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SECOND SERIES,

No. 52.

BULLETIN

—OF THE—

LOUISIANA STATE EXPERIMENT STATIONS,

WM. C. STUBBS, PH. D., Director.

REPORT FOR 1896 AND 1897

—OF THE—

HORTICULTURAL DEPARTMENT

—OF—

STATE EXPERIMENT STATIONS,

—BY—

WM. C. STUBBS,
F. H. BURNETTE,
EUGENE WATSON.

ISSUED BY THE BUREAU OF AGRICULTURE AND IMMIGRATION,
J. G. LEE, COMMISSIONER.

BATON ROUGE
PRINTED AT THE TRUTH BOOK AND JOB OFFICE.
1898.

LOUISIANA STATE UNIVERSITY AND A. & M. COLLEGE.

BUREAU OF AGRICULTURE.

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LOUISIANA STATE UNIVERSITY AND A. AND M. COLLEGE,
Office of State Experiment Stations,
Baton Rouge, Louisiana.

Hon. J. G. Lee, Commissioner of Agriculture and Immigration, Baton Rouge, La.:

DEAR SIR—I hand you herewith a summary of experiments conducted along Horticultural lines at the three Stations of this State during the last two years and ask that this be published as Bulletin No. 52.

Respectfully submitted,

WM. C. STUBBS,
Director.

The three stations, during the last two years, have engaged in the following general lines of Horticulture:

1. Trial of new varieties.
2. Comparative tests of Northern grown seeds with those grown upon the grounds of the stations.
3. Distribution of desirable plants and seeds.

Besides the above a number of miscellaneous experiments have been made at each station.

In addition to the above lines of work, the Horticultural Department at Baton Rouge has been experimenting in growing winter cucumbers under glass.

REVIEW OF THE SEASONS.

In 1896, a drouth during the summer prevailed both at Baton Rouge and Calhoun. It was serious at the former place, both to the garden and orchard, extending from August 1 to November 1, thus injuring the summer and fall crops of vegetables. The spring crops were very good, also the late fall and winter ones, but the late summer and early fall vegetables were only kept alive by frequent shallow cultivation. Tomatoes transplanted in the early fall did not receive over an inch of rain fall from transplanting to the maturity of its first fruit. By frequent shallow cultivations the soil was kept constantly covered with a loose mulch which conserved the moisture by preventing evaporation.

By such treatment, vegetables of a satisfactory growth can be grown in a very dry season.

The season of 1896 will ever be memorable for the destructive drouth that prevailed in the hills of North Louisiana. Without rain from April to October, little or nothing could be accomplished in the garden or orchard at Calhoun. On August 3d, a shower occurred which encouraged replanting of many seeds, but the effects of this rainfall was soon dissipated by another drouth extending to October. Such vegetables as were planted after the rains in October were destroyed by frost before reaching full maturity.

The season of 1896 was very favorable to all kinds of crops at Audubon Park. After the disastrous drouth at Calhoun in 1896, an irrigation plant was established, which was used successfully both upon the experimental field and garden. By an intelligent use of water even in favorable seasons larger crops of vegetables can be grown.

1897.

The season of 1897 was favorable to both the garden and the orchard at all three stations.

NEW VEGETABLES.

The Chinese Cabbage, *Pe Tsai*, was grown very satisfactorily at the State Experiment Station, Baton Rouge.

It has a large head of crispy material and highly prized when used as a salad. It grows well throughout the entire season and furnishing a substitute for lettuce at a season of the year when this plant does not thrive. It is preferred to lettuce by many connoisseurs.

Requiring similar treatment both in planting and cultivation as lettuce, with more care in handling in the seed bed, it is worthy of trial in every private garden.

ASPARAGUS.

This toothsome vegetable has been grown at Baton Rouge and Audubon Park. The varieties used were the following: Barr's Mammoth, Conover's Colossal, Moore's Crossbred and Palmetto. The last excelled in earliness and productiveness with the quality rather inferior to Barr's Mammoth and Conover's Colossal. Our experiments would indicate that our long hot summers are detrimental to the full growth and development of this desirable esculent; therefore do not recommend growing it for commercial purposes, but a small bed might appropriately find a place in every private garden.

BEANS.

Duplicates of the same variety were obtained as far as possible from Jas. M. Thorburn & Co., of New York, and *Richard Frotscher & Co., of New Orleans, and planted side by side on each station. Seeds were saved from each variety and will be used for planting the present year to test the comparative merits of home-grown seed with those grown in the North.

The following were the varieties duplicated from Thorburn and Frotscher: Pride of Newton (almost excellent sort), Early Mohawk (excellent), Valentine Wax (unsatisfactory), Wardwell's Kidney (poor), Thorburn's Prolific Market (fair),

*Since death of Richard Frotscher, from his successor, J. Steckler Seed Co., New Orleans.

Detroit Wax (poor), Kenneys' (fair), Early Valentine (very good), Early Yellow, six weeks (fair to poor), Flageolet Wax (good), Early Refugee (very good), Broad Windsor (good), Red Kidney (poor), White Kidney (poor), Best of All (fair), Imported Golden Wax (good), German Wax (poor), Pink Eye Wax (fair), Grenell's Dwarf Golden Wax (very good), Marvel of Paris (poor), Dwarf Butter Wax (good), Velvet Wax (poor), Dwarf White Wax (very good). The following varieties were obtained from Alexander Seed and Drug Co., Augusta, Ga., First of Market (very good), Stringless (very good), Silver Pod (very poor). From West Virginia was obtained "The Wisconsin Tree Bean, which did fairly well. Little or no difference was observable either during growth or at harvest in the same varieties from different sources.

POLE AND LIMA BEANS.

The following pole beans were grown: Golden Cluster Wax (good), Lazy Wife's (good), Southern Prolific (very good), White Cream Back (good), White Dutch Case Knife (good), Golden Wax Flageolet (good). The above were from Frotscher, of New Orleans.

The following varieties of Pole Lima or Butter Beans were grown: Large Lima (good), Southern Willow Leaf (good), Carolina Sewee (very good), Challenger (very good), Ford's Mammouth (good), Improved Pole (very good) and Wood's Improved Sewee (excellent).

Most of above were grown in triplicate—seed from Thorburn, from Frotscher and home grown. The last were equal if not superior to either of the others.

BUSH LIMAS.

These are beginning to supplant Pole Lima and are desirable acquisitions to every garden. The following varieties from the three sources given above were grown:

Burpee's Bush, a large bean, vine inclined to run, not very productive.

Henderson's Bush, a small bean, occurring abundantly on a perfect bush.

Thorburn's Bush, a good variety, rather inclined to run.

Jackson's Wonder, variable, highly valued at Calhoun.

Quite a profitable trade might be established by drying properly, the matured Lima Bean, for winter use.

BEETS.

In 1896 there was a failure in Beets at Calhoun.

The following varieties from Frotscher and Thorburn were grown at all the stations: Early Blood Turnip (very good), Half Long Blood (good), Eclipse (excellent), Lentz (excellent), Egyptian (excellent).

The following were from the station at New Orleans: Long Blood (fair), White French Sugar (fair), Bassano (very good), Edmond's (fair).

The following were from Thorburn: Black Queen (poor).

Besides the above six varieties of Mangel Wurtzels were grown successfully, the best of which was the "Long Red." Mangel Wurtzels should be grown on large areas in the Northern part of the State for winter stock feed, particularly for milch cows.

Beets can be successfully grown throughout a large portion of Louisiana as a late fall and winter crop.

With the above was grown the Swiss Chard or Silver Beet, whose large succulent leaves are highly esteemed as a substitute for spinach and very popular in the New Orleans market, and was a perfect success.

BRUSSELS SPROUTS.

Two varieties of above were grown, one of which, "Improved Half Dwarf," was quite successful. This vegetable is but little known in this State. It is grown like cabbage. The small heads which grow along the upper part of the stalk are highly esteemed when well prepared.

CABBAGES.

The following were grown from seed obtained of Thorburn and Frotscher: *No crop at Calhoun in 1896.*

Early York, an early small spring variety.

*Early Jersey Wakefield, valuable for early use, but little grown in Louisiana.

Early Winningstadt, medium in size and quality, heads pointed, for family use.

*Imported early Summer, very good.

Early Dwarf Savoy, variable, good upon rich alluvial soils, wrinkled.

*Stein's Flat Dutch, excellent on rich soils, early grown for market.

*Flat Brunswick, an excellent shipping variety.

*Succession, good variety, largely grown around New Orleans for market.

Late Drumhead, a good late winter cabbage.

The following are from Frotscher:

Early Large Oxheart, a good early spring variety.

*Solid South, an early summer shipping variety, good.

*Superior Late Flat Dutch, a large and popular winter variety, cultivated by nearly all market gardeners around New Orleans.

*Early Flat Dutch, a flat variety of decided merit.

Drumhead Savoy, wrinkled, good size, roundish heads.

Early Drumhead, a spring variety, but uncertain.

St. Dennis, very unsatisfactory.

Crescent City Flat Dutch, very good to poor, according to fertility of soil.

Red Dutch, used only for pickling.

From Alexander Seed & Drug Co., Augusta, Ga., came the following:

World Beater, a vigorous and promising variety.

*All Seasons, one of the best varieties, especially for light, dry soil.

Early Trucker, unsatisfactory.

With care in the selection of seed, preparation and cultivation of the soil, cabbages can be grown over a large part of the State of Louisiana throughout the entire year. Early hard heading varieties will give summer cabbage, while the Late Flat Dutch, Brunswick, Drumhead, Succession, etc., will give winter and spring crops. A rich heavy loam is best suited for cabbages, since this plant requires much moisture to attain perfection. Frequent stirring of the ground, each

Those marked with a (*) are recommended for general use.

time drawing up a little earth around the plant will be necessary for best results.

An immense industry in growing winter and spring cabbage for Western markets exists around New Orleans. On Lake Pontchartrain, at Frenier and other points large fields of cabbage are annually grown. The area in this section devoted to cabbages is large, aggregating several thousand acres.

The following are the results of experiments with fertilizers under this crop made at Baton Rouge:

FERTILIZER TESTS WITH CABBAGE, AT BATON ROUGE, 1897.

No.	Kind and Quantity of Manure.	Spring crop. Set.	Spring crop. Yield scale of 10.	Fall crop. Set.	Fall crop. Yield scale of 10.
1	Barnyard manure	March 2	9	Sept. 15	10
2	1000 lbs cotton seed meal per A	March 2	8	Sept. 15	8
3	300 lbs acid phosphate per A	March 2	8	Sept. 15	7
4	100 lbs sulphate of potash per A	March 2	7	Sept. 15	8
5	1000 lbs cotton seed meal, 300 lbs acid phosphate, per A	March 2	9	Sept. 15	10
6	1000 lbs cotton seed meal, 100 lbs sulphate of potash, per A	March 2	9	Sept. 15	8
7	300 lbs acid phosphate, 100 lbs sulphate of potash, per A	March 2	8	Sept. 15	8
8	1000 lbs cotton seed meal, 300 lbs acid phosphate, 100 lbs sulphate of potash, per A	March 2	10	Sept. 15	10
9	No manure	March 2	7	Sept. 15	7

CAULIFLOWER.

have succeeded at Audubon Park and Baton Rouge. Little or no attempt has been made to grow them at Calhoun.

The following varieties in the order of their productiveness were grown: Extra Early Paris (best), Le Normand's Short Stemmed (very good), Early Snowball (good), Early Italian (fair), Large Algiers (good).

In this climate the seed should be sown in beds in June and July, and transplanted to field in September. They should mature in December. Enormous quantities of this plant are grown annually on the Gulf coast of Louisiana. The soil

best suited is a rich, sandy loam, which should be well cultivated and kept moist during growth of the plants.

CARROTS.

Carrots were grown at Audubon Park and Baton Rouge.

The following varieties in duplicate from Thorburn & Co., New York, and Frotscher & Co., New Orleans, were grown, and they are given in the order of their productiveness: Danver's Intermediate, St. Valery, Long Orange, Early Scarlet Horn, Half Long Luc.

The following were from Frotscher: Half Long Scarlet French (good) and Long Red (very good).

The following were from Thorburn: Half Long Chantenay (excellent) and Half Long Pointed (good).

Danver's Intermediate is also the earliest of above varieties. For earliness, vigor of growth and productiveness this variety is perhaps the most desirable.

CELERY.

was grown at Baton Rouge in 1897. The seed were sown in July and transplanted in October to rows, where it is now growing. It will be ready for the market early in February.

The following varieties were used, and the order in which they are given represents their relative productiveness: Dwarf, large ribbed; Large Kalamazoo, Golden Self Blanching, Heartwell's Perfection and Giant Pascal.

With care and patience most excellent celery can be made upon well fertilized loamy soils, by planting seed in summer and transplanting young plants in the rows early in October.

SWEET CORNS.

Over thirty varieties of sugar corns were grown upon each of the three stations. So large a number of varieties were used in order to test: first, the best variety for table use, and second, to determine that variety best suited as early hog food. In a successive series of crops for hog raising, permitting the hog to gather them, the following is suggested: Early Sugar Corn, Early Sorghum, Spanish Peanuts, Corn and Specked Peas and Sweet Potatoes. That variety which will furnish the

largest amount of feed and early enough for gathering in the latter part of May or 1st of June will be the one for hogs, while for the table a succession will probably be more acceptable.

Besides the true sugar corns, Adam's Early and Adam's Extra Early were also grown.

For table use the following varieties will give roasting ears from May 1st to July 15th, viz: Adam's Extra Early, Early Cory, Early Sugar, Crosby's Early Mammouth, Stowell's Evergreen, Marblehead and Country Gentleman.

For hog purposes: Stowell's Evergreen, Large Excelsior, Country Gentleman or Marblehead are best adapted.

There are many other varieties well suited for the table and field, but the above are perhaps the best.

CRESS.

The following varieties of cress were grown: "Curled," a weak growth, but attractive in appearance; "Broadleaved," growth fair; "Water," excellent growth and highly prized by some people.

CUCUMBERS.

The following varieties obtained from Thorburn and Frotscher were grown at three stations. Home grown seed were also used with the above. They are given in the order of their superiority at New Orleans market: Imported White Spine, Long Green Turkey, Early Cluster and Early Fame.

A pickling variety and the Gherkin or Burr Cucumber were also grown. These are used exclusively for pickles.

It is gratifying to note at all their stations that home grown seed provided better crops than those grown elsewhere. They withstood the hot, dry weather and resisted the blight better than seed grown elsewhere. The New Orleans market, which is evidently a long grown Southern "White Spine," has shown itself in the past as best adapted to our soils and climate and the necessity which brought forward this acclimated variety still exists to-day, *i. e.* the danger from blight with Northern seeds.

CANTALOUPES.

A large number of duplicate varieties were obtained from Thorburn and Frotscher. Home grown seeds were also used.

At Calhoun upon light sandy soil, several varieties succeeded well, viz: Hackensack, New Orleans Market, Long Island Beauty, Netted Nutmeg, Delmonico, Osage and Gem; while at Baton Rouge the New Orleans Market, Pineapple and Netted Nutmeg only, were successfully grown.

At Audubon Park the New Orleans Market was the only one that resisted the blight and made a full crop.

In the Southern part of this State it seems useless to plant any other variety than the New Orleans Market, which nearly always succeeds on all kinds of soils. All others sooner or later succumb to the blight. In the hill lands a few other varieties may be successfully grown, especially for family use, but even there, the New Orleans Market may be found the most reliable.

As under cucumbers, so here, the home grown seed seem to have superior vigor and productiveness. The following are the results of fertilizers used uuder cantaloupes at Baton Rouge, La., in 1897:

FERTILIZER TESTS WITH CANTALOUPES, 1897.

No.	Kind and Quantity of Manure.	First Ripe.	Yield Whole No of Fruit.
1	Barnyard manure	July 2	26
2	1000 lbs cotton seed meal per A	July 8	16
3	300 lbs acid phosphate per A	July 9	21
4	100 lbs sulphate of potash per A	July 2	17
5	1000 lbs cotton seed meal 300 lbs acid phosphate. } per A	July 9	28
6	1000 lbs cotton seed meal.. 100 lbs sulphate of potash. } per A	July 14	22
7	300 lbs acid phosphate... 100 lbs sulphate of potash } per A	July 15	15
8	1000 lbs cotton seed meal.. 300 lbs acid phosphate.... 100 lbs sulphate of potash. } per A	July 2	24
9	No manure	July 2	14

EGG PLANTS.

The following varieties from Thorburn, Frotscher and home grown were used, and with success in the order given: New Orleans Market, Muse, White Pearl, New York Purple, New York White and Dwarf Purple. Here the New Orleans, which seems to be an acclimated New York Purple, has everywhere done the best and foreshadows what our experiments of the last few years have demonstrated that home grown egg plant seed are the best. The second on the list above is a strain of New Orleans Market developed by easy culture by Mrs. Muse, of Morganza, La. It produces the largest fruit, prolific and vigorous. A fall crop was also grown at Baton Rouge in 1897 from home grown seed, with results in following order: New Orleans, Dwarf Purple, Black Pekin and White Pearl.

The following are the results of fertilizers used under egg plants at Baton Rouge in 1897:

FERTILIZER TESTS WITH EGG PLANTS, AT BATON ROUGE, IN 1897.

No.	Kind and Quantity of Manure.	First Ripe.	Yield Whole No. of Fruit.
1	Barnyard manure	Aug. 1.	10
2	1000 lbs cotton seed meal per A	Aug. 8.	7
3	300 lbs acid phosphate per A	Aug. 4.	8
4	100 lbs sulphate of potash per A	Aug. 8	7
5	1000 lbs cotton seed meal 300 lbs acid phosphate.. per A	Aug. 10.	8
6	1000 lbs cotton seed meal.. 100 lbs sulphate of potash. per A	Aug. 10.	9
7	300 lbs acid phosphate... 100 lbs sulphate of potash per A	Aug. 8.	9
8	1000 lbs cotton seed meal.. 300 lbs acid phosphate.... 100 lbs sulphate of potash. per A	Aug. 11.	10
9	No manure	Aug. 12.	6

ENDIVE.

The following varieties were grown; no home grown seed being used: Round Leaf (very good), Self Blanching Curled (good) and Green Curled (fair). The first is a little later than the others in maturing.

KOHL RABI.

The Early White (excellent), The Early Purple (good), and Large White or Green (good) were the varieties grown. No home grown seed were used. This turnip rooted cabbage should be more extensively grown, both for table use and as an article of food for hogs and cows. It produces a large amount of food and can be used on the table either as a substitute for turnips or cabbage.

LETTUCE.

With so large a number of excellent varieties to select from, one can scarcely go astray in planting this crop. However, there are good, better and best here as elsewhere. The order of excellence is as follows: New Orleans Passion, Royal Cabbage, White Paris Cos., Early Cabbage, Brown Dutch, Perpignan, Trianon Cos., Drumhead and Trocadero. The first three were universally the best at all of the stations and the home grown seed in nearly every instance produced the best results.

LEEKS.

The Large Carantan, excellent; Large London Flag, excellent, and Large Flag Winter, good; the seed of which were obtained from Frotscher, were grown. They were marketable May 1st at Audubon Park, and May 15th to 20th at Baton Rouge.

WATERMELONS.

A large number of varieties from various sources, including home grown seed, were grown on each station. Melons have two decided merits: 1st, eating qualities; 2d, shipping qualities. For home purposes the first is always sought, while the latter is essential for the market. Very few varieties combine both qualities in a high degree.

The following are most excellent eating varieties: Florida Favorite, Georgia Rattlesnake, Ice Cream and Sweetheart. For shipping purposes Kolb Gem, Pride of Georgia, Blue Gem, Lone Star, Duke Jones, Dixie, Rattlesnake and Jumbo are probably the best.

The Seminole, Mammoth Iron Clad, Jordan's Gray Mon-

arch, Arkansas Traveler, Vaucluse and Carolina Bradford are fairly good melons, but are excelled by those given above on our soils.

Watermelons require light sandy soils, well enriched in the hill for their best development. They do not require much rainfall for successful growth, hence comparatively dry seasons give us large crops.

The South is the home of the melon, hence home grown seed are unquestionably better than those grown North, but our stations have encountered one serious difficulty in saving seed from so many varieties grown in such close proximity to each other. The seed rarely ever produced the true type of the original melon, having been cross-fertilized by insects when in the flowering state, therefore our comparative tests were lacking in similarity of products and to this extent useless, so far as home grown seed were concerned. The following are results of some fertilizer tests on melons at Baton Rouge, 1897:

FERTILIZER TESTS WITH WATERMELONS, 1897.

No.	Kind and Quantity of Manure.	First Ripe.	Yield Whole No. of Fruit	Remarks.
1	Barnyard manure	July 19.	14	Heaviest melon.
2	1000 lbs cotton seed meal per A	July 14.	17	
3	300 lbs acid phosphate per A	July 8.	21	
4	100 lbs sulphate of potash per A	July 9	18	
5	1000 lbs cotton seed meal 300 lbs acid phosphate.. per A	July 14.	16	
6	1000 lbs cotton seed meal.. 100 lbs sulphate of potash. per A.	July 14.	16	
7	300 lbs acid phosphate... 100 lbs sulphate of potash per A	July 14.	13	
8	1000 lbs cotton seed meal.. 300 lbs acid phosphate.... 100 lbs sulphate of potash. per A.	July 14.	21	
9	No manure	July 19.	10	Small ones.

MUSTARDS.

The "Curled," good; Chinese Large Leaved, excellent, and Chinese, fair, were grown at all of the stations. The "Tuberous Rooted" failed everywhere to germinate.

OKRA.

The Tall Growing Okra, once everywhere grown, has recently been supplanted by smaller and tenderer varieties. The Dwarf Green, Dwarf White, White Velvet, Density and New South are all candidates for favor and were tested by all of the stations. In point of vigor and productiveness none are the equal of the Tall Growing, but in quality they are perhaps all superior. The Dwarf Green stands next to Tall Growing in vigor and productiveness, but is perhaps excelled by the rest in table excellence. Since a row or two of any variety of Okra will supply an abundance of pods for even the largest family, the finer and smaller varieties are recommended for family use.

ONIONS

Are grown largely in South Louisiana for the market. Until recently only the Louisiana Creole onion was grown, believing that no other would make a good solid head in this climate. A failure, however, to obtain seed of the Creole variety, every year, has forced the gardeners and seedsmen to look for other varieties adaptable to our conditions. The Red Bermuda, grown on the coast of Africa, a flat, light colored onion, has been imported and is now largely grown with the Creole. It is not as good a keeper as the latter, hence it is sold in nearby markets for immediate use, while the Creole is shipped away.

Every year other varieties are tested, with negative results, save at Calhoun, in the northern part of the State, where the White Pearl, Yellow Danvers, Silver Skin, Prize Taker and Weathersfield have proven excellent home varieties.

In South Louisiana onion seed should be sown in September and October, transplanted to rows twelve to eighteen inches apart and well cultivated. They are ready for the market in April. In North Louisiana the seed may be sown in January or February in drills, thinned to a stand and cultivated. By the end of spring or early in summer the crop may be gathered, stored or sold.

PEAS.

A large number of varieties were tried on each station. The seed were obtained from Thorburn and Frotscher and frequently compared with home grown.

Among peas, there are many variations; some are very dwarfed in growth, others rampant growers. The seed of some smooth, others are wrinkled. The pods of some are edible, others not. Some are very early, others very late. It is not surprising, therefore, to find a score or more of varieties on every market, with yearly additions to the already perplexing nomenclature.

In a home garden, quality and earliness may be the properties sought for, and hence, many of the unproductive early varieties may be quite popular, but in a market garden productiveness must also be a ruling factor, hence the larger and less delicate varieties are used. Sown in the last of February, the different varieties will mature from April 15 to the middle or last of June.

A succession of varieties ripening from the 1st of May to the last of June, with heavy yields in this climate is about as follows: Alaska, Advancer, Telephone, Marrowfats, Champion of England and Tall Sugar. To these may be added the following as worthy of cultivation: Alpha, Little Gem, Strategem, Petit Pois, Laxton's Long Pod and Blue Beauty.

For market, such a selection must be made as will suit the trade, in earliness, shape of pea, etc., while productiveness must be had to give the grower a profit.

Our home grown seed have not shown any decided superiority over those purchased from seedsmen. In fact our experiments have shown such a fluctuation in results as to leave the question still unsettled. Future experiments upon a larger scale will doubtless fully remove our present uncertainties.

PARSLEY.

The Plain, Double Curled, Improved Gainesburg and Fine Leaved were grown successfully at each station. In point of productiveness the Plain, of course, leads, followed closely by Fine Leaved and Improved Gainesburg. In attractiveness the Curled Leaved varieties excel.

PEPPERS

for early service should be planted in hot beds early in January, and transplanted into rows in the garden as soon as the frosts are gone. A large number and great quantities of peppers are raised in this State. The hot varieties are used for seasoning and making pepper sauce, while the mild varieties are used for salads. In raising home grown seed care should be taken not to grow different varieties close together as they easily mix. The following sweet kinds were successfully grown: Ruby King, Mammouth Sweet Spanish, Golden Dawn and Cardinal. Of these, the Mammouth Sweet Spanish is the popular variety with market gardeners in South Louisiana.

The pungent, or hot varieties grown, were: Bell, Red Cluster, Chili, Celestial, Red Cherry, Cayennes (Long and Curved), Bird's Eye and Tabasco. Of these the last three are usually grown for market purposes.

Tabasco is grown extensively in South Louisiana for purpose of making the well-know Tabasco sauce. This variety is also well adapted to family use.

Bird's Eye is very hot and is used principally for making "Pepper Vinegar."

Several of the hot varieties are extensively grown for the manufacture of "Pepper Sauce," while the Cayennes are used by nearly all housewives in seasoning. Home grown seeds of peppers have proved superior in every instance to those purchased. This too, was to be expected.

IRISH POTATOES.

This crop is attracting much attention all over this State. It is largely grown for the early market of the West and North. Most of the railroads have provided quick transportation facilities for growers along their line, and the industry is gradually developing into large proportions. To grow Irish potatoes successfully a rich sandy loam is best. If not already fertile, it should be made so, by the growing and turning under of pea vines, supplemented by acid phosphate and potash salts.

The best varieties of seed should be used, and these should be selected with a view of producing the largest crop of merchantable potatoes in the shortest time. The spring crop may be planted all the way from December to March, and harvested from April to July.

The question of variety of potato to be used must be determined 1st, by demands of the markets to which they will be shipped, and 2d, by the demands of the soil, *i. e.*, whether the variety is adaptable to this soil and climate. After deciding upon the question of variety, the same old question recurs: Where shall these seed be grown? For years the *absurd* view that only Eastern potatoes would answer for seed in the South, was propagated by dealers and believed by farmers and planters. Thus thousands of dollars have been unnecessarily given to the potato growers of the New England States as a bounty for their potatoes, when just as good seed of the same varieties could have been bought from the West at often one-fourth of the price paid, and *further, much better seed could have been raised at home.*

This bondage to Eastern potato growers is gradually being dissolved. The truck growers of Virginia and North Carolina have long since declared their independence of the world and will not use any other seed for early crops than those grown at home. In fact you can not *give* them a barrel of northern grown potatoes for seed. Their plan is to replant the culls from the early crop, in July or August, and use this second crop for seed in the spring of the ensuing year. The practice of Virginia and North Carolina is gradually being adopted throughout the Southern States and is earnestly commended to every farmer and truck grower in this State. The cost of seed in planting a crop of potatoes is large, made unneccessarily so by paying high prices for select Northern seed potatoes and selling the crop when produced at low prices as early potatoes in the markets of the West.

One great trouble in growing our own seed is the difficulty of securing a stand with the second crop, the dry weather so frequently prevailing in August in this climate preventing germination. This difficulty can be avoided largely by pursuing the following directions: After thor-

oughly drying out the potatoes from the first crop by exposure in the shade to the first effects of the air the potatoes are taken the day before planting and placed in a tub of water and allowed to remain all night. They are taken out and cut into pieces and permitted to fall back in the water. As soon as the setting is finished they are taken directly out of the water and deposited in a DEEP furrow and covered heavily with well pulverized earth. After planting they are watched carefully, and as soon as sprouting is noticed throughout the row the excess of dirt is removed either with a board or with a hoe. In this way many farmers are making a great success in growing the second crop of potatoes. They not only grow enough for their own seed the following spring, but supply locally all demands, realizing frequently better monied results from the second than from the first crop.

Western potatoes are fully the equal of Eastern potatoes as seed, and *home grown seed* of the *second crop* are *better than either.*

Potatoes should be planted only on soils already fairly enriched. Pea vine or clover fallows are excellent soils for the early crop. Frequently the crop, even if on good soil, may be largely increased by the application of a good fertilizer. The following mixture per acre has been used repeatedly with success, viz: 1000 pounds cotton seed meal and 400 pounds acid phosphate. If the soil is sandy and *known* to be in need of potash, the above mixture may be supplemented with 300 to 400 pounds kainite.

VARIETIES.

At all three stations the following varieties available at all the seed stores in this State were used: Extra Early Vermont, Vermont Early Rose, Beauty of Hebron, Bliss' Triumph, Rural New Yorker No. 2, White Elephant, Peerless and Rural Blush.

The above are all excellent kinds, but by common consent the "Triumph" has become the favorite throughout the South for the early crop. Peerless, White Elephant and Rural Blush are good yielders, but are not so attractive in appearance as the Triumph. At Baton Rouge 216 varieties

were grown in 1896. Many were lost by the prolonged drouth. However 165 varieties were preserved and planted in 1897. The spring crop of this year was excellent and fall crop fairly good. A large number of these varieties will be planted this year (1898.

The year of 1896 was very dry and the crop was universally small. Only two varieties, the Charter Oak and Early Fortune, gave yields over 200 bushels per acre. Each gave 293 bushels. The following gave yields of over 100 bushels per acre: Early Market, 106 bushels; Fuller's Seeding, 106 bushels; Mason's Seeding, 112 bushels (this had been grown for five years in Louisiana), and Putnam's Favorite, 109 bushels. The rest all fell under 100 bushels per acre, and hence useless to give results.

Both the spring and fall crops of 1897 were fairly good. The following varieties made over 400 bushels to the acre in the spring crop: Great Divide, 440 bushels; Early California, 440 bushels; Rochester Rose, 440 bushels; Early Harvest, 430 bushels; White Elephant, 418 bushels; Sunset, 403 bushels; Early Northern, 403 bushels.

The following gave over 300 bushels per acre: Early Sunlit Star, 396 bushels; Clark No. 27, 396 bushels; Spanish Beauty, 374 bushels; Early Dustan, 374 bushels; Early Essex, 372 bushels; Delaware, 363 bushels; Republican, 363 363 bushels; Maine Pearls, 363 bushels; Morgan, 363 bushels; Snowflake, Jr., 363 bushels; Early Vermont, 352 bushels; Bill Nye, 362 bushels; Alexander's Prolific, 352 bushels; Lee's Favorite, 348 bushels; Early Vaughn, 330 bushels; Early Oxfords, 337 bushels; Germain Rose, 330 bushels; Howard, 330 bushels; Morning Star, 330 bushels; Mountain Rose, 330 bushels; Magnum Bonum, 332 bushels; Rees Rose, 330 bushels; Arizona, 332 bushels; Bell Rose, 330 bushels; Dictator, 322 bushels; Empire State, 323 bushels; Revere Rose, 323 bushels; American Magnum, 303 bushels; Brown's Best, 302 bushels; Crown Jewel, 302 bushels; Albright's Seedling, 303 bushels; California's Best, 303 bushels; Cayuga Chief, 302 bushels; Burpee's Superior, 308 bushels; Early Thorburn, 308 bushels; (home grown seed); Extra Early Purple, 308 bushels; Early Beaubond, 302 bushels; Gaelic, 302 bushels; J. C. McCelland,

308 bushels; King of Roses, 302 bushels; No Name, 302 bushels; New York State, 302 bushels; Queen of Sheba, 308 bushels; White Imperial, 302 bushels.

The following gave over 200 bushels per acre: Carpenter's Seed, 291 bushels; Harvest Queen, 291 bushels; Monroe Beauty, 290 bushels; Summit, 298 bushels; Vick's Early White, 291 bushels; Excelsior, 286 bushels; Mitchell's Seedling, 268 bushels; Everett's Rose, 286 bushels; Putnam's Favorite, 286 bushels; Thunderbolt, 286 bushels; Watson's Seedling 286 bushels; Vick's Perfection, 277 bushels; Burbank, 264 bushels; Extra Early Vermont, 266 bushels; Early Walton, 262 bushels; Gennessee County, 264 bushels; Matchless, 264 bushels; Orphan, 266 bushels; Rural Blush, 264 bushels; Colossal, 242 bushels; Chas. Downing, 242 bushels; Early Essex, 242 bushels (home grown seed); Early Market, 242 bushels; Early Ohio, 242 bushels; Early Dwarf, 242 bushels; Late Puritan, 242 bushels; Pullman's Seedlings, 242 bushels; Pollridge Seedling, 242 bushels; Victor Rose, 242 bushels; White Superior, 242 bushels; May Seedling, 242 bushels; Dew Drop, 223 bushels; White Superior, 242 bushels; Clay Rose, 220 bushels; Early Mohawk, 220 bushels; Early Prize, 220 bushels; Early Fortune, 218 bushels; Early White Prize, 220 bushels; Early Hebron, 222 bushels; Good News, 202 bushels; Monroe Pride, 201 bushels; McCormick's Seedling, 220 bushels; Mason's Seedling, 207 bushels; New Queen, 202 bushels; Pride, 222 bushels; Queen Victoria, 220 bushels; Roseman's Seed, 202 bushels; Strong's Pride, 220 bushels; Vick's Abundance, 229 bushels; White Hebron, 202 bushels; White Whipple, 220 bushels.

There were forty varieties whose yields per acre were over 100 bushels and less than 200 bushels, and twelve varieties whose yields were between 40 and 100 bushels per acre. Twelve varieties failed completely, leaving 153 for the fall crop.

FALL CROP—1898.

Early Vermont Rose, 345 bushels, and Peerless, 315 bushels, gave over 300 bushels per acre.

American Magnum, 218 bushels; California's Best, 224

bushels; German Rose, 260 bushels; Wheeler's Seedling, 206 bushels, gave over 200 and less than 300 bushels per acre.

The following gave between 100 and 200 bushels per acre: Arizona, 145 bushels; Burpee's Superior, 121 bushels; Crown Jewel, 199 bushels; Clay Rose, 151 bushels; Cheesman's Seed, 151 bushels; Dew Drop, 194 bushels; Early Fortune, 163 bushels; Enos Seedling, 146 bushels; Excelsior, 133 bushels; Early Reason, 102 bushels; Everett's Heavy Weight, 102 bushels; Early California, 122 bushels; Early Beaubond, 101 bushels; Early Oxford, 187 bushels; Early Hebron, 157 bushels; Fuller's Seedling, 101 bushels; Lee's Favorite, 102 bushels; McCormick's Seedling, 121 bushels; Magnum Bonum, 102 bushels; Pullman's Seedling, 102 bushels; Pollridge Seedling, 121 bushels; Putnam's Favorite, 199 bushels; Polaris, 194 bushels; Rural New Yorker No. 2, 182 bushels; Reese's Rose, 103 bushels; Rochester Rose, 194 bushels; State of Peacon, 199 bushels; Thunderbolt, 102 bushels; Vick's Long Late White, 133 bushels, and White Elephant, 194 bushels.

The following are the results of some fertilizer tests made at Baton Rouge in 1897:

FERTILIZER TESTS WITH IRISH POTATOES, AT BATON ROUGE IN 1897.

No.	Kind and Quality of Manure.	Planted.	Yield per Acre in Bushels.
1	Barnyard manure	Feb. 8	201.5
2	1000 lbs cotton seed meal per A	Feb. 8	200.5
3	300 lbs acid phosphate per A	Feb. 8	153.1
4	100 lbs sulphate of potash per A	Feb. 8	173.2
5	1000 lbs cotton seed meal.. / 300 lbs acid phosphate... } per A.	Feb. 8	100.7
6	1000 lbs cotton seed meal.. / 100 lbs sulphate potash... } per A.	Feb. 8	60.4
7	300 lbs acid phosphate.... / 100 lbs sulphate of potash. } per A.	Feb. 8	68.5
8	1000 lbs cotton seed meal .. / 300 lbs acid phosphate.... / 100 lbs sulphate of potash } per A	Feb. 8	190.1
9	No manure	Feb. 8	80.6

SWEET POTATOES.

This may be called a staple crop of Louisiana, grown by almost every farmer and planter in the State, and found on the table of every family in the South.

At Baton Rouge and Calhoun, where the soils are well adapted to potatoes, a large number of varieties were grown. Since every farmer in the State is interested in Sweet Potatoes the yields at Baton Rouge are given for 1896–97. It must be remembered that the former year was very dry, while the latter was exceptionally good. At Calhoun the crop was entirely destroyed in 1896. A fair one was made in 1897, with yields per acre in the following order: Providence, Shanghai, Southern Queen, Early Golden, Peabody, Yellow Red, Red and Yellow Nansemonds, Norton and Vineless.

YIELD OF SWEET POTATOES AT BATON ROUGE IN 1896.

Number.	VARIETY.	Yield in Bushels per Acre.			Yield Scale of 10.
		Salable	Small.	Total.	
1	Bermuda	424.71	25.41	450.12	5
2	Big Stem Jersey	188.76	12.70	201.46	3
3	Common Stock New Jersey	61.71	7.26	68.97	1
4	Delaware	108.90	19.05	127.95	2
5	Extra Early Caroline	112.53	14.52	127.05	2
6	Early Golden	834.90	19.96	854.86	9
7	Gold Skin	188.76	21.78	210.54	3
8	Georgia	94.38	16.33	110.71	2
9	Hayman	479.16	14.52	493.68	5
10	Light Early Red	90.75	19.96	110.71	2
11	Morris Sweet Seed	72.60	12.70	85.30	1
12	McCoy's Seed	145.20	9.98	155.18	2
13	Norton	330.33	14.52	344.85	4
14	Oebi Hitam (Java)	186.94	13.61	200.55	3
15	Oebi Kang Kong (Java)	145.20	6.80	152.00	2
16	Oebi Radjit (Java)	323.07	17.24	340.31	4
17	Peabody	938.35	27.22	965.57	10
18	Providence	718.74	21.78	740.52	8
19	Padisha	65.34	1.81	67.15	1
20	Pumpkin	127.05	7.26	134.31	2
21	Red Nansemond	480.97	1.81	482.78	5
22	Red Beans	101.64	3.63	105.27	2
23	Red Brazilian	185.13	18.15	203.28	3
24	Sugar	254.10	14.52	268.62	3
25	Southern Queen	350.29	12.70	362.99	4
26	Shanghai	299.47	29.04	328.51	4
27	Strasburg	617.10	18.15	635.25	7
28	Southern Yellow Yam	261.36	7.26	268.62	3
29	Southern Red Yam	780 45	14.52	794.97	8
30	Ticotea	377.52	56.26	433 78	5
31	Tennessee	72 60	9 98	82.58	1
32	Vineless	206.91	16.33	223.24	3
33	Yellow Nansemond	152.46	12.70	165.16	2
34	Yellow Yam, New Jersey	272.25	18.15	290 40	3
35	Yellow Jersey	127.05	19.96	147.01	2
36	Yellow Red	744.15	12.70	756.85	8
37	New Jersey	168.79	23.59	192.38	2

The sweet potatoes gave good results, and although it was very dry, some of the yields were very heavy. Evidently the supply of moisture has a marked effect upon the yield of the varieties. In other years, with a good supply of moisture, the Providence and Hayman gave much larger yields than this year, but this year the Peabody, Early Golden and Southern Red Yam led, producing an enormous yield of very large roots. In all other seasons these varieties have stood second and third

on the list, or lower, but the dry season this year was more favorable to their growth.

YIELD OF SWEET POTATOES AT BATON ROUGE IN 1897.

No.	VARIETY.	Bedded.	Set.	Yield per Acre in Bushels.
1	Bermuda	March 13	May 11	233.9
2	Big Stem Jersey	"	"	304.5
3	Delaware	"	"	145.2
4	Extra Early Carolina	"	"	146.
5	Early Golden	"	"	530.3
6	Early Peabody	"	"	419.4
7	Forked Leaf Pumpkin	"	"	189.6
8	Gold Skin	"	"	131.
9	Georgia	"	"	322.8
10	General Grant	March 25	May 30	129.
11	Hayman	March 13	May 11	665.5
12	Java No. 1	"	"	367.
13	Java No. 2	"	"	36.5
14	Java No. 3	"	"	455.8
15	Java No. 4	"	"	548.6
16	Java No. 5	"	"	383.
17	Kentucky White	March 25	May 30	572.7
18	Light Early Red	March 13	May 11	177.4
19	Morris Sweet Seed	"	"	308.5
20	McCoy's Seed	"	"	149.2
21	Norton	"	"	695.7
22	New Jersey	"	"	258.1
23	New Jersey Common Stock	"	"	227.8
24	Niggerchoker	"	"	failure
25	Oebi Hitam	"	"	150.9
26	Oebi Kang Kong	"	"	231.9
27	Oebi Radjit	"	"	348.8
28	Padisha	"	"	213.7
29	Peabody	"	May 20	645.3
30	Providence	March 13	May 11	681.6
31	Pumpkin	"	"	383.1
32	Red Brazilian	"	"	237.9
33	Red Beans	"	"	106.8
34	Red Nansemond	"	"	780.4
35	Sugar	"	"	100.8
36	Southern Red Yam	"	"	609.
37	Southern Yellow Yam	"	"	242.
38	Southern Queen	"	"	719.9
39	Shanghai	"	"	822.8
40	Strasburg	"	"	461.8
41	Ticotea	"	"	633.2
42	Tennessee	"	"	221.8
43	Vineless	"	"	225.8
44	Yellow Jersey	"	"	246.
45	Yellow Beans	"	"	254.1
46	Yellow Yam	"	"	195.6
47	Yellow Nansemond	"	"	213.7
48	Yellow Red	"	"	848.9

It will be seen that the Yellow Red, Shanghai, Red Nansemond, Southern Queen, Norton, Providence, Peabody, Ticotea and Southern Red Yam have given the largest yields, all over 600 bushels per acre; the highest, 893 bushels.

None of these are excellent table varieties, though a few are fair in quality. They suggest, however, an enormous amount of hog and other stock food, and should be grown more largely for this purpose. The Georgia, Sugar, Pumpkin, Hayman and Vineless are varieties everywhere preferred in the South for table use.

The following table gives the results of some fertilizer tests upon Sweet Potatoes at Baton Rouge, Louisiana:

FERTILIZER TEST WITH SWEET POTATOES IN 1896.

No.	MANURE USED.	Yield per Acre in Bus.		
		Marketable	Culls.	Total.
1	Barnyard manure	400	33	433
2	1000 lbs cotton seed meal per A.	555	28	583
3	300 lbs acid phosphate per A.	538	36	574
4	100 lbs sulphate of potash per A.	352	60	412
5	1000 lbs cotton seed meal 300 lbs acid phosphate } per Acre	554	49	603
6	1000 lbs cotton seed meal 100 lbs sulphate potash } per Acre	568	39	607
7	300 lbs acid phosphate 100 lbs sulphate of potash } per Acre	556	29	585
8	1000 lbs cotton seed meal 300 lbs acid phosphate 100 lbs sulphate of potash } per Acre	572	36	608
9	No manure	260	27	287

The results obtained from the fertilizer plots with sweet potatoes present an interesting study. The largest yield was obtained from the plot fed with the combination of the three manures (No. 8), while the lightest yield came from no manure. The largest amount of small roots came from the Potash plot, as well as the record lowest yield of large roots. The largest growth of vines was produced on the barnyard manure plot.

FERTILIZER TESTS WITH SWEET POTATOES IN 1897.

No.	Kind and Quality Manure.		Yield per Acre in Bushels.
1	Barnyard manure		114.55
2	1000 lbs cotton seed meal per A		100.75
3	300 lbs acid phosphate per A		70.42
4	100 lbs sulphate of potash per A		128.96
5	1000 lbs cotton seed meal 300 lbs acid phosphate	per A	145.08
6	1000 lbs cotton seed meal 100 lbs sulphate of potash	per A	118.88
7	300 lbs acid phosphate 100 lbs sulphate of potash	per A	75.55
8	1000 lbs cotton seed meal 300 lbs acid phosphate 100 lbs sulphate of potash	per A	147.09
9	No manure		75.75

PUMPKINS.

Pumpkins were grown on the three stations. The Improved Mammouth, from home grown seed, gave the best results at Baton Rouge, while the "Georgia" from home grown seed, gave the largest yield at Audubon Park.

The Golden Yellow Mammouth followed next in order, with the Connecticut Field and Large Cheese last on the list. Pumpkins planted late in the summer upon good soil will make a large quantity of food for stock by winter and should be more extensively grown.

RADISHES.

The varieties of radishes are numerous. As a rule all kinds of radishes do well in this climate. Over twenty-five varieties were grown on each station and with few failures recorded. The home grown seed were surpassed at Baton Rouge in only one instance by seeds purchased. The French Breakfast, Early Frame, Long Scarlet, Round China, Chartier and Strasburg are highly recommended. There are others of merit, but the above list gives a succession of excellent and and popular varieties.

SPINACH.

Two varieties, Broad Leaved Flanders and Extra Large Leaved Savoy, were grown on each station. Both are excellent varieties. This plant is quite popular in the New Orleans market from September to March.

TOMATOES.

This plant has been greatly developed within recent years and with each new variety placed upon the market, it is thought that perfection in the way of a tomato has been reached. But with each season comes new and better varieties and no one to-day can predict the characteristics of the tomato of the future. Nearly all varieties grow well in this State. With care two distinct crops can also be grown upon the same land, in the same year—a spring and fall crop.

The following is the order of productiveness at Baton Rouge: Extra Early Dwarf Red, Early Richmond, Large Yellow and Paragon, all with equal value and highest in productiveness; then Beauty, Favorite, Ignotum, King of Earlies, Dwarf Champion, followed next by Atlantic Prize, Fordhook First, Paragon, Stone and Trophy.

Ponderosa, Thorburn's New York and Honor Bright from the next group, with Aristocrat, Autocrat, Acme, Democrat, Matchless, Perfection, Trucker's Favorite, Waldorf and White Excelsior fell below six on a scale of ten. The above are results for 1897, a rather wet year.

In 1896, a very dry year, the following were results on a scale of 10: First Extra Early Dwarf Red, Autocrat, White's Excelsior and King of the Earlies. Those that market nine on a scale of ten were: Favorite, Dwarf Champion, Beauty, Early Atlantic Prize, Early Minnesota, Waldorf, Acme, Ignotum, Perfection, Aristocrat. Those marked eight on a scale of ten were: Paragon, Thorburn's New York and Democrat. Those receiving seven or less on a scale of ten were: Stone and Ponderosa.

Besides the above were a number of various crosses made by Dreer & Co., which were exceedingly instructive but not useful.

At Baton Rouge, the home grown seed excelled those bought from two seed houses in the following: Autocrat, Favorite, Ignotum, King of Earlies, Ponderosa and Waldorf. They were equal in the following: Thorburn's New York, Stone, Paragon, Extra Early Dwarf Red, Democrat and Beauty. They were excelled in the following: Aristocrat, Acme, Early Atlantic Prize, Dwarf Champion and Perfection.

The above would indicate that home grown seeds are perhaps the equal, if not the superior, to those grown North.

At Calhoun in 1897, on a similar scale of ten, King of the Earlies was the only one recorded as perfect. This was followed by Early Dwarf Red, Favorite, Perfection, Beauty, Acme, Paragon and Stone. The rest were under five on a scale of ten.

At Baton Rouge a full fall crop was grown from the seed produced from the spring varieties already given. The seeds were sown August 1, and set in the field when large enough to transplant. Ripe fruit was gathered from October 27 to November 30. In the fall crop the following received ten on a scale of ten: Acme, Beauty, Favorite, Ponderosa. Those receiving nine were: Early Atlantic Prize and Excelsior. Democrat and Extra Early Dwarf Red received eight; Paragon alone received seven, Waldorf six, with the rest below five.

It may be shown, by growing the above varieties several years in this climate, that several of the above, seemingly unadapted to this soil and climate, may ultimately become so by acclimation. Such a result seems foreshadowed in the fall crop. The following are the results of experiments with fertilizers under tomatoes made at Baton Rouge, 1897:

FERTILIZER TESTS AT BATON ROUGE, 1897, WITH TOMATOES.

No.	Kind and Quantity of Manure.	First Picking	Best Picking.	Last Picking.	Yield Whole No. of Fruit.
1	Barnyard manure	June 5..	July 3..	July 28.	247
2	1000 lbs cotton seed meal, per A	June 5..	June 22.	July 21.	262
3	300 lbs acid phosphate, per A	June 12.	June 26.	July 20.	241
4	100 lbs sulphate of potash, per A	June 9..	July 3..	July 20.	162
5	1000 lbs cotton seed meal. / 300 lbs acid phosphate... } per A	June 9..	July 3..	July 25.	304
6	1000 lbs cotton seed meal... / 100 lbs sulphate of potash.. } per A	June 5..	June 22.	July 20.	204
7	300 lbs acid phosphate.... / 100 lbs sulphate of potash } per A	June 9..	July 3..	June 20.	186
8	1000 lbs cotton seed meal... / 300 lbs acid phosphate..... / 100 lbs sulphate of potash.. } per A	June 9..	July 16.	July 23.	274
9	No manure	June 9..	June 26.	July 20.	137

SQUASH.

The following varieties were grown at all three stations. They are given in the order of their merit: Early Bush, Turban, Faxon, Fordhook, Perfect Gem, Golden Custard, Summer Crookneck, Everbearing, Boston Marrow, Hubbard and Cashaw.

The last two are admirably adapted to winter use. Home grown seeds were tested on all three stations with seed bought from Thorburn and Frotscher, and in every instance with equally as good, if not better results. Since the home seed were saved from the experimental growing where all the varieties were growing together, they several times showed distinct signs of crossing, which was to be expected anywhere.

TURNIPS.

Turnips were grown at all of the stations but were specially emphasized at Calhoun, where the crop was utilized for the stock. The following varieties in the order of their yield were grown: Early Flat Dutch, Red or Purple Top, Purple Top Globe, Large White Globe, White Hanover, Extra Early Purple Top, Cow Horn, Early White Spring, Amber Globe and Yellow Aberdeen.

In this State the turnip crop, as a stock feed, is but little grown. This should not be so. It would be a valuable addition to our present forage crop during the winter.

REVIEW OF FERTILIZER PLATS.

For three years these plats have received the same fertilizers, applied with care as a top dressing in early spring. The unmanured plat has been carefully guarded to see that it received in this time no addition of any kind to its fertility. This has been used as our check plat.

The following crops have been grown on them for the last three years: Watermelons, cantaloupes, egg plants, Irish potatoes, sweet potatoes, cabbage, tomatoes, results of which for the last year have already been given.

The same number of plants of same variety were planted at same time on each plat. Plat No. I, which has received the stable manure, has been greatly improved in texture. It is always mellow, in good condition and ready for planting. The others, lacking this improvement, have to be worked carefully before planting to bring them into good tilth. Especially is this true of Plat No. IX, which has received no addition of any kind.

Results so far are not as pronounced as was desired, but this soil is already quite fertile and results from fertilizers are not so marked as on poor sandy soils. However the complete manure, is uniformly the best, while the different vegetables differ in the other plots according to their tastes and appetites.

WHAT CROPS ENDURE THE DROUTH BEST.

The following notes from Calhoun made during the sea- of 1896, will give some data as to the comparative requirements for water by the different crops usually grown in our gardens. It must be remembered that the drouth extended from early in April to October, and therefore, the true summer crops necessarily suffered more than those maturing in the spring. However, the table will clearly show that all the summer crops were not equally affected by the drouth:

Artichokes, failed to mature.

Asparagus, a complete failure.
Beans, a fairly good crop reaching maturity.
Beets, failed to reach maturity.
Cabbage, failed to reach maturity.
Cauliflower, complete failure.
Carrots, failed to reach maturity.
Cucumbers, good results; matured perfectly.
Egg Plants, good results; matured perfectly.
Gourds, failed to mature.
Kohl Rabi, failed to mature.
Lettuce, failed to mature.
Mustard, failed to mature.
Melons, Musk, results faily good.
Melons, Water, results good; all varieties reached maturity.
Okra, fairly good results.
Onions, failure.
Peas, fairly good results; all matured seed.
Peppers, fairly good results.
Pumpkins, failure.
Potatoes, Irish, failure.
Potatoes, Sweet, could not be grown.
Radish, results good; all matured seed.
Spinach, summer planting a failure.
Squash, early varieties fair, late ones failed.
Tomatoes, results good; all matured seed.

HOME GROWN SEED.

The experiments of even a few year's duration are never sufficient to base ultimate conclusions, especially when the latter constitutes such a radical departure from generally accepted beliefs and practices, yet those grown above certainly point to the equal efficacy, if not superiority, of many of our home grown seeds. The experiments will be continued for years to come and it is hoped that ultimately the question will be positively solved with every variety of garden crop.

INSECTS.

The striped cucumber beetle (*Diabrotica vitata*) and the

twelve spotted beetle (*Diabrotica 12 punctata*) are sometimes exceedingly troublesome in this climate. The following will keep them well in check: To twelve quarts of air slaked lime pour one pint of coal oil, stir thoroughly and let stand a few hours, stir well again and dust it on the young melon, cucumbers or squash vines. It is best to use a hand bellows or powder gun in applying it, as thereby a perfect distribution can be obtained. This preparation is cheap, easy to apply and very obnoxious to the beetles.

GROWING OF WINTER CUCUMBERS UNDER GLASS.

BY F. H. BURNETTE, HORTICULTURIST, BATON ROUGE.

For some years winter cucumbers have been grown around New Orleans, not only for the New Orleans markets, but also for the city markets in the North. As a rule these have been grown with profit, for oftentimes the item of bottom heat did not play such an important part, some winters being very mild, and thus there was a great saving in the cost of fuel. A number of gardeners use their hot beds only for these winter cucumbers, and unless an extremely cold spell comes along they are safe with their crop. The forcing house proper is the place, however, to grow winter cucumbers, for in the house the temperature and moisture can be controlled and insects fought to a better advantage. A small attempt was made during the last winter season in growing winter cucumbers, and so far as the experiment went, it was attended with profit. The house in which the cucumbers were grown is a very simple and common hot house with movable sashes 16x60 feet. There are three beds in the house, one in the center and two on the sides. The variety grown on two of the beds was the New Orleans Market, which is probably a long grown sort, of the White Spine variety. It resists blight better than any variety grown in the South, and for this reason, as well as being of good quality and prolific, it is justly the most popular variety grown. The other bed was sown with White Spine. The seed was planted October 1 in a continuous row in the center of the beds, and thinned to eighteen inches in the row. The plants in the side beds were trained to wires following

the slope of the roof, about six inches from the glass. One portion of the center bed was trained on a shelf of strung wires two feet above the bed and the other portion was allowed to run on the ground. All lateral branches were kept pinched and the single vines allowed to grow. A well in the little room in the back end of the house gave all the water needed, which was put on by hand, and a small hot water heater in this room also supplied the heat when needed. Only twice was the heater run for any length of time, and then the rubbish wood that had been accumulating during the year was used as fuel; this did not amount to over one and one-half cords of good wood. This amount of fuel was all that was necessary during the season. The plants grew well, and set a good crop of fruit. Hand pollination was not necessary as the bees were always on hand, and many mornings were found buzzing around the door ready to fly in when a chance was offered.

The melon worm was a little troublesome, but a careful search with thumb and finger, and an application of Paris green, was effectual in ridding the house of the little pests. The most trouble was experienced in dealing with the cucumber aphis. The ordinary emulsions were not effectual, but an insecticide recently brought out was used with complete success. This was Rose Leaf Insecticide, obtained from the Louisville Spirit Cured Tobacco Co., Louisville, Ky.

The extract was used at the rate of one part of extract to two of water, in pails, in various parts of the house and heated irons were dropped into the vessels. The fumes rapidly filled the house and killed the lice. Three applications will surely rid the house of every insect. The house should be closed tightly and left so for two or three hours at least. It was our practice to fumigate, the last thing at night, and leave the house closed until morning. The cucumber blight was destructive just as the last fruits were maturing, but did little damage, on account of the lateness of the attack. It was observed that the plants immediately under the movable sashes, which were left down one day during a rain, were the ones first attacked with the blight, and it is believed that should any good fungicide be used thoroughly, and care taken

not to sprinkle the leaves much when watering, this disease would not be troublesome.

Raffia was used in training the vines to the wires and also to support the fruits.

Two shipments were made to Chicago. The first consisted of five boxes containing thirteen and one-half dozens, and was sent to Theo. C. H. Wegeforth & Co., 133 S. Water street, on November 30th. They were graded as follows:

Box No. 1, 2 dozen fancy.
Box No. 2, 2 dozen choice.
Box No. 3, 2½ dozen choice.
Box No. 4, 2½ dozen choice.
Box No. 5, 3½ dozen undersized and imperfect.

These were assorted carefully, rolled in brown paper and packed neatly in boxes 22 inches by 14 inches by 4 inches. A letter was also sent with them asking for the criticism of the firm upon the packing, grading and quality of fruit. This was not obtained, but the following statement gives the returns from this shipment:

Proceeds from the five boxes		$7 65
Express	$3 15	
Commission	85	4 00
Net proceeds		$3 65

Per dozen, 27 cents.

Cucumbers were selling in the Chicago market on the day of sale, forty cents to one dollar per dozen. We desired to obtain a record of the price obtained as to our grading, but failed to do so.

The second shipment was made to Smith, Cordes & Co., 139 S. Water street, Chicago, on December 30th, and contained the following:

Box No. 1, 2 dozen first choice.
Box No. 2, 2½ dozen choice.
Box No. 3, 3 dozen undersized and imperfect.

These were packed just the same as the first shipment and were accompanied by a similar letter. The following is a statement of the returns and a copy of the answer to the letter:

Proceeds from three boxes		$8 00
Express	$2 00	
Commission	88	2 88
Net proceeds		5 12

Per dozen, 68 cents.

Cucumbers were selling in the Chicago market at this date from 50 to $1.25 per dozen.

DEAR SIR—Your favor at hand. Would say in reply that the quality of the cukes shipped is perfectly satisfactory and the grading of No. 1 and No. 2 could not be criticised. While they do not quite come up to the Eastern hothouse cukes they are fully as good as any Southern cukes which we have received and sold at the outside price, as you will notice from enclosed price current. The only suggestion we could make is that it would be safer in extremely cold weather to ship them in boxes with heavy paper to protect against frost. We shall be pleased to receive your further favors and remain,

Yours respectfully,
SMITH, CORDES & CO.

The following is a record of the product of the benches of the hot house:

BENCH.	VARIETY.	Small.	Large.	Total.	No. of Feet.
West	New Orleans Market	59	240	299	60
East	White Spine	28	80	108	60
Middle Trained	New Orleans Market	28	100	128	40
Middle Flat	New Orleans Market	11	21	32	15

The following is a record of the Northern market so far as obtained:

November 25	$ .50 to $ .85 per dozen.
November 30	.40 to 1.00 per dozen.
January 4	.50 to 1.25 per dozen.
April 24	1.00 to 1.25 per dozen.
April 24	2.50 to 3.50 per bushel crate.

There is very little doubt but that if a sufficient number of growers should produce enough to warrant the express company to do so, reduced rates would be given, but at the present express rates, unless the Northern market is high when the shipment is received, there will be little profit. A good com-

mission merchant should be procured, who could keep the grower well posted as to the market—and prompt shipments made upon short notice—being very careful to attend to the little items relating to the wrapping and packing in order to make an attractive box when opened. Our first shipment was put on the market when prices were low, the last shipment, when the prices ranged almost three times as high. A careful study of the Price Current will also be a great advantage to the shipper. So far as our experience goes, the New Orleans Market is much more prolific and healthier than any variety tried in the house. In the field it is the standard variety grown.

THE ORCHARDS

have not been as prosperous and as successful as might have been expressed or desired. Nearly every available variety of the following fruits have been grown at Baton Rouge and Calhoun: Apples, pears, peaches, plums, persimmons, apricots, almonds, chestnuts, cherries (only at Calhoun), blackberries, raspberries and strawberries, figs, grapes and quinces. At Baton Rouge oranges have also been grown to a limited extent. At Audubon Park oranges pomelas, plums, peaches (of Peento type), Japanese persimmons and pears have been extensively grown. Olives and guavas have been raised to a limited extent.

It was not to be expected that every kind of fruit would thrive in Louisiana, and much less was the expectation to grow every variety of every kind of fruit. Failures have therefore been expected, but the quantity has been greatly beyond our desires.

Both the pear and the apple are quite subject to blight at Baton Rouge and Calhoun, and only by vigorous treatment can it be kept in check. Peaches everywhere are subject to borers and curculio, and require in Louisiana most persistent efforts to keep them from the trees. Grapes must be sprayed regularly and persistently to ward off attacks of mildew, rust, etc.

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The question then of growing fruit on a large scale for commercial purposes narrows itself down to a few kinds of fruits, and these might, with profit, be still further restricted to peculiar strains. The following is a resume of work done with each kind of fruit:

APPLES.

At Baton Rouge seventy-one and at Calhoun over 100 varieties are growing. At neither place are they such a success as would justify the growing of apples for market. The trees at each place are from one to nine years old. At Baton Rouge in 1896 a few apples were obtained from the following varieties: Shannon, Transparent, Red Astrachan, Red June, Cullasaga and Transcendent Crab. Some of the specimens were good but the quantity produced was small.

In 1897 a few fruits were obtained from the following: Baldwin, Bellflower, Carolina Watson, Horse, Kentucky Streak, Lawrence, Maverack's Sweet, Nantahalee, Russet, Shannon, Smith, Taunton, Tuscaloosa, Wine Sap, Yellow June, Red Astrachan, Red June and Romanite.

At Calhoun the following bore in 1897: Romanite (abundantly), Astrachan and Early Harvest, a fair crop, and small quantities from Tuscaloosa, Red June, Kansas Queen, Rhodes Orange, Shockley, Maverack's Sweet, Chattahoochee, Kittageskie, Yates and Red Limbertwig, while only the Astrachan and Early Harvest matured fruit in 1896.

The blight which has prevailed at both stations for several years, has apparently been checked. No trees were lost at either station from this disease last year.

It is perfectly evident that an apple adapted to general culture in this State must be developed from some of the few successful seedling trees, occasionally found over the State. To this end both seeds and scions of such trees are being collected and propagated and in time may give us some varieties adaptable to our soils and climate.

At present for home use the following are the best varieties: Astrachan, Early Harvest, Red June, Maverack's and Romanite.

FIGS.

There are forty-four varieties of figs at Baton Rouge, seven at Calhoun and fourteen at Audubon Park. All are doing well. Except for an occasional cold which may destroy the branches at Calhoun, by growing these would be a great success. At Baton Rouge and New Orleans the fig is perfectly at home, growing large crops annually. At the latter place large quantities are canned yearly and fig orchards near the canneries are very profitable.

At Audubon Park the Celeste stands forth as the most popular, healthiest and sweetest variety. The White Adriatic and Marseilles are also worthy of cultivation. At Baton Rouge the Reine Blanche, Lemon, Celeste and Brunswick are recommended for general purposes. The Zimetza, a large fig, is excellent for preserving, followed closely for the same purpose by the Osborne Prolific and De Constantine. At Calhoun the following are commended: Celeste, Madeline and Brown Turkey.

Fig growing might be made a profitable industry almost everywhere in Louisiana.

PEARS.

While the Chinese type of pears are far more resistent to blight than the French varieties, they are not everywhere exempt. In the heavy clay soils of Audubon Park, blight has not yet made its appearance, and many of the Chinese type are large trees and bear enormous crops every year. At Baton Rouge and at Calhoun the blight has destroyed a number of trees regardless of type. By severe pruning and burning, the disease is now apparently checked and hopes are entertained that it is completely eradicated.

There have been grown at each of the upper stations nearly fifty varieties, of these about thirty varieties at Baton Rouge and twenty at Calhoun survive. At Audubon Park, the Jefferson has been eradicated because of infection from scale. None have died from blight.

The Chinese type, including the Le Conte, Kieffer, Smith, Garber, Von Seibold, etc., are healthy, vigorous growers and

abundant bearers, and wherever pear culture is practiced in this State, should include only varieties of this type.

PEACHES.

Full lists of almost every variety of every type of peaches are to be found in the orchards at Baton Rouge and Calhoun, and while an occasional tree gives a good quantity of delicious fruit the general success is not sufficient to warrant extensive growing for market anywhere in the State. At New Orleans only the Peento type budded, on peach and plum stocks have been tried. Twelve varieties of both kinds of stock have signally failed. Budding any kind of peach on a plum stock has been with us a perfect failure. However, for home purposes a few varieties of select peaches should be grown on every home in the State. The following varieties are recommended for North Louisiana: Alexander, Early Beatrice, Early Rivers, Oriole, Elberta, Pallas, Newington, Osceola, Berenice, Muscogee, Stump the World, Sylphide and Juno, and in this last the best are: Oriole, Newington, Pallas, Osceola Elberta and Early Rivers.

At Baton Rouge, Early Rivers, Elberta, Thurber, Countess, Victoria, Berenice, Honey, Hoover's Heath, Angel and Silver Medal are perhaps to be recommended.

The late frosts occurring after the trees are in full bloom frequently destroy all prospects of a crop. The Missouri Station recommends the whitewashing of the trees during winter to retard blooming as a protection against early frosts.

PLUMS.

The European type of plums is everywhere unsuccessful in the extreme South. The American type is grown successfully in the hill lands of Louisiana with several varieties making fairly good fruits. Possibly some of the varieties might be grown all over the State, but the recent introduction of the Japanese plums, with several varieties of such excellent merit, growing well in Southern and Middle Louisiana, has rendered the trial of the American varieties superfluous. Along the Illinois Central Railroad and in and around New Orleans, the finer varieties of the Japanese type are grown largely for

Northern markets. The best varieties, so far thoroughly tested, are the Burbank and Botan, (wrongfully styled Abundance, since this station has trees now growing on it, which were in full bearing before Mr. Lovett introduced it under the name of Abundance).

The Chabot and Masu are also good varieties. The Hale, Wickson and Willard are promising varieties not yet fully tested here. The Kelsey and Satsuma are both proved to rot badly in this climate.

Every variety of Japanese plum has a tendency to overproduction, which frequently kills the young tree. Both as a protection to the young tree and for securing good, large, marketable fruit, as least one-half of the crop should be removed soon after the fruit are set. From present appearances the Japan varieties should supplant every other kind of plum all over the State.

JAPAN PERSIMMONS.

Japan Persimmons have been successfully introduced all over the South. They are very healthy and productive throughout this State. On the three stations over twenty-five varieties have been tested: The Hyakume, Hachaya, Kuro Kume and Tane Nashi are perhaps the most reliable to grow.

GRAPES.

Over 100 varieties of grapes have been grown on the different stations. Gradually, one by one, the number is reduced and to-day but very few are found suited to the different localities of this State. In South Louisiana, few soils are sufficiently drained to permit of profitable grape growing. Besides it is a fruit that exacts most excellent care and regular attention for full results any and everywhere. Fine specimens of several varieties have been grown at Baton Rouge, Calhoun, Jennings, Hammond and other places in the State, but nowhere in this State has the writer seen a large and well established vineyard, giving annually commercial crops of profit. It is hoped that it may be seen in the near future. Until it is proven that varieties have been found which will furnish us vineyards profitable on a large scale, the cultiva-

tion should be confined to restricted areas for home use or local markets. The Niagara is said to have done well in Southwest Louisiana. Dracutt's Amber, Diamond, Herbert, Champion, Herbernont and Jacques are the best varieties at Baton Rouge, while Calhoun reports Niagara, Pearl, Lenoir, Early Victor and Merrimac as the best of numerously tried varieties.

The black and brown Rots (*Laestadia bedwellii and Peronospora viticola*) are so very persistent in the moist days of May and June, in this climate, that daily spraying is often necessary to control them. Spraying is done with the Bordeau Mixture, which has been found superior to the Ammoniacal Copper Solution, on account of color, which aids the eye in detecting the presence on the grape and leaf.

CHERRIES, ALMONDS, APRICOTS AND NECTARINES

Have been tried in numerous varieties at both of the upper stations, without the promise of success.

POMEGRANATES.

Five or six varieties of the improved types have been grown at both Baton Rouge and Audubon Park. An occasional cold spell kills the tops and it requires several years before the sprouts from the roots are mature enough to bear. These improved varieties give delicious fruits, and were they more hardy would be worthy of general cultivation in South Louisiana.

MEDLARS.

Usually styled Japanese or Mespilus Plums by our citizens, and Loquats by our nurserymen, are grown quite extensively in South Louisiana. Ripening early in March they find the market bare of fruit and hence fetch fair prices. They are full of seeds and at best are poor fruit, but are highly esteemed by virtue of the scarcity of all fresh fruits at this early season. Three or four improved varieties have been introduced but have not yet fruited.

GOUMI.

(*Eleagnus longipes*), described in a former report and so excellent for jellies, continues to thrive and bear large crops annually at Baton Rouge. A few bushes of this plant should be on every home for the manufacture of home jellies.

The Jujube (*Zizyphus Jujube*) was planted in 1895, Aberia Caffia and Cyphomandra betacia in 1897, all at Baton Rouge, have not yet borne fruit.

STRAWBERRIES.

Over one hundred and fifty varieties of this luscious berry have been tested at the three stations. Since the growing of this berry constitutes so large an industry in the eastern part of this State, the results in full of one hundred and thirty varieties are given for Baton Rouge and about fifty varieties at Calhoun. The extreme drouth of 1896 completely destroyed all plants at Calhoun and seriously injured the beds at Baton Rouge. In 1897 only two varieties were lost at Baton Rouge.

RESULTS OF STRAWBERRY TESTS OF 1897, AT BATON ROUGE, CALCULATED ON A SCALE OF 10.

No.	Variety.	Condition.	Yield.	No.	Variety.	Condition.	Yield.
1	Arrow	8	7	22	Columbia	5	4
2	Annie Kennedy	6	4	23	Carmichael	10	8
3	Aroma	2	4	24	Crescent	7	8
4	Berlin	8	8	25	Cumberland	9	5
5	Bouncer	3	4	26	Crystal City	10	9
6	Beverly	5	5	27	Captain Jack	10	5
7	Bismarck	2	2	28	Coville	10	8
8	Bisel	1	5	29	Creole Beauty	5	5
9	Bailey's Grant	1	2	30	Carrie	1	3
10	Barton	6	5	31	Cyclone	2	4
11	Barton's Eclipse	6	5	32	Champion of England	4	5
12	Brandywine	10	10	33	Cloud	10	10
13	Bederwood	7	9	34	Dayton	7	9
14	Bubach	1	3	35	Darling	10	8
15	Bubach No. 132	5	5	36	Dew	1	4
16	Bubach No. 5	7	5	37	Earliest	10	8
17	Bomba	2	8	38	Enormous	1	1
18	Belle	1	1	39	Eclipse	6	5
19	Burnett	1	2	40	Eureka	7	5
20	Belmont	4	8	41	Eells	7	8
21	Clyde	4	6	42	Excelsior	10	8

RESULTS OF STRAWBERRY TESTS—Continued.

No.	Variety.	Condition.	Yield.	No.	Variety.	Condition.	Yield.
43	Enhance	3	8	87	May King	4	8
44	Elba	10	5	88	Miller	10	8
45	Evans	2	4	89	Muskingum	4	4
46	Edith	1	2	90	Michigan	1	3
47	Epping	4	6	91	Mary	2	4
48	Eleanor	1	1	92	Marshall	5	4
49	Erie	3	5	93	Newark	7	7
50	Equinox	4	3	94	Oriole	7	4
51	Farnsworth	2	8	95	Ocean City	6	3
52	Gov. Hoard	5	6	96	Ohio	8	8
53	Gandy Belle	2	8	97	Omega	4	4
54	Gen. Putnam	1	3	98	Orange Co	2	5
55	Greenville	4	9	99	Princess	5	4
56	Gold	10	7	100	Parker Earle	1	1
57	Gandy	10	10	101	Prince of Berries	1	7
58	Gertrude	2	8	102	Pioneer	4	7
59	Glen Mary	10	10	103	Princeton Chief	5	7
60	Great American	5	5	104	Pride of Cumberland	1	5
61	Henderson	8	6	105	Plow City	2	2
62	Hoffman	10	10	106	Rio	5	5
63	Haverland	1	5	107	Sandoval	10	10
64	Hersey	3	5	108	Saunders	2	7
65	H. W. Beecher	1	1	109	Swindle	1	5
66	Howell Seedling	4	5	110	Shuster's Gem	9	10
67	Holland	3	5	111	Sunrise	6	5
68	Ideal	7	4	112	Splendid	9	9
69	Ivanhoe	2	5	113	Sharpless	8	5
70	James Vick	8	6	114	Stevens	10	10
71	John Little	10	10	115	Staples	1	3
72	Jucunda	9	8	116	Sparta	5	5
73	Jessie	7	5	117	Sunnyside	3	5
74	Jersey Queen	8	5	118	Tubbs	3	5
75	Klicktica	4	3	119	Timbrill	2	9
76	Louise	1	5	120	Tennessee Prolific	2	8
77	Lovett's Early	8	5	121	Victor Hugo	2	3
78	Lady Thompson	5	8	122	Van Deman	6	8
79	Lanahan	10	8	123	Weston	1	4
80	Maytrot	3	3	124	Warfield	7	9
81	Manchester	5	5	125	Wolverton	1	5
82	Margaret	5	5	126	Williams	8	5
83	Meek's Early	10	8	127	Wilson	8	5
84	Michel's Early	10	10	128	West Lawn	10	8
85	Miner	8	10	129	Wm. Belt	5	3
86	Monmouth	7	8	130	Yale	1	1

The following gave maximum results both in condition and yield, viz: Brandywine, Cloud, Hoffman, John Little, Michel's Early, Sandoval and Stevens.

RESULTS OF STRAWBERRY TESTS OF 1897, AT CALHOUN, CALCULATED ON SCALE OF 10.

Variety.	Began to Bloom.	Began to Ripen.	No of Pickings Made.	Date of First Picking.	Date of Last Picking	Quality, Scale 0-10.	Yield 0-10.
Hoffman	March 15	April 12	2	April 20	May 14.	6	4
Michell's Early	" 15	" 15	5	" 28	" 14.	5	6
Cloud	" 15	" 15	6	" 24	" 13.	6	8
Stevens	" 20	" 18	3	" 25	" 13.	7	3
Bedar Wood	" 22	" 25	5	" 29	" 16.	5	4
Carmichael	" 24	" 29	6	" 30	" 20.	7	8
Mrs. Cleveland	" 20	" 24	4	" 30	" 13.	3	4
Jucunda	" 20	" 24	4	" 30	" 13.	8	7
Gypsy	" 21	" 25	2	" 28	" 6.	8	2
Crescent	" 18	" 22	3	" 28	" 8.	6	4
Ontario	" 20	" 25	4	" 29	" 16.	7	3
*Pineapple	April 15.	May 8..	None	.....	.....	....	..
*Logan	March 20	April 25	.....	.....	.....	5	..
Farnsworth	" 21	" 26	2	May 6..	May 13.	5	4
Crystal City	" 24	" 27	4	" 4..	" 16.	2	3
†West Lawn	" 24	" 28	.....	.....	.....	....	..
†Clingto	" 24	" 28	.....	.....	.....	....	..
John Little	" 24	" 27	1	May 4.	.....	1	4
Lovett Early	" 23	" 25	1	" 4.	.....	1	2
Warfield	" 24	" 27	1	" 8.	.....	9	4
Warfield No. 1	" 22	" 24	3	" 6.	May 13.	8	5
Warfield No. 2	" 24	" 28	1	" 13.	.....	5	1
Shusters Gem	" 22	" 27	5	April 30	May 16.	8	3
Bubach	" 30	" 28	3	May 4..	" 13.	3	3
*Bubach No. 24	April 25.	May 15.	.....	.....	.....	5	..
Bubach No. 132	March 25	April 28	3	May 6.	May 13.	7	4
Eureka	" 23	" 25	2	" 8..	" 13.	7	4
Excelsior	" 20	" 27	4	April 30	" 13.	6	6
Louisa	" 20	" 27	3	" 30	" 13.	6	6
Smeltzer	" 23	" 30	1	May 4..	.....	3	3
Mammoth	" 21	" 28	6	" 1..	May 16.	8	6
Gandy	" 22	" 30	5	" 1..	" 16.	6	9
May King	" 20	" 28	5	" 1..	" 16.	7	8
Belmont	" 20	" 30	6	" 4..	" 16.	8	10
Capt. Jack	" 19	" 27	3	" 4..	" 16.	4	2
Enhance	" 20	" 26	4	April 29	" 16.	7	7
Sharpless	" 21	" 28	4	" 29	" 16.	8	5
Chas. Downing	" 22	" 30	3	May 4..	" 16.	5	3
Prince of Berries	" 22	" 30	3	" 4..	" 13.	10	4
Ivanhoe	" 24	" 30	3	" 4..	" 13.	9	4
Mt. Vernon	" 18	" 25	6	" 1..	" 16.	8	9
Yale	April 1..	May 2..	2	" 8..	" 16.	3	3
Pioneer	March 30	" 1..	5	" 4..	" 16.	8	9
Haverlrnd	April 30.	" 5..	4	" 6..	" 16.	8	8
Staymans No. 9	" 30.	" 2..	1	" 16..	.....	3	..
Monmouth	" 30.	" 2..	3	" 8..	May 16.	3	1
Indiana	" 3..	" 5..	2	" 8..	" 13.	5	2
*Ohio Centennial	" 10.	" 8..	.....	.....	.....	1	..
Bomba	" 5..	" 6..	4	May 13.	May 20.	5	6
Henderson	" 5..	" 6..	3	" 13.	" 20.	7	9

*Gave only a few berries. †Yield too light to be rated.

After testing the above varieties for three seasons, giving conditions of excessive moisture and drouth, we are able to draw the following conclusions:

1st. Those varieties adapted for market purposes on our soils: *Early*—Michell's, Cloud, Hoffman. *Medium*—Bedar Wood, May King, Gandy, Crescent, Mount Vernon, Belmont, Carmichael, Sharpless. *Late*—Haverland, Warfield, Pioneer, Mammoth, Ivanhoe, Henderson.

2d. Those adapted to the home garden: *Early to Medium* —Michell, May King, Belmont, Gandy, Shuster's Gem, Crescent. *Late*—Haverland, Pioneer, Ivanhoe, Warfield, Prince of Berries, Henderson.

RASPBERRIES

Are not successful as a rule in Louisiana, several varieties having died out completely during the past season.

BLACKBERRIES AND DEWBERRIES

Are a great success everywhere in the State. The following are growing on the stations: *Of Blackberries*—Early Harvest, Killarney, Minnewaski and Wilson. *Of Dewberries*—Austin's Improved, Baden, Coleman and Manatee.

NUTS.

The following trees are growing on the college campus: American Chestnut, Spanish Chestnut, Mayette Walnut, Thinshelled Walnut, Japan Walnut, Early Bearing Walnut, Chaberts, Butternut, Rome Pecan, Centennial Pecan.

CITRUS FRUITS.

The severe freeze of 1895 almost completely destroyed a large grove of over 125 varieties of Oranges, Pomelas and Kumquats at Audubon Park.

The stock used for budding were Rough Lemon, Grape Fruit, Sour, Sweet and Bitter Sweet Oranges and the Citrus Trifoliata. All varieties except Satsumas, Kumquats and Tangerines were completely killed on all kinds of stocks. All Satsumas and Kumquats on Trifoliata stock were unhurt, while our Tangerine on same stock were saved. All Satsumas, Kumquats and Tangerines on all other kinds of stock were killed.