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—OF THE—


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CORN AND COTTON.

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VARIETIES OF CORN.

OBJECT OF EXPERIMENT.

- (a) To ascertain the best yielding variety.
- (b) To find a good early variety.

The corn was planted on plots 1-40 of an acre large, and in checks 3x5 feet. A fertilizer, composed of 200 lbs. acid phosphate, 66 lbs. muriate potash and 66 lbs. sulphate of ammonia, was applied in the drill before planting, at the rate of 300 lbs. per acre.

Four plots were planted in Experiment Station Yellow. Any difference in the fertility of the soil would be shown by the difference in the yield of those plots. A perfect stand was not secured and this with some inequality of the soil prevents drawing any reliable conclusions as to the best variety.

Cocke's Prolific, Blount's Prolific, Experiment Station Yellow and Pride of America gave best yields in the order named. Cocke's Prolific and Blount's Prolific bear from 2 to 3 small ears to the stalk. With the other varieties named the ears are larger, and two to the stalk an exception.

The best varieties of early corn were Clarke's Early Mastadon (yellow), Early Eclipse (yellow), Gentry's Early Market (white) and Improved Golden Dent.

All varieties were planted April 8th. The shuck on these four was dry August 7th. To the farmer whose corn crib is low in the Spring, it will be quite a saving to plant one of these early varieties.

By planting early, any one of these would be dry by the first of August.

Plot No.	Names of Varieties.	Weight of corn on ear.	Weight of corn shelled.	Per cent. of cob.	Yield in bus. per Acre.	Date of first tassel.
1	Experiment Station Yellow...	30.7	24.	218	17.1	June 24th
2	Blount's Prolific.....	30.9	24.3	213	17.3	" 18th
3	Clayton Bread Corn.....	28.3	20.5	31	14.1	" 24th
4	ocke's Prolific.....	41.6	32.	231	22.8	" 23rd
5	Clarke's Early Mastadon....	24.7	19.	23	13.5	" 14th
6	Experiment Station Yellow...	30	21.6	28	15.4	" "
7	Early Eclipse (Y).....	23.	18.6	191	13.2	June 9th
8	Gentry's Early Market.....	23.4	18.1	217	12.9	" 16th
9	Giant Broad Grain.....	26.6	20.1	206	14.3	" 20th
10	Hickory King.....	22.6	17.8	216	12.7	" "
11	Experiment Station Yellow...	22.6	17.7	216	12.6	" "
12	Improved Golden Dent.....	21.8	17.7	188	12.6	" 20th
13	Pride of America.....	24.1	19.9	174	14.2	" 26th
14	Piasa King.....	21.7	16.9	221	12.	" 23rd
15	Experiment Station Yellow...	22.6	17.	247	12.1	" "
16	Ross Improved.....	24.7	19.5	21	13.9	July 1st
17	Shoe Peg White.....	21.8	18.	174	12.8	June 24th
18	Virginia Gourd Seed.....	24.2	18.6	231	13.2	" "

INTERCULTURAL EXPERIMENTS WITH FERTILIZERS ON COTTON.

The object of this experiment was to ascertain whether it would pay to apply nitrogenous fertilizers interculturally.

Six rows 210 feet long by $3\frac{1}{2}$ feet wide, equal to 1-0 of an acre, were used. Just before planting, the following mixture of fertilizers was applied to each plot, at the rate of 200 pounds per acre: 200 pounds Acid Phosphate; 66 pounds Muriate Potash; 66 pounds Sulphate Ammonia.

As soon as the cotton was up, it was chopped and sided with a heel scrape. About June 1st the stalks of cotton in each row were counted, and then all rows but one thinned to 90 stalks. The 5th row of plot 6 had only 76 stalks. The several numbers of stalks in this row probably accounts for the small yield of that plot.

On June 22nd and July 7th the cotton seed meal and nitrate soda were scattered broadcast and the cotton plowed with a large heel scrape. All the plots were the same size and color up to July 7th and after that date the plots fertilized interculturally became much larger and had better color than the plots which were not fertilized after planting.

CONCLUSIONS.

1st. It pays to apply nitrogenous fertilizers to cotton on sandy land, provided there are good rains following their applications.

2nd. 200 pounds applied in June will be as profitable as 100 pounds in June and 100 pounds in July.

The following table shows the yield per plot and the profit from each plot fertilized after planting.

In calculating profit, the cost of nitrate of soda laid down in Auburn is used, and cotton seed meal is valued at \$22 per ton. The seed cotton is valued at .02½ cents per pound.

The following table shows the results of this experiment :

Plot No.	June 22nd Name and quantity of fertilizers applied interculturally.	July 7th Name and quantity of fertilizers applied interculturally.	Pounds yield seed cotton per plot.	Pounds yield seed cotton per Acre.	Value of fertilizers per Acre.	Profit per Acre.
1	100 lbs cotton seed meal	100 lbs cotton seed meal	59.9	898.5	2.20	2.33
2	200 " " "	200 " " "	70.1	1051.5	4.40	3.95
3	Check		50.1	751.5		
4	50 lbs nitrate soda	50 lbs nitrate soda	67.6	1014.	2.82	4.60
5	100 " " "	100 " " "	63.6	954.	5.64	.28
6	Check		45.5	682.5		
7	300 lbs cotton seed meal		60.9	913.5	2.20	2.71

EXPERIMENTS WITH COTTON, 1893.

A COMPARISON OF VARIETIES.

This experiment consists of a comparison of twenty varieties of cotton. In preparing the land for planting, all the plots were fertilized alike. The rows were laid-off 3½ feet wide, and the cotton planted in checks 3½ feet apart. The culture of every plot, 1-20 of an acre, was the same. The cotton was carefully picked and weighed, and the following tabulated statement shows not only the total yield per acre, but the yield per acre of each variety at every picking, and the date of same. Each variety was kept to itself until the time of ginning, when it was re-weighed and ginned separately.

The following is the table, showing list of varieties :

Plot No.	Names of Varieties.	Yield per acre at different pickings.				Yield of seed cotton per acre when pick'd.	Yield of seed cotton per acre when ginn'd Dec. 8th.	Yield of lint cotton per acre.	Per cent. of lint.	No. of stalks per acre.	No. of stalks per plot.
		1st Picking.	2nd Picking.	3rd Picking.	4th Picking.						
1	Peerless (seed from C. M. Cory) . . .	140	650	340	90	1220	1194	388	32.5	2600	130
2	Coltharps Eureka	135	600	390	190	1375	1346	416	30.9	2600	130
3	Coltharps Pride	140	610	340	210	1300	1264	402	31.8	2600	130
4	Dalkeiths Eureka	85	535	410	230	1260	1236	386	31.2	2600	130
5	Herlong	75	600	535	100	1305	1278	404	31.6	2600	130
6	Hawkins	90	580	480	80	1230	1224	424	34.6	2120	106
7	Jones' Long Staple	140	615	410	170	1335	1338	414	30.9	2600	130
8	Mathews Long Staple	110	590	400	220	1320	1256	384	30.5	2600	130
9	Okra	275	620	290	50	1235	1196	392	32.8	2600	130
10	Peerless (seed from C. M. Cory) . . .	130	700	345	70	1245	1172	378	32.2	2480	124
11	Peterkin (M. W. Johnson Seed Co . .	60	420	400	1E0	1000	968	338	34.8	1160	58
12	Peerless (old seed)	190	860	415	90	1455	1492	474	31.7	2600	130
13	Peeler	90	450	390	260	1190	1140	340	29.8	1840	92
14	Petit Gulf	160	710	430	130	1430	1440	456	31.6	2460	123
15	Truitt	100	620	410	110	1240	1176	380	32.04	1600	80
16	Wonderful	200	840	390	190	1620	1554	460	29.6	2600	130
17	W. A. Cook	205	830	370	190	1615	1554	460	29.6	2600	130
18	Welborn's Pet.	340	730	270	50	1390	1388	446	32.1	2600	130
19	Whatley's Improved	230	520	350	130	1230	1208	388	32.1	2600	130
20	Peerless (seed from C. M. Cory) . . .	205	810	350	70	1435	1410	456	32.3	2600	130

The following table shows the classification and grade of each kind of the twenty varieties of cotton as furnished by Mr. C. E. Porter, cotton broker of Opelika, Ala., whose long experience and good judgment guaranteed a correct report. A sample of the lint of each variety was taken and numbered so as to compare with the numbers on our record, sent to Mr. Porter and his report which follows, it is hoped will prove of interest to cotton producers :

Plot No.	CLASSIFICATION.	Length of staple.	GRADE.
1	Strict Low Middling...	$\frac{3}{4}$ inch	Very weak.....
2	“ “ “	1 5-16 to $1\frac{3}{8}$	Irregular, but strong.....
3	“ “ “	1 inch	Regular and fine lint.....
4	Good Middling.....	1 3-16 to $\frac{1}{4}$	Irregular, moderate strength..
5	Strict Middling.....	$\frac{3}{4}$ to $\frac{7}{8}$	Very irregular.....
6	“ Low “	$\frac{5}{8}$ inch	Very weak, poor staple.....
7	Strict Middling.....	1 inch.....	Moderate strength.....
8	“ “	1 1-16 inch..	Strong and regular.....
9	Middling	1 inch.....	Regular and fine lint.....
10	Strict Middling.....	$1\frac{3}{4}$ to $1\frac{7}{8}$...	Weak lint.....
11	“ “	$\frac{3}{4}$ to $\frac{7}{8}$	Irregular and fine lint.....
12	Good Middling.....	$1\frac{1}{4}$ inch....	Regular and strong.....
13	Middling	15-16 to 1 in	Fine lint and irregular.....
14	Strict Middling.....	$\frac{7}{8}$ to 1 inch.	Irregular, very fine lint.....
15	“ “	$\frac{7}{8}$ to 1 inch.	Irregular, fair strength.....
16	Middling.....	$1\frac{1}{4}$ inch....	Regular and strong.....
17	Good Middling.....	1 1-16 to $1\frac{1}{8}$	Very irregular, but strong....
18	Middling.....	$\frac{3}{4}$ inch....	Very weak staple.....
19	Strict Low Middling....	1 3-16 inch..	Very weak staple.....
20	Strict Middling.....	$\frac{7}{8}$ inch....	Very fine and regular staple..

