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RECENT COTTON EXPERIMENTS

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RECENT COTTON EXPERIMENTS*

Introduction.—This bulletin is a report on experiments recently conducted with cotton at the four Mississippi Experiment Stations. These experiment stations are the Central Station at the A. and M. College, the McNeill Branch Station at McNeill, the Holly Springs Branch Station at Holly Springs, and the Delta Branch Station at Stoneville. Some of the experiments have been conducted along the same lines at each of the four stations, but the experiments at the different stations are reported separately in this bulletin.

Different soil conditions and, to some extent, different climatic conditions prevail at the different stations and while the bulletin as a whole should be of interest to all cotton growers of the state, they should pay particular attention to the results from the stations where conditions are most similar to their own. For instance, it would be very incorrect to assume that the negative results usually secured from the use of commercial fertilizers at the station at the A. and M. College will apply to all sections of the state. The report consists mainly of tables which speak for themselves and readers can draw their own conclusions as to the application of the results to their own conditions.

Other cotton experiments are in progress at the experiment stations but these are not yet sufficiently advanced for their results to be published.

* The issue of this bulletin has been delayed on account of the burning of the printing establishment. It should have been out about two months ago and the Experiment Station regrets the delay.

RESULTS FROM THE CENTRAL EXPERIMENT STATION.

By J. W. Fox, J. R. Ricks, and E. C. Ewing.

The cotton experiments reported here were variety tests, fertilizer experiments, topping experiments, and distance experiments. To aid the reader in understanding the results, the report of the weather at this station for 1910 and 1911 is also given.

Table 1---Temperature, 1910 and 1911.

Months.	1910.				1911.			
	Minimum.	Average Minimum.	Maximum.	Average Maximum.	Minimum.	Average Minimum.	Maximum.	Average Maximum.
January	15	34.8	70	57.6	7	40	78	60.8
February	13	33	70	56	20	45	82	64.7
March	30	48.9	92	77.6	28	45.6	89	71.2
April	31	48.5	88	76.9	38	52.4	87	70.4
May	43	51.7	92	85.8	43	59.9	100	86.9
June	56	63.2	95	87.3	64	68.9	104	90.4
July	62	68.3	95	89	57	68	97	88.1
August	62	67.5	96	92.6	62	68.8	98	89
September	53	62.9	98	90.7	64	66.2	100	92.2
October	26	53.9	94	81.1	34	53	97	78
November	29	41	75	65.2	17	37.3	84	63.4
December	20	33	72	51.9	24	38.7	75	58

Table 2---Rainfall, 1910 and 1911.

	Total Rainfall, Inches.		Number of Days on which rain fell.	
	1910.	1911.	1910.	1911.
January	4.07	5.47	6	10
February	3.80	3.75	9	8
March	.93	1.45	2	5
April	3.02	10.07	6	12
May	2.62	1.92	5	3
June	4.49	5.88	12	12
July	8.67	6.24	14	18
August	1.42	5.10	6	18
September	.85	.20	2	6
October	2.76	2.18	5	7
November	1.93	4.28	5	12
December	3.00	11.83	10	18
Total	37.56	58.37	82	129

Variety Test.

All varieties were planted April 24th and 25th and directly thereafter a heavy rain fell, which packed the soil. Cool weather followed and delayed germination for so long that a hard crust formed on the soil before many of the seeds sprouted. After this crust formed, very few of the young plants could break through. As a result, poor stands were secured of those varieties which were slowest to germinate. The stands of four varieties were so poor that it was thought best to replant them. The Cleveland's Cleveland, Station Cleveland, Sproull, and Columbia were accordingly replanted three weeks after the first planting. This replanting placed these varieties at a great disad- vantage as the replanted rows between the older rows never had a fair opportunity to develop. As these replanted varieties were later in maturing than the others, they were not picked with them at the first picking.

The relative way in which the varieties came up is indicated in a column in the table. It is noticeable that the varieties which germinated most poorly and had to be replanted are varieties with large seeds while those whose germination was best are small seeded varieties. Quick germination and a good stand are of considerable importance in growing early crops of cotton. In this experiment poor stands were made good in those varieties that did not have to be entirely replanted by replanting the skips with hoes.

Table 3---Variety Test, 1911.

Names of Varieties.	Per Acre, Weight Seed Cotton, 1st picking.	Per Acre, Weight Seed Cotton, 2nd picking.	Per Acre, Weight Seed Cotton, 3rd picking.	Per Acre, Total Weight Seed Cotton.	Percentage of Lint.	Per Acre, Total Weight of Lint.	Per Acre, Total Weight of Seed.	Length of Staple in Inches, N. O. classification.	Value of Lint per Pound Good Middling Grade, N. O., Dec. 9th.	Value of Lint per Acre.	Value of Seed per Acre at $18.00 per Ton.	Total Value of Lint and Seed per Acre.	Rank in Money Value.	Number of Bolls Required to Yield 1 lb. Seed Cotton.	Germination as indicated by character of stand observed May 6, 11 days after planting.	Plants each variety each plat 0.132 acre killed or affected by cot. wilt dis.
									cents.							
Lone Star	398	888	385	1671	38.1	637	1034	1 1-8	10 1-8	$64.49	$ 9.30	$73.79	7	45	Poor	11
Triumph from A.D.Mebane *a*	385	772	265	1422	39.0	555	867	1 1-16full	10	55.50	7.80	63.30	14	45	Fair	21
Triumph from Jas. Wade	590	840	340	1770	36.0	637	1133	1 1-16	9 13-16	62.50	10.21	72.71	8	48	Fair	19
Cleveland, from J. R. Cleveland *a x*	*x*	1218	348	1566	33.0	517	1049	1 full	9¾	50.40	9.44	59.84	18	51	Poor	4
Cleveland, from Experiment Station *x*	*x*	1124	298	1422	35.3	502	920	1 1-16	9 13-16	49.25	8.28	57.53	19	53	Poor	3
Cook from J. R. Cook *a*	635	968	363	1966	35.0	688	1278	7-8	9 11-16	66.65	11.50	78.15	4	63	Fair	8
Cook from Exper. Station	635	786	280	1701	38.0	646	1055	7-8	9 11-16	62.58	9.50	72.08	9	53	Fair	6
Trice	815	385	105	1305	31.4	410	895	1 1-16	9 13-16	40.23	8.05	48.28	21	70	Good	35
Rowden 116	715	1120	469	2304	32.6	751	1553	1 1-8	10 1-8	76.03	13.98	90.01	2	53	Good	11
Sproull *x*	*x*	742	522	1264	33.0	417	847	1 1-16full	10	41.70	7.42	49.12	20	40	Very poor	0
Broadwell's Double Jointed	838	627	166	1631	33.7	550	1081	7-8	9 11-16	53.28	9.73	63.01	15	92	Fair	12
King	940	507	166	1613	33.7	544	1069	7-8	9 11-16	52.70	9.62	62.32	16	91	Fair	24
Simpkins	987	433	105	1525	35.8	546	979	7-8	9 11-16	52.89	8.81	61.70	17	92	Good	26
Truitt's Ninety Day	902	643	219	1764	34.0	600	1164	1	9 11-16	58.12	10.48	68.60	10	82	Very Good	15
Money Maker	667	907	280	1854	36.8	682	1172	1 full	9¾	66.69	10.55	77.24	6	86	Very good	5
Rublee	701	809	234	1744	34.0	593	1151	1 1-16	9 13-16	58.19	10.36	68.55	11	67	Good	4
Covington-Toole	722	817	287	1826	37.7	688	1138	1 full	9¾	67.08	10.24	77.32	5	85	Very good	2
Dixie	306	1051	424	1781	32.3	575	1206	1 full	9¾	56.06	10.85	66.91	12	80	Very good	1
World's Wonder	640	870	234	1744	31.0	541	1203	1 1-16full	10	54.10	10.83	64.93	13	74	Fair	1
Columbia *x*	*x*	851	340	1191	31.0	369	822	1 5-16	20	73.80	7.40	81.20	3	64	Very poor	1
Sunflower	613	888	272	1773	28.7	510	1263	1 3-8	21	107.10	11.37	118.47	1	90	Poor	1

a Originator of the variety.

x As these varieties had to be replanted they were three weeks later than the others, and they were not picked when the others were first picked.

TYPE OF STALK OF DIFFERENT VARIETIES.

The following is a condensed description of the type of plant of each of the different varieties and of the character of the foliage.

Lone Star.—Plant medium sized and stocky, leaves large, foliage dense on rich land, bolls quite storm proof.

Triumph.—The type of plant is very similar to the above and the same description will apply here for all practical purposes.

Cleveland, or Cleveland Big Boll.—Plant large and vigorous, some plants of semi-cluster type, foliage medium to dense, bolls not storm proof.

Cook, or *Cook's Improved.*—Plant large and vigorous, foliage medium dense, cotton falls out of bolls badly.

Cook, from Experiment Station.—Plant smaller than the original variety, being of medium size and having been selected very closely to type, foliage medium dense, cotton falls out of bolls badly.

Trice.—Plant small to medium in size but grows rapidly early in the season. The variety is somewhat mixed, many plants of the semi-cluster type with short joints, fruits rapidly, foliage light, bolls quite storm proof.

Rowden 116.—Plant large and vigorous, foliage medium dense, bolls quite storm proof, distinct from original variety called Rowden.

Sproull.—Plant medium sized and very stocky, leaves very large, foliage dense, bolls storm proof.

Broadwell, or Broadwell's Double Jointed.—Plant small and slender, foliage light, cotton falls out of bolls.

King.—Broadwell identical, or practically identical, with King and above remarks describe this variety.

Simpkins.—Practically identical with King except more uniform, all of the plants being more nearly of one type.

Truitt's Ninety Day.—Very similar to King but plants of slightly larger size.

Money Maker.—Plants small, of the Peterkin type, foliage light, plants very uniform.

Rublee.—Plants usually of the semi-cluster type, rather tall and slender with short joints, foliage light, fairly storm proof.

Covington-Toole.—Plants small, of the Peterkin type, foliage light, plants very uniform.

Dixie.—Plants medium to large, similar to Peterkin type, foliage medium dense. This is the wilt resistant variety distributed by the U. S. Department of Agriculture.

World's Wonder.—Plants medium to large, usually of semi-cluster type, foliage medium dense.

Columbia.—Plants medium sized and stocky, foliage dense, bolls storm proof.

Sunflower.—Plants tall and slender, foliage medium dense.

The following is a list of the names of parties from whom seed of the varieties grown at the College Station were obtained and their addresses:

Lone Star—U. S. Department of Agriculture, Washington, D.C.
Mebane's Triumph—A. D. Mebane, Lockhart, Tex.
Wade's Triumph—Jas. A. Wade, Alexander City, Ala.
Cleveland's Cleveland—J. R. Cleveland, Decatur, Miss.
Station Cleveland.—Mississippi Experiment Station.
Cook's Cook—J. R. Cook, Ellaville, Ga.
Station Cook—Mississippi Experiment Station.
Trice—West Tenn. Experiment Station, Jackson, Tenn.
Rowden 116—A. M. Ferguson & Co., Sherman, Tex.
Sproull—G. F. Sproull, Raines, Tenn.
Broadwell—John B. Broadwell, Alpharetta, Ga.
King—Otto Schwill and Co., Memphis, Tenn.
Simpkins—W. A. Simpkins, Raleigh, N. C.
Truitt's Ninety Day—J. G. Truitt, LaGrange, Ga.
Money Maker—Alexander Seed Co., Augusta, Ga.
Rublee—C. A. Rublee, Seagoville, Tex.
Covington-Toole—W. F. Covington, Headland, Ala.
Dixie—U. S. Department of Agriculture, Washington, D.C.
World's Wonder—J. E. Evans, Muldon, Miss.
Columbia—U. S. Department of Agriculture, Washington, D. C.
Sunflower—Marx Schaefer, Yazoo City, Miss.

Table 4---Variety Test, 1910.

Name of Varieties.	Weight seed cotton per acre, 1st picking, in lbs.	Weight seed cotton per acre, 2d picking, in lbs.	Weight seed cotton per acre, 3rd picking, in lbs.	Total yield seed cotton per acre in pounds.	Percentage of lint.	Total weight lint per acre in pounds.	Total weight of seed per acre in pounds.	Length of Staple.	Value of lint per pound.	Value of lint per acre.	Value of seed per acre, at $25.00 per ton.	Total value per acre.	Rank in money value.	No. bolls required to yield 1 lb. of cotton.
								inches	cts.	$	$	$		
Cook's Improved No. 9	924	1093	88	2105	38	800	1305	7-8	14	112.00	16.31	128.31	1	56
Cook's Improved No. 8	520	1401	95	2016	40	806	1210	¾	14	112.84	15.02	127.86	2	57
Cook's Improved, from J. R. Cook	652	1181	205	2039	38.5	784	1254	¾	14	109.76	15.68	125.44	3	61
Triumph, from A. D. Mebane	469	1173	169	1811	40	724	1087	1 1-16	15	108.60	13.59	122.19	4	46
Covington-Toole	763	1019	66	1848	39.5	730	1118	1	14¾	107.67	13.97	121.64	5	85
Cook's Improved No. 11	653	1181	102	1936	39	755	1181	¾	14	105.10	14.76	119.86	6	59
Cook's Improved No. 7	594	1188	102	1884	38.5	725	1159	¾	14	101.50	14.49	115.99	7	62
Triumph, from Jas. Wade	513	1269	102	1884	35	659	1225	1 1-16	15	98.85	15.31	114.16	8	47
Cleveland No. 2	550	1269	58	1877	35	657	1220	1	14¾	96.91	15.25	112.16	9	53
Cleveland No. 1	623	1152	73	1848	35	647	1201	1	14¾	95.63	15.01	110.64	10	52
Wall's Early Prolific	697	1027	168	1892	33.7	638	1254	1	14¾	94.10	15.68	109.78	11	72
Triumph from Excelsior Seed Farm	484	1115	190	1789	35	626	1163	1 1-16	15	93.90	14.54	108.44	12	55
Allen Long Staple	521	784	88	1393	26.3	366	1027	1 3-8	25	91.50	12.84	104.34	13	86
Cleveland No. 3	499	1151	80	1730	35	605	1125	1	14¾	89.24	14.06	103.30	14	51
Excelsior	572	990	110	1672	37	619	1053	7-8	14	86.66	13.16	99.82	15	79
Sugar Loaf	1085	513	37	1635	35.7	584	1051	7-8	14	81.76	13.14	94.90	16	99
Simpkins	1019	550	59	1628	35.6	580	1048	7-8	14	81.20	13.10	94.30	17	86
Uncle Sam	733	660	66	1459	36.5	532	927	1	14¾	78.47	11.59	90.06	18	49
Reimproved King	902	528	37	1467	36.7	538	929	¾	14	75.32	11.61	86.93	19	90
Gold Coin	433	960	103	1496	35.4	530	966	7-8	14	74.20	11.97	86.17	20	77
Mexican Big Boll	528	799	88	1415	34.5	488	927	1	14¾	71.98	11.59	83.57	21	50

RESULTS WITH FERTILIZERS.

Table 5---Fertilizer Tests---Five Years.

Plot No.	Fertilizer per Acre.	Yield Seed Cotton, 1907.	Yield Seed Cotton, 1908.	Yield Seed Cotton, 1909.	Yield Seed Cotton, 1910.	Yield Seed Cotton, 1911.	Average Total Yield of Seed Cot.	Seed Cotton Percentage of Lint.
		lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	
1	Kainit, 288 lbs.	1468	1940	1744	1352	904	1481	38%
2	Acid Phosphate, 288 lbs.	1540	1688	1352	1656	1120	1471	38%
3	C.-S. Meal, 288 lbs.	1268	1376	832	1232	1016	1145	38%
4	No treatment	1280	1384	1240	1192	936	1206	38%
5	Manure, 4 tons, Lime, 800 lbs.	1528	2432	1744	1528	1496	1746	38%
6	C.-S. Meal, 288 lbs., Kainit, 288 lbs.	1664	1912	1616	1536	984	1342	38%
7	C.-S. Meal, 288 lbs., Kainit, 288 lbs., Acid Phosphate, 288 lbs.	1760	1872	1592	1464	1064	1550	38%
8	Manure, 8 tons	1736	2352	2440	1856	2152	2107	38%
9	Manure, 4 tons, Acid Phosphate, 288 lbs.	1616	2032	1792	1592	1888	1784	38%
10	Manure, 4 tons Kainit, 288 lbs.	1440	2096	1680	1496	1536	1649	38%
11	Kainit, 288 lbs. Acid Phosphate, 288 lbs.	1296	1680	1624	1264	864	1346	38%
12	C.-S. Meal, 288 lbs., Acid Phosphate, 288 lbs.	1040	1382	1040	1048	1000	1102	38%

Table 6---Relative Earliness from Fertilizer Plots as Shown by the Different Pickings, 1911.

Plot No.	Fertilizer per Plot.	1st picking, lbs. seed cotton per acre.	2nd picking., lbs. seed cotton per acre.	3rd picking, lbs. seed cotton per acre.	4th picking, lbs. seed cotton per acre.	Total Yield, lbs. seed cotton per acre.
1	Kainit, 288 lbs.	210	328	320	56	904
2	Acid Phosphate, 288 lbs.	352	336	360	72	1120
3	C.-S. Meal, 288 lbs.	192	312	416	96	1016
4	No treatment	184	248	408	96	936
5	Manure, 4 tons, Lime, 800 lbs.	336	456	608	96	1496
6	C.-S. Meal, 288 lbs., Kainit, 288 lbs.	256	384	288	56	984
7	C.-S. Meal, 288 lbs., Kainit, 288 lbs., Acid Phosphate, 288 lbs.	280	424	312	48	1064
8	Manure, 8 tons	608	760	688	96	2152
9	Manure, 4 tons, Acid Phosphate, 288 lbs.	584	696	512	96	1888
10	Manure, 4 tons, Kainit, 288 lbs.	416	608	400	112	1536
11	Kainit, 288 lbs., Acid Phosphate, 288 lbs.	328	328	168	40	864
12	C.-S. Meal, 288 lbs. Acid Phosphate, 288 lbs.	512	296	184	8	1000

Table 7---Manure and Kainit to Prevent Rust, 1911.

Plot.	1st picking, lbs. seed cotton per acre.	2nd picking, lbs. seed cotton per acre.	3rd picking, lbs. seed cotton per acre.	4th picking, lbs. seed cotton per acre.	Total Yield, lbs. seed cotton per acre.
Manure, 10 tons per acre	693	1026	458	90	2267
Kainit, 400 lbs. per acre	403	845	377	90	1715
No treatment	661	539	200	74	1474

Results from Kainit in 1910.

Plot.	1st Picking, lbs. seed cotton per acre.	2nd Picking lbs. seed cotton per acre.	Total Yield, lbs. seed cotton per acre.
Kainit, 200 lbs. per acre	722	1266	1989
No treatment	1178	722	1900

The application of from 200 to 400 pounds of potash to land on which cotton rusts badly is usually profitable as indicated in the first part of table 7. We do not get profitable results from potash used here on soils where cotton does not rust. This was true of the plots represented in the second part of table 7.

Table 8---Topping Cotton.

Results in 1911.

Plot.	1st picking lbs. seed cotton per acre.	2nd picking lbs. seed cotton per acre.	3rd picking lbs. seed cotton per acre.	Total Yield lbs. seed cotton per acre.
Topped July 15th	995	825	181	1931
Topped August 1st	675	919	194	1788
Not topped	744	850	162	1756

Results in 1910.

Plot.	1st picking lbs. seed cotton per acre.	2nd picking lbs. seed cotton per acre.		Total Yield lbs. seed cotton per acre.
Topped July 23rd	1479	187		1666
Topped August 5th	1567	185		1752
Not topped	1593	228		1821

Results in 1909.

Plot.	1st picking lbs. seed cotton per acre.	2nd picking lbs. seed cotton per acre.	3rd picking lbs. seed cotton per acre.	Total Yield lbs. seed cotton per acre.
Topped August 1st	888	316	376	1580
Not topped	792	256	416	1464

Results in 1907.

Plot.	Yield per acre seed cotton.
Topped August 3rd	1808 lbs.
Not topped	1575 lbs.
Topped August 26th	1780 lbs.
Not topped	1821 lbs.

DISTANCE EXPERIMENTS.

Table 9---Width of Rows.

Results in 1911.

Plot.	Average height of stalks.	1st picking lbs. seed cotton per acre.	2nd picking lbs. seed cotton per acre.	Total yield lbs. seed cotton per acre.
5 ft. rows	4½ ft.	922	309	1231
4½ ft. rows *a*	4½ ft.	907	439	1346
4 ft. rows *a*	4½ ft.	911	413	1324
3½ ft. rows	4½ ft.	1063	425	1488
3 ft. rows	4½ ft.	1100	526	1626

a The 4 and 4½ ft. row plots were slightly damaged by wilt.

Results in 1909 and 1910.

Plot.	Yield of seed cotton per acre. 1909.	Yield of seed cotton per acre. 1910.
6 ft. rows	1930 lbs.	1661 lbs.
5 ft. rows	2049 lbs.	2087 lbs.
4 ft. rows	2175 lbs.	

In the above the plants stood at an average of fifteen inches in the drill.

Table 10---Distances in the Drill for 1910 and 1911.

Plot.	1910.			1911.			
	1st picking, lbs. seed cot. per acre.	2nd picking, lbs. seed cot. per acre.	Total Yield seed cotton, lbs. per acre.	1st picking, lbs. seed cot. per acre.	2nd picking, lbs. seed cot. per acre.	3rd picking, lbs. seed cot. per acre.	Total Yield, lbs. seed cot. per acre.
12 inches	1796	566	2362	812	583	73	1468
20 inches	1454	621	2075	771	581	62	1414
30 inches	1202	666	1868	698	554	48	1300

In the above the rows were three feet and eight inches apart.

Table 11---Results from Poisoning for Cotton Army Worm.

Plot.	Dates of the poisoning.	1st picking lbs. seed cotton per acre.	2nd picking lbs. seed cotton per acre.	Total Yield lbs. seed cotton per acre.
Poisoned	1. Aug. 20. 2. Aug. 30.	644	770	1414
Not poisoned		531	236	767

The above results show that it is good practice to control the army worm by poisoning. Our results this season indicate that Paris green is more effective for this purpose than arsenate of lead. One pound of the former will be sufficient for one acre for each application. It will require from 4 to 5 pounds of the latter.

RESULTS FROM THE McNEILL EXPERIMENT STATION.

By E. B. Ferris.

NATURAL CONDITIONS AT McNEILL.

When this station was first located at McNeill the country was new; little cotton had been grown in the immediate vicinity and few of the fungous diseases common to the plant were here. For the first few years yields of cotton were fairly good, but, later, anthracnose, or pink boll rot, became very troublesome and sometimes apparently reduced the yield of cotton fully 50 per cent. The heavy summer rainfall here contributed greatly to the spread of this trouble as well as to any trouble of like character, and this with the natural tendency of the plant to shed its forms on account of daily rains, made cotton growing here rather unsatisfactory even before the appearance of the boll weevil, and with this pest the frequent showers of June, July, August and September will make the growing of cotton almost an economic impossibility so long as the weevils remain as plentiful as they have been for the past two years.

The rainfall in this section of the state, so near the Gulf Coast, is said to be the heaviest of that in any portion of the United States except a strip along the coast of Northwest Washington. And it is not altogether the total rainfall here that counts for so much in the control of the weevil and fungous diseases, as it is the frequency of the showers, many of these amounting to almost nothing in inches, but coming almost daily, contribute to the reproduction of the weevil and the spread of fungous growths of every kind.

This station has kept daily weather records since it was established and the following table gives a summary of weather conditions since 1905:

Table 12---Weather Report; Temperature and Rainfall.

Year.	January			February			March			April			May			June			July			August			Sept.			October			Nov.			Dec.			Total Rainfall.
	Maximum.	Minimum.	Rainfall.	Maximum.	Minimum.	Rainfall.	Maximum.	Minimum.	Rainfall.	Maximum.	Minimum.	Rainfall.	Maximum.	Minimum.	Rainfall.	Maximum.	Minimum.	Rainfall.	Maximum.	Minimum.	Rainfall.	Maximum.	Minimum.	Rainfall.	Maximum.	Minimum.	Rainfall.	Maximum.	Minimum.	Rainfall.	Maximum.	Minimum.	Rainfall.	Maximum.	Minimum.	Rainfall.	
1905		16	7.77		13	8.43		40	9.67	93	38	11.59		57	6.36	98	64	5.55	97	63	8.50	94	67	5.54	93	59	3.34	86	39	8.03	79	36	3.44	69	25	7.25	85.47
1906	75	25	3.46	70	29	4.51	79	28	10.57		38	1.96	94	45	3.02	99	64	5.47	95	68	5.80	100	68	3.83	95	65	.....	85	38	.78	84	27	1.19	80	26	2.38	53.20
1907	80	28	1.16	78	30	6.35	90	41	1.22	85	30	6.99	91	49	10.86	95	54	2.71	98	68	6.11	97	66	10.48	96	60	6.06	90	38	1.32	81	28	6.61	74	27	6.65	66.52
1908	76	25	6.05	75	27	4.92	90	38	3.00	89	48	3.98	94	39	8.76	95	61	7.87	96	66	12.32	96	64	7.47	95	48	9.41	84	36	.46	82	30	1.15	80	28	1.19	66.58
1909	78	23	2.48	78	23	5.91	84	34	6.50	87	39	6.25	88	45	12.20	97	66	10.48	97	61	8.74	103	69	7.43	95	47	8.49	94	39	3.76	84	31	1.01	75	20	7.90	81.15
1910	74	22	2.81	75	23	5.13	88	30	.97	87	36	.42	94	54	4.57	94	60	10.09	96	66	10.76	97	70	3.06	96	56	3.11	96	30	4.17	82	32	1.87	72	23	2.12	49.08
1911	81	15	4.20	80	25	2.32	90	37	5.51	85	47	11.08	98	53	2.91	99	67	5.96	93	62	8.94	97	68	6.57	98	68	8.14	93	39	4.18	81	23	3.38	74	26	6.08	69.27

VARIETY TEST.

In January, 1911, 2.4 acres of land were selected for conducting tests with varieties of cotton. About half of this land had grown cotton the year before, while the other half had grown corn and velvet beans. The half heretofore planted to cotton was naturally much more productive soil than the half previosuly planted to corn and velvet beans, but was more on the order of bottom land and not so perfectly drained. All this land was laid off in rows four and one-half feet apart in January and bedded. In March it was fertilized with a mixture of acid phosphate and sulphate of ammonia at the rate of 400 pounds of acid phosphate and 66 pounds of sulphate of ammonia per acre and rebedded. These beds were dragged down almost level about the first of April and twenty varieties of cotton were planted April 6th, each variety occupying a single row and this being repeated as often as was necessary to plant all the land. This was done to avoid as nearly as possible variations in yield due to inequalities of the soil, for while the more level and lower portion of the patch was naturally the better land, experience showed that the upper and more rolling half made much the better cotton.

There were seventy-two rows in the field, so that there were four rows each of the first ten varieties given below and three rows each of the others, each row being one-thirtieth of an acre. The variety, Ashcraft's Double Jointed Snow Bank, came after the other varieties were planted and was given two rows on the opposite side of the field from where the planting was started.

With the exception of the Sproull cotton these varieties all came up to almost perfect stands, but on the lower half of the field, where cotton had grown the year before, a great deal of the young cotton died. The cotton died in spots and was evidently caused by disease germs which were present in the soil from the previous year, as no such trouble manifested itself on the land where corn had grown the year before. In reporting results we give the calculated yields as gathered and the calculated yields figured on the basis of a perfect stand.

Experience with this patch of cotton showed that the rows were too wide for best results and that larger yields would probably have been made with narrower rows, as the cotton never grew large enough, except on the bottom land, to reach near the center of such rows. The cotton was thinned to about twenty-four inches in the drill and we noted few if any more grown bolls on the stalks having, on account of a poorer stand, a greater distance than this in the drill.

When this cotton was about ready to put on squares, which was the latter part of May, we began going over it from once to twice a week catching boll weevils and this was continued for almost a month. Then there were so many forms that the process of looking into each square to find the weevils was too laborious and the method of catching the grown weevils gave place to the process of picking up squares. We were only able to pick up these squares about twice, after which daily rains interfered, sometimes washing the fallen squares entirely away and again leaving the freshly plowed land too soft to hold up the laborers who did the picking. In all 145 grown weevils were caught from this patch of cotton and several hundred squares picked up. After the continuous spell of wet weather, we were never able to regain control of the weevils and had to let them run their course.

A great many bolls were set on this cotton and at the first picking it looked as if three-fourths of a crop would be made in spite of the weevil and adverse weather conditions, but a great many bolls more than half grown were later punctured and failed to open at all.

In the table following the yield of cotton calculated in pounds per acre as given for each picking, also the total yield, and the total yield calculated on the basis of a perfect stand, the stalks having been counted on each row and the percentage of stand determined:

Table 13---Variety Test, 1911.

No.	Names of Varieties.	Fraction of Acre in test.	Pounds of seed cotton per acre, Aug. 22, calculated.	Pounds of seed cotton per acre, Sept. 15, calculated.	Total actual yield per acre, calculated.	Yield seed cotton per acre, based on perfect stand, calculated.
1	Lone Star	4-30	263	150	420	524
2	Triumph from Mebane	4-30	296	150	446	518
3	Triumph from Wade	4-30	262	154	416	526
4	Cleveland Big Boll	4-30	307	169	476	580
5	Cook's Improved, from Cook	4-30	240	210	450	522
6	Cook's Improved, from Station	4-30	172	154	326	466
7	Trice	4-30	435	128	563	770
8	Rowden 116	4-30	188	128	316	464
9	Sproull	4-30	101	128	229	434
10	Broadwell's Double Jointed	4-30	405	105	510	662
11	King	3-30	385	95	480	584
12	Truitt's 90-day	3-30	380	150	530	588
13	Money-Maker	3-30	240	140	300	432
14	Rublee	3-30	240	135	375	422
15	Covington-Toole	3-30	170	160	330	358
16	Dixie	3-30	245	150	395	452
17	World's Wonder	3-30	350	120	470	504
18	Columbia	3-30	240	125	365	650
19	Sunflower	3-30	270	115	385	388
20	Barber's Big Boll Prolific	3-30	270	105	375	478
21	Ashcraft's Double Jointed Snow Bank	2-30	375	250	625	625

SIX YEARS WORK WITH FERTILIZERS UNDER COTTON AT THE McNEILL BRANCH EXPERIMENT STATION.

In 1905 sixty plats of land of one-twentieth acre each were set aside for permanent work with fertilizers for cotton and corn. These plats are located on soil as nearly uniform in composition as possible, practically level, and typical of the vast body of pine lands in South Mississippi. Thirty plats each are planted yearly to corn and cotton, one crop succeeding the other, with cowpeas grown in the corn to keep up the productiveness of the soil. These plats have been fertilized the same way each year since the experiment began, but only ten kinds and combinations of fertilizer have been used, the tests with each crop having been conducted in triplicate and the plats which were fertilized alike having been so distributed over the field as to do away of nearly as possible with variations in yield due to inequalities of the soil.

At the same time fertilizer work has been carried on with corn and cotton on eight plats of one-twentieth acre each located on what

we term the parked area. This parked area is the land on which cattle were fed during the winter of 1902-'03.

At that time thirty head of steers were fed here for about one hundred days on cottonseed meal and hulls, the troughs having been regularly moved during the feeding period so as to cause a uniform distribution of the manure from these cattle and the land having been plowed at intervals so as to prevent its washing away over the surface. The eight test plats set aside for this work with corn and cotton were selected in the center of this five-acre tract as representative of the whole.

The boll weevil appeared in September, 1909, and during the years 1910 and 1911 seriously affected the cotton as will be seen from the table following in which is given the results of all this work calculated to the basis of one acre.

Table 14---Fertilizer Experiments.

Plot No.	Kind and Quantity of Fertilizer	Yield of Seed Cotton Calculated in Pounds per Acre.						
		1906	1907	1908	1909	1910	1911	Aver.
1	No Fertilizer	480	220	110	153	20	30	169
2	100 lbs. Cottonseed Meal	760	436	376	400	90	63	354
3	100 lbs. Acid Phosphate	800	514	744	480	366	166	512
4	100 lbs. Kainit	620	300	274	186	34	8	237
5	100 lbs. Cottonseed Meal, 100 lbs. Acid Phosphate	1060	616	644	513	326	292	575
6	100 lbs. Cottonseed Meal, 100 lbs. Acid Phosphate, 100 lbs. Kainit	860	640	693	520	306	300	553
7	200 lbs. Cottonseed Meal, 100 lbs. Acid Phosphate	1040	756	684	620	306	370	630
8	100 lbs. Cottonseed Meal, 200 lbs. Acid Phosphate	1000	666	636	480	254	340	563
9	100 lbs. Cottonseed Meal, 500 lbs. New Jersey Marl	620	420		360		140	385
10	100 lbs. Cottonseed Meal, 100 lbs. Ground Phosphate Rock	840	510		520		220	522
11	165 lbs. Raw Ground Bone			720				
12	100 lbs. Cottonseed Meal, 400 lbs. Lime and Acid Phos. Mixture, (Reverted P_2O_5)			680		406		
13	100 lbs. Cottonseed Meal, 100 lbs. Acid Phosphate, On land parked by cattle, winter 1902-'03	1540	1120	920	624	180	490	812
14	100 lbs. Cottonseed Meal, 100 lbs. Acid Phosphate, 100 lbs. Kainit, On land parked by cattle, winter 1902-'03	1485	1090	870	633	170	510	793

In 1911 all fertilizer applications given in table were doubled.

Time of Planting Cotton.

Earliness in maturity has much to do with the success or failure of growing cotton under boll weevil conditions and to find how much this earliness of maturity is influenced by the time of planting, an experiment was conducted here in 1911 of planting four lots of cotton at intervals of two weeks, treating all alike as nearly as possible, and

keeping records of yield from the several plantings. Four plats of land of one-tenth acre each were selected for this work. This land was of uniform composition, of the best quality, and had been thoroughly prepared and fertilized. Triumph cotton seed were used in the test and were planted at intervals of two weeks from April 1st until the four plats were planted. The seed on all these plats germinated perfectly and gave perfect stands, but cold nights injured the stand of the cotton planted April 1st to a certain extent, though not materially. Weevils were caught from May 20th to June 20th and after this, fallen squares were picked up about twice, when daily rains made it impossible to continue the work.

The yields calculated in pounds of seed cotton per acre were as follows:

Planted April 1st, 278 pounds; planted April 15th, 289 pounds; planted May 1st, 55 pounds; planted May 15th, 0 pounds.

RESULTS FROM THE HOLLY SPRINGS BRANCH EXPERIMENT STATION.

By C. T. Ames.

Table 15---Variety Test, 1911.

Plot No.	Names of Varieties.	Weights of Pickings by Plats—Seed Cotton.				Total Yield Seed Cotton per Acre.	Percentage of Lint.	Yield of Lint per Acre.	Length of Staple in inches.
		Sept. 22.	Oct.3-20	Nov. 7.	Nov. 18.				
		lbs.	lbs.	lbs.	lbs.	lbs.			
1	Lone Star	30	49	32	6	1170	37%	433	1 1-16
2	Triumph, from Mebane	44	54	39	5	1420	40%	570	1 1-16
3	Triumph, from Wade	51	59	35	7	1520	35%	530	1 1-16
4	Cleveland Big Boll	52	75	36	6	1690	32%	540	1
5	Cook, from Cook	36	56	32	7.5	1315	36%	475	7-8
6	Cook, from Station	29	60	32	6	1270	39%	495	¾
7	Trice	104	58	25	5	1920	29%	555	1
8	Rowden 116	61	67	31	6.5	1655	35%	575	1 1-16
9	Sproull	27	73	36	8	1440	33%	475	1 1-16
10	Broadwell's Double Jointed	78	56	24	5	1630	36%	585	¾
11	King	78	51	20	5	1540	35%	540	¾
12	Simpkins	80	45	20	5.5	1505	35%	525	¾
13	Truitt's Ninety Day	77	61	30	5	1730	34%	590	7-8
14	Money Maker	34	71	40	8	1530	37%	565	7-8
15	Rublee	56	62	29	7	1540	35%	540	7-8
16	Covington-Toole	31	68	37	9	1450	39%	565	7-8
17	Dixie	29	72	39	12	1520	32%	485	7-8
18	World's Wonder	41	63	30	7	1410	33%	465	1 1-16
19	Columbia	36	66	29	4.5	1355	33%	445	1¼
20	Sunflower	43	48	20	5	1160	31%	360	1 3-8

These plats were planted May 3, 1911 in four and one-half foot rows on valley soil. One row of each variety was planted in the order indicated above and each variety was repeated five times in the same order. The above results were influenced to some extent by the cotton wilt disease. Some varieties were affected by the disease more than others and the variety, Cleveland Big Boll, appeared to be the most resistant.

Plat No.	200 lbs. Fertilizer per Acre.	Weights of Pickings. Sept. 21. lbs.	Oct. 3. lbs.	Oct. 27. lbs.	Nov. 17. lbs.	Total lbs.	Seed cotton per acre, lbs.	Plat No.	400 lbs. Fertilizer per Acre.	Weights of Pickings. Sept. 21. lbs.	Oct. 3. lbs.	Oct. 27. lbs.	Nov. 17. lbs.	Total lbs.	Seed cotton per acre, lbs.
1	No Fertilizer	8	6	5	1	20	400								
2	200 lbs. Cottonseed Meal	25	15	9	0.5	44.5	885								
3	200 lbs. Acid Phosphate	37	9	4	1	51	1020								
4	200 lbs. Kainit	15	8	6	1	30	600								
5	No Fertilizer	10	8	5	1	24	480								
6	100 lbs. Cottonseed Meal 100 lbs. Acid Phosphate	33	10	6	0.5	49.5	985	6½	200 lbs. Cottonseed Meal, 200 lbs. Acid Phosphate	43	15	4	0.5	62.5	1245
7	100 lbs. Cottonseed Meal.. 100 lbs. Kainit	21	9	7	1	38	760	7½	200 lbs. Cottonseed Meal, 200 lbs. Kainit	22	17	10	1	50	1000
8	100 lbs. Acid Phosphate, 100 lbs. Kainit	26	11	5	0.5	42.5	845	8½	200 lbs. Acid Phosphate, 200 lbs. Kainit	33	11	3	0.5	47.5	945
9	120 lbs. Acid Phosphate, 40 lbs. Cottonseed Meal, 40 lbs. Kainit	23	5	5	1	34	680	9½	240 lbs. Acid Phosphate, 80 lbs. Cottonseed Meal, 80 lbs. Kainit	35	12	4	0.5	51.5	1025
10	No Fertilizer	5	12	6	2	25	500	10½	No Fertilizer	5	5	5	2	17	340
11	150 lbs. Cottonseed Meal, 50 lbs. Acid Phosphate	20	9	6	1	36	720	11½	300 lbs. Cottonseed Meal, 100 lbs. Acid Phosphate	23	20	6	1	50	1000
12	100 lbs. Cottonseed Meal, 100 lbs. Acid Phosphate	24	9	4	1	38	760	12½	200 lbs. Cottonseed Meal, 200 lbs. Acid Phosphate	25	18	7	1.5	51.5	1030
13	50 lbs. Cottonseed Meal, 150 lbs. Acid Phosphate	16	9	5	1	31	620	13½	100 lbs. Cottonseed Meal, 300 lbs. Acid Phosphate	30	9	3	0.5	42.5	850
14	No Fertilizer	8	6	5	1	20	400	14½	No Fertilizer	4	8	4	1	17	340

Variety Cleveland Big Boll, planted May 4, 1911. Plats 1-20 acre each. Soil rolling hill land.

Table 17---Six Years' Results from Fertilizers Under Cotton.

Plat No.	200 lbs. Fertilizer per Acre.	Yield of Seed Cotton per Acre.						Average for six years.	Grade in inches per 1000 feet.
		1906	1907	1908	1909	1910	1911		
		lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1	No Fertilizer	520	860	820	310	300	400	535	7.8
2	200 lbs. C.-S. Meal	680	1140	1240	615	900	885	910	6.5
3	200 lbs. Acid Phos.	1180	1200	1420	690	1060	1020	1095	4.3
4	200 lbs. Kainit	520	940	890	460	470	600	647	5.4
5	No Fertilizer	560	860	790	365	290	480	557	5.4
6	100 lbs. C.-S. Meal, 100 lbs. Acid Phos.	980	1140	1240	615	1160	985	1020	1.1
7	100 lbs. C.-S. Meal, 100 lbs. Kainit	640	880	1000	550	800	760	772	1.1
8	100 lbs. Acid Phos. 100 lbs. Kainit	960	980	1100	625	910	845	903	5.4
9	120 lbs. Acid Phos., 40 lbs. C.-S. Meal, 40 lbs. Kainit	1040	1030	1230	670	800	680	908	12
10	No Fertilizer	600	760	820	340	250	500	545	15
11	150 lbs. C.-S. Meal, 50 lbs. Acid Phos.	940	900	1120	580	820	720	847	17
12	100 lbs. C.-S. Meal, 100 lbs. Acid Phos.	940	820	1190	630	810	760	858	17
13	50 lbs. C.-S. Meal, 150 lbs. Acid Phos.	800	1120	1210	660	800	620	868	20
14	No Fertilizer	660	690	910	330	340	400	555	17

Plat No.	400 lbs. Fertilizer per Acre.	Yield of Seed Cotton per Acre.						Average for six years.	Grade in inches per 1000 feet.
		1906	1907	1908	1909	1910	1911		
		lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1½	No Fertilizer	420	580	560	260			455	40
2½	400 lbs. C.-S. Meal	780	780	920	470			738	36
3½	400 lbs. Acid Phosphate	850	940	1070	425			821	37
4½	400 lbs. Kainit	420	780	790	400			598	38
5½	No Fertilizer	540	800	650	230			555	21
6½	200 lbs. C.-S. Meal, 200 lbs. Acid Phosphate	1120	1160	1540	910	1186	1245	1193	17
7½	200 lbs. C.-S. Meal, 200 lbs. Kainit	760	1080	1180	660	830	1000	918	14
8½	200 lbs. Acid Phosphate, 200 lbs. Kainit	1180	1200	1460	700	1030	945	1086	12
9½	240 lbs. Acid Phosphate, 80 lbs. C.-S. Meal, 80 lbs. Kainit	1218	1270	1570	840	1050	1025	1162	8.5
10½	No Fertilizer	520	850	920	250	200	340	513	3.4
11½	300 lbs. C.-S. Meal, 100 lbs. Acid Phosphate	1040	1170	1650	850	940	1000	1108	2.5
12½	200 lbs. C.-S. Meal, 200 lbs. Acid Phosphate	1040	1180	1680	830	1000	1030	1127	4.6
13½	100 lbs. C.-S. Meal, 300 lbs. Acid Phosphate	760	1060	1080	600	670	850	837	3.3
14½	No Fertilizer	700			430	450	340	480	1

Table 18---Fertilizer Test, 1911.

Plat No.	Fertilizer per Acre.	Weights of Pickings. Sept. 21.	Oct. 3.	Oct. 27.	Nov. 17.	Total.	Seed cotton per acre.
		lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1	No fertilizer	4	6	2	3.5	15.5	310
2	200 lbs. Cottonseed Meal	19	15	14	3	51	1020
3	200 lbs. Acid Phosphate	32	11	5	0.5	48.5	970
4	200 lbs. Kainit	7	10	6	1.5	24.5	490
5	No fertilizer	4	6	8	1	19	380
6	200 lbs. Raw Phosphate Rock	19	16	5	1	41	820
7	400 lbs. Raw Phosphate Rock	21	20	8	1	50	1000
8	200 lbs. Acid Phosphate	20	11	6	1	38	760
9	100 lbs. Cotton seed Meal 100 lbs. Acid Phosphate	24	13	6	1.5	44.5	890
10	100 lbs. Cottonseed Meal, 200 lbs. Raw Phosphate Rock	22	14	6	2	44	880
11	No fertilizer	8	1	6	3	28	560
12	100 lbs. Cottonseed Meal, 200 lbs. Acid Phosphate	22	10	5	1	38	760
13	200 lbs. Acid Phosphate	16	12	5	1	34	680
14	400 lbs. Raw Phosphate Rock	15	13	6	1	35	700
15	200 lbs. Kainit	12	16	7	1	36	720
16	No fertilizer	9	10	8	2	29	580
17	200 lbs. Raw Phosphate Rock	19	14	6	1	40	800
18	400 lbs. Raw Phosphate Rock	16	10	3	0.5	29.5	590

Variety, Cleveland Big Boll. Planted May 4, 1911. Plats six rows each, 4 feet wide and 92 feet long, making 1-20 acre each.

Table 19---A Test of Four Forms of Nitrogen.

Plat No.	Lbs. Fertilizer per Acre.	Weights of Pickings. Sept. 28.	Oct. 20.	Nov. 16.	Total.	Pounds of seed cotton per acre.	Plat No.	Lbs. Fertilizer per Acre.	Weights of Pickings. Sept. 28.	Oct. 20.	Nov. 16.	Total.	Pounds of seed cotton per acre.
		lbs.	lbs.	lbs.	lbs.	lbs.			lbs.	lbs.	lbs.	lbs.	lbs.
1	200 lbs. Cotton seed Meal, 200 lbs. Acid Phosphate	36	12	2	50	1000	1½	No Fertilizer	16	12	7	41	820
2	200 lbs. Acid Phosphate, 80 lbs. Nitrate of Soda	27	12	3	42	840	2½	200 lbs. Cottonseed Meal, 200 lbs. Acid Phosphate	27	17	7	51	1020
3	No Fertilizer	13	10	3	26	520	3½	200 lbs. Acid Phosphate, 80 lbs. Nitrate of Soda	29	16	7	52	1040
4	200 lbs. Acid Phosphate, 150 lbs. Nitroline	20	13	3	36	720	4½	200 lbs. Acid Phosphate, 150 lbs. Nitroline	29	20	6	55	1100
5	200 lbs. Acid Phosphate, 486 lbs. Ammoline	20	10	3	33	660	5½	200 lbs. Acid Phosphate, 486 lbs. Ammoline	27	13	4	44	880

Plats 1-20 acre each. Soil rolling hill land. Variety of Cotton, Cook's Improved, planted in 4 foot rows on May 10, 1911.

Remarks.—The soil employed in making these fertilizer tests has been in cultivation for more than fifty years, and represents the characteristic poorer type of soils found in this section of the state.

Each plat has been used for the past six years with the same kind and quantity of fertilizers.

No manure of any kind has been used on this land, nor leguminous crop grown during the past six years, or probably at any time prior to that, except the fertilizer used in making the test.

It can be seen from the foregoing tables that nitrogen and available phosphorus are very deficient, and that an application of these elements is profitable.

RESULTS FROM DELTA BRANCH EXPERIMENT STATION.

By G. B. Walker.

Variety Test.

Below is given a list of the twenty-three varieties of cotton tested at the Delta Branch Experiment Station in 1911, with data which shows results obtained from each variety.

The land on which this test was made is a tract of 4 3-5 acres of characteristic Deer Creek sandy loam soil, being only fairly well surface drained, and not highly improved. It grew oats followed by Mexican June corn the year previous. No fertilizer was used.

The land was broken flat the first week in March, put into beds four feet apart in April, and planted on May 1st. One row of each variety was planted in the order in which they appear in the table, and in this order the varieties were repeated five times. The planting was done in this manner to obviate any differences there might be in the soil. There was 1-5 acre planted to each variety and our yields per acre are computed on that basis.

The cotton was planted just at the beginning of a long drought and as a result poor stands were secured of some of the varieties, particularly those varieties having large seed. The stand in no case, however, was so bad as to justify replanting.

This field of cotton was attacked by two broods of the cotton army worm, by the boll worm, and by the boll weevil, each of which did considerable damage to the crop.

Samples of lint cotton from each of the varieties were classed and priced by the Greenville Cotton Company, of Greenville, Miss., and the McGee-Dean Cotton Company of Leland, Miss., and our valuations are made from information furnished by these concerns. The Experiment Station is greatly indebted to the above mentioned for the assistance rendered by them.

Table 20---Variety Test, 1911.

Names of Varieties.	Date of first blooms.	Character of foliage.	Pounds seed cotton per acre, 1st pick., Sep. 30.	Pounds seed cotton per acre, 2nd pick., Nov. 2.	Total yield seed cotton per acre.	Yield lint cotton per acre.	Percentage of lint.	Length of staple according to Leland classification.	Character of lint.	Price of lint per pound middling grade.	Value of lint cotton per acre.	Value of seed per acre, at $18.00 per ton.	Total value of lint and seed per acre.	% of stand secured	Rank as to money value
			lbs.	lbs.	lbs.	lbs.	%	INCHES.		CTS.				%	
Rublee	Jun 27	Very light	1235	275	1510	498	33	1	Good, strong, even	9¾	$48.55	$9.10	$57.65	95	3
Broadwell's Double Jointed	Jun 28	Very light	1125	225	1350	445	33	5-8	Very poor, uneven	8¼	31.71	8.14	44.85	98	20
Covington-Toole	July 2	Very light	915	395	1310	484	37	1	Fairly good, and even	9¾	47.16	7.43	54.62	98	8
Truitt's Ninety-Day	Jun 29	Very light	1255	275	1530	489	32	½ to 5-8	Poor and uneven	8¼	40.34	9.37	49.71	98	14
Sproull	July 2	Very d'nse	580	330	910	282	31	1	Fairly good and even	9¾	27.50	5.65	33.15	80	23
Trice	Jun 26	Light	1390	225	1615	484	30	7-8	Fairly good and even	9½	45.98	11.08	57.06	97	5
Simpkins	Jun 29	Very light	1290	165	1455	480	33	½ to5-8	Poor in every respect	8¼	39.60	8.77	48.37	98	17
King	Jun 26	Very light	1285	200	1485	519	35	½ to 5-8	Poor in every respect	8¼	42.82	8.60	51.42	98	12
World's Wonder	Jun 28	Light	1080	380	1460	438	30	1 1-16	Good, strong, even	10¼	44.89	9.20	54.09	95	10
Dixie	July 1	Light	925	470	1395	446	32	½	Poor, undesirable	8¼	37.79	8.54	45.33	97	19
Rowden 116	Jun 28	Medium	1040	350	1390	463	33½	1 1-16	Very good	10 1-8	46.88	8.34	55.22	92	7
Money Maker	July 2	Light	860	345	1205	445	37	7-8	Poor and undesirable	8½	37.82	6.84	44.66	95	21
Cook, from Exp. Station*a*	July 1	Dense	1115	380	1495	538	36	½	Undesirable, any tr'd.	8¼	44.38	8.61	52.99	95	11
Cook, from Cook	July 1	Dense	985	315	1300	455	35	¾	Wasty	8¾	39.81	7.60	47.41	95	18
Cleveland, from Exp. Sta.*a*	July 1	Dense	965	330	1295	430	34	7-8	Very wasty and unev.	9½	40.85	7.78	48.63	92	16
Cleveland, from Cleveland	July 2	Dense	980	385	1365	455	33½	1 1-16	Fairly good and even	10 1-8	46.07	8.10	54.17	90	9
Triumph, from Wade	Jun 29	Dense	995	340	1335	480	36	1 1-16full	Good, strong body	10 1-8	48.60	7.70	56.30	95	6
Triumph, from Mebane	Jun 28	Dense	985	360	1345	510	38	1 1-8	Very good and even	10¾	54.82	7.51	62.33	93	2
Lone Star	Jul 2	Dense	830	375	1205	420	35	1 1-8 full	Good heavy body and staple	12	50.40	7.06	57.46	90	4
Express	Jun 28	Very light	1475	220	1695	474	28	1 1-8 full	Even, ex. heavy body	12	56.88	10.98	67.86	98	1
Sunflower	Jun 29	Light	755	270	1025	256	25	1 5-16	Good, silky and str'ng	17	43.52	6.92	50.44	95	13
Columbia	Jun 29	Dense	725	325	1050	315	30	1¼	Good body, strong and even	13½	42.52	6.61	49.13	92	15
Mississippi Silk	July 2	Light	540	250	790	189	24	1 7-16	Good body and staple	19½	36.85	5.41	42.26	95	22

a From Experiment Station, A. and M. College, Agricultural College, Miss.

Spacing.

We tested at the Delta Station in 1911 3-foot, 3 1-2 foot, 4-foot, 5 foot, and 6 foot rows. In all rows the stalks stood from 18 to 24 inches in the drill. The best yield was gotten from the 3 1-2 foot rows, with the second best from the 3 foot rows, third from the 4 foot rows, fourth from the 5 foot rows, and fifth from the 6 foot rows.

AVAILABLE BULLETINS AND CIRCULARS.

The following bulletins and circulars of the Station may be had on request:

No. **Bulletins.**

60—Value of Cotton Seed to the Farmer.
84—Report of Field Work at College Station for 1903.
90—San Jose Scale.
91—Inspection and Analyses of Commercial Fertilizers.
92—Beef Cattle.
93—Peach and Plum Culture.
94—Report of Work at McNeill Branch Station for 1905.
95—The Dairy Cow.
104—Inspection and Analyses of Cotton-Seed Meal.
107—Pork Production at the Delta Station.
114—Inspection and Analyses of Cotton-Seed Meal.
119—Report of Work at the Delta Branch Station for 1907 and 1908.
121—Experiments in Feeding Beef Steers.
122—Report of Work at the Holly Springs Branch Station for 1908.
125—Inspection and Analyses of Commercial Feeding Stuffs.
127—Inspection and Analyses of Cotton-Seed Meal.
128—Inspection and Analyses of Cotton-Seed Meal.
129—Sugar Cane for Syrup Making.
132—The Soils of Mississippi.
133—Inspection and Analyses of Commercial Feeding Stuffs.
135—Cotton 1909.
137—Inspection and Analyses of Commercial Feeding Stuffs.
138—Inspection and Analyses of Commercial Feeding Stuffs.
139—The Boll Weevil in Mississippi, 1909.
140—Cotton Diseases in Mississippi.
141—Control of Diseases of Fruits, Flowers and Vegetables.
142—Inspection and Analyses of Commercial Fertilizers.
143—Inspection and Analyses of Cotton-Seed Meal.
144—Inspection and Analyses of Commercial Feeding Stuffs.
145—Inspection and Analyses of Commercial Feeding Stuffs.
146—Suggestions for Growing Home Fruits.
147—Apple Growing in Mississippi.
148—Inspection and Analyses of Cotton-Seed Meal.
149—Inspection and Analyses of Commercial Feeding Stuffs.
150—Inspection and Analyses of Commercial Fertilizers.
151—Inspection and Analyses of Cotton-Seed Meal.
152—Inspection and Analyses of Commercial Feeding Stuffs.
153—Inspection and Analyses of Commercial Feeding Stuffs.
154—Inspection and Analyses of Commercial Feeding Stuffs.
155—Recent Cotton Experiments.

Circulars.

Asparagus.
Blackleg.
Boll Weevil.
Insect Pest Law.
Underground Waters of Mississippi.
Hairy Vetch.

Address, AGRICULTURAL EXPERIMENT STATION,
Agricultural College, Miss.