

**1948 Cotton Variety
Tests
In Hill Sections of
Mississippi**

MISSISSIPPI STATE COLLEGE
AGRICULTURAL EXPERIMENT STATION

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The field data from these tests were collected by Russell Landrum, Louie Walton, B. C. Hurt, Jr., and S. L. Wedgworth at the Holly Springs, Brooksville, Newton and Oakley Stations, respectively. The remainder of the work was handled by J. F. O'Kelly.

1948 Cotton Variety Tests

HILL SECTIONS

The 1948 season was especially favorable for cotton production where planting could be done early enough for prompt germination. After the middle of April showers were moderate to very light and some late plantings fared badly.

Seed for planting the tests here reported were assembled at State College and distributed to the Branch Stations. In nearly all cases, seed was obtained from the originator of the variety. Where this could not be done, first year certified seed were used.

At harvest, the branch station workers sent to State College triplicate seed cotton samples for the determination of lint percentages and to provide lint samples for stapling. The staple lengths used for the current year are averages of lengths provided by three cotton classers in Memphis, Tennessee.

Prices used in computing lint values cover ten weeks' of the Memphis market, beginning the last of August. In calculating total acre values, seed was valued at \$70.00 per ton for the three grades of lint.

The test at the Black Belt Station, Brooksville, was fertilized before planting with 600 pounds of 6-8-8 fertilizer to the acre. Because of weather and other limitations, planting had to be done late and, due to the ensuing drouth, germination was irregular. Some treatment for insect control was given but under such handicaps high yields cannot be expected. Due to these irregularities the yields are not as dependable as one might desire, but a variety should not be selected on yield alone and the data on staple length, lint percentage, and bolls per pound should be quite useful.

At the Coastal Plains Station, Newton, it was possible to handle the test in such way that good to excellent stands were obtained. It was fertilized with 600 pounds of 6-8-4 to the acre before planting. Extremely dry weather in July and August slowed plant growth but the plants were well fruited. A variety test cannot be accurate enough that varieties which lead in any one season will lead in all seasons, but for the one season this test appears to be quite dependable.

Delays due to weather and other unavoidable circumstances caused late planting with late and irregular germination at the Brown Loam Station, Oakley. The test was fertilized prior to planting with 500 pounds 5-10-5 to the acre. The potential yield was considerably greater than was obtained. With yields this low, it is unsafe to assume the order of production will not be changed in other seasons. Differences in staple length, lint percentage, and bolls per pound should not vary a great deal.

Production obstacles at the North Mississippi Station, Holly Springs, were not great enough to prevent excellent yields. The test was fertilized prior to planting with 600 pounds 6-8-4 to the acre. Production like this is characteristic of the soils in that area in all but the very unfavorable seasons.

At State College the 1948 tests were planted April 26, which was early enough for prompt and regular germination. The tests were fertilized prior to planting with 500 pounds 6-8-4 fertilizer to the acre. No insect control measures were used.

The varieties included in these tests are, with few exceptions, the best available. The five-year averages from State College and Holly Springs show that at

either place there are several varieties which are usually near the top in yield and, over a period of years, average out nearly the same. This means that a farmer need not select a variety on yield performance alone. He can also usually sat-

isfy his desire for an easy-picking cotton, one with extra staple length or, one with a lint percentage more to his liking.

Since variety tests were not started at Brooksville, Newton, and Oakley until 1948, there are no five-year averages for those locations.

Table 1. Cotton Varieties, Brooksville, 1948

	Pounds lint per acre	Acre value seed and lint			Staple inches	Lint per- centage	Bolls per lb. lint
		Middling	Strict low middling	Low middling			
Deltapine 15	229.9	87.01	84.25	72.41	1 1/16	38.9	198
Hi-Bred	221.7	75.47	74.58	66.82	29/32	40.5	169
Coker, Staple	212.1	87.38	83.77	69.46	1 1/8	35.0	204
Deltapine 14	210.7	80.51	77.98	67.13	1	35.3	215
Cleveland 54	198.9	75.61	73.23	64.47	1	35.3	209
Empire	196.8	77.36	74.80	63.97	1 3/32	35.5	178
Miller	195.1	74.36	72.02	62.66	1 1/32	36.4	193
Stoneville 5A	191.0	75.40	72.92	62.42	1 3/32	34.9	214
Delfos 9169	181.7	71.94	69.58	59.58	1 3/32	34.5	210
Delfos 651	179.8	71.62	69.29	59.40	1 3/32	33.7	238
Stoneville 2B	178.0	70.37	68.06	58.27	1 3/32	34.7	189
Delfos 4313	176.4	70.38	68.09	58.39	1 3/32	33.5	222
Bobshaw 1	176.2	69.76	67.47	57.78	1 3/32	34.5	205
Coker, Wilt	173.1	68.29	66.04	56.52	1 3/32	35.0	201

Table 2. Cotton Varieties, Newton, 1948

	Pounds lint per acre	Acre value seed and lint			Staple inches	Lint per- centage	Bolls per lb. lint
		Middling	Strict low middling	Low middling			
Hi-Bred	515.4	160.34	157.76	147.45	27/32	46.0	154
Miller	501.6	184.41	178.39	156.32	1	40.0	176
Cleveland 54	499.6	164.76	162.76	150.27	7/8	40.8	199
Stoneville 2B	498.8	185.70	179.71	155.75	1 1/32	40.1	178
Coker, Wilt	489.8	180.07	174.19	152.64	1	40.4	188
Deltapine 14	474.7	171.77	166.07	145.18	1	43.3	204
Bobshaw 1	471.9	176.63	170.97	148.31	1 1/32	39.2	194
Stoneville 5A	464.6	173.06	167.49	145.19	1 1/32	40.0	203
Deltapine 15	459.7	165.18	159.66	139.43	1	44.7	195
Empire	459.4	167.84	162.33	142.11	1	41.5	176
Delfos 9169	450.8	169.69	164.28	141.07	1 1/16	39.8	189
Coker, Staple	450.4	169.15	163.75	140.55	1 1/16	40.2	197
Delfos 4313	434.0	163.67	158.46	137.63	1 1/32	38.0	218
Delfos 651	432.8	162.49	157.29	136.52	1 1/32	38.7	219

Table 3. Cotton Varieties, Oakley, 1948

	Pounds lint per acre	Acre value seed and lint			Staple inches	Lint per- centage	Bolls per lb. lint
		Middling	Strict low middling	Low middling			
Deltapine 15	271.3	98.89	95.64	83.70	1	41.9	175
Hi-Bred	262.7	80.99	79.67	74.42	13/16	44.7	162
Miller	249.6	91.38	88.38	77.65	31/32	39.5	186
Deltapine 14	247.5	92.20	89.23	77.35	1 1/32	40.0	181
Delfos 4313	243.5	92.88	89.96	78.27	1 1/32	36.3	184
Stoneville 2B	240.5	90.93	88.04	76.50	1 1/32	37.6	198
Stoneville 5A	231.9	86.64	83.86	73.65	1	37.8	197
Delfos 9169	230.8	88.24	85.47	73.59	1 1/16	37.3	174
Delfos 651	229.7	87.66	84.91	73.88	1 1/32	36.2	210
Coker, Wilt	227.2	85.68	82.96	72.05	1 1/32	38.0	208
Empire	225.4	83.36	80.65	70.73	1	39.4	168
Coker, Staple	222.3	84.11	81.44	70.77	1 1/32	37.5	186
Cleveland 54	218.0	79.51	76.89	68.06	15/16	39.0	228
Bobshaw 1	217.2	82.28	79.68	69.25	1 1/32	37.3	183

Table 4. Cotton Varieties, Holly Springs, 1948

	Pounds lint per acre	Acre value seed and lint			Staple inches	Lint per- centage	Bolls per lb. lint
		Middling	Strict low middling	Low middling			
Stoneville 2B	755.6	294.78	284.96	243.40	1 3/32	36.6	174
Hi-Bred	745.9	274.37	265.42	232.60	1	40.3	163
Miller	741.7	279.51	270.61	235.01	1 1/32	38.1	188
Delfos 9169	731.9	286.50	276.99	236.73	1 3/32	36.1	178
Coker, Staple	730.8	284.73	275.23	235.03	1 3/32	36.8	197
Stoneville 5A	720.4	280.67	271.31	231.68	1 3/32	36.8	199
Empire	707.9	275.62	266.42	227.49	1 3/32	36.9	189
Coker, Wilt	703.1	273.21	264.07	225.40	1 3/32	37.2	194
Deltapine 15	689.7	264.54	255.57	217.64	1 3/32	39.3	211
Delfos 4313	688.3	271.14	262.20	224.31	1 3/32	35.2	204
Deltapine 14	682.7	262.48	253.60	216.06	1 3/32	38.9	193
Delfos 651	675.1	264.82	256.04	218.91	1 3/32	35.8	191
Bobshaw 1	657.3	252.66	244.77	210.92	1 1/16	36.5	189
Cleveland 54	636.9	242.25	234.61	204.03	1 1/32	26.7	201
Super Sam	499.9	205.26	196.76	163.01	1 1/8	35.5	198

Table 5. Miscellaneous Varieties and Strains, State College, 1948*

	Pounds lint per acre	Acre value seed and lint			Staple inches	Lint per- centage	Bolls per lb. lint
		Middling	Strict low middling	Low middling			
CSS 9	720.8	274.69	266.04	228.92	1 1/16	37.8	161
Coker, Wilt	713.7	290.73	278.60	230.43	1 1/8	36.7	171
Deltapine 15	709.6	284.75	272.69	224.79	1 1/8	39.2	176
Hybrid 1282	690.2	270.37	261.40	223.44	1 3/32	36.0	175
Empire	683.6	265.64	256.75	219.15	1 3/32	37.2	157
Delfos 9169	669.8	274.83	263.44	218.23	1 1/8	35.6	175
Miller	664.6	247.12	239.14	210.56	31/32	37.1	160
Bobshaw 31	652.2	252.11	244.28	210.69	1 1/16	35.7	191
Stoneville 2B	639.6	261.73	250.86	207.69	1 1/8	36.0	166
Bobshaw 1	632.5	248.45	240.23	205.44	1 3/32	35.6	193
Cleveland 54	629.7	237.00	229.44	201.73	1	36.7	179
Bobshaw 0339A	588.2	225.33	218.27	187.98	1 1/16	37.0	191

*The above test was on soil lightly infested with fusarium wilt, but there was only slight damage to the most susceptible varieties.

Table 6. Cotton Varieties, State College, 1948

	Pounds lint per acre	Acre value seed and lint			Staple inches	Lint per- centage	Bolls per lb. lint
		Middling	Strict low middling	Low middling			
Deltapine 14	750.0	289.05	279.30	238.05	1 3/32	38.5	185
Deltapine 15	734.4	284.80	275.14	234.25	1 3/32	39.5	185
Miller	729.6	272.21	263.46	231.36	1	38.0	164
Stoneville 2B	726.7	283.32	273.87	233.90	1 3/32	36.7	173
Cleveland 54	726.6	268.55	259.83	228.59	31/32	38.0	173
Bobshaw 1	722.6	278.33	269.66	232.45	1 1/16	36.2	187
Delfos 4313	710.3	291.05	278.98	231.03	1 1/8	35.8	191
Coker, Staple	708.7	287.62	275.57	227.73	1 1/8	37.3	183
Coker, Wilt	707.2	274.63	265.44	226.54	1 3/32	37.3	175
Delfos 651	699.8	275.67	266.58	228.09	1 3/32	35.2	203
Stoneville 5A	696.7	272.73	263.68	225.36	1 3/32	36.1	195
Delfos 9169	693.9	270.71	261.69	223.52	1 3/32	36.6	176
Hi-Bred	685.3	245.29	237.07	209.31	15/16	42.2	144
Empire	677.9	262.08	253.27	215.98	1 3/32	38.0	153

Table 7. Average Results with Cotton Varieties at Holly Springs, 1944-1948

	Pounds lint per acre						Average value (2)	Staple inches	Lint percentage	Bolls per lb. lint
	1944	1945	1946	1947	1948	Average (1)				
Hi-Bred	489.4	728.7	409.8	667.5	745.9	608.3	193.19	7/8	41.7	157
Miller	493.2	704.7	384.2	672.8	741.7	599.3	204.04	31/32	37.6	178
Deltapine 15(3)	498.4	715.7	421.4	607.7	689.7	590.6	200.71	1 1/16	39.6	196
Stoneville 2B....	487.3	617.3	414.6	664.9	755.6	587.9	208.79	1 1/16	36.2	181
Coker, Wilt....	502.2	679.2	432.2	622.8	703.1	587.9	206.10	1 1/32	36.6	194
Empire	471.4	688.9	444.8	620.0	707.9	586.6	203.59	1 1/32	37.4	170
Stoneville 5A....	494.0	645.0	410.3	656.8	720.4	585.3	205.85	1 1/32	36.3	209
Delfos 9169.....	519.5	628.6	395.5	639.2	731.9	582.9	208.00	1 1/16	36.2	187
Delfos 651.....	441.7	648.7	353.0	639.8	675.1	551.7	198.02	1 1/16	35.1	214
Bobshaw 1	436.6	606.6	375.4	624.2	657.3	540.0	189.97	1 1/32	35.9	203

Notes: (1) In all cases the annual data used for the years 1944 to 1947 were averages of data obtained from the valley and hill tests for the respective years.

(2) Based on middling grade lint.

(3) Deltapine 14 data used for 1944-46.

Table 8. Average Results with Cotton Varieties at State College, 1944-1948

	Pounds lint per acre						Average value	Staple inches	Lint percentage	Bolls per lb. lint
	1944	1945	1946	1947	1948	Average				
Miller	548.2	484.8	418.4	480.1	729.6	532.2	180.40	31/32	37.5	172
Deltapine 15(1)	607.4	429.3	433.9	398.2	743.4	522.4	178.65	1 1/16	39.6	190
Delfos 9169....	588.1	469.2	453.4	370.4	693.9	515.0	181.52	1 1/16	36.0	186
Stoneville 5A....	525.5	465.6	414.0	431.5	696.7	506.7	176.65	1 1/32	36.1	203
Bobshaw 1.....	488.7	453.1	435.4	422.7	722.6	504.5	177.33	1 1/32	35.9	197
Stoneville 2B....	509.6	473.8	411.6	390.0	726.7	502.3	176.22	1 1/16	36.1	182
Empire	539.0	512.6	411.6	364.0	677.9	501.0	172.39	1 1/32	37.1	162
Coker, Wilt....	537.0	410.0	423.0	357.1	707.2	484.9	170.18	1 1/16	36.5	186
Hi-Bred	436.3	482.7	379.3	438.8	685.3	484.5	153.27	7/8	42.6	148
Delfos 651.....	480.2	353.7	411.9	385.5	699.8	466.2	168.01	1 1/16	34.4	213

Note: (1) Deltapine 14 data used for 1944-1946.