35	@	—
Fish scrap, dried, 11% ammonia and 14% bone phosphate, f.o.b. fish works, per unit	2.40	&	10
wet, acidulated, 6% ammonia, 3% phosphoric acid, delivered	2.50	&	35
Ground fish guano, imported, 10 and 11% ammonia and 15-17% bone phos- phate, c. i. f. N. Y., Balto. or Phila.....	3.10	&	10
Tankage, 11% and 15% f.o.b. Chicago.....	2.70	&	10
Tankage, 10% and 20% f.o.b. Chicago, ground	2.30	&	10
Tankage, 9% and 20% f.o.b. Chicago, ground	2.30	&	10
Tankage, concentrated, f.o.b. Chicago 14 to 15%, f.o.b. Chicago.....	2.30	&	10
Garbage, tankage, f.o.b. Chicago.....	9.00	@	—
Sheep manure, concentrated, f.o.b. Chi- cago, per ton.....	10.00	&	—
Hoofmeal, f.o.b. Chicago, per unit.....	2.60	@	2.70
Dried Blood, 12-13% ammonia, f.o.b. New York	2.50	@	—
Chicago	2.50	@	—
Nitrate of Soda, 95% spot per 100 lbs....	2.45	@	2.47½
futures, 95%	2.45	@	2.47½

PHOSPHATES.

Acid Phosphate, per unit.....	50	@	55
Bones, rough, hard, per ton.....	22.50	@	24.00
soft steamed unground.....	21.50	@	22.00
ground, steamed, 1¼% ammonia and 60% bone phosphate.....	20.00	@	21.00
ditto, 3 and 50%.....	23.50	@	24.00
raw ground, 4% ammonia and 50% bone phosphate.....	28.50	@	30.00
South Carolina phosphate rock, kiln dried, f.o.b. Ashley River.....	3.50	@	3.75
Florida land pebble phosphate rock, 68%, f.o.b. Port Tampa, Fla.....	3.70	@	3.80
Florida high grade phosphate hard rock, 77%, f.o.b. Florida ports.....	5.75	@	6.25
Tennessee phosphate rock, f.o.b. Mt. Pleasant, domestic, 78 to 80%, per ton	5.00	@	5.50
75% guaranteed	4.75	@	4.50
68 to 72%.....	4.25	@	4.50

POTASHES.

Muriate of potash, 80-85%, basis 80%, in bags	38.55	@	—
Muriate of potash, min. 95%, basis 80%, in bags	40.15	@	—
Muriate of potash, min. 98%, basis 80%, in bags	41.00	@	—
Sulphate of potash, 90-95%, basis 90%, in bags	46.80	@	—
Double manure salt, 48-53%, basis 48%, in bags	24.95	@	—
Manure salt, min. 20% K ₂ O, in bulk.....	13.50	@	—
Hardsalt, min. 16% K ₂ O, in bulk.....	10.85	@	—
Kainit, min. 12.4% K ₂ O, in bulk.....	8.45	@	—

STATE VALUATIONS.

For Available and Insoluble Phosphoric Acid, Ammonia and Potash, for the Season of 1912.

Available Phosphoric Acid.....	5c. a pound
Insoluble Phosphoric Acid.....	1c. a pound
Ammonia (or its equivalent in nitrogen).....	18½c. a pound
Potash (as actual potash, K ₂ O).....	5½c. a pound

If calculated by units—

Available Phosphoric Acid.....	\$1.00 per unit
Insoluble Phosphoric Acid.....	20c per unit
Ammonia (or its equivalent in nitrogen).....	3.65 per unit
Potash	1.10 per unit

With a uniform allowance of \$1.50 per ton for mixing and bagging.

A unit is twenty pounds, or 1 per cent., in a ton. We find this to be the easiest and quickest method for calculating the value of fertilizer. To illustrate this, take for example a fertilizer which analyzes as follows:

Available Phosphoric Acid.....	6.22 per cent.x\$1.00—	\$ 6.22
Insoluble Phosphoric Acid.....	1.50 per cent.x .20—	.30
Ammonia	3.42 per cent.x 3.65—	12.48
Potash	7.23 per cent.x 1.10—	7.95
Mixing and Bagging.....	—	1.50

Commercial value at sea ports.....\$28.45

Or a fertilizer analyzing as follows:

Available Phosphoric Acid.....	8 per cent.x\$1.00—	\$ 8.00
Ammonia	2 per cent.x 3.65—	7.30
Potash	2 per cent.x 1.10—	2.20
Mixing and Bagging.....	—	1.50

Commercial value at sea ports.....\$19.00

The above valuations are for cash for materials delivered at Florida seaports, and they can be bought in one-ton lots at these prices at the date of issuing this Bulletin. Where fertilizers are bought at interior points, the additional freight to that point must be added.

The valuations and market prices in preceding illustrations are based on market prices for one-ton lots.

STATE VALUES.

It is not intended by the "State valuation" to fix the price or commercial value of a given brand. The "State values" are the market prices for the various approved chemicals and materials used in mixing or manufacturing commercial fertilizers or commercial stock feed at the date of issuing a Bulletin, or the opening of the "season." They may, but seldom do, vary from the market prices, and are made liberal to meet any slight advance or decline.

They are compiled from price lists and commercial reports by reputable dealers and journals.

The question is frequently asked: "What is 'Smith's Fruit and Vine' worth per ton?" Such a question cannot be answered categorically. By analysis, the ammonia, available phosphoric acid and potash may be determined, and the inquirer informed what the cost of the necessary material to compound a ton of goods similar to "Smith's Fruit and Vine" would be, using none but accepted and well known materials of the best quality.

State values do not consider "trade secrets," loss on bad bills, cost of advertisements and expenses of collections. The "State value" is simply that price at which the various ingredients necessary to use in compounding a fertilizer or feed, can be *purchased for cash in ton lots at Florida seaports.*

These price lists are published in this report, with the "State values" for 1912 deducted therefrom.

COMPOSITION OF FERTILIZER MATERIALS.
NITROGENOUS MATERIALS.

	POUNDS PER HUNDRED		
	Ammonia	Phosphoric Acid	Potash
Nitrate of Soda.....	17 to 19	.....	.....
Sulphate of Ammonia...	21 to 24	.....	.....
Dried Blood	12 to 17	.....	.....
Concentrated Tankage...	12 to 15	1 to 2	.....
Bone Tankage	6 to 9	10 to 15	.....
Dried Fish Scrap.....	8 to 11	6 to 8	.....
Cotton Seed Meal.....	7 to 10	2 to 3	1½ to 2
Hoof Meal	13 to 17	1½ to 2	.....

PHOSPHATE MATERIALS.

	POUNDS PER HUNDRED		
	Ammonia	Available Phos. Acid	Insoluble Phosphoric Acid
Florida Pebble Phosphate.....	.....	.....	26 to 32
Florida Rock Phosphate..	.....	.....	33 to 35
Florida Super Phosphate.....	.....	14 to 45	1 to 35
Ground Bone	3 to 6	5 to 8	15 to 17
Steamed Bone	3 to 4	6 to 9	10 to 20
Dissolved Bone	2 to 4	13 to 15	2 to 3

POTASH MATERIALS AND FARM MANURES.

	POUNDS PER HUNDRED			
	Actual Potash	Ammonia	Phosphoric Acid	Lime
Muriate of Potash.....	50	.....	.....	.....
Sulphate of Potash....	48 to 52	.....	.....	.....
Carbonate of Potash...	55 to 60	.....	.....	.....
Nitrate of Potash....	40 to 44	12 to 16	.....	.....
Double Sul.of Pot.&Mag	26 to 30	.....	.....	.....
Kalnit	12 to 12½	.....	.....	.....
Sylvinit	16 to 20	.....	.....	.....
Cotton Seed Hull Ashes	15 to 30	.....	7 to 9	10
Wood Ashes, unleached	2 to 8	.....	1 to 2	.....
Wood Ashes, leached..	1 to 2	.....	1 to 1½	35 to 40
Tobacco Stems	5 to 8	2 to 4	.....	3½
Cow Manure (fresh)...	0.40	0 to 0.41	0.16	0.31
Horse Manure (fresh)..	0.53	0 to 0.60	0.28	0.31
Sheep Manure (fresh)..	0.67	1.00	0.19	0.33
Hog Manure (fresh)...	0.60	0.55	0.19	0.08
Hen Dung (fresh).....	0.85	2.07	1.54	0.24
Mixed Stable Manure..	0.63	0.76	0.26	0.70

FACTORS FOR CONVERSION.

To convert—

Ammonia into nitrogen, multiply by.....	0.824
Ammonia into protein, multiply by.....	5.15
Nitrogen into ammonia, multiply by.....	1.214
Nitrate of soda into nitrogen, multiply by.....	0.1647
Nitrogen into protein, multiply by.....	6.25
Bone phosphate into phosphoric acid, multiply by	0.458
Muriate of potash into actual potash, multiply by	0.632
Actual potash into muriate of potash, multiply by	1.583
Sulphate of potash into actual potash, multiply by	0.41
Actual potash into sulphate of potash, multiply by	1.85
Nitrate of potash into nitrogen, multiply by.....	0.139
Carbonate of potash into actual potash, multiply by	0.681
Actual potash into carbonate of potash, multiply by	1.466
Chlorine, in "kainit," multiply potash (K_2O) by....	2.33

For instance, you buy 95 per cent. of nitrate of soda and want to know how much nitrogen is in it, multiply 95 per cent. by 0.1647, you will get 15.65 per cent. nitrogen; you want to know how much ammonia this nitrogen is equivalent to, then multiply 15.65 per cent. by 1.214 and you get 18.99 per cent., the equivalent in ammonia.

Or, to convert 90 per cent. carbonate of potash into actual potash (K_2O), multiply 90 by 0.681, equals 61.29 per cent. actual potash (K_2O).

COPIES OF THE FERTILIZER, STOCK FEED AND
PURE FOOD AND DRUG LAWS.

Copies of the Laws, Regulations and Standards will be furnished by the Commissioner of Agriculture on application.

AVERAGE COMPOSITION OF COMMERCIAL
FEED STUFFS.

NAME OF FEED.	Crude Fiber.	Protein.	Starch and Sugar.	Fat.	Ash.
Bright Cot'n Seed Meal	9.35	39.70	28.60	7.80	5.80
Dark Cotton Seed Meal	20.00	22.90	37.10	5.50	5.00
Linseed Meal, old process	7.50	35.70	36.00	7.20	5.30
Linseed Meal, new process	8.40	36.10	36.70	3.60	5.20
Wheat Bran	9.00	15.40	53.90	4.00	5.80
Wheat Middlings	5.40	15.40	59.40	4.10	3.20
Mixed Feed (Wheat)	7.80	16.90	54.40	4.80	5.30
Ship Stuff (Wheat)	5.60	14.60	59.80	5.00	3.70
Corn (grain)	2.10	10.50	69.60	5.40	1.50
Corn Meal	1.90	9.70	68.70	3.80	1.40
Corn Cobs	30.10	2.40	54.90	0.50	1.40
Corn and Cob Meal	6.60	8.50	64.80	3.50	1.50
Hominy Feed	4.05	10.50	65.30	7.85	2.55
Corn and Oats, equal parts	5.70	10.50	64.20	4.40	2.20
Corn and Oats Feeds	12.10	8.70	61.70	3.70	3.20
Barley (grain)	2.70	12.40	69.80	1.80	2.40
Barley and Oats, equal parts	6.10	12.10	64.75	3.40	2.70

AVERAGE COMPOSITION OF COMMERCIAL
FEED STUFFS—(Continued.)

NAME OF FEED.	Crude Fiber.	Protein.	Starch and Sugar.	Fat.	Ash.
Oats (grain)	9.50	11.80	59.70	5.00	3.00
Oat Feed	6.10	16.00	54.90	7.10	3.70
Rice (grain)	0.20	7.40	79.20	0.40	0.40
Rice Bran	9.50	12.10	49.90	8.80	10.00
Rice Hulls	35.70	3.60	38.60	0.70	13.20
Rye (grain)	1.70	10.60	72.50	1.70	1.90
Rye Bran	3.50	14.70	63.80	2.80	3.60
Wheat (grain)	1.80	11.90	71.90	2.10	1.80
Cow Pea	4.10	20.80	55.70	1.40	3.20
Cow Pea Hay	20.10	16.60	42.20	2.20	7.50
Velvet Beans and Hulls	9.20	19.70	51.30	4.50	3.30
Velvet Bean Hay	29.70	14.70	41.00	1.70	5.70
Beggarweed Hay	24.70	21.70	30.20	2.30	10.90
Japanese Kudzu Hay	32.14	17.43	30.20	1.67	6.87
Cotton Seed (whole)	23.20	18.40	24.70	19.90	3.50
Cotton Seed Hulls	44.40	4.00	36.60	2.00	2.60
Gluten Feed	5.30	24.00	51.20	10.60	1.10
Beef Scrap		44.70	3.28	14.75	29.20

COMMERCIAL STATE VALUES OF FEED STUFFS FOR 1912.

For the season of 1912 the following "State values" are fixed as a guide to purchasers.

These values are based on the current prices of corn, which has been chosen as a standard in fixing the commercial values; the price of corn, to a large extent, governing the price of other feeds, pork, beef, etc.:

COMMERCIAL VALUES OF FEED STUFFS FOR 1912.

Protein, 3.53c per pound.....	70.6c per unit
Starch and Sugar, 1.56c. per pound.....	31.3c per unit
Fats, 3.52c. per pound.....	70.5c per unit

A unit being 20 pounds (1%) of a ton.

Indian corn being the standard @ \$33.00 per ton.

To find the commercial State value, multiply the percentages by the price per unit.

EXAMPLE No. 1.

HOMINY FEED—

Protein	10.50 x	70.6c,	\$ 7.41
Starch and Sugar.....	65.30 x	31.3c,	20.43
Fat	7.85 x	70.5c,	5.53
State value per ton.....			\$33.37

EXAMPLE No. 2.

Protein	10.50 x	70.6c,	\$ 7.41
Starch and Sugar	69.60 x	31.3c,	21.78
Fat	5.40 x	70.5c,	3.81
State value per ton.....			\$33.00

FORMULAS.

There are frequent inquiries for formulas for various crops, and there are hundreds of such formulas published; and, while there are hundreds of "brands," the variations in these grades are surprisingly little. Dozens of "brands" put up by the same manufacturer are identical goods, the only difference being in the name printed on the tag or sack. A good general formula for field or garden might be called a "vegetable formula," and would have the following: Ammonia, $3\frac{1}{2}\%$; available phosphoric acid, $6\frac{1}{2}\%$; and potash, $7\frac{1}{4}\%$. The following formulas will furnish the necessary plant food in about the above proportion. I have purposely avoided the use of any fraction of 100 pounds in these formulas to simplify the values are taken from price lists furnished by the trade, January 1, 1912.

For cotton, corn, sweet potatoes and vegetables: Ammonia, $3\frac{1}{2}\%$; available phosphoric acid, $6\frac{1}{2}\%$; potash, $7\frac{1}{4}\%$.

(A) "VEGETABLE."

No. 1.

	Per Cent.
900 pounds of Cotton Seed Meal ($7\frac{1}{2}$ - $2\frac{1}{2}$ - $1\frac{1}{2}$).....	3.25 Ammonia
300 pounds of Acid Phosphate (16 per cent)....	6.50 Available
300 pounds of Muriate or (Sulphate) (50 per cent)	7.50 Potash
<hr/>	
2,000	State value mixed and bagged.....\$28.11
	Plant Food per ton..... 343 pounds

No. 2.

	Per Cent.
1,000 lbs of Blood and Bone (61-8).....	3.25 Ammonia
400 lbs of Acid Phosphate (16 per cent)....	7.00 Available
600 lbs of Low Grade Sulp. Pot. (26 per cent)	7.30 Potash
<hr/>	
2,000	State value mixed and bagged.....\$29.94
	Plant Food per ton..... 360 pounds

No. 3.

	Per Cent.
300 lbs of Dried Blood (16 per cent).....	} 3.25 Ammonia 8.00 Available 7.80 Potash
100 lbs of Nitrate of Soda (17 per cent).....	
1,000 lbs of Acid Phosphate (16 per cent).....	
600 lbs of Low Grade Sulph. Pot. (26 per cent)	

2,000

State value mixed and bagged.....\$30.04
Plant Food per ton..... 581 pounds

(B) "FRUIT AND VINE."

No. 1.

Fruits, Melons, Strawberries, Irish Potatoes: Ammonia, 4 per cent., Available Phosphoric Acid 7 per cent., Potash 10 per cent.

	Per Cent.
1,900 lbs of Blood and Bone (6½-8).....	} 8 Available 4 Ammonia 10 Potash
400 lbs of Muriate of Potash (50 per cent)	
500 lbs of Acid Phosphate (16 per cent)...	
100 lbs of Nitrate of Soda (17 per cent)...	

2,000

State value mixed and bagged.....\$35.22
Plant Food per ton..... 440 pounds

No. 2.

	Per Cent.
500 lbs of Castor Pomace (6-8 per cent).....	} 1.00 Ammonia 7.50 Available 3.60 Potash
200 lbs of Sulph. of Am. (25 per cent).....	
900 lbs of Acid Phosphate (16 per cent).....	
400 lbs of Sulph. of Pot. (48 per cent).....	

2,000

State value mixed and bagged.....\$34.48
Plant Food per ton..... 426 pounds

No. 3.

	Per Cent.
500 lbs of Cotton Seed Meal (7½-2½-1½).....	} 3.97 Ammonia 8.30 Available 3.97 Potash
100 lbs of Nitrate of Soda (17 per cent).....	
100 lbs of Sulph. of Am. (25 per cent).....	
900 lbs of Acid Phosphate (16 per cent).....	
400 lbs of Sulph. of Potash (48 per cent).....	

2,000

State value mixed and bagged.....\$34.27
Plant Food per ton..... 425 pounds

DEPARTMENT OF AGRICULTURE—DIVISION OF CHEMISTRY.

FERTILIZER SECTION.

R. E. ROSE, State Chemist. SPECIAL FERTILIZER ANALYSES, 1912. L. HEIMBURGER, Asst. Chemist.

Samples taken by Purchaser Under Section 8, Act Approved May 22, 1901.

NAME, OR BRAND.	Laboratory Number.	Moisture.	Phosphoric Acid.			Ammonia.	Potash (K ₂ O.)	BY WHOM SENT.
			Available.	Insoluble.	Total.			
Fertilizer	2783	6.22	6.55	1.94	10.45	1.35	19.94	Mrs. A. F. Marshall, Acton.
Fertilizer	2788		9.96	1.69	7.59	4.22	7.15	C. C. Masely, Covina.
Fertilizer No. 1	2789	12.79	19.32	9.72	19.94			J. H. Plant, Pace.
Muriate of Potash, No. 2	2790						22.72	J. H. Plant, Pace.
Tobacco	2791					4.64	2.22	J. B. Warren, Manteca.
Acid Phosphate No. 1	2792		18.22	1.43	17.67			A. N. Jones, Jay.
Fertilizer No. 1	2793	10.79	9.89	2.17	12.96	2.59	1.25	A. N. Jones, Jay.
Fertilizer No. 1	2794	12.75	8.12	1.68	9.81	2.14	2.22	W. J. Wilkerson, Glendale.
Fertilizer No. 1	2795	12.49	10.45	1.43	11.83	2.16	1.80	J. Wilkerson, Glendale.
Fertilizer	2796	15.95	11.67	1.14	12.21	1.68	1.89	L. Adams, Glendale.
Fertilizer	2797	9.51	5.65	1.14	6.79	4.41	8.61	A. L. Hearn, Goulds.
Muriate of Potash	2798						22.94	W. F. Jones, Pace.
Fertilizer	2799	10.18	8.28	1.41	9.79	2.29	2.64	F. Jones, Pace.
Fertilizer	2800	9.59	4.52	0.71	5.24	4.62	7.64	C. L. Joyner, St. Andrews.
Nitrate Soda No. 1	2801					15.12		T. Donnelly, Indianapolis.
Fertilizer No. 2	2802	9.42	9.93	2.29	14.22	2.64	4.62	T. Donnelly, Indianapolis.
Fertilizer	2803		7.84	2.32	10.16	2.27	2.68	A. L. Wilson Co., Quincy.

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Fertilizer	2894	7.65	9.59	8.24	1.61	4.87	A. P. Thomas, Cottontale.	
Fertilizer	2895	8.82	1.01	7.62	2.74	5.28	Johanna Houghland, Astor Park.	
Fertilizer No. 1	2896	22.16	9.42	3.49	12.82	2.16	L. C. Bowman, Mt. David.	
Acid Phosphate No. 2	2897	19.61	2.42	18.09	.....	.....	L. C. Bowman, Mt. David.	
Fertilizer	2898	22.26	11.78	1.04	12.82	2.72	1.82	Nash Allen, Gracoville.
Guano No. 1	2899	26.27	15.63	3.19	16.77	7.75	1.26	M. W. Carruth, Tampa.
Guano No. 2	2916	22.28	13.69	4.22	17.21	2.64	1.22	M. W. Carruth, Tampa.
Fertilizer	2811	.....	26.67	1.66	11.75	2.22	2.22	G. W. Kibben, Galliver.
Fertilizer	2812	.....	9.19	2.22	12.41	1.69	2.24	G. W. Reeves, Galliver.
Fertilizer	2813	12.99	9.15	9.44	9.62	2.12	2.71	L. P. Kimbro, Galliver.
Fertilizer	2814	12.91	8.79	9.44	9.19	2.56	2.68	J. L. Kimbro, Galliver.
Nitrate Soda	2815	.....	.....	.....	.....	28.74	.....	J. L. Kimbro, Galliver.
Fertilizer	2816	10.75	10.68	1.72	12.82	1.88	1.82	J. W. Kehala, Jay.
Fertilizer	2817	13.22	8.99	2.62	12.52	2.01	.....	Howard & Kennedy, Terra Cola.
Fertilizer	2818	1.94	6.22	2.22	9.48	4.69	7.18	R. B. Brown, Sanford.
Fertilizer No. 1	2819	.....	7.79	9.61	8.49	2.22	4.17	W. M. Hawkins, Berrydale.
Fertilizer	2820	.....	6.92	6.22	7.24	2.26	2.42	D. D. Martin, Okahite.
Fertilizer No. 1	2821	12.26	11.52	1.92	12.46	2.01	1.61	J. W. Kelly, Okahite.
Fertilizer No. 1	2822	12.45	9.88	1.94	19.92	2.28	1.24	J. W. Kelly, Okahite.
Fertilizer	2823	12.87	9.69	1.91	15.81	2.71	1.72	Charlie Foster, Okahite.
Fertilizer	2824	12.26	8.41	1.11	9.52	1.29	1.57	A. J. Glover, Milton.
Guano	2825	.....	12.72	2.67	17.28	6.51	1.42	H. E. Gunn, Wall Springs.
Acid Phosphate	2826	.....	16.57	0.62	17.44	.....	.....	R. C. Collins, Milton.
Fertilizer No. 1	2827	9.12	4.77	2.52	6.86	4.62	6.92	H. B. Hampton, Tampa.
Fertilizer No. 2	2828	9.25	7.79	2.41	11.29	4.58	10.26	H. B. Hampton, Tampa.
Fertilizer No. 1	2829	1.99	7.42	1.66	9.67	2.46	12.74	H. B. Hampton, Tampa.
Sea Fowl Guano No. 1	2830	.....	14.99	4.29	21.29	4.72	1.62	L. Robert Wood, Tampa.
Sea Fowl Guano No. 2	2831	.....	14.16	4.49	18.65	5.17	1.18	L. Robert Wood, Tampa.
Acid Phosphate	2832	.....	16.96	1.92	18.92	.....	.....	J. M. Hamilton, Milton.
Fertilizer No. 1	2833	22.14	6.61	9.88	7.59	4.17	4.25	L. J. Clark, Greenboro.
Fertilizer	2834	7.17	7.94	1.24	19.28	4.29	7.82	Drew Williams, Milledgeville.
Fertilizer No. 1	2835	9.29	4.69	2.22	8.97	2.34	2.22	W. C. Crossmart, Bechtou, Ga.

SPECIAL FERTILIZER ANALYSES, 1913—Continued.

NAME, OR BRAND.	Laboratory Number.	Moisture.	Phosphoric Acid.			Ammonia.	Potash (K ₂ O).	BY WHOM SENT.
			Available.	Insoluble.	Total.			
Fertilizer No. 2.....	1836	10.75	8.45	1.25	9.74	2.16	1.65	W. J. Cassette, Beaufort, Ga.
Fertilizer	1837	.....	8.91	0.41	9.35	1.85	1.65	Frank Powell, Garden City.
Sea-Bird Guano	1838	.....	14.35	0.64	15.00	0.55	1.65	L. Perouse & Co., Tarpon Springs.
Tobacco	1839	.....	.....	.....	.....	0.48	.....	United Grocery Co., Jacksonville.

DEPARTMENT OF AGRICULTURE—DIVISION OF CHEMISTRY.

FERTILIZER SECTION.

R. E. ROSE, State Chemist. OFFICIAL FERTILIZER ANALYSES, 1912. I. HEIMBÜCKER, Asst. Chemist.

Samples Taken by State Chemist Under Sections 1 and 2, Act Approved May 22, 1905.

NAME OR BRAND.	Laboratory Number.		Moisture.	Phosphoric Acid.			Ammonia.	Potash (K ₂ O.)	BY WHOM and WHERE MANUFACTURED.
				Available.	Insoluble.	Total.			
No. 1 Peruvian and Fish Guano Mixture	1792	Guarant'd Analysis	12.00	5.00	1.50	.....	4.00	5.00	Fla. Ferts. Co., Branch, Gainesville, Fla.
		Official Analysis...	2.18	5.27	1.57	5.84	4.30	4.12	
Armour's Original No. 1 Mixture	1793	Guarant'd Analysis	10.00	5.00	1.00	.....	5.00	5.00	Armour Ferts. Works, Jacksonville, Fla.
		Official Analysis...	8.00	5.23	0.53	5.76	4.35	5.68	
Bean Fertilizer	1794	Guarant'd Analysis	10.00	5.00	1.00	.....	5.00	5.00	Armour Ferts. Works, Jacksonville, Fla.
		Official Analysis...	8.45	5.25	0.74	6.02	5.18	5.55	
Armour's Irish Potato Special	1795	Guarant'd Analysis	10.00	5.50	1.00	.....	2.50	5.50	Armour Ferts. Works, Jacksonville, Fla.
		Official Analysis...	8.50	6.00	0.12	6.62	2.44	7.77	
Armour's Cucumber Special	1796	Guarant'd Analysis	10.00	5.00	1.00	.....	2.00	7.00	Armour Ferts. Works, Jacksonville, Fla.
		Official Analysis...	8.80	5.24	1.20	6.53	2.54	7.55	
Armour's Practical Truckee	1797	Guarant'd Analysis	10.00	6.00	2.00	.....	3.00	10.00	Armour Ferts. Works, Jacksonville, Fla.
		Official Analysis...	8.24	5.51	2.50	6.24	2.19	9.60	

OFFICIAL FERTILIZER ANALYSES, 1912—Continued.

NAME OR BRAND	Laboratory Number		Moisture	Phosphoric Acid			Ammonia	Potash (K ₂ O)	BY WHOM and WHERE MANUFACTURED
				Available	Insoluble	Total			
Sugar Cane Special.....	1795	Guaran't'd Analysis	10.00	1.00	1.00	.....	4.00	6.00	American-Agrical Chem. Co., Jacksonville, Fla.
		Official Analysis...	7.45	0.75	1.00	4.75	4.45	7.50	
Bradley Orange Tree.....	1799	Guaran't'd Analysis	10.00	0.00	1.00	.....	3.50	5.00	American-Agrical Chem. Co., Jacksonville, Fla.
		Official Analysis...	7.10	7.07	1.01	8.30	2.50	4.61	
Bradley Special Fruit and Vine	1800	Guaran't'd Analysis	10.00	0.00	1.00	.....	4.25	10.00	American-Agrical Chem. Co., Jacksonville, Fla.
		Official Analysis...	6.70	4.00	1.20	7.20	4.00	10.00	
Bradley Florida Vegetable.	1801	Guaran't'd Analysis	10.00	0.00	1.00	.....	4.00	5.00	American-Agrical Chem. Co., Jacksonville, Fla.
		Official Analysis...	5.72	4.21	0.61	6.08	4.71	5.50	
Bradley Nursery Stock....	1802	Guaran't'd Analysis	10.00	0.00	1.00	.....	4.50	2.00	American-Agrical Chem. Co., Jacksonville, Fla.
		Official Analysis...	11.25	0.75	1.02	10.10	4.12	3.25	
H. G. Champion Citrus Compound	1803	Guaran't'd Analysis	10.00	0.00	1.00	.....	1.00	14.00	Virginia-Carolina Chem. Co., Savannah, Ga.
		Official Analysis...	2.17	0.04	1.01	7.00	2.42	14.21	
Dixie Trucker Fertilizer..	1804	Guaran't'd Analysis	8.00	0.00	1.00	.....	4.00	3.00	Virginia-Carolina Chem. Co., Sanford, Fla.
		Official Analysis...	7.45	0.75	1.02	5.00	4.74	7.24	

No. 1 Lettuce & Celery Grower	1806	Guarant'd Analysis Official Analysis...	8.00 7.11	5.00 3.85	1.00 1.18	..... 7.04	5.00 5.45	1.00 1.19	Virginia-Carolina Chem. Co., Sanford, Fla.
Virginia-Carolina Tip Top Tomato Truckee	1806	Guarant'd Analysis Official Analysis...	8.00 7.39	7.00 7.44	1.00 1.15	..... 8.79	4.00 4.84	1.00 1.18	Virginia-Carolina Chem. Co., Sanford, Fla.
Southern States Special Vegetable Grower	1807	Guarant'd Analysis Official Analysis...	8.00 7.82	6.00 6.52	1.00 1.28	..... 8.21	4.00 4.36	1.00 1.18	Virginia-Carolina Chem. Co., Sanford, Fla.
Virginia-Carolina Special No. 5	1808	Guarant'd Analysis Official Analysis...	8.00 7.45	5.00 3.46	1.00 1.34	..... 7.64	5.00 4.44	1.00 1.12	Virginia-Carolina Chem. Co., Sanford, Fla.
The Mapes Fruit and Vine Manure	1809	Guarant'd Analysis Official Analysis...	10.00 9.25	5.00 4.14	2.00 2.52	..... 7.78	2.00 2.82	10.70 8.84	The Mapes F. & P. Co. and Co., New York.
The Mapes Orange Tree Manure	1810	Guarant'd Analysis Official Analysis...	10.00 11.30	6.00 5.17	2.00 2.58	..... 8.75	4.00 4.36	1.00 1.20	The Mapes F. & P. Co. and Co., New York.
The Mapes Vegetable Ma- nure	1811	Guarant'd Analysis Official Analysis...	12.00 8.22	6.00 4.57	2.00 2.28	..... 7.93	3.00 3.97	4.00 4.51	The Mapes F. & P. Co. and Co., New York.
Farr's Celery Special.....	1812	Guarant'd Analysis Official Analysis...	10.00 6.18	5.00 4.41	..... 2.56	..... 6.92	6.00 5.72	5.00 5.11	Independent Ferta. Co., Jacksonville, Fla.
Favorite Early Truckee....	1813	Guarant'd Analysis Official Analysis...	10.00 5.34	6.00 6.00	2.00 1.70	..... 7.76	2.00 3.28	10.00 10.12	Independent Ferta. Co., Jacksonville, Fla.
Johnson Special Mixture....	1814	Guarant'd Analysis Official Analysis...	..... 7.44	5.00 5.97	..... 6.14	..... 8.21	2.75 2.45	1.50 6.12	Ocala Fertilizer Co., Ocala, Fla.
'Superior' Bean Fertilizer.	1815	Guarant'd Analysis Official Analysis...	10.00 5.58	5.00 5.42	1.00 0.30	..... 5.72	5.00 4.45	5.00 5.12	Ocala Fertilizer Co., Ocala, Fla.

DEPARTMENT OF AGRICULTURE—DIVISION OF CHEMISTRY.

FEEDING STUFF SECTION.

H. E. ROSE, State Chemist. SPECIAL FEEDING STUFF ANALYSES, 1913. E. PECK GREENE, Asst. Chemist.

Samples Taken by Purchaser Under Section 9, Act Approved May 24, 1904.

NAME, OR BRAND.	Laboratory Moisture,	Fibers,	Proteins,	Starch, Free Fat, Sugar and Glycerin,	Pal.	Ash.	BY WHOM SENT.
Cotton Seed Meal.....	213		25.85				Sam Woodberry, Quincy, Fla.
Cotton Seed Meal.....	214		26.82				J. W. Plant, Pace, Fla.
Cotton Seed Meal.....	217	9.57	43.70	24.52	7.96	3.27	David Mitchell, Milton, Fla.
Cotton Seed Meal.....	218		31.74				C. C. Linder, Marianna, Fla.
Cotton Seed Meal.....	219		28.73				L. M. Green, Quincy, Fla.
Cotton Seed Meal.....	220		28.36				J. L. Green, Quincy, Fla.
Cotton Seed Meal.....	221		28.34				S. C. Collins, Milton, Fla.
Cotton Seed Meal.....	222		27.85				J. M. Hamilton, Milton, Fla.
Corpa Feed.....	223	12.95	16.59	25.53	2.82	2.52	The A. L. Wilson Co., Quincy, Fla.
Horse Manure.....	224	24.12	9.45	45.23	4.39	7.93	R. E. Rose, Tallahassee, Fla.
Palm Seed.....	225	15.22	9.92	9.29	23.29	1.29	J. A. Jefford, Havana, Cuba.
Mixed Feed.....	226	12.97	15.82	25.71	4.16	7.12	Consolidated Grocery Co., Tampa, Fla.
Scratch Feed.....	228	2.37	11.14	52.57	2.80	5.54	Chas. L. West, Orinda, Fla.

DEPARTMENT OF AGRICULTURE—DIVISION OF CHEMISTRY.

FEEDING STUFF SECTION.

B. E. ROSE, State Chemist. OFFICIAL FEEDING STUFF ANALYSES. 1912. E. PECK GREENE, Asst. Chemist.
 Samples Taken by State Chemist and State Inspector Under Sections 1, 2 and 12, Act Approved May 28, 1905.

NAME, OR BRAND.	Laboratory No. (agent).		Fibre.	Protein.	Nitrogen, Free Nit. (nitric and sugar.)	Fat.	Ash.	NAME AND ADDRESS OF MANUFACTURER.
Imperial Horse Feed.....	1288	Contract's Analysis	12.66	11.96	56.68	1.86	.....	K. & E. Newmond, New Or- leans, La.
		Official Analysis...	18.22	11.58	47.66	4.28	5.82	
Nutlie Horse & Mule Feed	1289	Contract's Analysis	12.90	11.90	52.08	1.80	.....	Nutlie Feed & Milling Co., New Orleans, La.
		Official Analysis...	11.50	11.75	55.97	4.80	4.50	
Home Food	1291	Contract's Analysis	7.68	1.50	67.55	1.60	.....	American Housley Co., Indian- apolis, Ind.
		Official Analysis...	8.42	11.10	68.79	6.00	2.10	
Kawalla Feed	1292	Contract's Analysis	12.94	12.05	54.65	1.95	4.25	Kawalla Feed Milling Co., Kansas City, Mo.
		Official Analysis...	12.98	12.09	54.65	1.95	4.25	
Wheat Feed	1293	Contract's Analysis	8.66	14.57	57.99	1.50	.....	Atlanta Milling Co., Atlanta, Ga.
		Official Analysis...	7.47	16.22	55.55	4.45	5.27	
Statville Shorts	1294	Contract's Analysis	10.60	14.80	45.00	18.80	.....	Statville Feed & Milling Co., New Orleans, La.
		Official Analysis...	10.12	16.21	55.58	1.30	5.28	

OFFICIAL FEEDING STUFF ANALYSES, 1915—Continued.

NAME OR BRAND.	Laboratory Number.		Fiber.	Protein.	Nitrogen-Free Extract, (calculus and lignin.)	Fat.	Ash.	NAME AND ADDRESS OF MANUFACTURER.
Pure Wheat Bran.....	1295	Guarant'd Analysis Official Analysis...	9.50 9.15	14.75 15.55	57.50 55.92	4.95 4.95	..... 5.55	The Dunlop Milling Co., Clarksville, Tenn.
Pure Winter Wheat Bran..	1296	Guarant'd Analysis Official Analysis...	9.50 9.37	14.50 15.57	54.00 52.28	4.95 4.10	..... 7.70	Standard/Tibon Milling Co., St. Louis, Mo.
Dunes Feed	1297	Guarant'd Analysis Official Analysis...	4.00 4.22	5.00 51.45	65.00 61.84	5.50 6.71	..... 2.10	Dehner-Walker Milling Co., Union City, Tenn.
Insecticide Feed	1298	Guarant'd Analysis Official Analysis...	9.50 7.55	15.00 15.34	58.50 55.41	4.50 5.30	..... 5.77	Hopkinsville Milling Co., Hopkinsville, Ky.
M. Middlings	1299	Guarant'd Analysis Official Analysis...	5.70 6.85	17.50 17.51	54.44 56.23	4.40 4.60	4.40 5.20	Hecker-Jones-Jewell Co., New York, N. Y.
Ship Staff	1300	Guarant'd Analysis Official Analysis...	7.80 5.35	14.50 17.60	54.00 58.94	4.95 3.50	..... 4.55	The Dunlop Mills, Richmond, Va.
Choice Feed	1301	Guarant'd Analysis Official Analysis...	7.97 8.25	13.00 14.70	54.00 57.55	2.95 3.27	..... 5.57	Empire Mills Co., Columbus, Ga.
Home Feed	1302	Guarant'd Analysis Official Analysis...	7.80 6.42	9.50 11.41	67.50 65.95	7.00 5.55	..... 4.60	American Hominy Co., Indianapolis, Ind.

Cracker Male Feed.....	1303	Guarant'd Analysis Official Analysis...	12.99 12.36	16.69 16.79	58.90 59.99	2.58 2.77	..... 2.89	The Quaker Oats Co., Chicago, Ill.
Shorts	1304	Guarant'd Analysis Official Analysis...	5.79 6.97	17.81 17.72	54.44 56.93	6.46 4.66	4.55 5.22	Hecker-Jones-Jewell Co., New York, N. Y.
White Dove Feed.....	1305	Guarant'd Analysis Official Analysis...	9.89 9.42	13.69 12.72	..... 67.44	8.09 2.28	..... 1.89	Cannock Mills, Gadsden, Ala.
Pure Winter Brown Mid- dlings	1306	Guarant'd Analysis Official Analysis...	8.39 7.29	16.79 17.11	55.59 56.59	3.59 4.17	..... 3.99	C. A. Gambrell Mfg. Co., Balti- more, Md.
Cracker Male Feed.....	1307	Guarant'd Analysis Official Analysis...	12.80 12.29	16.69 16.62	58.99 58.93	2.58 2.68	..... 2.81	The Quaker Oats Co., Chicago, Ill.
Pure Wheat Bran.....	1308	Guarant'd Analysis Official Analysis...	9.59 8.82	14.59 15.97	56.99 54.81	4.99 3.66	..... 6.56	Mountain City Mills Co., Chat- tanooga, Tenn.
Banner Feed	1309	Guarant'd Analysis Official Analysis...	10.89 19.29	9.73 19.27	62.89 62.14	3.75 2.19	..... 2.92	The Quaker Oats Co., Chicago, Ill.
Pure Wheat Brown Mid- dlings	1310	Guarant'd Analysis Official Analysis...	8.39 6.22	16.79 16.69	55.59 56.71	3.59 4.59	..... 4.95	C. A. Gambrell Mfg. Co., Balti- more, Md.
Choice Bran	1311	Guarant'd Analysis Official Analysis...	9.59 19.22	14.95 13.77	52.25 52.17	5.35 2.64	..... 6.06	Hecker-Jones-Jewell Milling Co., New York, N. Y.
Pure Wheat Middlings....	1312	Guarant'd Analysis Official Analysis...	5.19 4.27	17.11 17.11	58.18 58.89	4.41 3.89	..... 3.54	Gen. P. Plant Milling Co., St. Louis, Mo.
Shorts	1313	Guarant'd Analysis Official Analysis...	5.79 7.62	17.81 17.99	54.44 55.23	6.46 3.99	4.55 4.57	Hecker-Jones-Jewell Milling Co., New York, N. Y.

OFFICIAL FEEDING STUFF ANALYSES, 1912—Continued

NAME, OR BRAND.	Laboratory Number.		Fibre.	Protein.	Moisture, Free Sol., (Water and Alcohol.)	Fat.	Ash.	NAME AND ADDRESS OF MANUFACTURER.
M. Middings	1214	Guarant'd Analysis	5.70	17.31	24.44	5.40	4.55	Hecker - Jones - Jewell Milling Co., New York, N. Y.
		Official Analysis...	6.15	17.55	25.19	6.55	5.60	
Feed Meal	1215	Guarant'd Analysis	8.50	17.54	60.85	5.54	.....	Mountain City Mills Co., Chattanooga, Tenn.
		Official Analysis...	9.17	15.50	60.55	5.55	4.77	
Imperial Feed	1216	Guarant'd Analysis	4.90	16.00	60.00	1.50	.....	F. H. Chamberlain Co., St. Louis, Mo.
		Official Analysis...	5.10	17.00	62.50	2.10	5.20	
Pure Wheat Bran.....	1217	Guarant'd Analysis	3.50	14.50	50.00	4.00	.....	Mountain City Mills Co., Chattanooga, Tenn.
		Official Analysis...	7.87	16.40	56.15	2.45	6.15	
Nutrilac Stock Feed.....	1218	Guarant'd Analysis	12.00	11.00	52.00	4.50	.....	Nutrilac Milling Co., Crowley, La.
		Official Analysis...	4.00	11.00	63.77	3.07	4.42	
Nutrilac Stock Feed.....	1219	Guarant'd Analysis	12.00	11.00	52.00	4.50	.....	Nutrilac Milling Co., Crowley, La.
		Official Analysis...	6.00	17.00	53.53	4.57	5.07	
Globe Gluten Feed.....	1220	Guarant'd Analysis	.....	22.00	51.00	2.50	.....	Corn Products Refining Co., New York, N. Y.
		Official Analysis...	7.07	25.10	48.40	3.15	5.50	
Domino Scratch Feed.....	1221	Guarant'd Analysis	4.80	10.00	54.80	2.00	.....	Standard Feed Mills, Atlanta, Ga.
		Official Analysis...	2.10	9.25	54.25	2.05	21.00	

Parina Feed	1232	Guarant'd Analysis Official Analysis...	9.90 11.10	12.00 13.15	28.00 28.43	4.00 4.22	4.04	Ballston Parina Co., St. Louis, Mo.
Arrow Mixed Feed.....	1233	Guarant'd Analysis Official Analysis...	8.00 2.90	10.00 11.75	62.00 60.44	2.50 2.42	2.90	Stetson Feed Co., St. Louis, Mo.
Runner Feed	1234	Guarant'd Analysis Official Analysis...	10.50 10.60	9.75 9.65	62.00 60.27	2.50 2.62	4.65	The Quaker Oats Co., Chicago, Ill.
Pure Wheat Brown Middings	1235	Guarant'd Analysis Official Analysis...	8.50 7.90	16.70 16.47	55.50 55.71	2.50 2.25	2.62	C. A. Gamble Mfg. Co., Balti- more, Md.
Cornc Horse & Mule Feed.	1236	Guarant'd Analysis Official Analysis...	12.00 16.37	19.00 11.25	58.50 53.98	2.50 2.80	4.37	The Corn Mills Co., St. Louis, Mo.
U.N.L. Feed "A" Grade...	1237	Guarant'd Analysis Official Analysis...	14.48 14.17	13.03 12.11	53.87 52.53	2.15 2.57	4.80	United Grocery Co., Jackso- ville, Fla.
Victor Feed	1238	Guarant'd Analysis Official Analysis...	12.00 11.99	7.50 8.44	62.00 62.26	2.00 2.87	2.78	The Quaker Oats Co., Chicago, Ill.
Pure Alfalfa Meal.....	1239	Guarant'd Analysis Official Analysis...	20.00 14.50	12.00 12.75	35.00 37.18	1.50 2.65	8.97	The Wichita Alfalfa Stock Feed Co., Wichita, Kan.
Pure Winter Wheat Bran.	1240	Guarant'd Analysis Official Analysis...	8.00 9.37	14.50 15.62	24.00 23.16	4.00 4.25	6.57	National Feed Co., St. Louis, Mo.
Shorta	1241	Guarant'd Analysis Official Analysis...	5.75 6.90	17.51 18.30	54.44 54.95	4.40 4.50	6.21	Hecker-Jones-Jewell Co., New York, N. Y.
Cotton Seed Meal.....	1242	Guarant'd Analysis Official Analysis...	.....	25.67 26.70	.....	.....	.....	Georgia Cotton Oil Co., Macon, Ga.

OFFICIAL FEEDING STUFF ANALYSES, 1911—Continued.

NAME, OR BRAND	Laboratory Number		Fibre.	Protein.	Nitrogen Free Ext. (ashless acid sugar.)	Fat.	Ash.	NAME AND ADDRESS OF MANUFACTURERS.
Medium Grade Cotton Seed Meal	1232	Guarant'd Analysis		34.62				Batais Oil Co., Mobile, Ala.
		Official Analysis		41.24				
Standard Grade Cotton Seed Meal	1234	Guarant'd Analysis		34.62				Pelham Oil & Fertilizer Co., Pelham, Ga.
		Official Analysis		43.94				
Parina Molasses Feed.....	1235	Guarant'd Analysis	12.00	19.00	59.60	2.50		Ralston Parina Co., St. Louis, Mo.
		Official Analysis	10.32	9.42	4.49	2.29	6.55	
Cow Feed	1233	Guarant'd Analysis	12.00	14.38	52.58	2.50		International Sugar Feed Co., Memphis, Tenn.
		Official Analysis	14.15	18.50	62.24	5.48	7.69	
Stud Horse Feed.....	1237	Guarant'd Analysis	12.00	10.25	59.60	4.60		K. & E. Newmond, New Orleans, La.
		Official Analysis	9.70	12.42	56.48	4.65	8.41	
Liberty Horse Feed.....	1238	Guarant'd Analysis	12.00	10.25	59.60	4.60		Stafford Feed & Milling Co., New Orleans, La.
		Official Analysis	9.55	10.12	57.69	4.56	6.07	
Dorcas Feed	1239	Guarant'd Analysis	12.00	10.50	58.90	2.60		Cairo Milling Co., Cairo, Ill.
		Official Analysis	29.28	9.50	54.69	2.81	6.19	
"Silco" Cold Processed Feed	1240	Guarant'd Analysis	29.00	26.00	46.00	6.00		Sea Island Cotton Oil Co., Charleston, S. C.
		Official Analysis	21.89	26.24	22.87	5.24	4.52	

Durham Brand Cotton Seed Meal	1341	Guarant's Analysis	28.00	23.17	.....	7.98	.....	Florida Cotton Oil Co., Jacksonville, Fla.
		Official Analysis...	29.66	23.17	26.82	8.45	8.45	
Heavy Drought Feed.....	1342	Guarant's Analysis	8.39	19.25	63.43	3.42	.....	United Grocery Co., Jacksonville, Fla.
		Official Analysis...	8.65	19.62	63.61	3.60	3.14	

DEPARTMENT OF AGRICULTURE—DIVISION OF CHEMISTRY.

FOOD AND DRUG SECTION.

E. E. ROSE, State Chemist.

SPECIAL FOOD ANALYSES, 1912.

A. M. HENRY, Asst. Chemist.

Samples Taken by Purchaser Under Section 10, Act Approved June 7, 1906.

ALCOHOLIC DRINKS.

No.	LABEL.	MANUFACTURER.	Alcohol per cent by volume.	FROM.
1023	Beckings Brew	Tampa Bottling Works, Tam- pa, Fla.	Trace.	L. A. Hendry, Ft. Myers.
1024	Whiskey .....	.....	43.60	Kutledge Dennis, Tallahassee.
1025	Beer .....	.....	3.87	E. R. Holland, Brooksville.
1026	White Alcohol.....	.....	47.60	J. M. Sash, Tallahassee.
1027	Alcohol .....	.....	24.64	The Griffin Drug Co., Dade City.
1028	Beverage No. 184.....	.....	3.26	Paul Carter, Marianna.
1029	Beverage No. 200.....	.....	3.34	Paul Carter, Marianna.
1031	Beverage No. 204.....	.....	3.13	Paul Carter, Marianna.
1032	Beverage No. 240.....	.....	3.24	Paul Carter, Marianna.

1032	Radweiser Beer	Anheuser-Busch Brewing Association, St. Louis.	4.37	J. W. Boston, Tallahassee.
1034	Fluid Extract of Saw Palmetto.	Palmetto Extract Co., Miami, Fla.	12.87	Palmetto Extract Co., Miami.
1035	Beer .....	.....	4.12	J. B. McCormick, Macclenny.
1036	Beer	The Florida Brewing Co., Tampa, Fla.	2.28	J. S. McMullen, Center Hill.
1037	Berliner Malt Extract.....	New Orleans Brewing Co....	2.28	Harrell & Co., Chipley.
1038	Cider .....	.....	7.83	P. L. Everett, Graceville.
1040	Cider .....	.....	7.64	L. A. Ball, Graceville.
1041	Cider .....	.....	6.77	P. H. Kistler, Cotacade.
1042	Beer	The Tampa Brewing Co., Tampa, Fla.	4.54	W. A. Tills, Sanford.
1043	Near Beer .....	.....	1.86	W. A. Tills, Sanford.
1044	Beer	New Orleans Brewing Co....	2.28	G. F. Morris, Delor.

DEPARTMENT OF AGRICULTURE—DIVISION OF CHEMISTRY.

FOOD AND DRUG SECTION.

H. E. ROSE, State Chemist.

SPECIAL FOOD ANALYSES, 1912.

A. M. HENRY, Asst. Chemist.

Samples Taken by Purchaser Under Section 10, Act Approved June 7, 1909.

MISCELLANEOUS.

No.	LABEL.	RESULTS.	FROM.
1009	Grits	Sour, fermented	David Anderson, Crescent City.
1020	Parson Brown Oranges.....	Total Acids, as citric acid (g. per 100 cc.)..... 0.425 Reducing Sugars, as invert sugar (g. per 100 cc.)..... 4.94 Sucrose (by reduction) (g. per 100 cc.) 8.71 Total Sugars (g. per 100 cc.).. 8.35 Ratio of Acids to Sugars, 1 to..21.43	Chase & Co., Sanford.
1021	Seedling Oranges	Total Acids, as citric acid (g. per 100 cc.) 0.872 Reducing Sugars, as invert Sugar (g. per 100 cc.)..... 3.66 Sucrose (by reduction) (g. per 100 cc.) 8.63 Total Sugars (g. per 100 cc.)..14.63 Ratio of Acids to Sugars, 1 to..14.83	Chase & Co., Sanford.
1022	Distilled Water	Total Solids, 1 parts per million..	H. E. Rose, Tallahassee.
1023	Milk	Fat (per cent.)..... 3.00	K. H. Bellards, Tallahassee.

DEPARTMENT OF AGRICULTURE—DIVISION OF CHEMISTRY.

H. K. ROSE, State Chemist.

FOOD AND DRUG SECTION.

A. M. HENRY, Asst. Chemist.

Samples Taken by State Inspector Under Section 9, Act Approved June 3, 1911.

OFFICIAL FOOD ANALYSES, 1912.

CANNED CORN.

In the seventy-seven samples examined no evidences of preservatives, artificial sweeteners, or bleaching agents were detected. Forty out of these seventy-seven samples were misbranded in that they failed to bear any statement of the net weight or measure on the label, and the most of the thirty-seven that had statements of the weight or measure were not stated in pounds and ounces when over one pound, as required to be done.

Number.	LABEL.	Total Solids (per cent.)	Saccharia.	Weight.	REMARKS.
1066	Nabob Corn. Francis H. Leggett & Co., New York.	21.12	None.	12 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1070	Blue Label Sweet Corn. Curtiss Bros. Co., Rochester, N. Y. Contents weigh at least 20 oz.	22.31	None.	1 lb. 5 ozs.	Legal.
1071	Paris Sugar Corn. Burnham & Merrill Co., Portland, Me. Net weight 20 ozs.	22.09	None.	1 lb. 6 ozs.	Legal.

OFFICIAL FOOD ANALYSES, 1912.—Continued.

Number.	LABEL.	Total Solids (per cent.)	Starchin.	Weight.	REMARKS.
1872	Kiebelien Brand Corn. Sprague, Warner & Co., Chicago, Ill. Capacity 18 liquid ozs.	20.26	None.	1 lb 5 ozs.	Legal.
1873	White Rose Brand Corn. Seaman Bros., New York. Average weight of contents at least 12 ozs.	20.65	None.	12 ozs.	Legal.
1874	Red Lion Brand Sugar Corn. Putner's Canning Co., Red Lion, Pa.	23.91	None.	1 lb 5 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1875	Snow Drift Sugar Corn. W. W. Boyer & Co., Baltimore, Md.	23.79	None.	1 lb 6 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1876	Early Bird Sugar Corn. G. T. Holden & Co., Denton, Caroline County, Md.	19.71	None.	1 lb 5 ozs.	Illegal. Misbranded. No statement of net weight or measure.

1877	Wayne Brand Country Gentleman Sweet Corn. Packed by Edgett-Burnham Co., Newark, N. Y.	22.13	None.	11 cans.	Illegal. Misbranded. No statement of net weight or measure.
1878	Burnham Brand Country Gentleman Sweet Corn. Edgett-Burnham Co., Newark, N. Y. Not less than 9 cans.	23.95	None.	11 cans.	Legal.
1879	Fairless Brand Country Gentleman Sweet Corn. Edgett-Burnham Co., Newark, N. Y. Not less than 9 cans.	25.11	None.	11 cans.	Legal.
1880	My Favorite Sugar Corn. Geo. W. DeYillie, Stewartstown, Pa. Contains 18 cans or over.	26.13	None.	1 B. 1 can.	Legal.
1881	Apple Blossom Brand Extra Standard Quality Sweet Corn. Oswego County Canning Co., Fulton, N. Y.	25.78	None.	1 B. 5 cans.	Illegal. Misbranded. No statement of net weight or measure. Corn decayed. Can badly corroded.
1882	Extra Quality Republic Sugar Corn. Austin, Nichols & Co., New York.	21.32	None.	1 B. 5 cans.	Illegal. Misbranded. No statement of net weight or measure.
1883	Burnham Pure Food Sweet Corn. Austin, Nichols & Co., New York.	20.29	None.	1 B. 5 cans.	Illegal. Misbranded. No statement of net weight or measure.

OFFICIAL FOOD ANALYSES, 1911.—Continued.

Number.	LABEL.	Total Solids (Per cent.)	Branche.	Weight.	REMARKS.
1044	Scottish Chief Sweet Corn. Assin, Nichols & Co., Distributors, New York.	19.78	None.	1 lb. 5 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1045	Dragon Sweet Corn. Genesee Canning Co., Genesee, Ill.	21.00	None.	1 lb. 1 oz.	Illegal. Misbranded. No statement of net weight or measure.
1046	Little Fellow Sweet Corn. Genesee Canning Co., Genesee, Ill.	22.44	None.	1 lb. 5 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1047	Mistletoe Brand Pearly Grains Sweet Kernel Corn. Ft. Stanwix Canning Co., Rome, Oneida County, N. Y.	22.38	None.	1 lb. 5 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1048	Flag Brand Sweet Kernel Corn. Stanwix Canning Co., Rome, Oneida County, N. Y.	24.75	None.	1 lb. 5 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1049	Sweet Violet Brand Country Sea Gemma Corn. John F. White Co., Mt. Morris, N. Y. About 30½ ozs.	24.12	None.	1 lb. 5 ozs.	Legal.

1690	Baxter's Floral Brand Sugar Corn. H. C. Baxter & Bro., Brunswick, Me. Net weight 20 lbs.	25.97	None.	1 lb 6 ozs.	Legal.
1691	Gold Dragon Brand Corn. H. C. Baxter & Bro., Brunswick, Me. Net weight 20 lbs.	24.14	None.	1 lb 6 ozs.	Legal.
1692	Preferr'd Stock Brand Sugar Corn. H. C. Baxter & Bro., Brunswick, Me. Net weight 20 lbs.	28.45	None.	1 lb 6 ozs.	Legal.
1693	Libe Brand Sugar Corn. H. C. Baxter & Bro., Brunswick, Me. Net weight 20 lbs.	25.33	None.	1 lb 6 ozs.	Legal.
1694	Blue Ridge Brand Sugar Corn. B. F. Shriver Co., Union Mills, Md. Contents 18 lbs. or over.	21.11	None.	1 lb 4 ozs.	Legal.
1695	Country Gentiana Corn, A No. 1. B. F. Shriver Co., Union Mills, Md. Contents 18 lbs.	22.16	None.	1 lb 6 ozs.	Legal.
1696	Royal Scarlet Evergreen Corn. R. C. Williams & Co., New York.	29.22	None.	13 lbs.	Illegal. Misbranded. No statement of net weight or measure.

OFFICIAL FOOD ANALYSES, 1912.—Continued.

Number.	LABEL.	Total Solids (Per cent.)	Starchless.	Weight.	REMARKS.
1097	Robin Hood Brand Sweet Corn, H. C. Williams & Co., New York.	21.89	None.	1 lb. 6 oz.	Illegal. Misbranded. No statement of net weight or measure.
1098	Crescent Brand Sweet Corn, H. C. Williams & Co., New York.	21.85	None.	1 lb. 4 oz.	Illegal. Misbranded. No statement of net weight or measure.
1099	Red Line Sweet Corn, H. C. Williams & Co., New York.	20.45	None.	1 lb. 4 oz.	Illegal. Misbranded. No statement of net weight or measure.
1100	Oar Table Brand Cream Corn, Webster-Thomas Co., Boston, Mass.	22.46	None.	1 lb. 5 oz.	Illegal. Misbranded. No statement of net weight or measure.
1101	Grandmother's Brand A. & P. Corn, The Great Atlantic & Pacific Tea Co., Inc., Jersey City, N. J.	21.52	None.	1 lb. 4 oz.	Illegal. Misbranded. No statement of net weight or measure.
1102	Iona Brand Corn, The Great At- lantic & Pacific Tea Co., Inc., Jersey City, N. J.	22.50	None.	1 lb. 5 oz.	Illegal. Misbranded. No statement of net weight or measure.

1183	Van Camp's Sugar Corn. Van Camp Packing Co., Indianapolis, Ind. Net weight 20 ozs.	22.44	None.	1 lb. 5 ozs.	Legal.
1184	Standard Sugar Corn. Van Camp Packing Co., Indianapolis, Ind. Net weight 18 ozs.	22.57	None.	1 lb. 5 ozs.	Legal.
1185	Honey Drop Brand Sugar Corn. Davis, Baxter & Co., Portland, Me. Net weight 12 ozs.	22.72	None.	12 ozs.	Legal.
1186	American Beauties Brand Shoe Peg Cream Style Sugar Corn. E. V. Stockham, Perryman, Md.	25.74	None.	1 lb. 5 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1187	War Ax Brand Sweet Corn. Hyung Canning Co., Rossm, N.Y. Net weight 21 ozs.	24.15	None.	1 lb. 5 ozs.	Legal.
1188	Victory Brand Maine Style Sweet Corn. The John Doyle Co., Baltimore, Md.	24.65	None.	1 lb. 5 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1189	Clipper Brand Sweet Corn. Wm. Nissen & Sons, Inc., Baltimore, Md. Contents 18 ozs. 97 over.	24.75	None.	1 lb. 4 ozs.	Legal.
1.10	American Club Sweet Corn. The Hart Olney Canning Co., Othello, N. Y.	24.57	None.	1 lb. 5 ozs.	Illegal. Misbranded. No statement of net weight or measure.

OFFICIAL FOOD ANALYSES, 1912.—Continued.

Number.	LABEL.	Total Solids (per cent.)	Saccharin.	Weight.	REMARKS.
1111	Archer Cream Brand Sugar Corn. Ponduscol Canning Co., Braun- swick, Me. Net weight 28ozs.	21.23	None.	1 lb. 6 ozs.	Legal.
1112	Webb's Cream Sugar Corn. H. F. Webb Co., Poland, Me. Net weight 29-33 ozs.	22.84	None.	1 lb. 6 ozs.	Legal.
1113	Favorite Sweet Corn. W. N. Clark Co., Rochester, N. Y. Contents weight at least 29 ozs.	21.69	None.	1 lb. 6 ozs.	Legal.
1114	Reliable Brand Sugar Corn. J. B. Brinkley & Son's Reliable Brand, Anghinbaugh Canning Co., Baltimore, Md. Contents 18 ozs. or over.	19.19	None.	1 lb. 4 ozs.	Legal.
1115	Bridal Brand Sweet Sugar Corn. Thomas Roberts & Co., Phila- delphia, Pa. Average net weight of contents 29 ozs.	22.39	None.	1 lb. 4 ozs.	Legal.

1114	Seven Brand Country Gentleman Sweet Corn, S. E. Comstock & Co., Newark, N. Y. The net contents of this can is about 24 1/2 ozs.	24.18	None.	1 lb 5 ozs.	Legal.
1117	Duchess Brand Sugar Corn, Snow Flake Canning Co., Brunswick, Me. Net weight 28 ozs.	24.20	None.	1 lb 4 ozs.	Legal.
1118	Day & Night Brand Sugar Corn, Peninsular Naval Stores Co., Tampa, Fla.	17.45	None.	1 lb 4 ozs.	Legal.
1119	Pawn Grove Brand Sugar Corn, James T. Smith, Pawn Grove, Pa.	18.90	None.	1 lb 5 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1120	United States Brand Sweet Corn, United States Canning Co., Fredonia, N. Y. Weight 21 ozs.	21.44	None.	1 lb 5 ozs.	Legal.
1121	Day's Brand Sugar Corn, Daugh, Bowman & Daugh, Clarksville, Ohio.	18.22	None.	1 lb 5 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1122	Macaw Brand Peg Sugar Corn, Chas. F. Osborn, Aberdeen, Md.	14.90	None.	1 lb 4 ozs.	Illegal. Misbranded. No statement of net weight or measure.

OFFICIAL FOOD ANALYSES, 1917.—Continued.

Number.	LABEL.	Total Solids (Per cent.)	Saccharin.	Weights.	REMARKS.
1123	Little Jay Maine Style Sweet Corn, Wm. Nason & Sons, Inc., Baltimore, Md. Contents 18 cans, or over.	21.72	None.	1 lb. 4 ozs.	Legal.
1124	Perfection Brand Sugar Corn, Ed D. Deper & Co., New York.	24.38	None.	1 lb. 5 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1125	Harvest Brand Sugar Corn, Aus- tin, Nichols & Co., New York.	24.47	None.	1 lb. 5 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1126	Blue Mountain Brand Sugar Corn, Austin, Nichols & Co., New York.	24.44	None.	1 lb. 5 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1127	Maryland Chief Brand Maine Style Sugar Corn, J. Langraff & Bro., Inc., Baltimore, Md. Contents 18 cans, or over.	22.57	None.	1 lb. 4 ozs.	Legal.

1128	Defiance Brand Sugar Corn, Camden Packing Co., Camden, Oneida County, N. Y. Net weight 19 ozs.	22.25	None.	1 B 1/2 ozs.	Legal.
1129	Byron Brand Choice Corn, Average weight of contents at least 19 ozs.	22.07	None.	1 B 1/2 ozs.	Legal.
1130	Beck's Brand Sugar Corn, C. Beck, Key West, Fla.	20.54	None.	1 B 1/2 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1131	Varick Brand Sweet Corn, Fran- cis H. Leggett & Co., New York	19.75	None.	1 B 1/2 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1132	Premier Brand Corn, Francis H. Leggett & Co., New York.	21.35	None.	1 B 1/2 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1133	Moran Brand Sweet Corn, Sprague, Darrow & Co., Chi- cago, Ill. Liquid capacity 19 ozs.	22.34	None.	1 B 1/2 ozs.	Legal.
1134	Banquet Brand Maine Sweet Corn, Portland Packing Co., Portland, Me.	20.05	None.	1 B 1/2 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1135	Antecoop Brand Maine Sugar Corn, Portland Packing Co., Portland, Me.	22.01	None.	1 P. 1 ozs.	Illegal. Misbranded. No statement of net weight or measure.

OFFICIAL FOOD ANALYSES, 1912.—Continued.

Number.	LABEL.	Total Solids (Percent.)	Remarks.	Weight.	REMARKS.
1126	Gold Seal Sugar Corn. Portland Packing Co., Portland, Me.	21.45	None.	1 lb. 4 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1127	Spring Garden Brand Maine Style Sweet Sugar Corn. Wm. Grecht Co., Baltimore, Md. Net contents of this can weigh 20 ozs.	22.51	None.	1 lb. 4 ozs.	Legal.
1128	Allen & Roberts Brand Standard Sweet Corn. H. C. Williams & Co., New York.	20.66	None.	1 lb. 4 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1129	No. 9. N. Hyde Brand Egyptian Sweet Corn. Acker, Merrill & Condit Co., New York.	18.97	None.	1 lb. 4 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1130	Golden Sceptre Brand Fancy Maine Sweet Corn. Van De-man & Lewis Co., Jacksonville, Fla. Contents 18 ozs. or over.	21.26	None.	1 lb. 5 ozs.	Legal.

1141	White Cross Maine Sugar Corn, H. R. Webb Co., Portland, Me.	24.77	None.	1 lb 5 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1142	Brook Dale Brand Evergreen Sugar Corn. Theo. D. Miller, Webster, Me.	18.81	None.	1 lb 5 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1143	Meadow Brand Sugar Corn. Gen- esco Canning Co., Geneseo, Ill.	22.65	None.	1 lb 4 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1144	Pride of the West Brand Sugar Corn. Gibson Canning Co., Gibson City, Ill. Net weight 1 lb 5 ozs.	21.73	None.	1 lb 5 ozs.	Legal.
1145	Lebanon's Best Brand Sugar Corn. The Banner Packing Co., Lebanon, Ohio. Net weight of contents 21 ozs.	18.83	None.	1 lb 5 ozs.	Legal.