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COUNTY MAP OF STATE OF FLORIDA

PART I.

CELERY GROWING, LETTUCE GROWING, AND PLANTING DATES.

CELERY GROWING IN FLORIDA.

Celery has for many years been recognized as one of the greatest luxuries of the garden, and while there are no special difficulties in the way of cultivation, it is grown by comparatively very few. The plant is a native of England, where it grows in a wild state in favorable localities. It is also a native of and occurs in several localities in Florida in its wild state, though in this condition it is not fit to eat except by wild water fowl, as it contains a poisonous principle making it dangerous as human food.

Although it has been grown for market in various sections of the country in a comparatively small way for many years, it is really little more than ten years since it became one of the most important commercial vegetable crops. The first experiments in its cultivation were not without failures by any means, for they were many, but gradually success was generally the rule, and with well defined methods, the growing of celery became a commercial success.

Celery requires in both its early and late stages of growth a cool, moist atmosphere, and consequently does not do well under extremes of heat or drought. In Florida the seeds are sown in the open generally, protection being rarely necessary. The soil must be a rich loam, or other soil and means added to obtain the same character as nearly as possible, but it should be loose and rich, soil that has been previously cultivated and manured heavily being considered the very best. The seed bed may be any length desired, but from three to five feet is the best width, most growers use three feet widths.

Such beds are prepared generally in August and September. The most successful celery growers in Florida

prepare their seed beds some two to three weeks *before* time for planting the seed, the bed having previously been well manured, thus time enough is allowed to elapse for the manure to become thoroughly assimilated. The seed being very small must not be too deeply covered. Germination of the seed may be hastened by packing the soil over the seed immediately after sowing by means of a smooth board six or eight inches wide and three or more feet long, as may be necessary. Mark off the rows for planting the seed across the beds in the following manner. "Take a five-inch plank, three feet long; nail a lath on each edge, projecting one-fourth of an inch on one side. With this make marks across the beds by pressing it down on the beds. Scatter or sprinkle in the seeds thinly and cover by sprinkling or sifting light soil or sand over the rows. A good idea is to cover the beds with old gunny sacks, Spanish moss or by laying a corn stalk along each side of the drill, but not directly over it and keep fairly wet till the seeds sprout, which, under favorable conditions, will be in from eight to twelve days. As soon as the seed are well sprouted and show that they are coming up it is best to cover them as a protection against both hot sun and heavy rains, removing the cover in the evening till next morning. Each day as the plants grow stronger, a little more sunlight can be given them till in a few days they will, under ordinary circumstances, be able to remain uncovered all day. Keep the beds moist, not letting them become dry at any time. When the plants are well above ground, say about an inch high, it is a good plan to put a little fertilizer between the rows and either stir into the surface gently or let it be distributed by a gentle sprinkling of water, either or both is good. Good working of the surface to keep down the weeds should be given once every few days. When plants are two or three inches high they are about ready to transplant to other beds, though some growers prefer to wait till the plants are larger, and some do not trans-

plant but once and that direct from the original beds to the fields. None but the best stocky plants should be used, as spindling plants rarely develop into profitable growth. Celery has been and can be grown on almost all of the soils of Florida, the best soil, however, being the low hammock lands when well drained, but any soil loose in texture and containing a good supply of humus will, under proper management produce fine crops. As before stated, a soil of a cool nature should be selected if obtainable, as the plant develops better, and is less liable to attacks of injurious diseases. Following in concise form are the methods used in South Florida in connection with the system of irrigation practiced in Orange County.

"The plot to be planted should be well supplied with water either from artesian wells, steam pumps or natural sources. Many of the most successful growers are tile draining their lands, the tiles being placed from a foot and a half to two feet under ground. The joints are covered with cinders, sawdust or even moss, to keep the sand out and let the water pass in or out as necessary. These drains are placed about twenty-five feet apart, and are so arranged, that they can be used to drain the land during heavy rains or to irrigate it when it is dry. After the draining and irrigating system is completed, no pains should be spared, or labor omitted to reduce the soil to perfect tilth so that the innumerable fine feeding roots of the plant can penetrate the soil in every direction."

In sections where overhead or sprinkling and surface systems of irrigation are practiced the same principles will apply, and can be adapted to suit conditions, but one thing must be remembered, the plants whether in bed or field must not be permitted to suffer from lack of water any more than they must be over-watered. All manures applied to the soil should be in the most perfect condition —soluble and available—whether it be in the form of commercial or barnyard manure; the latter should be thor-

oughly decomposed, evenly distributed broadcast and harrowed in well. At this stage, the general custom is to also apply about a ton of first-class commercial fertilizer to the land and harrow till thoroughly incorporated into the soil.

A well-known authority on this subject says: "When plants are ready for transplanting take great care to have these in each row of uniform size. To accomplish this, put the large and small plants in alternate rows, as the larger ones will often be ready for market from *ten* days to two weeks prior to the smaller ones. There is no use setting celery plants in dry soil. If there has been lack of rain as is often the case in October and November in Florida, then turn on the irrigating plant till the land is thoroughly moist, and then water the plants freely. In setting the plants remember the rows must be absolutely straight. Use a line as a guide and run a cleated roller over the ground to mark the place for each plant. Setting in double rows is seldom practiced, and the rule now is to set plants four inches apart in single rows twenty-eight to thirty inches in width, giving about 60,000 plants to the acre. Droppers immediately preceding the plant setter, place the plants at the marks along the line. The plants are quickly placed in the holes made by a round dibble or garden trowel the depth of the center or heart leaf and the soil placed firmly alongside of the plant over the roots by pushing the dibble to the depth of the root and bearing towards the plant, afterwards closing up the depression made by the dibble to prevent drying out of the soil near the roots; thus *firm the soil.* When the soil is wet, celery plants will usually live even though carelessly set."

Either of the following formulas for commercial fertilizer are good for celery, and the one which seems best adapted to the soil and conditions can be used, or any other approximately similar:

1 800 lbs Nitrate of Soda.....			
800 lbs Fish Scrap			
600 lbs Acid Phos., 13%....	yields	6.9% Ammonia	
300 lbs Muriate Potash.....		5.5% Avail. Phos. Acid	
2000 lbs		7.2% Potash	

2 250 lbs Nitrate of Soda.....			
600 lbs Dried Blood			
850 lbs Acid Phos. 13%.....	yields	7.2% Ammonia	
300 lbs Muriate Potash		5.5% Avail. Phos. Acid	
		7.8% Potash	

During the growth of the crop from one to two tons per acre of the above may be applied between the rows, and from two to four hundred pounds of nitrate of soda per acre as a top-dressing in four equal applications at about four different times.

To make the cultivation of celery a success it must be worked often; in fact, it is not too much to say that the oftener it is worked the better, just so it is not disturbed or handled while the plant is wet with dew or rain, or while the soil is wet, or it will cause rust to the plant and pack the soil. The best implements for use near the plants when small are the hand cultivators with wheel hoes and small blades, while the middles can be worked out well with horse hoes on similar, or larger implements.

When the weather is cool during the winter months, be very careful not to apply too much water, as it may make your soil soggy and check the growth of the plants.

Blanching is done almost entirely with twelve-inch boards placed close alongside the rows of plants. It is found to be much better, takes much less time to blanche, and avoids the danger of the loose soil falling into the crown of the plants, as was the case when blanching was done by drawing the earth up against the plant. It requires only from twelve to fifteen days to blanche the plants to the creamy yellow color so desired in celery where boards are used. The above suggestions are appli-

cable to celery growing in all sections of the State by simply observing and adapting them to the prevailing climatic conditions and seasons.

Four ounces of seed is sufficient to plant an acre.

Crates of standard size can readily be obtained from any one of the numerous crate manufacturers throughout the State.

COMMERCIAL LETTUCE GROWING IN FLORIDA.

This plant has been cultivated for more than twenty centuries, and apparently continues to increase in popularity every year with all classes of people. Few plants are more easily grown, and yet with the enormous demand for it it is still a luxury on most tables, merely because so comparatively few gardeners take the trouble to grow it at the season of the year when it is appreciated. The best varieties are to a great degree intolerant of hot sunshine, but thrive well with but very little protection from either hot sun or cold snaps, from October to the first of June.

The quality of the lettuce crop is more or less influenced by the kind of soil upon which it is grown, and while some soils are inferior for the work, their character may be changed to such a degree, by careful management, as to give satisfactory results.

The soils may be divided into three classes—light soils, heavy soils (those containing a good deal of clay), and medium soils, as the various grades of loamy soils—clay loam, fine sandy loam and sandy loam. All things considered, the ideal soils for the development of this crop are those of the best sandy loam, resting on a clay subsoil twelve to fifteen inches below the surface and well drained. A soil retentative of moisture and plant-food must have a more or less impervious clay subsoil, for, no matter how suitable the surface soil may be, unless there is clay beneath it the plant-food on becoming soluble will quickly leach out and be lost if it is not taken up by the crop. Deep sandy soils, though quicker in their action than heavier soils, if constantly irrigated and fed, are nevertheless expensive in both fertilizer and irrigation. In selecting a soil for lettuce growing, in fact, for any

truck crop, it is best to look carefully into the character and position of the subsoil.

Lettuce thrive best on a very rich, loamy, moist soil, well drained so there will be no water-sogging after rains, and in common with all quick-growing crops, requires a large amount of humus in the soil. Barnyard manure is one of the best and surest means of adding humus to the soil, but because of its scarcity it is not always available, so the next best and cheapest source of organic matter is by the use of cover crops of the legume order. Lettuce growers should see to it that whenever their lettuce soils are not under crop they should be storing humus and nitrogen from a crop of some legume; cowpeas or velvet beans are best. To make lettuce growing a success, humus must be supplied, and it may as well be set down as an incontrovertible fact, that where there is no humus in the soil there will be no lettuce. A rich soil is absolutely necessary. If you haven't got it, and are not willing to bear the expense of making it, don't plant lettuce.

Prepare the land by plowing deeply; scatter broadcast stable manure or well-rotted compost, and harrow in well till the soil is in finest tilth and the manure thoroughly incorporated with the soil seven days, or even two weeks, before the time for setting on the plants; it is also a good plan to apply before harrowing from one thousand to one thousand five hundred pounds per acre of a high-grade commercial fertilizer, as an adjunct to the stable manure, etc., and that it may be well assimilated by the soil before time for setting.

Plants are ready for setting at from four to six weeks after sowing the seed, at which time they should be from three to five inches high. Set only vigorous plants, or they will likely be stunted and run to seed instead of heading. The varieties most preferred and apparently

most in demand by consumers are the Big Boston and the California Cream Butter.

Preparation of the seed-bed does not materially differ from that of the celery, and the same methods are applicable to a great degree.

Select for this purpose a piece of new, rich land, preferably hammock, for new land is not subject to the root knot plague which sometimes troubles roots. Clear the soil of all trash, plow or spade it deep and rake very fine and mellow, scattering on hardwood ashes or air-slaked lime two weeks beforehand to neutralize the sourness. Sow in drills as you would turnip seed, very shallow, and rake in. *Firm the soil.* Beat down the earth with the back of the hoe or lay down boards and walk along them. If planted before October, it is well to shade the beds lightly for seven or eight hours during the middle of the day. Sprinkle night and morning with a fine spray, so as not to pack the land.

Watch sharply for ants; they may carry off every seed in forty-eight hours. Apply tobacco dust liberally; if they still persist, give them a tobacco solution, strong; also, as a further preventative, sow grits over the bed. The ants will take this in preference to the seeds, and while they are carrying it away the lettuce will have sprouted and be out of danger.

When the plants are to be transplanted, weed out rigidly and throw away the diseased and feeble plants. A small strawberry plant, by diligent care, can be fed up to be nearly as good as a large one; but not so with a lettuce plant. With a lettuce, it is a head or it is nothing; unless it heads it is valueless.

We repeat, it is not worth while to attempt to grow lettuce commercially for profit unless you have made up your mind to fertilize liberally, unstintedly. Lettuce is largely a luxury of the rich, used for garnishing meats in splendid dinner services, and small leaves, though they may be just as crisp and high-flavored, are not wanted,

because they lack in spectacular qualities. A single large, rich, creamy-white leaf or head is worth a dozen smaller ones.

Fully four-fifths of the failures in lettuce culture in Florida are chargeable to the stinting habit in the application of fertilizer. In some localities hundreds of dollars worth of fertilizer per acre is applied, with larger profits as a result. One to two tons of ashes per acre, specially on medium to heavy soils, while preparing the land will be worth many times their cost. It will make the soil loose, friable and sweet.

The truckers of Central Florida begin to plant seed the latter part of August and continue to plant until the first of January. Those who plant prior to the middle of September seldom succeed in securing a satisfactory stand of plants. Lettuce is a cool weather plant; it germinates poorly in hot weather. The few, however, who do succeed by shading and watering in securing a good stand of these extra early plants, and who bring them on to a handsome and solid maturity, generally reap a rich reward, as this early lettuce commands a fine price. It is a good plan to make repeated sowings, from August 25th to January 1st.

It is an advantage to select a field on the south side of a forest, as a screen against wind. A covering of cotton cloth often pays heavy dividends on the investment. Lettuce, when in heading, is greatly injured by a temperature of 25 degrees; but when not heading it will often withstand 20 degrees without serious injury. The cloth is carried on short stakes, care being exercised to bring the edges well down to prevent the wind from getting under. If the field is not protected by a cloth cover, cut all the heads that will do to ship, when you see that there will be a killing frost; and ship them to market next day.

Following are two good formulas for fertilizing lettuce. Use the one which seems to suit your soil and

general conditions best; or if preferred, use some other approximating them:

1. Ammonia, 5 to 6 per cent.
   Available phosphoric acid, 7 to 9 per cent.
   Potash, 8 to 10 per cent.

2. Ammonia, 6 to 7 per cent.
   Available phosphoric acid, 6 to 7 per cent.
   Potash, 6 to 7 per cent.

Apply from 1,500 to 2,000 pounds per acre, and while the crop is growing top-dress with about 150 to 200 pounds of nitrate of soda per acre. It requires about three pounds of seed to sow an acre, or one ounce to every 250 feet of drill.

Baskets for shipping can be obtained from the vegetable crate manufacturers in any section of the State.

SEASONS AND DATES FOR PLANTING VEGETABLES AND OTHER CROPS IN FLORIDA.

The following lists include what experience demonstrates can be successfully grown each month as the season most suitable for each variety comes around in the several sections of the State.

NORTH AND WEST FLORIDA.

January—Asparagus seed, Brussels Sprouts, Cabbage Seed and Plants, Cauliflower seed, Collards, Leeks, Lettuce, Mustard, Onion sets, Radishes, Rape, Spanish Onion seed, Tomato seed, Turnips.

February—Asparagus seed, Early corn, Brussels Sprouts, Cabbage, Carrots, Collards, Eggplant seed, English Peas, Irish Potatoes, Kale, Leeks, Lettuce, Onions, Parsley, Parsnip, Pepper seed, Rutabages, Salsify, Spinach, Beets.

March—Beans, Beets, Brussels Sprouts, Cantaloupes, Carrots, Collards, Cowpeas, Cucumbers, Early Corn, Eggplant, English Peas, Irish Potatoes, Kale, Kohlrabi, Leek, Okra, Parsley, Parsnip, Pepper, Pumpkin, Radish, Rape, Rutabagas, Salsify, Squash, Sugar Corn, Watermelons, Tomato, Turnip.

April—Beans, Cantaloupes, Cow Peas, Cucumber, Eggplant, English Peas, Irish Potatoes, Kohlrabi, Lettuce, Okra, Parsley, Parsnip, Peppers, Pumpkins, Radishes, Rutabagas, Squash, Sugar Corn, Sweet Potatoes, Tomatoes, Turnips, Watermelons.

May—Beans, Butter Beans, Cantaloupes, Cowpeas, Cucumbers, Eggplant, Okra, Peppers, Pumpkins, Squash, Sugar Corn, Sweet Potatoes, Tomato Plants and seed, Watermelons.

June—Butter Beans, Cowpeas, Eggplant, Peppers, Squash, Sweet Potatoes, Tomatoes, Watermelons.

July—Cowpeas, Eggplant, Parsley, Peppers, Pumpkin, Rutabagas, Squash, Sweet Potatoes, Tomato Plants and seed, Watermelons.

August—Beans, Beets, Cabbage, Cauliflower seed, Carrots, Cowpeas, Cucumbers, Collards, Eggplants, Irish Potatoes, Kale, Kohlrabi, Okra, Onions, Rape, Rutabagas, Salsify, Spinach, Squash, Tomatoes, Turnips, Celery seed.

September—Beets, Brussels Sprouts, Cabbage, Carrots, Cauliflower plants, Celery plants, Collards, Cowpeas, English Peas, Irish Potatoes, Kale, Leeks, Lettuce, Mustard, Onion sets, Parsnip, Radishes, Rape, Rutabagas, Salsify, Spinach, Turnips.

October—Beets, Bermuda Onion seed, Brussels Sprouts, Cabbage, Carrots, Cauliflower plants, Celery plants, Collards, Kale, Leeks, Lettuce seeds and plants, Mustard, Onion sets, Parsnips, Radishes, Rape, Spinach, Turnips.

November—Beets, Brussels Sprouts, Cabbage seeds and plants, Carrots, Collards, Kale, Lettuce, Mustard, Onion sets, Parsnip, Radishes, Rape, Spinach, Turnips.

December—Cabbage plants and seed, Collards, Leeks, Lettuce plants and seed, Mustard, Onions, Radishes, Rape.

The following list includes what experience demonstrates can be successfully grown each month as the season most suitable for each variety comes around in the section of the State mentioned below.

CENTRAL FLORIDA.

January—Asparagus seed, Brussels Sprouts, Cabbage seed and plants, Cauliflower seed, Collards, Leeks, Let-

tuce, Mustard, Onion sets, Radishes, Rape, Spanish Onion seed, Tomato seed, Turnips, Eggplant seed.

February—Asparagus seed, Early corn, Beans, Brussels Sprouts, Cabbage, Cantaloupes, Carrots, Collards, Cucumbers, Eggplant seed, English Peas, Irish Potatoes, Kale, Leeks, Lettuce, Onions, Parsley, Parsnip, Pepper seed, Rutabagas, Salsify, Spinach, Windsor Beans, Beets.

March—Beans, Beets, Brussels Sprouts, Cantaloupes, Carrots, Cauliflower, Collards, Cowpeas, Cucumbers, Early Corn, Eggplant, English, Peas, Irish Potatoes, Kale, Kohlrabi, Leek, Okra, Onion, Parsley, Parsnip, Pepper, Pumpkin, Radish, Rape, Rutabagas, Salsify, Squash, Sugar Corn, Watermelons, Tomatoes, Turnips.

April—Beans, Cantaloupes, Collards, Cowpeas, Cucumbers, Eggplant, English Peas, Irish Potatoes, Kohlrabi, Lettuce, Okra, Onion Plants, Parsley, Parsnip, Peppers, Pumpkin, Radishes, Rutabagas, Squash, Sugar Corn, Sweet Potatoes, Tomatoes, Turnips, Watermelons.

May—Beans, Butter Beans, Cantaloupes, Collards, Cowpeas, Cucumbers, Eggplant, Okra, Peppers, Pumpkins, Squash, Sugar Corn, Sweet Potatoes, Tomato plants and seed, Watermelons.

June—Butter Beans, Cabbage seed, Cauliflower seed, Celery seed, Cowpeas, Eggplant, Peppers, Squash, Sweet Potatoes, Tomatoes, Watermelons.

July—Cabbage seed, Cantaloupes, Cauliflower seed, Celery seed, Cowpeas, Eggplant, Parsley, Peppers, Pumpkin, Rutabagas, Squash, Sweet Potatoes, Tomato plants and seed, Watermelons.

August—Beans, Beets, Cabbage, Cauliflower seed, Carrots, Cowpeas, Cress, Cucumbers, Collards, Eggplant, Irish Potatoes, Kale, Kohrabi, Okra, Onions, Rape, Rutabagas, Salsify, Spinach, Squash, Tomatoes, Turnips, Windsor Beans, Celery seed.

September—Beets, Brussels Sprouts, Cabbage, Carrots, Cauliflower plants, Celery plants, Collards, Cowpeas, Cucumbers, English Peas, Irish Potatoes, Kale, Leeks,

Lettuce, Mustard, Onion sets, Parsnip, Radishes, Rape, Rutabagas, Salsify, Spinach, Squash, Turnips.

October—Beets, Bermuda Onion seed, Brussels Sprouts, Cabbage, Carrots, Cauliflower plants, Celery plants, Collards, Kale, Leeks, Lettuce seed and plants, Mustard, Onion sets, Parsnip, Radishes, Rape, Spinach, Turnips.

November—Beets, Brussels Sprouts, Cabbage seed and plants, Carrots, Collards, Kale, Lettuce, Mustard, Onion sets, Parsnip, Radishes, Rape, Spinach, Turnips.

December—Cabbage plants and seed, Collards, Leeks, Lettuce plants and seed, Mustard, Onions, Radishes, Rape.

The following list includes what experience demonstrates can be successfully grown each month as the esason most suitable for each variety comes around in the section of the State mentioned below.

TAMPA, ORLANDO, TITUSVILLE AND SOUTHWARD.

January—Beans, Beets, Brussels Sprouts, Cabbage plants and seed, Carrots, Cauliflower seed, Collards, Eggplant seed, Irish Potatoes, Kale, Kohlrabi, Lettuce, Mustard, Radishes, Rape, Spanish Onion seed, Spinach, Tomato seed, Turnips.

February—Adams Early Corn, Beans, Beets, Brussels Sprouts, Cabbage, Cantaloupes, Carrots, Cucumbers, Eggplant seed, Irish Potatoes, Kale, Lettuce, Okra, Onions, Pepper seed, Spinach, Squash, Windsor Beans.

March—Beans, Beets, Brussels Sprouts, Cantaloupes, Cauliflower, Cowpeas, Cucumbers, Early Corn, Eggplant, Irish Potatoes, Lettuce, Mustard, Okra, Onions, Pepper, Pumpkin, Radish, Squash, Sugar Corn, Tomatoes, Watermelons.

April—Beans, Collards, Cowpeas, Cucumbers, Eggplant, Kohlrabi, Okra, Radishes, Squash, Sugar Corn, Sweet Potatoes, Tomatoes, Onion plants, Pepper, Pumpkins.

May—Beans, Butter Beans, Cowpeas, Eggplant, Okra, Peppers, Pumpkins, Squash, Sugar Corn, Sweet Potatoes, Tomatoes.

June—Butter Beans, Cabbage seed, Celery seed, Cowpeas, Eggplant seed, Peppers, Squash, Sweet Potatoes, Tomato plants and seed, Watermelons.

July—Cabbage seed, Cantaloupes, Celery seed, Cowpeas, Eggplants and seed, Peppers, Pumpkins, Squash, Sweet Potatoes, Tomato plants and seed, Watermelons.

August—Beans (snap), Cabbage seed, Cantaloupes, Carrots, Cauliflower seed, Collards, Cowpeas, Cucumbers, Eggplant, English Peas, Irish Potatoes, Kale, Kohlrabi, Lettuce, Mustard, Onions, Peppers, Pumpkin, Radishes, Rape, Rutabagas, Spinach, Squash, Swiss Chard, Tomatoes, Turnips, Windsor Beans.

September—Beets, Brussels Sprouts, Cabbage plants and seed, Carrots, Celery seed and plants, Collards, Cowpeas, Cucumbers, English Peas, Irish Potatoes, Kale, Lettuce, Mustard, Onion sets, Radishes, Rape, Rutabagas, Spinach, Squash, Swiss Chard, Turnips.

October—Beets, Bermuda Onion seed, Brussels Sprouts, Cabbage plants and seed, Carrots, Celery seed, Collards, Kale, Lettuce plants and seed, Mustard, Onion sets, Radishes, Rape, Rutabagas, Spinach, Swiss Chard, Turnips.

November—Beets, Brussels Sprouts, Cabbage plants and seed, Carrots, Celery seed and plants, Collards, Kale, Lettuce, Mustard, Onion sets, Radishes, Rape, Rutabagas, Spinach, Swiss Chard, Turnips.

December—Cabbage plants and seed, Celery plants, Collards, Lettuce plants and seed, Mustard, Onion sets and plants, Radishes, Rape, Spanish Onion seed, Swiss Chard.

PART II.

CONDITION AND PROSPECTIVE YIELD OF CROPS.

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.

Bay,
Calhoun,
Escambia,
Holmes,
Jackson,
Santa Rosa,
Walton,
Washington—8.

Northeastern Division.

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

Central Division.

Citrus,
Hernando,
Lake,
Levy,
Marion,
Orange,
Pasco,
Seminole,
Sumter,
Volusia—10.

Southern Division.

Brevard,
Lade,
DeSoto,
Hillsborough,
Lee,
Manatee,
Monroe,
Osceola,
Palm Beach,
Pinellas,
Polk,
St. Lucie—12.

DEPARTMENT OF AGRICULTURE

W. A. McRAE, Commissioner. H. S. ELLIOT, Chief Clerk

CONDENSED NOTES OF CORRESPONDENTS.

By Divisions.

Northern Division.—From well digested reports by our correspondents throughout the above district, the conclusion is readily arrived at that the crops generally are far better than at this time last year. In fact, the corn crop is nearly one third greater than last year, although the difficulties in the way of uniform planting in the early season retarded the crop to a great degree. The present crop of corn in this district will be probably between 25 and 35 per cent greater than last year. Cotton although affected by unfavorable seasons in the beginning is also yielding much better than was first anticipated. The area planted to cotton is possibly not quite equal to that of 1912, but those planters who succeeded in getting their crops in at the proper time and a good stand have more than made up for the loss by poor stands. Generally the season since planting time has been very favorable to general crop growing throughout this section. It has also been favorable to live stock, which we note are in much better condition than at the same time last season. Hogs are certainly in better condition. We have had practically no complaints of cholera or other dangerous diseases. Only once or twice have we had anything on the subject. All crops are in good condition and all of them promise unusually large yields. The hay crops and forage crops generally are the finest this district has produced for a number of years. Pastures are in fine condition.

WESTERN DIVISION.—In this division conditions are practically the same as just reported above for the northern district. Crops of all kinds are good, live stock is in fine condition and pastures, of course, are above the average. Indications are that the corn crop is even a little better in the western division than in the northern, and the same may be said of one or two other crops. By reference to the statistical tables these facts will appear to anyone who wishes to examine closely into these conditions. In this district also it will be noticed that forage crops are in most excellent condition and promise unusually large yields. Also in this connection, alfalfa is reported as doing remarkably well and is growing with fine success in one or two counties of this district. This is a fact worth noting as an example of the ability of the soils of Florida to produce this universally extolled forage plant. Seasonable conditions have, of course, been favorable to produce these results. No fatal diseases of live stock are reported so far from this district. Every indication is for a prosperous condition.

NORTHEASTERN DIVISION.—In this division, if anything, there is still an increase over the two former ones. All crops seem to have produced remarkably well and indicate full yields in return. The cotton of this district, which is mostly Sea Island, will, apparently yield a full average crop and the quality is said to be above the average in some localities. It is said to be the finest cotton crop for a number of years, both as to quality and quantity. The corn crop certainly is equal to anything heretofore produced for many years, if not possibly the greatest yield within the past fifteen years. All crops promise full yields. Live stock is in good condition and no reports of unhealthfulness are made.

CENTRAL DIVISION.—Reports from this division show equally as well as those mentioned above. In this division the citrus fruit crops begin to show up and, according to our correspondents, conditions are exceedingly

favorable for a fine crop of citrus fruits generally. Oranges do not appear to be quite up to the large crop of last year, nor do grape fruit, but it is said that the quality will be possibly superior. In general, crops of all kinds in this section are fine. The results of the vegetable crops were favorable and live stock in this section, as in the others, is in fine condition.

SOUTHERN DIVISION.—In this division the climatic conditions have been, taken as a whole, probably as favorable as it is possible to be for the products which are grown on a commercial scale and for profit. All of the products of this district of importance are showing remarkable returns. The principal products of this section are commercial vegetable growing and fruit growing. The first has been favorable in the extreme according to reports and the fruits promise to equal last year if not exceed it in profitableness. All of the fruit crops have produced remarkably well. The orange crop in this district is almost equal, possibly quite, to that of last year, with the exception of grape fruit which appears to be short throughout the district about 30 per cent. In some localities this decrease is more, in some others not so much.

Considered as a whole, the prospects for the yield of products of Florida this year are brighter than for many years, in fact it is doubtful whether ever before more favorable conditions existed in any of the branches of agriculture than do exist in all of them today. The increase in the corn out-put in the State is most remarkable. Indications are that it will run close to one and a quarter million bushels over the yield of 1912. The oat crop is the largest ever known and the possibilities are that the increase will reach near to 125 per cent over last year.

The sweet potato crop which is one of the most valuable grown in the State, is also a record breaker this year. It is quite possible that the increase in this crop will

exceed 1,000,000 bushels over last year. Other crops are showing the same ratio of increase, practically, and to those who would inform themselves thoroughly on this subject, we suggest a close study of the statistical tables which follow.

From the best information obtainable through our correspondents who have made a most careful report in this case, it is apparent that the orange crop will come within about 150,000 crates of last year's crop. Two to two and a half per cent decrease is about the figures indicated for the orange crop as compared with last year. The same careful estimates indicate that the grape fruit crop of this year is about 30 to 31 per cent short of that of 1912.

We do not believe that anything will cause any material change in these figures. These conditions warrant the prophesy that the present citrus crop with proper handling, will be the most profitable ever grown in the State.

REPORT OF CONDITION AND PROSPECTIVE YIELD OF CROPS, FRUIT AND FRUIT TREES, FOR QUARTER ENDING SEPTEMBER, 30, 1913, AS COMPARED WITH SAME PERIOD LAST YEAR.

COUNTIES.	Upland Cotton.		Sea Island Cotton.	
Northern Division.	Condition.	Prospective Yield.	Condition.	Prospective Yield.
Gadsden	110	50	110	60
Hamilton	...	...	70	80
Jefferson	85	70	70	75
Leon	85	65	...	...
Liberty	80	65	...	...
Madison	60	75	50	60
Suwannee	80	80	75	70
Taylor	...	...	100	95
Wakulla	*5	60	...	...
Div. Av. per cent.	81	71	79	73
Western Division.				
Calhoun	100	125	105	105
Escambia	60	50	...	...
Holmes	70	60	...	...
Jackson	90	85	...	...
Santa Rosa	90	85	...	...
Walton	90	85	...	...
Div. Av. per cent.	83	80	105	105
Northeastern Division.				
Alachua	...	...	90	90
Baker	100	100	100	110
Bradford	...	...	100	90
Clay	...	...	100	100
Columbia	90	90	80	75
Duval	...	...	...	...
Nassau	100	90	95	90
St. Johns	...	...	...	...
Div. Av. per cent.	97	93	94	93
Central Division.				
Citrus	...	...	...	...
Hernando	...	...	...	...
Lake	...	...	...	...
Levy	60	60	50	50
Marion	...	...	100	95
Orange	...	...	...	...
Pasco	...	...	...	...
Volusia	...	...	...	...
Div. Av. per cent.	60	60	75	72
Southern Division.				
Brevard	...	...	...	...
Dade	...	...	...	...
DeSoto	...	...	...	...
Hillsborough	...	...	...	...
Lee	...	...	...	...
Osceola	...	...	...	...
Pinellas	...	...	...	...
St. Lucie	...	...	...	...
Div. Av. per cent.	...	...	...	...
State Av. per cent.	80	76	88	86

REPORT OF CONDITION AND PROSPECTIVE YIELD—Continued.

COUNTIES.	Corn.		Sugar Cane.	
Northern Division.	Condition.	Prospective Yield.	Condition.	Prospective Yield.
Gadsden	100	120	80	80
Hamilton	100	105	90	95
Jefferson	100	110	90	90
Leon	100	125	95	95
Liberty	100	100	90	85
Madison	100	125	110	110
Suwannee	110	100	100	100
Taylor	100	100	100	100
Wakulla	100	100	100	90
Div. Av. per cent.	100	109	95	94
Western Division.				
Calhoun	100	150	100	100
Escambia	100	100	100	100
Holmes	100	110	100	105
Jackson	100	115	100	105
Santa Rosa	100	100	100	100
Walton	100	105	100	100
Div. Av. per cent.	100	113	100	102
Northeastern Division.				
Alachua	110	105	90	85
Baker	100	155	100	100
Bradford	100	100	60	60
Clay	100	125	100	100
Columbia	100	100	85	85
Duval	100	100	100	100
Nassau	100	100	100	100
St. Johns	100	110	75	75
Div. Av. per cent.	100	112	89	88
Central Division.				
Citrus	85	95	100	100
Hernando	100	100	100	100
Lake	80	85	100	100
Levy	90	90	60	60
Marion	110	110	98	105
Orange	90	90	...	...
Pasco	100	100	90	90
Volusia	80	70	80	80
Div. Av. per cent.	92	92	90	91
Southern Division.				
Brevard	...	...	75	75
Dade	100	100	100	100
DeSoto	80	75	90	100
Hillsborough	90	90	90	85
Lee	...	...	100	120
Osceola	100	100	100	100
Pinellas	...	...	85	85
St. Lucie	...	...	95	95
Div. Av. per cent.	92	91	92	95
State Av. per cent.	97	115	93	94

REPORT OF CONDITION AND PROSPECTIVE YIELD—Continued.

COUNTIES.	Field Peas.		Rice.	
Northern Division.	Condition.	Prospective Yield.	Condition.	Prospective Yield.
Gadsden	110	120	...	...
Hamilton	60	50	...	...
Jefferson	75	75	...	...
Leon	100	105	...	...
Liberty	100	100	...	...
Madison	90	100	...	...
Suwannee	50	40	...	...
Taylor	100	100	...	...
Wakulla	100	90	...	...
Div. Av. per cent....	87	87	...	...
Western Division.				
Calhoun	100	100	...	...
Escambia	75	75	100	100
Holmes	100	100	...	...
Jackson	100	100	...	...
Santa Rosa	90	90	100	100
Walton	50	60	75	75
Div. Av. per cent....	86	88	92	92
Northeastern Division.				
Alachua	70	75	...	...
Baker	90	85	100	100
Bradford	75	80	...	...
Clay	100	100	...	...
Columbia	60	65	60	65
Duval	90	90	...	...
Nassau	100	100	100	100
St. Johns	80	90	80	85
Div. Av. per cent....	83	86	85	87
Central Division.				
Citrus	100	100	...	...
Hernando	100	100	100	100
Lake	95	90	...	...
Levy	50	50	...	...
Marion	100	100	...	...
Orange	...	...	...	...
Pasco	95	100	75	75
Volusia	90	90	...	...
Div. Av. per cent....	90	90	87	87
Southern Division.				
Brevard	50	60	...	...
Dade	100	100	...	...
DeSoto	85	90	75	60
Hillsborough	95	95	90	90
Lee	90	90	100	100
Osceola	100	100	...	...
Pinellas	90	90	85	85
St. Lucie	...	...	...	...
Div. Av. per cent....	87	89	87	84
State Av. per cent....	87	88	88	87

REPORT OF CONDITION AND PROSPECTIVE YIELD—Continued.

COUNTIES.	Sweet Potatoes.		Cassava.	
Northern Division.	Condition.	Prospective Yield.	Condition.	Prospective Yield.
Gadsden	90	90	...	...
Hamilton	45	50	...	...
Jefferson	60	65	...	...
Leon	100	110	...	...
Liberty	100	80	...	...
Madison	100	100	...	...
Suwannee	75	80	...	...
Taylor	90	90	...	...
Wakulla	90	85	...	...
Div. Av. per cent.	83	83	...	...
Western Division.				
Calhoun	100	100	...	...
Escambia	100	110	100	100
Holmes	100	100	...	...
Jackson	100	110	...	...
Santa Rosa	100	105	...	...
Walton	100	100	...	...
Div. Av. per cent.	100	104	100	100
Northeastern Division.				
Alachua	90	85	...	...
Baker	100	125	...	...
Bradford	100	100	...	...
Clay	100	100	...	...
Columbia	80	80	...	...
Duval	100	100	...	...
Nassau	100	100	...	...
St. Johns	100	100	...	...
Div. Av. per cent.	96	99	...	...
Central Division.				
Citrus	105	100	...	...
Hernando	105	115	...	...
Lake	100	107	...	...
Levy	80	80	60	60
Marion	95	95	...	...
Orange	80	95	...	...
Pasco	90	90	75	75
Volusia	75	75	80	80
Div. Av. per cent.	91	95	72	72
Southern Division.				
Brevard	65	70	...	...
Dade	100	100	...	...
DeSoto	75	75	...	...
Hillsborough	95	90	85	90
Lee	100	120	...	...
Osceola	80	80	90	90
Pinellas	90	90	...	...
St. Lucie	95	95	...	...
Div. Av. per cent.	88	90	87	90
State Av. per cent.	92	94	88	88

REPORT OF CONDITION AND PROSPECTIVE YIELD—Continued.

COUNTIES.	Peanuts.		Broom Corn.	
Northern Division.	Condition.	Prospective Yield.	Condition.	Prospective Yield.
Gadsden	100	100	...	...
Hamilton	100	100	...	...
Jefferson	100	95	...	...
Leon	100	110	...	...
Liberty	100	100	...	...
Madison	100	100	...	...
Suwannee	100	100	...	...
Taylor	100	100	...	...
Wakulla	100	100	...	...
Div. Av. per cent.	100	101	...	...
Western Division.				
Calhoun	100	105	...	...
Escambia	100	125	100	100
Holmes	100	100	...	...
Jackson	100	100	...	...
Santa Rosa	100	100	...	...
Walton	100	100	...	...
Div. Av. per cent.	100	105	100	100
Northeastern Division.				
Alachua	100	100	...	...
Baker	100	100	...	...
Bradford	60	60	...	...
Clay	100	100	...	...
Columbia	90	90	...	...
Duval	100	100	...	...
Nassau	100	100	100	100
St. Johns	85	85	...	...
Div. Av. per cent.	92	92	100	100
Central Division.				
Citrus	105	100	...	...
Hernando	100	100	...	...
Lake	100	100	100	100
Levy	85	85	...	...
Marion	100	100	...	...
Orange	...	...	...	...
Pasco	80	90	...	...
Volusia	90	90	...	...
Div. Av. per cent.	94	95	100	100
Southern Division.				
Brevard	...	...	...	...
Dade	...	...	...	...
DeSoto	...	...	...	...
Hillsborough	90	90	...	...
Lee	...	...	...	...
Osceola	...	...	...	...
Pinellas	...	...	...	...
St. Lucie	...	...	...	...
Div. Av. per cent.	90	90	...	...
State Av. per cent.	95	97	100	100

REPORT OF CONDITION AND PROSPECTIVE YIELD—Continued.

COUNTIES.	Hay—Native Grasses.		Alfalfa.	
Northern Division.	Condition.	Prospective Yield.	Condition.	Prospective Yield.
Gadsden	100	100	...	...
Hamilton	100	110	...	...
Jefferson	100	110	...	...
Leon	100	115	...	...
Liberty	...	...	...	...
Madison	100	100	...	...
Suwannee	100	100	...	...
Taylor	100	100	...	...
Wakulla	100	100	...	...
Div. Av. per cent....	100	104	...	...
Western Division.				
Calhoun	100	100	100	100
Escambia	85	100	...	...
Holmes	100	100	...	...
Jackson	100	100	100	125
Santa Rosa	100	100	...	...
Walton	100	100	...	100
Div. Av. per cent....	95	100	100	112
Northeastern Division.				
Alachua	100	100	...	...
Baker	100	200	...	...
Bradford	50	50	...	...
Clay	100	110	...	...
Columbia	90	90	...	...
Duval	100	100	...	...
Nassau	100	100	100	50
St. Johns	90	95	...	...
Div. Av. per cent....	91	106	100	50
Central Division.				
Citrus	100	100	...	...
Hernando	100	100	...	...
Lake	100	115	...	...
Levy	95	95	...	...
Marion	100	115	...	...
Orange	75	75	...	...
Pasco	85	90	...	...
Volusia	100	100	...	...
Div. Av. per cent....	94	99	...	...
Southern Division.				
Brevard	...	...	...	...
Dade	100	100	...	...
DeSoto	100	100	...	...
Hillsborough	100	100	...	...
Lee	110	100	...	...
Osceola	100	100	...	...
Pinellas	100	100	...	...
St. Lucie	100	100	...	...
Div. Av. per cent....	101	101	...	...
State Av. per cent....	97	102	100	81

REPORT OF CONDITION AND PROSPECTIVE YIELD—Continued.

COUNTIES.	Velvet Beans.		Pastures.
Northern Division.	Condition.	Prospective Yield.	Condition.
Gadsden	110	100	100
Hamilton	100	100	100
Jefferson	100	100	100
Leon	100	110	115
Liberty	100	100	100
Madison	50	60	100
Suwannee	80	80	100
Taylor	100	100	100
Wakulla	100	100	100
Div. Av. per cent.	93	93	102
Western Division.			
Calhoun	100	115	100
Escambia	100	125	90
Holmes	100	100	100
Jackson	100	100	100
Santa Rosa	100	100	100
Walton	100	100	100
Div. Av. per cent.	100	107	98
Northeastern Division.			
Alachua	75	70	100
Baker	100	100	100
Bradford	60	60	80
Clay	100	100	100
Columbia	75	80	100
Duval	100	100	100
Nassau	100	100	100
St. Johns	100	100	100
Div. Av. per cent.	89	89	97
Central Division.			
Citrus	90	100	100
Hernando	100	100	100
Lake	90	100	100
Levy	65	65	90
Marion	100	100	100
Orange	100	100	100
Pasco	90	95	90
Volusia	90	90	90
Div. Av. per cent.	91	94	96
Southern Division.			
Brevard	...	...	...
Dade	100	100	...
DeSoto	100	100	100
Hillsborough	100	100	100
Lee	100	100	100
Osceola	100	100	100
Pinellas	85	90	100
St. Lucie	100	100	105
Div Av. per cent.	98	99	101
State Av. per cent.	94	96	99

REPORT OF CONDITION AND PROSPECTIVE YIELD—Continued.

COUNTIES.	Bananas.		Mangoes.	
Northern Division.	Condition.	Prospective Yield.	Condition.	Prospective Yield.
Gadsden	...	...	...	...
Hamilton	...	...	...	...
Jefferson	...	...	...	...
Leon	...	...	...	...
Liberty	...	...	...	...
Madison	...	...	...	...
Suwannee	...	...	...	...
Taylor	...	...	...	...
Wakulla	...	...	...	...
Div. Av. per cent.	...	...	...	...
Western Division.				
Calhoun	...	...	...	...
Escambia	...	...	...	...
Holmes	...	...	...	...
Jackson	...	...	...	...
Santa Rosa	...	...	...	...
Walton	...	...	...	...
Div. Av. per cent.	...	...	...	...
Northeastern Division.				
Alachua	100	100	...	...
Baker	...	...	...	...
Bradford	...	...	...	...
Clay	...	...	...	...
Columbia	...	...	...	...
Duval	100	100	...	...
Nassau	100	50	...	...
St. Johns	...	...	...	...
Div. Av. per cent.	100	83	...	...
Central Division.				
Citrus	...	...	...	...
Hernando	...	...	...	...
Lake	100	100	...	...
Levy	20	20	...	...
Marion	...	...	...	...
Orange	...	...	...	...
Pasco	100	100	...	...
Volusia	...	...	...	...
Div. Av. per cent.	73	73	...	...
Southern Division.				
Brevard	85	75	75	60
Dade	100	100	95	85
DeSoto	75	60	...	...
Hillsborough	90	90	...	...
Lee	110	110	90	75
Osceola	100	300	100	300
Pinellas	...	...	...	...
St. Lucie	88	90	95	60
Div. Av. per cent.	93	105	91	112
State Av. per cent.	53	52	91	112

REPORT OF CONDITION AND PROSPECTIVE YIELD—Continued.

COUNTIES.	Avocado Pears.		Guavas.	
Northern Division.	Condition.	Prospective Yield.	Condition.	Prospective Yield.
Gadsden	...	...	...	...
Hamilton	...	...	...	...
Jefferson	...	...	...	...
Leon	...	...	...	...
Liberty	...	...	...	...
Madison	...	...	...	...
Suwannee	...	...	...	...
Taylor	...	...	...	...
Wakulla	...	...	...	...
Div. Av. per cent.	...	...	...	...
Western Division.				
Calhoun	...	...	...	...
Escambia	...	...	...	...
Holmes	...	...	...	...
Jackson	...	...	...	...
Santa Rosa	...	...	...	...
Walton	...	...	...	...
Div. Av. per cent.	...	...	...	...
Northeastern Division.				
Alachua	...	...	...	...
Baker	...	...	...	...
Bradford	...	...	...	...
Clay	...	...	...	...
Columbia	...	...	...	...
Duval	...	...	...	...
Nassau	...	...	...	...
St. Johns	...	...	100	100
Div. Av. per cent.	...	...	100	100
Central Division.				
Citrus	...	...	...	...
Hernando	...	...	...	...
Lake	...	...	100	100
Levy	...	...	...	...
Marion	...	...	...	...
Orange	...	...	100	100
Pasco	...	...	100	100
Volusia	...	...	100	100
Div. Av. per cent.	...	...	100	100
Southern Division.				
Brevard	...	...	90	90
Dade	100	100	100	100
DeSoto	...	...	100	100
Hillsborough	...	...	95	100
Lee	90	110	100	90
Osceola	...	...	100	300
Pinellas	...	...	100	100
St. Lucie	100	150	100	100
Div. Av. per cent.	97	120	98	122
State Av. per cent.	97	120	99	107

REPORT OF CONDITION AND PROSPECTIVE YIELD—Continued.

COUNTIES.	Orange Trees.		Lemon Trees.	
Northern Division.	Condition.	Prospective Yield.	Condition.	Prospective Yield.
Gadsden	...	...	...	...
Hamilton	...	...	...	...
Jefferson	...	...	...	...
Leon	100	90	...	...
Liberty	...	...	...	...
Madison	...	...	...	...
Suwannee	60	60	...	...
Taylor	...	...	...	...
Wakulla	...	...	...	...
Div. Av. per cent....	80	75	...	...
Western Division.				
Calhoun	100	90	100	85
Escambia	...	...	...	...
Holmes	...	...	...	...
Jackson	...	...	...	...
Santa Rosa	...	...	...	...
Walton	100	50	...	...
Div. Av. per cent....	100	70	100	85
Northeastern Division.				
Alachua	80	80	...	...
Baker	100	150	100	100
Bradford	...	...	...	...
Clay	100	90	...	...
Columbia	...	...	...	...
Duval	100	100	...	...
Nassau	90	100	90	100
St. Johns	100	100	...	...
Div. Av. per cent....	95	103	95	100
Central Division.				
Citrus	105	85	100	95
Hernando	90	75	...	...
Lake	95	100	90	90
Levy	60	80	...	...
Marion	100	85	100	90
Orange	95	100	...	...
Pasco	80	85	...	...
Volusia	80	75	...	...
Div. Av. per cent....	88	86	97	92
Southern Division.				
Brevard	80	80	80	55
Dade	100	85	85	75
DeSoto	100	85	85	70
Hillsborough	95	95	90	90
Lee	100	100	100	75
Osceola	100	70	100	70
Pinellas	95	90	90	85
St. Lucie	100	118	100	100
Div. Av. per cent....	96	90	91	66
State Av. per cent....	92	85	95	86

REPORT OF CONDITION AND PROSPECTIVE YIELD—Continued.

COUNTIES.	Lime Trees.		Grapefruit Trees.	
Northern Division.	Condition.	Prospective Yield.	Condition.	Prospective Yield.
Gadsden	...	...	...	...
Hamilton	...	...	...	...
Jefferson	...	...	...	...
Leon	...	...	100	85
Liberty	...	...	...	...
Madison	...	...	20	20
Suwannee	...	...	40	20
Taylor	...	...	...	...
Wakulla	...	...	...	...
Div. Av. per cent....	...	...	53	42
Western Division.				
Calhoun	...	...	100	90
Escambia	...	...	...	...
Holmes	...	...	...	...
Jackson	...	...	...	...
Santa Rosa	...	...	...	...
Walton	...	...	...	...
Div. Av. per cent....	...	...	100	90
Northeastern Division.				
Alachua	...	...	90	90
Baker	...	...	100	150
Bradford	...	...	...	...
Clay	...	...	100	100
Columbia	...	...	...	...
Duval	...	...	100	100
Nassau	...	...	100	100
St. Johns	...	...	100	100
Div. Av. per cent....	...	...	98	107
Central Division.				
Citrus	100	100	105	75
Hernando	...	...	90	40
Lake	...	...	90	45
Levy	...	...	60	60
Marion	100	80	100	125
Orange	...	...	90	60
Pasco	100	100	80	80
Volusia	...	...	80	60
Div. Av. per cent....	100	93	87	68
Southern Division.				
Brevard	...	...	80	70
Dade	100	112	100	90
DeSoto	90	90	90	80
Hillsborough	95	85	92	50
Lee	100	90	100	80
Osceola	100	60	100	50
Pinellas	...	...	95	60
St. Lucie	100	100	100	86
Div. Av. per cent....	97	89	95	71
State Av. per cent....	98	91	87	76

PART III.

Fertilizers,
Feed Stuffs, and
Foods and Drugs.

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 DISTERESTED PARTY TO THE COMMISSIONER OF AGRICULTURE AT TALLAHASSEE. NOT LESS THAN EIGHT OUNCES, IN A TIN CAN OR BOTTLE, WILL BE ACCEPTED FOR ANALYSES. This rule is adopted to secure fair samples of sufficient size to make the necessary determination 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.

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 analyzed 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 SAMPLES 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."

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, 3½%; available phosphoric acid, 6½%; and potash, 7½%. The following formulas will furnish the necessary plant food in about the above proportion. havle purposely avoided the use of any fraction of 100 pounds in these formulas to simplify them. Values are taken from price lists furnished by the trade, January 1, 1912.

For cotton, corn, sweet potatoes and vegetables: Ammonia, 3½%; available phosphoric acid, 6½%; potash, 7½%.

(A) "VEGETABLE."

No. 1.

		Per Cent.
900	pounds of Cotton Seed Meal (7½-2½-1½)	3.25 Ammonia
800	pounds of Acid Phosphate (16 per cent)	6.46 Available
300	pounds of Muriate or (Sulphate) (50 per cent)	7.50 Potash
2,000		

State value mixed and bagged.....$27.52
Plant Food per ton..... 343 pounds

No. 2.

		Per Cent.
1,000	lbs. of Blood and Bone (6½-8)	3.25 Ammonia
400	lbs. of Acid Phosphate (16 per cent)	7.00 Available
600	lbs. of Low Grade Sulp. Pot. (26 per cent)	7.80 Potash

State value mixed and bagged.....$28.45
Plant Food per ton..... 360 pounds

No. 3.

		Per Cent.
300 lbs. of Dried Blood (16 per cent).....		3.25 Ammonia
100 lbs. of Nitrate of Soda (17 per cent).....		8.00 Available
1,000 lbs. of Acid Phosphate (16 per cent).....		7.80 Potash
600 lbs. of Low Grade Sulp. Pot. (26 per cent)		
2,000		

State value mixed and bagged.....$29.45
Plant Food per ton..... 381 pounds

(B) "FRUIT AND WINE."

No. 1.

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

		Per Cent.
1,000 lbs of Blood and Bone (6½-8).....		
400 lbs. of Muriate of Potash (50 per cent)....		8 Available
500 lbs. of Acid Phosphate (16 per cent).....		4 Ammonia
100 lbs. of Nitrate of Soda (17 per cent).....		10 Potash
2,000		

State value mixed and bagged.....$34.50
Plant Food per ton..... 440 pounds

No. 2.

		Per Cent.
500 lbs. of Castor Pomace (6-2 per cent).....		4.00 Ammonia
200 lbs. of Sulp. of Am. (25 per cent).....		7.70 Available
900 lbs. of Acid Phosphate (16 per cent).....		9.60 Potash
400 lbs. of Sulp. of Pot. (48 per cent).....		
2,000		

State value mixed and bagged.....$33.76
Plant Food per ton..... 426 pounds

No. 3.

		Per Cent.
500 lbs. of Cotton Seed Meal (7½-2½ 1½).....		
100 lbs. of Nitrate of Soda (17 per cent).....		3.97 Ammonia
100 lbs. of Sulp. of Am. (25 per cent).....		8.30 Available
900 lbs. of Acid Phosphate (16 per cent).....		8.97 Potash
400 lbs. of Sulp. of Potash (48 per cent)....		
2,000		

State value mixed and bagged.....$33.56
Plant Food per ton..... 425 pounds

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.

COMMERCIAL "STATE VALUES" OF FERTILIZERS FOR 1913.

Available Phosphoric Acid	5c a pound
Insoluble Phosphoric Acid	1c a pound
Ammonia (or its evuivalent in nitrogen)	17½c a pound
Potash (as actual potash, K_2O)	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)	3.50 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 easist 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 3.50	— 11.97
Potash	7.23 per cent.	x 1.10	— 7.95
Mixing and Baging			— 1.50
Commercial value at Florida sea ports			$27.94

Or a fertilizer analyzing as follows:

Available Phosphoric Acid	8 per cent.	x $1.00	—$ 8.00
Ammonia	2 per cent.	x 3.50	— 7.00
Potash	2 per cent.	x 1.10	— 2.20
Mixing and Bagging			— 1.50
Commercial value at Florida sea ports			$18.70

The State 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 boods 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 sea ports.*

These price lists are published in this report, with the "State values" for 1913 deducted therefrom.

MARKET PRICES OF CHEMICALS AND FERTILIZING MATERIALS AT FLORIDA SEA PORTS, OCTOBER 1, 1913.

Ammoniates.

Nitrate of Soda, 17% Ammonia	$ 60.00
Sulphate of Ammonia, 20% Ammonia	74.00
Dried Blood, 16% Ammonia	60.00
Cynanamid, 17.5% Ammonia	54.00
Dry Fish Scrap, 11% Ammonia	55.00

Potash.

High Grade Sulphate of Potash, 90% Sulphate, 48% K_2O	$ 50.00
Low Grade Sulphate of Potash, 48% Sulphate, 26% K_2O	30.00
Muriate of Potash, 80%; 48% K_2O	46.00
Nitrate of Potash, imported, 16% Ammonia, 46% Potash K_2O	120.00
Nitrate of Potash, American, 13% Ammonia, 42% Potash K_2O	100.00
Kainit, Potash, 12% K_2O	13.00
Canada Hardwood Ashes, in bags, 4% K_2O Potash	19.00

Ammonia and Phosphoric Acid.

Water Soluable Tankage, 15% Ammonia	$ 52.00
High Grade Tankage, 10% Ammonia, 3½% Phosphoric Acid	43.00
Tankage, 8% Ammonia, 10% Phosphoric Acid	37.00
Low Grade Tankage, 6½% Ammonia, 12% Phosphoric Acid	33.00
Totel Tankage, 6% Ammonia, 7% Phosphoric Acid	28.00
Sheep Manure, ground, 3% Ammonia	24.00

Imported Fish Guano, 12% Ammonia, 12% 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	Market
Dark Cotton Seed Meal, 4½% Ammonia	Market

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	$ 24.00
High Grade Ground Kentucky Tobacco Stems, 2½% Ammonia, 10% Potash	28.00
Tobacco Dust No. 1, 2% Ammonia, 2% Potash	25.00
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 manufactures for mixing and bagging any special or regular formula are $1.50 per ton in excess of above prices.

NEW YORK WHOLESALE PRICES, CURRENT OCTOBER 1, 1913—FERTILIZER MATERIALS.

Ammoniates.

Ammonia, sulphate, foreign, prompt...	3.10	@	—
futures	3.10	@	—
Ammonia, sulph. domestic, spot	—	@	—
futures	3.00	@	—
Fish scrap, dried, 11 p. c. ammonia and 14 p. c. bone phosphate, f. o. b. fish works, per unit.....	3.10	@	—
wet, acidulated, 6 p. c. ammonia, 3 p. c. phosphoric acid delivered	—	@	—
Ground fish guano, imported, 10 and 11 p. c. ammonia and 15-17 p. c. bone phosphate, c. i. f. N. Y., Balto. or Phila.	3.00	&	10
Tankage, 11 p. c. and 15 p. c. f. o. b. Chicago	2.70	&	10
Tankage, 10 and 20 p. c., f. o. b. Chicago ground	2.37½	&	10
Tankage, 9 and 20 p. c., f. o. b. Chicago ground	2.37½	&	10
Tankage, concentrated, f. o. b. Chicago, 14 to 15 per cent, f. o. b. Chicago....	2.45	&	10
Garbage, tankage, f. o. b. Chicago.....	9.00	@	—
Sheep manure, concentrated, f. o. b. Chicago, per ton	13.00	@	—
Hoofmeal, f. o. b. Chicago, per unit....	2.00	@	2.70
Dried blood, 12-13 p. c. ammonia, f. o. b. New York	2.95	@	—
Chicago	2.80	@	—
Nitrate of soda, 95 p. c. spot, per 100 lbs.	2.35	@	—
futures, 95 p. c.	2.40	@	—

Phosphates.

Acid phosphate, per unit.....	45	@	50

Bones, rough, hard, per ton	22.50	@24.00
soft steamed unground.....	21.50	@22.00
ground, steamed, 1¼ p. c. ammonia and 60 p. c. bone phosphate	20.00	@21.00
ditto, 3 and 50 p. c.	23.50	@24.00
raw ground, 4 p. c. ammonia and 50 p. c. 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 per cen., f. o. b. Port Tampa, Fla..	3.00	@ 3.25
Florida high grade phosphate rock 77 per cent., f. o. b. Florida ports.....	5.75	@ 6.25
Tennessee phosphate rock, f. o. b. Mt. Pleasant, domestic, 78@80 p. c., per ton	5.00	@ 5.50
75 p. c. guaranteed	4.75	@ 5.00
68@72 p. c.	4.25	@ 4.50

POTASHES.

Muriate of potash, 80-85 per cent., basis 80 per cent., in bags	38.55	@ —
Muriate of potash, min. 95 per cent., basis 80 per cent., in bags	40.15	@ —
Muriate of potash, min. 98 per cent., basis 80 per cent., in bags	41.00	@ —
Sulphate of potash, 90-95 per cent., basis 80 per cent., in bags	46.80	@ —
Double manure salt, 48-53 per cent., basis 48 per cent., in bags	24.95	@ —
Manure salt, min. 20 per cent., K_2O, in bulk	13.50	@ —
Hardsalt, min. 16 per cent., K_2O, in bulk	10.85	@ —
Kainit, min. 12.4 per cent., K_2O, in bulk	8.45	@ —

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	.....	.....	.....
Kainit	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	0.20	0.70

COMMERCIAL STATE VALUES OF FEED STUFFS FOR 1913.

For the season of 1913 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 1913.

Protein, 3.4c. per pound	68c. per unit
Starch and Sugar, 1.1c. per pound	22c. per unit
Fats, 2.5c. per pound	50c. per unit

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

Indian corn being the standard @$25.00 per ton.

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

Example No. 1.

CORN AND OATS, EQUAL PARTS—

Protein	11.15 x 68c,	$ 7.58
Starch and Sugar	64.65 x 22c,	14.22
Fat	5.20 x 50c,	2.70
State value per ton		$24.50

Example No. 2.

Protein	10.50 x 68c,	$ 7.14
Starch and Sugar	69.60 x 22c,	15.31
Fat	5.40 x 50c,	2.70
State value per ton		$25.15

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	5.80	11.15	64.65	5.20	2.25
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
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
Wheat (grain)	1.80	11.90	71.90	2.10	1.80
Dry Jap Sugar Cane	26.22	2.28	62.55	1.55	2.77
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 Bean Hulls	27.02	7.46	44.56	1.57	4.32
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

DEPARTMENT OF AGRICULTURE—DIVISION OF CHEMISTRY.

FERTILIZER SECTION.

R. E. ROSE, State Chemist. SPECIAL FERTILIZER ANALYSES, 1913. FRANK T. WILSON, Asst. Chemist.

Samples taken by Purchaser Under Section 9, Act Approved May 22, 1901.

NAME, OR BRAND.	Laboratory Number.	Moisture.	Phosphoric Acid.			Ammonia.	Potash (K_2O).	BY WHOM SENT.
			Available.	Insoluble.	Total.			
Fertilizer	3082	4.54	5.94	0.96	6.90	4.90	8.91	Green & Robertson, Rideout.
Fertilizer	3083	9.60	9.78	1.02	10.80	3.22	6.35	Jno. A. Bailey, Chumuckla.
Sea Fowl Guano	3084	.....	.....	.....	.....	4.80	.....	B. E. Chapman, Tampa.
Ground Castor Pomace	3085	.....	.....	.....	.....	5.35	.....	Osceola Fertilizer Co., Jacksonville.
Fertilizer No. 1	3086	7.45	7.83	4.02	11.85	5.13	5.24	Henry W. Smith, Wauchula.
Fertilizer No. 2	3087	7.68	6.25	2.40	8.65	4.93	10.52	Henry W. Smith, Wauchula.
Ashes	3088	.....	.....	.....	.....	.....	0.34	W. S. Tallant, Manatee.
Fertilizer	3089	9.23	7.14	0.78	7.92	5.01	8.15	F. E. Williams, Inverness.
Guano	3090	.....	10.50	1.90	12.40	2.39	1.86	R. H. Ellison, Baker.
Fertilizer	3091	5.39	5.85	0.50	6.35	3.20	7.17	D. H. Spencer, Sorrento.
Complete Fertilizer	3092	15.34	9.51	3.80	13.41	4.73	6.17	J. Ed Raulerson, Lily.
Fertilizer	3093	.....	3.65	1.85	5.50	6.15	4.53	C. T. Brown, Delray.
Fertilizer	3094	7.17	6.40	2.55	8.95	5.45	10.06	H. W. Smith, Wauchula.
Treated Muck or Peat (Potash Salts added.)	3095	.....	.....	.....	.....	2.17	6.65	Robert Ranson, Pablo Beach.

NAME, OR BRAND.	Laboratory Number.	Moisture.	Phosphoric Acid.			Ammonia.	Potash (K_2O.)	BY WHOM SENT.
			Available.	Insoluble.	Total.			
Fertilizer	3096	8.52	7.25	0.85	8.10	5.31	7.94	F. R. Williams, Inverness.
Fertilizer No. 3	3097	0.31	11.40	0.10	11.50	3.44	11.88	Henry W. Smith, Wauchula.
Fertilizer	3098	1.74	5.79	4.95	10.74	.....	.....	H. G. Gacio, Venice.
Castor Pomace	3099	.....	.....	.....	.....	5.62	.....	Osceola Fertilizer Co., Jacksonville.
Fertilizer	3100	7.67	8.00	2.80	10.80	4.43	8.09	J. T. Rousseau, Largo.
Hardwood and Hickory Ashes	3101	.....	.....	.....	.....	.....	1.45	J. R. Williams, Citra.
Fertilizer No. 1 (C. S. M.)	3102	.....	.....	.....	.....	8.00	.....	J. M. Nobles, Berrydale.
Fertilizer No. 2 (complete)	3103	8.03	12.02	0.43	12.45	2.63	2.36	J. M. Nobles, Berrydale.
Fertilizer No. 3 (Kainit)	3104	.....	.....	.....	.....	.....	11.32	J. M. Nobles, Berrydale.
Guano	3105	.....	9.25	0.35	9.60	2.35	1.88	J. C. Stewart, Bascom.
Fertilizer	3106	4.26	8.90	2.25	11.15	4.54	7.91	T. E. Mobley, Hastings.
Fertilizer	3107	4.24	8.72	2.48	11.20	4.49	7.46	J. A. Gladney, Hastings.
Fertilizer	3108	5.43	8.20	3.20	11.40	5.03	6.92	J. J. Brown, Hastings.
Fertilizer	3109	8.38	6.21	1.14	7.35	2.38	9.77	L. J. Hartley, Jr., Longwood.
Ashes	3110	.....	.....	.....	.....	.....	3.34	B. F. Blackburn, Osprey.
No. 1 Guano	3111	10.45	10.00	0.60	10.60	3.45	3.08	E. M. Pitts, Red Rock.
No. 2 Phosphate	3112	.....	16.25	1.15	17.40	.....	.....	E. M. Pitts, Red Rock.
No. 1 Fertilizer	3113	11.80	9.20	1.60	10.80	2.78	1.75	J. W. Kelly, Otahite.
Guano	3114	.....	9.23	1.27	10.50	2.43	3.46	J. M. Deshazo, Mossy Head.
Fertilizer	3115	9.02	6.95	0.95	7.90	3.98	6.54	M. Merrett, West Apopka.

Fertilizer	3116	.....	12.62	0.38	13.00	.....	3.71	J. W. Peddle, Bristol.
Acid Phosphate	3117	.....	18.55	1.05	19.60	.....	.....	J. B. Huggins, Bluff Springs.
Fertilizer	3118	.....	10.65	0.45	11.10	3.95	3.88	B. D. Mayo, Pollard.
Ashes	3119	.....	.....	.....	.....	.....	3.14	R. F. Blackburn, Osprey.
Fertilizer No. 1	3120	8.44	7.37	1.55	8.92	3.23	9.97	C. F. Kistner, Crystal River.
Fertilizer No. 2	3121	6.71	9.30	0.20	9.50	3.68	7.21	C. F. Kistner, Crystal River.
Fertilizer No. 3	3122	12.04	10.15	0.65	10.80	3.80	5.06	C. F. Kistner, Crystal River.
Fertilizer	3123	11.05	6.60	0.80	7.40	3.65	8.28	R. P. Johnson, Orlando.
Fertilizer	3124	.....	9.28	1.70	10.98	1.96	1.20	C. B. Franklin, Galliver.
Fertilizer	3125	5.88	6.86	0.74	7.60	3.10	10.16	Armour Fertz. Wks., Jacksonville.
Fertilizer	3126	3.53	5.50	0.50	6.00	3.35	8.29	Armour Fertz. Wks., Jacksonville.
Fertilizer	3127	6.58	7.90	0.90	8.80	4.45	6.12	Armour Fertz. Wks., Jacksonville.
Fertilizer	3128	4.88	5.83	0.82	6.65	5.28	5.13	Armour Fertz. Wks., Jacksonville.
Fertilizer	3129	5.25	6.90	0.90	7.80	5.55	8.34	Armour Fertz. Wks., Jacksonville.
Fertilizer	3130	.....	7.88	2.20	10.08	3.68	11.68	Nocatee Fruit Co., Nocatee.
Ashes No. 1	3131	.....	.....	.....	.....	.....	0.37	Walter S. Tallant, Manatee.
Ashes No. 2	3132	.....	.....	.....	.....	.....	0.27	Walter S. Tallant, Manatee.
Hardwood Ashes	3133	.....	.....	.....	.....	.....	2.05	R. P. Johnson, Orlando.
Phosphatic Clay (Sea Mud)	3134	.....	.....	.....	1.20	.....	.....	J. Raford Carter, Merritt.
Fertilizer (Basic Slag & Nitrogen.)	3135	.....	4.73	6.87	11.60	3.21	.....	Jno. W. Jourdan, Jacksonville.
Fertilizer No. 1	3136	13.69	9.00	1.80	10.80	2.00	1.20	Chas. B. Franklin, Galliver.
Fertilizer No. 2	3137	12.87	10.48	1.62	12.10	2.85	2.06	Chas. B. Franklin, Galliver.

DEPARTMENT OF AGRICULTURE—DIVISION OF CHEMISTRY.

FERTILIZER SECTION.

R. E. ROSE, State Chemist. OFFICIAL FERTILIZER ANALYSES, 1913. FRANK T. WILSON, Asst. Chemist.

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

NAME, OR BRAND.	Laboratory Number.	Analyses, Guaranteed and Found.	Moisture.	Phosphoric Acid.			Ammonia.	Potash (K_2O.)	BY WHOM and WHERE MANUFACTURED.
				Available.	Insoluble.	Total.			
Armour Fruit & Vine	1914	Guaranteed	10.00	6.00	1.00	.....	2.50	11.00	Armour Fertilizer Works, Jacksonville, Fla.
		Found.....	3.32	6.49	0.43	6.92	2.69	11.29	
Benn Fertilizer	1915	Guaranteed	10.00	5.00	1.00	.....	5.00	5.00	Armour Fertilizer Works, Jacksonville, Fla.
		Found.....	6.04	6.76	0.82	7.58	4.97	5.94	
Tomato Special	1916	Guaranteed	10.00	6.00	1.00	.....	5.00	8.00	Armour Fertilizer Works, Jacksonville, Fla.
		Found.....	7.60	6.48	0.90	7.38	4.76	8.96	
Goulding's Bone Compound.	1917	Guaranteed	14.00	8.00	1.00	.....	2.00	2.00	American Agricultural Chemical Co., Pensacola, Fla.
		Found.....	12.13	8.12	2.90	11.02	2.35	1.90	
New Mineral Fertilizer.	1918	Guaranteed	.....	....	.....	0.23	.....	2.00	New Mineral Fertilizer Co., Boston, Mass.
		Found.....	0.12	....		0.06	.....	.....	

Mapes Orange Tree Manure.	1919	Guaranteed	12.00	6.00	2.00	.....	4.00	3.00	Mapes F. & P. Guano Co., New York, N. Y.
		Found.....	9.32	6.90	3.95	10.85	4.55	6.90	
Mapes Fruit & Vine Manure.	1920	Guaranteed	10.00	5.00	2.00	.....	2.00	10.00	Mapes F. & P. Guano Co., New York, N. Y.
		Found.....	9.03	6.13	1.97	8.10	2.75	10.86	
Mapes Vegetable Manure.	1921	Guaranteed	12.00	6.00	2.00	.....	5.00	2.00	Mapes F. & P. Guano Co., New York, N. Y.
		Found.....	5.46	6.80	3.20	10.00	5.94	5.12	
Ideal Corn Fertilizer	1922	Guaranteed	10.00	8.00	2.00	.....	2.00	6.00	Gulf Chemical Company, Marianna, Fla.
		Found.....	8.11	7.36	1.84	9.20	2.05	7.05	
Dekle's Trucker Guano.	1923	Guaranteed	10.00	7.00	2.00	.....	3.00	8.00	Gulf Chemical Company, Marianna, Fla.
		Found.....	6.27	4.75	2.45	7.20	3.45	9.09	
V. C. Special No. 5..	1924	Guaranteed	8.00	5.00	1.00	.....	5.00	5.00	Virginia-Carolina Chemical Company, Sanford, Fla.
		Found.....	8.18	5.93	1.07	7.00	5.00	4.27	
Number 3	1925	Guaranteed	8.00	6.00	2.00	.....	4.00	10.00	Southern Fertilizer Company, Orlando, Fla.
		Found.....	5.53	6.25	0.15	6.45	3.85	10.42	
Ideal Fruit & Vine Manure.	1926	Guaranteed	8.00	6.00	2.00	.....	3.00	10.00	Wilson & Toomer Fertilizer Company, Jacksonville, Fla.
		Found.....	9.98	6.85	1.00	7.85	3.55	8.85	
Mineral Plant Food.	1927	Guaranteed	.....	....	.....	0.23	.....	2.00	New Mineral Fertilizer Company, Boston, Mass.
		Found.....	.....	....	.....	.....	.....	.....	

DEPARTMENT OF AGRICULTURE—DIVISION OF CHEMISTRY.

FEEDING STUFF SECTION.

R. E. ROSE, State Chemist. **OFFICIAL FEEDING STUFF ANALYSES, 1913.** E. PECK GREENE, Asst. Chemist.

Samples Taken by State Chemist and State Inspector Under Sections 1, 2 and 13, Act Approved May 24, 1905.

NAME, OR BRAND.	Laboratory Number.	Analyses, Guaranteed and Found.	Fibre.	Protein.	Starch and Sugar. (Nitrogen Free Extr't.)	Fat.	Ash.	NAME AND ADDRESS OF MANUFACTURER.
Prime Cotton Seed Meal.....	1546	Guaranteed	.....	38.62	.....	.....	.....	The Buckeye Cotton Oil Co., Cincinnati, Ohio.
		Found.....	.....	38.70	.....	.....	.....	
Magnolia Brand Cot. Seed Meal	1547	Guaranteed	.....	38.62	.....	.....	.....	Union Brokerage and Com. Co., New Orleans, La.
		Found.....	.....	38.26	.....	.....	.....	
Standard Grade Cot. Seed Meal	1548	Guaranteed	.....	38.62	.....	.....	.....	Georgia Cotton Oil Co., Columbus, Ga.
		Found.....	.....	40.63	.....	.....	.....	
Standard Grade Cot. Seed Meal	1549	Guaranteed	.....	38.62	.....	.....	.....	W. C. Bradley Co., Columbus, Ga.
		Found.....	.....	38.52	.....	.....	.....	
Faultless Hen Feed.....	1550	Guaranteed	4.00	10.00	65.00	3.00	.....	Consolidated Grocery Co., Jacksonville, Fla.
		Found.....	3.13	11.14	69.02	3.65	1.54	
Larro-Feed	1551	Guaranteed	14.00	19.00	50.00	3.00	.....	The Larrowe Milling Co., Detroit, Mich.
		Found.....	11.50	20.71	51.12	3.62	4.20	

Feed (?)	1552	Guaranteed	.....	.....	.....	.....	.....	J. Bolgiano & Son, Baltimore, Md.
		Found.....	4.17	12.90	65.79	3.32	2.87	
Corno Horse and Mule Feed..	1553	Guaranteed	12.00	10.00	58.50	3.50	.....	The Corno Mills Co., St. Louis, Mo.
		Found.....	13.21	11.06	53.07	3.61	4.25	
Schumacher Special Horse Feed	1554	Guaranteed	8.00	9.25	64.50	3.25	.....	The Quaker Oats Co., Chicago, Ill.
		Found.....	4.50	9.02	66.56	4.50	2.42	
Gano Feed	1555	Guaranteed	.....	7.50	59.00	3.50	.....	Valley Milling Co., St. Louis, Mo.
		Found.....	3.70	11.14	60.90	4.22	4.67	
Carolina Horse and Mule Feed	1556	Guaranteed	12.00	10.00	55.00	3.00	.....	Virginia-Carolina Feed Co., East St. Louis, Ill.
		Found.....	10.75	10.92	61.63	2.78	6.35	
Bell Horse and Mule Feed....	1557	Guaranteed	17.00	10.00	47.00	2.40	.....	Commonwealth Feed Mill Co., St. Louis, Mo.
		Found.....	15.95	9.74	51.06	3.81	5.09	
Rex Stock Feed	1558	Guaranteed	9.00	11.45	59.00	4.45	.....	Milan-Morgan Co., New Orleans, La.
		Found.....	10.16	12.21	58.90	4.27	4.22	
Kornfalfa Kandy Feed.....	1559	Guaranteed	12.00	9.00	55.00	2.50	.....	Kornfalfa Feed Milling Co., Kansas City, Mo.
		Found.....	8.67	8.42	61.10	2.55	4.30	
Hammond Dairy Feed.....	1560	Guaranteed	11.00	16.50	48.00	2.50	.....	Western Grain Products Co., Hammond, Ind.
		Found.....	10.78	16.51	46.85	6.02	9.76	
Permenter's Stud Feed.....	1561	Guaranteed	12.00	10.50	55.00	2.50	.....	Cairo Milling Co., Cairo Ill.
		Found.....	11.44	11.88	54.69	3.00	5.83	
Perfection Horse Feed	1562	Guaranteed	12.00	10.00	55.00	2.00	.....	Omaha Alfalfa Milling Co., Omaha, Neb.
		Found.....	9.68	11.27	59.79	2.04	4.87	

NAME, OR BRAND.	Laboratory Number.	Analyses, Guaranteed and Found.	Fibre.	Protein.	Starch and Sugar. (Nitrogen Free Extr't.)	Fat.	Ash.	NAME AND ADDRESS OF MANUFACTURER.
Straight Alfalfa Molasses Feed	1563	Guaranteed	25.00	9.00	45.00	1.00	.....	Kornfalfa Feed Milling Co., Kansas City, Mo.
		Found.....	12.00	11.14	53.58	1.98	8.20	
Reliable Horse Feed	1564	Guaranteed	15.00	10.00	52.00	3.50	.....	Excello Feed Milling Co., St. Joseph, Mo.
		Found.....	12.82	9.81	54.99	3.23	6.92	
Best Yet Molasses Feed.....	1565	Guaranteed	12.00	10.00	58.00	3.75	.....	National Milling Co., Macon, Ga.
		Found.....	12.22	8.67	58.68	2.35	5.41	
Crown Horse Feed.....	1566	Guaranteed	12.00	9.00	59.00	2.00	.....	G. E. Patteson & Co., Memphis, Tenn.
		Found.....	15.88	8.34	55.24	2.16	6.34	
Big Four Feed.....	1567	Guarantee[1]	12.00	10.50	55.00	2.50	.....	Cairo Milling Co., Cairo, Ill.
		Found.....	10.14	11.49	59.39	2.11	6.24	
Just Horse and Mule Feed....	1568	Guaranteed	12.00	10.00	58.00	3.25	.....	Just Milling Co., Nashville, Tenn.
		Found.....	9.62	10.07	59.20	2.91	5.09	
Molac Horse Feed.....	1569	Guaranteed	10.50	10.00	62.00	3.00	.....	The Quaker Oats, Co., Chicago, Ill.
		Found.....	9.09	10.11	53.09	2.75	4.65	
Royal Horse and Mule Feed..	1570	Guaranteed	12.00	10.00	55.00	2.50	.....	Standard Feed Co., Memphis, Tenn.
		Found.....	10.96	8.78	62.45	3.28	5.55	

Nutriline "Momylk" Dairy Feed	1571	Guaranteed	12.00	15.00	48.00	4.50	.....	Nutriline Milling Co., Crowley, La.
		Found.....	12.04	14.99	45.24	7.22	8.08	
Steer Head Molasses Feed.....	1572	Guaranteed	12.50	9.00	56.51	3.00	.....	Drago Grain Co., Mobile, Ala.
		Found.....	5.36	9.62	63.33	3.14	4.04	
Mak-Fat Molasses Feed.....	1573	Guaranteed	12.00	10.00	55.00	3.50	.....	National Milling Co., Macon, Ga.
		Found.....	12.00	9.34	59.23	2.30	5.46	
Mixed Chicken Feed.....	1574	Guaranteed	.....	.....	.....	.....	.....	Excello Feed Milling Co., St. Joseph, Mo.
		Found.....	5.10	11.41	65.16	2.23	5.10	
Special Horse and Mule Feed..	1575	Guaranteed	12.00	10.00	58.00	3.25	.....	Stringfellow & Doty Co., Jacksonville, Fla.
		Found.....	9.21	11.23	54.54	3.92	3.69	
Purina Feed	1576	Guaranteed	9.80	12.00	58.00	4.00	.....	Ralston Purina Co., St. Louis, Mo.
		Found.....	9.00	16.23	55.78	4.75	2.70	
Acme Feed	1577	Guaranteed	10.00	10.00	70.00	3.00	.....	Valley Milling Co., St. Louis, Mo.
		Found.....	2.45	10.00	69.10	3.45	2.70	
Choice Feed	1578	Guaranteed	9.00	11.00	58.00	2.50	.....	City Mills Co., Columbus, Ga.
		Found.....	8.62	12.24	61.12	3.35	3.72	
O. K. Horse Feed.....	1579	Guaranteed	12.00	10.00	55.00	2.00	.....	Omaha Alfalfa Milling Co., Omaha, Neb.
		Found.....	11.09	12.20	58.29	3.51	3.76	
Midland Poultry Feed.....	1580	Guaranteed	2.50	17.50	50.50	2.50	.....	Midland Mixed Food Co., Kansas City, Mo.
		Found.....	4.61	16.50	53.59	4.61	10.11	
Ballard's Brand	1581	Guaranteed	8.04	15.78	53.00	4.42	.....	Ballard & Ballard Co., Louisville, Ky.
		Found.....	9.00	14.93	55.27	4.60	6.50	

NAME, OR BRAND.	Laboratory Number.	Analyses. Guaranteed and Found.	Fibre.	Protein.	Starch and Sugar. (Nitrogen Free Extract.)	Fat.	Ash.	NAME AND ADDRESS OF MANUFACTURER.
Omega Stock Feed.....	1582	Guaranteed	12.00	12.00	50.00	5.00	.....	Webb & Maury, Memphis, Tenn.
		Found.....	13.42	11.93	49.41	6.87	8.57	
M. Middlings	1583	Guaranteed	5.70	17.81	54.44	6.40	4.55	Hecker-Jones-Jewell Milling Co., New York, N. Y.
		Found.....	7.20	17.29	53.48	6.00	5.45	
Pure Wheat Middlings.....	1584	Guaranteed	6.00	15.00	60.00	4.00	.....	Iglehart Bros., Evansville, Ind.
		Found.....	5.70	17.02	56.72	5.29	5.45	
Southern Dairy Feed.....	1585	Guaranteed	9.00	9.00	55.00	7.50	.....	Western Grain Co., Birmingham, Ala.
		Found.....	10.15	8.95	61.77	4.83	2.97	
Steinmesch Mixed Feed.....	1586	Guaranteed	6.00	10.00	65.00	3.50	.....	Steinmesch Feed Co., St. Louis, Mo.
		Found.....	4.88	10.97	66.89	4.58	2.15	
Camp's Flaked Corn and Oats..	1587	Guaranteed	8.00	10.00	65.00	4.00	.....	The Toledo Grain & Milling Co., Toledo, Ohio.
		Found.....	4.17	10.00	67.85	4.27	3.60	
Pure Dustless Alfalfa.....	1588	Guaranteed	30.00	14.00	.....	1.50	.....	The Otto Weiss Alfalfa Co., Wichita, Kan.
		Found.....	29.67	13.00	37.36	2.77	7.37	
Pawnee Feed	1589	Guaranteed	12.00	8.25	65.00	3.50	.....	National Oats Co., St. Louis, Mo.
		Found.....	10.17	8.09	58.89	4.35	3.02	

Carolina Horse and Mule Feed.	1590	Guaranteed	12.00	10.50	53.60	3.50	.....	Allseed Mills Co., East St. Louis, Ill.
		Found.....	11.77	11.93	56.01	3.77	6.47	
Kentucky Farm Feed.....	1591	Guaranteed	6.42	16.45	58.00	4.60	.....	Ballard & Ballard Co., Louisville, Ky.
		Found.....	4.20	19.13	58.26	4.20	4.64	
Snow's Horse and Mule Feed..	1592	Guaranteed	.....	10.50	55.00	2.75	.....	G. E. Patteson & Co., Memphis, Tenn.
		Found.....	11.50	10.73	55.00	3.08	5.45	
Circle C. Molasses Feed.....	1593	Guaranteed	12.00	10.50	55.00	2.50	.....	Cairo Milling Co., Cairo, Ill.
		Found.....	11.79	10.30	56.29	2.50	6.00	
Old Beck Sweet Feed.....	1594	Guaranteed	12.00	8.50	55.00	2.00	.....	Edgar-Morgan Co., Memphis, Tenn.
		Found.....	11.49	9.68	60.40	2.34	3.23	
Reliable Horse Feed.....	1595	Guaranteed	15.00	10.00	52.00	3.50	.....	Excello Feed Milling Co., St. Joseph, Mo.
		Found.....	14.36	11.71	50.26	3.00	6.74	
Feed Meal	1596	Guaranteed	8.00	12.50	60.00	5.50	.....	Mountain City Mills Co., Chattanooga, Tenn.
		Found.....	8.32	12.72	59.22	5.62	3.42	
Camp's Flaked Corn and Oats.	1597	Guaranteed	8.00	10.00	65.00	4.00	.....	The Toledo Grain and Milling Co., Toledo, Ohio.
		Found.....	7.31	9.96	65.43	4.27	2.13	
Atlas Feed	1598	Guaranteed	.....	11.85	57.18	3.35	.....	Barnard & Hester, Tampa, Fla.
		Found.....	11.65	12.35	57.10	3.65	4.14	
Homco Feed	1599	Guaranteed	7.00	9.50	67.89	7.00	.....	American Hominy Co., Indianapolis, Ind.
		Found.....	4.25	10.97	64.10	4.25	3.68	
Red Seal Mixed Feed.....	1600	Guaranteed	7.00	9.50	67.89	7.00	.....	Jacksch, Davison & Co., Galveston, Texas.
		Found.....	4.25	10.97	64.10	9.03	3.68	

NAME, OR BRAND.	Laboratory Number.	Analyses, Guaranteed and Found.	Fibre.	Protein.	Starch and Sugar (Nitrogen Free Extrt.)	Fat.	Ash.	NAME AND ADDRESS OF MANUFACTURER.
Brown Mule Feed.....	1601	Guaranteed	12.00	10.00	50.00	3.00	.....	Good Luck Mills, St. Louis, Mo.
		Found.....	12.62	9.92	55.74	3.35	8.40	
Star Feed	1602	Guaranteed	10.00	11.70	57.00	3.50	.....	Illinois Feed Mills, St. Louis, Mo.
		Found.....	10.46	13.08	58.70	6.30	5.11	
Protena Feed	1603	Guaranteed	10.00	11.70	57.00	3.80	.....	Ralston Purina Co., St. Louis, Mo.
		Found.....	8.95	14.30	57.90	4.33	4.13	
Besto Molasses Feed.....	1604	Guaranteed	12.00	10.00	57.00	3.50	.....	J. T. Gibbons, New Orleans, La.
		Found.....	8.46	9.63	59.36	2.90	5.13	
Sucrene Alfalfa Horse & Mule Feed	1605	Guaranteed	12.00	11.00	50.00	2.50	.....	American Milling Co., Chicago, Ill.
		Found.....	11.09	12.89	53.58	2.37	5.06	
Sho-Me Horse Feed.....	1606	Guaranteed	15.00	10.00	52.00	3.50	.....	Excello Feed Milling Co., St. Joseph, Mo.
		Found.....	10.04	11.42	57.77	2.83	4.29	
Kawmo Molasses Feed.....	1607	Guaranteed	12.00	9.00	55.00	2.50	.....	Kornfalfa Feed Milling Co., Kansas City, Mo.
		Found.....	11.87	10.50	57.09	4.03	5.18	
Standard Feed	1608	Guaranteed	12.00	10.00	55.00	2.50	.....	Standard Feed Co., Memphis, Tenn.
		Found.....	11.04	10.28	58.60	2.42	4.42	

Infirmary Feed	1609	Guaranteed	7.50	9.78	62.95	6.05	.....	Barnard & Hester, Tampa, Fla.
		Found.....	3.38	9.74	64.57	6.05	5.26	
Ideal Horse & Mule Feed	1610	Guaranteed	12.00	10.50	56.00	3.50	.....	Just Milling & Feed Co., Nashville, Tenn.
		Found.....	9.45	10.97	61.45	3.40	2.80	
International Poultry Feed	1611	Guaranteed	5.00	10.00	70.00	3.50	.....	International Sugar Feed Co., Memphis, Tenn.
		Found.....	2.41	10.53	71.37	3.42	1.82	
Larro Feed	1612	Guaranteed	14.00	19.00	50.00	3.00	3.50	The Larrowe Milling Co., Detroit, Mich.
		Found.....	12.12	19.13	51.69	3.80	4.36	
Cerolfa Stock Feed	1613	Guaranteed	11.50	13.00	55.00	3.50	.....	Edgar-Morgan Co., Memphis, Tenn.
		Found.....	4.87	14.22	61.86	4.13	4.80	
M. Middlings	1614	Guaranteed	6.27	17.59	53.65	5.78	.....	Hecker-Jones-Jewell Milling Co., New York, N. Y.
		Found.....	10.90	17.36	54.51	4.60	3.96	
Shipstuff	1615	Guaranteed	7.00	14.50	54.00	4.00	.....	The Dunlop Mills, Richmond, Va.
		Found.....	5.15	15.71	59.45	4.60	4.07	

DEPARTMENT OF AGRICULTURE—DIVISION OF CHEMISTRY.

FOOD AND DRUG SECTION.

R. E. ROSE, State Chemist. SPECIAL FOOD ANALYSES, 1913. I. HEIMBURGER, Asst. Chemist.

Samples Taken by Purchaser Under Section 12, Act Approved June 5, 1911.

ALCOHOLIC DRINKS.

Number.	LABEL.	MANUFACTURER.	Alcohol (per cent by volume).	FROM
1464	Wurtzburger Style Malt Tonic..	Wurtzburger Malt Extract Co., Atlanta, Ga.	3.88	Nat R. Walker, Crawfordville.
1465	Hop Ale	.....	0.20	T. C. Smyth, Tavares.
1466	Florida Bud., 12 oz. Guaranteed less than 2% Alcohol.	The Florida Brewing Co., Tampa, Fla.	3.27	T. C. Smyth, Tavares.
1467	Florida Bud., 12 oz. Guaranteed less than 2% Alcohol.	The Florida Brewing Co., Tampa, Fla.	2.95	T. C. Smyth, Tavares.
1469	Extract Jamaica Ginger.....	New Smyrna Pharmacy, New Smyrna, Fla.	91.04	W. H. Newell, New Smyrna.
1470	Schnapp's Brew	Tampa Bottling Works, Tampa, Fla..	0.47	Tampa Bottling Works, Tampa
1475	Cider	.....	7.39	E. D. Wester, DeFuniak Sp'gs.

SOFT DRINKS.

(These Drinks Contain No Alcohol.)

No.	LABEL.	MANUFACTURER.	FROM.
1471	Poinsetta. Contains no alcohol, etc.	The Purity Extract & Tonic Co., Chattanooga, Tenn.	H. Blaine Peacock, Tarpon Springs.
1474	Golden Ribbon. Non-intoxicating, etc., 12 ozs.	Council Bluffs Soda Water Co., Council Bluffs, Iowa.	Paul Carter, Marianna.
1476	Mezzo No. 1. Elberta Flavor..	Anderson & Co., Atlanta, Ga.....	A. R. Denmark, Tallahassee.
1477	Golden Ribbon. Non-intoxicating, etc., 12 ozs.	Council Bluffs Soda Water Co., Council Bluffs, Iowa.	Tallahassee Fruit & Grocery Co., Tallahassee.
1478	Schooner Brew. Preserved with 1/10 of 1% Benzoate of Soda, etc. Bottled under authority of National Beverage Co., Chattanooga, Tenn.	Crown Bottling Works, Brooksville, Fla.	Crown Bottling Works, Brooksville.

CITRUS FRUIT.

Number.	NAME.	DATE.	Total Acid as Citric (per cent.)	FROM.
1472	Pomelo (Sample No. 2).....	Aug. 27, 1913.....	2.23	J. R. Williams, Citra.
1473	Pomelo (Sample No. 1.....	Aug. 27, 1913.....	2.05	J. R. Williams, Citra.
1479	Oranges	Sept. 18, 1913.....	1.49	Barney Dillard, Astor.
1480	Grapefruit	Sept. 18, 1913	1.83	Barney Dillard, Astor.

MISCELLANEOUS.

No.	LABEL.	ANALYSIS.	FROM.
1468	Blue Grass Belle Catsup. Put up by The Castleman-Blakemore Co., Louisville, Ky.; 16 fluid ozs.	Sodium Benzoate.....None. Net measure.....16.6 fluid ozs. *Microscopic Examination.* Mold (in 2% of fields)....= 2 Yeasts & spores per 1/00 cc= 8 Bacteria (per cc).....= 5,000,000	Peninsular Grocery Co., Tampa.

MISCELLANEOUS.

No.	LABEL.	RESULTS.	REMARKS.
1450	Airlo Brand Cane & Corn Syrup. Packed by Dunbars, Lopez & Dukate Co., New Orleans, La.	Sulfur Dioxide .....=None. Net Weight .....=12, 2 /8 ozs.	Illegal. Misbranded. No. statement of net weight or measure.
1451	Excelsior Brand Beets. Packed by C. E. Sears & Co., Circleville, Ohio.	Salicylic Acid .....=None. Benzoic Acid .....=None. Net weight .....=2 lbs. 1, 3 /8 ozs.	Illegal. Misbranded. No statement of net weight or measure.
1452	Crown Brand Little Neck Clams. Packed by L. Pickert Fish Co., Boston, Mass.	Salicylic Acid.....=None. Benzoic Acid .....=None. Net weight .....=15, 7 /8 ozs.	Illegal. Misbranded. No. statement of net weight or measure.
1459	Monticello Special Reserve Rye Whiskey. The Monticello Distilling Co., Baltimore, Md.	Alcohol (by volume)....=44.13%	Illegal. Misbranded. No statement of net weight or measure or alcohol percentage on label.
1460	Mild Holland Gin. Hanne Bros., importers and bottlers, Jacksonville, Fla.	Alcohol (by volume).....=34.32%	Illegal. Misbranded. No. statement of net weight or measure or alcohol percentage on label.

LARDS, LARD COMPOUNDS AND COOKING OILS

Number.	LABEL.	Net Contents as Stated.	Net Contents as Found.	Iodine Number.	Butro Refractometer Reading at 40° C.	Cotton Seed Oil.	REMARKS.
1204	Armour's "Shield" Pure Lard. Armour & Co. (on 60-lb tub).	Sold in bulk	.....	62.5	50.2°	Absent.	Legal.
1205	Wesson Snowdrift Oil. Choice Winter Pressed Cotton Seed Oil. Good for salads and cooking, etc. The Southern Cotton Oil Co., New York, Savannah, New Orleans, Chicago.	Not stated..	13½ ozs.	69.9	59.8°	Present	Illegal. No statement of net weight or measure.
1206	Advance Compound. Ingredients: Prime Oleo Stearine and Refined Cotton Seed Oil. Sulzberger & Sons Co., of Oklahoma (on 60-lb. tub).	Sold in bulk	.....	83.2	56.6°	Present	Legal.

1207	Scoco Shortening. Not less than 1 lb. 7 ozs. net. Contains only C. S. Oil, Stearine made from C. S. Oil and Oleo Stearine. Made at Savannah, Ga. The Southern Cotton Oil Co.	1 lb. 7 ozs. ..	1 lb. 7 ozs.	88.6	58.0°	Present	Legal.
1208	Pearl-Choice Refined Cotton Seed Oil, Prime Oleo Stearine-Beef Fat. Tennessee Packing and Stock Yards Co., Nashville, Tenn. (on tierce).	Sold in bulk	.....	63.8	55.3°	Present	Legal.
1209	Kneedit. Composed of C. Seed Oil, Cotton Seed Stearine and Oleo Stearine. Edible Products Co. Made at Savannah, Ga. (on 60-lb. tub).	Sold in bulk	.....	93.2	56.4°	Present	Legal.
1210	Fairbanks Brand Compound. Composed of C. S. Oil, Oleo Stearine and Stearine made from C. S. Oil. The N. K. Fairbanks Co., New Orleans. (on 50-lb. can).	Sold in bulk	.....	83.2	55.2°	Present	Legal.
1211	Indiana Brand Pure Lard. Kingar & Co., Indianapolis, Ind. (on 50-lb. can).	Sold in bulk	.....	63.9	50.3°	Absent.	Legal.

LARDS, LARD COMPOUNDS AND COOKING OILS.

Number.	LABEL.	Net Contents as Stated.	Net Contents as Found.	Iodine Number.	Butro-Refractometer Reading at 40° C.	Cotton Seed Oil.	REMARKS.
1212	Morris' White Seal. Made from Cotton Seed Oil and Oleo Stearine, Morris & Co., E. St. Louis. [Sample from 45-lb. can).	Sold in bulk	.....	84.2	55.9°	Present	Legal.
1213	Invincible. For shortening, for frying. The Proctor & Gamble Co. Made at Ivorydale, O., and Macon, Ga. (on 60-lb. tub.)	Sold in bulk	.....	93.9	57.0°	Present	Legal.
1214	Sea Foam Compound. Cotton Seed Oil and Oleo Stearine. Made for Kingar & Co., Indianolis, Ind. (on 60-lb. tub).	Sold in bulk	.....	86.7	55.2°	Present	Legal.

1215	White Breast Brand Pure Lard, 401-54 gross. Morton Gregson Co., Nebraska City, Neb. (Label taken from bottom of tierce).	Sold in bulk	.....	65.7	50.4°	Absent.	Legal.
1216	Cream 'O'Cotton. Contains only sterilized C. S. Oil and Oleo Stearine. Texas Refining Co., Greenville, Texas. (on 45-lb. tin).	Sold in bulk	.....	87.2	56.5°	Present	Legal.
1217	Eagle Brand Pure Lard with Oleo Stearine. Jones & Lamb Co., Baltimore, Md. (on 45-lb tin).	Sold in bulk	.....	63.0	50.2°	Absent.	Legal.
1218	Sunny South C. S. Oil and Oleo Stearine. Net weight of contents 46 lbs. Street & Corkran Co., Baltimore, Md. (on 45-lb. tin can).	Sold in bulk	.....	83.4	56.2°	Present	Legal.
1219	Polar Compound. Sterilized Cotton Seed Oil and Oleo Stearine. Net weight 45 lbs. 9 ozs. Manufactured by the Merchants & Planters' Oil Co., Houston, Tex. (on 45-lb. can).	Sold in bulk	.....	83.6	55.2°	Present	Legal.
1220	Tennessee Country Style Pure Lard (on 45-lb. tin can).	Sold in bulk	.....	69.6	50.9°	Absent.	Legal.

LARDS, LARD COMPOUNDS AND COOKING OILS.

Number.	LABEL.	Net Contents as Stated.	Net Contents as Found.	Iodine Number.	Butro-Refractometer Reading at 40° C.	Cotton Seed Oil.	REMARKS.
1414	Crisco. Purely vegetable. Net weight 1½ lbs. The Proctor & Gamble Co., Cincinnati, O.	1 and ½ lbs.	1 lb 8½ ozs.	76.3	53.2°	Absent.	Legal.
1415	Cottolene. Cotton Seed Oil—Oleo Stearine, 1 lb. 10 ozs. net weight. Contains no hog fat. The N. K. Fairbank Co.	1 lb. 10 ozs.	1 lb. 10 ozs.	87.1	55.2°	Present	Legal.
1416	Snowdrift. Contains only C. S. Oil and Oleo Stearine. Not less than 23 ozs. net. The Southern Cotton Oil Co., Gretna, La.	23 ozs.	25¾ ozs.	81.9	55.9°	Present	Illegal. Net weight not correctly stated in pounds and ounces.

1417	Cream White. Choice C. S. Oil, Prime Oleo Stearine—Beef Fat. Tennessee Packing and Stock Yards Co., Nashville, Tenn. (on barrel).	Sold in bulk	.....	88.9	56.3°	Present	Legal.
1418	Swift's Jewel Shortening. Made from refined Cotton Seed Oil and Oleo Stearine (on barrel).	Sold in bulk	.....	85.5	56.0°	Present	Legal.
1419	Cudahy's White Ribbon Compound. Prepared from Cotton Seed Oil, Oleo Stearine and Beef Fat (on barrel).	Sold in bulk	.....	84.8	55.3°	Present	Legal.
1420	Cudahy's Milwaukee Snow Ball, composed of C. S. Oil, Oleo Stearine and Beef Fat. Cudahy Bros. Co. plant, Cudahy, Wis.	Sold in bulk	.....	69.9	55.3°	Present	Legal.
1421	Pure Lard, Laurel Leaf Brand. Sulzberger & Sons Co. (on 40-lb. tin.	Sold in bulk	.....	59.5	50.2°	Absent.	Legal.
1422	Cudahy's Milwaukee White Champion Brand Pure Lard. Cudahy Bros. Co., Cudahy, Wis. (on 40-lb. tub).	Sold in bulk	.....	58.3	50.0°	Absent.	Legal.

LARDS, LARD COMPOUNDS AND COOKING OILS.

Number.	LABEL.	Net Contents as Stated.	Net Contents as Found.	Iodine Number.	Butro-Refractometer Reading at 40° C.	Cotton Seed Oil.	REMARKS.
1423	Swift's Silver Leaf Brand, Guaranteed Pure Lard. Swift & Co. (on 60-lb. tub).	Sold in bulk	.....	64.9	51.1°	Absent.	Legal.
1424	Flake White for shortening, etc. Proctor & Gamble Co., Ivorydale, O. (on 60-lb. tub).	Sold in bulk	.....	80.9	50.7°	Present	Legal.
1425	Snowhite. Composed of C. S. Oil. The N. K. Fairbank Co., New Orleans, La. (on tierce).	Sold in bulk	.....	84.5	55.4°	Present	Legal.
1426	Armour's White Cloud. Composed of Cotton Seed Oil and Oleo Stearine. Armour & Co. (on 60-lb. tub).	Sold in bulk	.....	80.8	55.3°	Present	Legal.

1427	Armour's Simon Pure Leaf Lard. Armour & Co.	Sold in bulk	.....	53.5	48.8°	Absent.	Legal.
1428	Cudahy's Rex Pure Lard (on side of tierce).	Sold in bulk	.....	60.9	50.1°	Absent.	Legal.