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1949 Cotton Variety Tests

In Hill Sections of Mississippi

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HILL SECTIONS

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Results of the 1949 cotton variety trials conducted by the Mississippi Experiment Station in the hill areas of the state are reported here along with average yields for longer periods.

Wide contrasts in seasonal rainfall cause cotton yields to vary widely from year to year. Rainfall in the 1949 season was so abnormally high at the hill stations that the plants did not thrive well and insect control measures were not satisfactorily effective. Under such conditions tests fail to show the potential yielding ability of varieties. Even where the differences obtained appear to have meaning, it may be due to a differential in tolerance to excessive soil moisture and they might be reversed in a widely different season. This makes it urgent that attention be centered mainly on **average** results where such are available.

The averages at State College and Holly Springs show that there are three or more varieties which do not differ greatly in yield or value. This means that, over a period of years, a farmer could grow any one of these with assurance of satisfactory performance.

The averages at the other locations are more variable. However, they cover only two years. Four or five years are usually required to reduce the weather and other variables enough for results to be dependable.

The test at Holly Springs was planted May 11. Five hundred pounds 6-8-4 fertilizer were applied before planting. Weevil infestation at that station was the most severe in several years. Dusting for insect control was only partially successful. Very little cotton was produced after the early part of August.

At State College the test was fertilized with 500 pounds 5-10-5 before planting. The test was planted in late April but excessive rains made planting necessary again on May 10. Dusting for insect control was started a little too late and frequent rains reduced the efficiency of the treatments which were given. This test is a good example of the need for starting control measures early.

The highest yields of any test were obtained at Brooksville. The test was fertilized with 300 pounds 5-10-5 before planting. It was planted during the latter half of April and survived the heavy rains of early May. Insect control was started in the first half of July and discontinued August 3. Five dustings stayed on long enough to be effective. This test is a good example of what can be done by starting insect control early especially if there is a period sufficiently dry that it may be effective.

At the Coastal Plain Station, Newton, the variety test was planted April 21 with 600 pounds of 6-8-8 per acre applied in the buster furrow and 32 pounds of nitrogen per acre from ammonium nitrate applied as a side dressing just after cotton was chopped.

Good stands were obtained from all varieties. The stalk growth and fruiting were excellent during the season, yet boll weevil infestation affected the yields bad-

ly even though six applications of poison were applied after infestation reached 25 percent or more. The first three applications of poison reduced infestation to ten percent and this was maintained until migration. After migration three applications were applied but since a shortage of poison existed, poisoning had to be discontinued. The greatest damage was then done to bolls which were near maturity after last poisoning.

Stoneville 2B, Deltapine 15, Empire, Coker Wilt, and Bobshaw were the leading varieties and should be planted in this area. Where wilt is a problem, such varieties as Coker Wilt and Empire should be selected, since they have a high degree of resistance.

At the Brown Loam Station at Oakley conditions were slightly more favorable for cotton production in 1949 than in 1948. The test received 500 pounds 5-10-

STATE COLLEGE

Average results from cotton varieties, State College, 1945-'49

	Pounds lint per acre						Averages			
	1945	1946	1947	1948	1949	Average	Acre value	Staple inches	Lint percentage	Bolls per lb. lint
Bobshaw 1	453.1	435.4	422.7	722.6	380.9	482.9	178.13	1 1/16	35.9	196
Miller	484.8	418.4	480.1	729.6	308.1	480.2	172.87	31/32	37.7	170
Empire	512.6	411.6	364.0	677.9	386.9	470.6	170.82	1 1/16	37.2	160
Deltapine 15	429.3	433.9	398.2	743.4	345.0	470.0	170.88	1 1/16	39.5	187
Delfos 9169	469.2	453.4	370.4	693.9	361.3	469.6	173.54	1 1/16	36.1	187
Hi-Bred	482.7	379.3	438.8	685.3	340.5	465.3	155.02	29/32	42.8	147
Stoneville 2B	473.8	411.6	390.0	726.7	299.7	460.4	169.92	1 1/16	36.3	183
Coker, Wilt	410.0	423.0	357.1	707.2	343.0	448.1	165.79	1 1/16	36.6	188
Delfos 651	353.7	411.9	385.5	699.8	338.9	438.0	166.21	1 3/32	34.7	209

Cotton varieties, State College, 1949

	Pounds lint per acre	Acre values seed and lint			Staple inches	Lint percentage	Bolls per lb. lint
		Middling	Strict low middling	Low middling			
CSS9	402.9	138.69	131.00	115.89	1 1/32	38.9	182
Empire	386.9	133.15	125.79	111.29	1 1/32	38.9	168
Bobshaw 1	380.9	133.44	125.82	110.97	1 1/16	36.6	205
Delfos 9169	361.3	127.00	119.77	105.14	1 3/32	37.7	198
Stoneville 2492	357.7	123.48	116.69	103.27	1 1/32	38.2	183
Coker, Staple	346.7	121.70	114.77	100.73	1 3/32	38.0	206
Deltapine 15	345.0	118.78	111.88	98.43	1 1/16	40.5	187
Coker, Wilt	343.0	119.54	112.68	99.30	1 1/16	37.7	202
Hi-Bred	340.5	107.13	102.88	93.17	7/8	42.9	148
Delfos 651	338.9	124.17	115.36	99.94	1 1/8	36.0	211
Miller	308.1	104.12	98.42	87.95	31/32	38.7	181
Stoneville 2B	299.7	104.65	98.65	86.96	1 1/16	37.3	199

5 fertilizer before planting. Planting was done in the latter half of April. Dusting for insect control consisted of five treatments which were only partially effective.

The prices used in computing lint values were averages of ten weeks of the Memphis marketing season beginning with the last week of August. Seed was valued at $46.00 a ton. The staple lengths used were averages of lengths supplied by three commercial classers.

Producing cotton on soils so sloping that runoff water cannot be controlled will result in the loss of so much surface soil that the land will ultimately be unfit for profitable crop production. This practice is probably a greater menace to continued profitable cotton production than any competition yet offered by synthetics. Enforced or other cotton acreage reductions should, therefore, be made, where possible, on the more erosive soils.

HOLLY SPRINGS

Average results, cotton varieties, Holly Springs, 1945-'49

	Pounds lint per acre						Averages			
	1945	1946	1947	1948	1949	Average	Acre value	Staple inches	Lint percentage	Bolls per lb. lint
Hi-Bred	728.7	409.8	667.5	745.9	528.2	616.0	204.37	29/32	41.8	154
Empire	688.9	444.8	620.0	707.9	564.6	605.2	218.23	1 1/16	37.4	167
Miller	704.7	384.2	672.8	741.7	497.8	600.2	212.01	31/32	37.7	178
Deltapine 15	715.7	421.4	607.7	689.7	551.1	597.1	212.24	1 1/16	39.9	194
Delfos 9169	628.6	395.5	639.2	731.9	562.8	591.6	218.83	1 3/32	36.4	185
Coker, Wilt	679.2	432.2	622.8	703.1	513.8	590.2	215.42	1 1/16	36.7	194
Stoneville 2B	617.3	414.6	664.9	755.6	456.7	581.8	214.40	1 1/16	36.3	178
Delfos 651	648.7	353.0	639.8	675.1	496.3	562.7	208.18	1 3/32	35.3	208
Bobshaw 1	606.6	375.4	624.2	657.3	447.4	542.2	197.94	1 1/16	36.0	203

Cotton varieties, Holly Springs, 1949

	Pounds lint per acre	Acre value seed and lint			Staple inches	Lint percentage	Bolls per lb. lint
		Middling	Strict low middling	Low middling			
Empire	564.6	195.37	184.08	162.06	1 1/16	39.3	158
Delfos 9169	562.8	195.96	184.70	162.75	1 1/16	37.9	184
Deltapine 15	551.1	187.17	176.70	156.04	1 1/32	42.1	182
Coker, Staple	546.7	191.91	180.98	158.84	1 3/32	38.0	203
Hi-Bred	528.2	169.25	161.86	145.22	29/32	44.3	144
Coker, Wilt	513.8	178.73	168.46	148.42	1 1/16	38.1	191
Miller	497.8	167.48	158.27	141.35	31/32	39.7	172
Delfos 651	496.3	175.45	165.52	145.42	1 3/32	36.5	202
CSS9	470.4	161.38	152.45	134.81	1 1/32	39.6	181
Super Sam	463.9	169.32	157.26	136.15	1 1/8	36.8	196
Stoneville 2492	459.2	159.60	150.42	132.51	1 1/16	38.3	172
Stoneville 2B	456.7	159.39	150.25	132.44	1 1/16	37.4	176
Bobshaw 1	447.4	155.85	146.90	129.45	1 1/16	37.8	199

BROOKSVILLE

Average results from cotton varieties, Brooksville, 1948-'49

	Pounds lint per acre			Averages			
	1948	1949	Average	Acre value	Staple inches	Lint percentage	Bolls per lb. lint
Deltapine 15	229.9	669.9	449.9	157.39	1 1/16	40.3	200
Deltapine 14	210.7	655.2	432.9	153.09	1 1/16	38.9	218
Empire	196.8	654.7	425.7	151.99	1 1/16	37.3	175
Hi-Bred	221.7	620.3	421.0	139.96	29/32	41.7	166
Stoneville 2B	178.0	653.9	415.9	148.97	1 1/16	36.3	193
Delfos 9169	181.7	640.8	411.2	147.73	1 3/32	36.0	211
Coker, Wilt	173.1	614.1	393.6	140.14	1 1/16	36.6	214
Delfos 651	179.8	592.8	386.3	139.39	1 3/32	35.4	225
Coker, Staple	212.1	548.2	380.1	139.86	1 3/32	36.5	214
Miller	195.1	549.1	372.1	130.15	1	38.1	187
Bobshaw 1	176.2	529.7	352.9	126.52	1 1/16	36.1	211

Cotton varieties, Brooksville, 1949

	Pounds lint per acre	Acre values seed and lint			Staple inches	Lint percentage	Bolls per lb. lint
		Middling	Strict low middling	Low middling			
Deltapine 15	669.9	227.78	215.05	189.93	1 1/32	41.8	202
Deltapine 14	655.2	225.67	212.57	187.01	1 1/16	40.4	222
Empire	654.7	226.63	213.54	188.01	1 1/16	39.2	172
Stoneville 2B	653.9	227.58	214.50	189.00	1 1/16	38.0	198
Delfos 9169	640.8	223.53	210.71	185.72	1 1/16	37.5	212
Stoneville 2492	630.4	217.52	205.55	181.91	1 1/32	38.3	196
Hi-Bred	620.3	204.46	193.60	172.82	15/16	42.9	164
Coker, Wilt	614.1	211.99	200.32	177.31	1 1/32	38.2	227
Delfos 651	592.8	207.17	195.32	172.20	1 1/16	37.1	213
CSS9	580.1	199.80	188.78	167.03	1 1/32	38.7	196
Miller	549.1	185.95	175.79	156.57	1	39.9	181
Coker, Staple	548.2	192.34	181.38	159.17	1 3/32	38.1	225
Bobshaw 1	529.7	183.28	173.21	153.35	1 1/32	37.7	217

NEWTON

Average results from cotton varieties, Newton, 1948-1949

	Pounds lint per acre			Averages 1948-'49			
	1948	1949	Average	Acre value	Staple inches	Lint percentage	Bolls per lb. lint
Hi-Bred	515.4	273.6	394.5	125.54	7/8	43.6	165
Deltapine 15	459.7	308.2	383.9	135.84	1 1/32	42.1	204
Stoneville 2B	498.8	267.3	383.0	139.68	1 1/32	38.3	192
Coker Wilt	489.8	258.0	373.9	135.53	1 1/32	37.8	218
Empire	459.4	283.2	371.3	133.40	1 1/32	39.3	180
Bobshaw 1	471.9	245.1	358.5	131.62	1 1/32	37.0	212
Deltapine 14	474.7	241.0	357.8	127.60	1 1/32	41.2	217
Miller	501.6	191.4	346.5	124.63	31/32	39.2	190
Delfos 9169	450.8	232.7	341.7	125.99	1 1/16	38.1	204
Delfos 651	432.8	223.1	327.9	120.94	1 1/16	36.9	227
Coker Staple	450.4	180.6	315.5	116.27	1 1/16	38.2	215

NEWTON

Cotton varieties, Newton, 1949

	Pounds lint per acre	Acre value, seed and lint			Staple inches	Lint percentage	Bolls per lb. lint
		Middling	Strict low middling	Low middling			
Deltapine 15	308.2	106.51	100.34	88.32	1 1/16	39.6	214
Empire	283.2	98.97	93.31	82.26	1 1/16	37.1	185
Hi-Bred	273.6	90.75	85.96	76.79	15/16	41.3	176
Stoneville 2B	267.3	93.65	88.30	77.88	1 1/16	36.6	207
Coker, Wilt	258.0	90.99	85.83	75.77	1 1/16	35.3	248
CSS9	245.2	85.33	80.43	70.87	1 1/16	38.0	207
Bobshaw 1	245.1	86.62	81.72	72.16	1 1/16	34.9	230
Deltapine 14	241.0	83.43	78.61	69.21	1 1/16	39.2	231
Stoneville 2492	235.7	82.49	77.78	68.59	1 1/16	36.8	208
Delfos 9169	232.7	82.30	77.65	68.22	1 3/32	36.4	219
Delfos 651	223.1	79.39	74.93	65.89	1 3/32	35.2	236
Miller	191.4	64.86	61.32	54.81	31/32	38.1	205
Coker, Staple	180.6	63.40	59.78	52.74	1 1/16	36.2	233

OAKLEY

Average results from cotton varieties, Oakley, 1948-'49

	Pounds lint per acre			Averages			
	1948	1949	Average	Acre value	Staple inches	Lint percentage	Bolls per lb. lint
Deltapine 15	271.3	358.8	315.0	110.78	1 1/32	41.1	180
Empire	225.4	380.4	302.9	107.49	1 1/32	39.3	174
Miller	249.6	344.2	296.9	103.67	31/32	39.4	187
Hi-Bred	262.7	301.7	282.2	87.99	27/32	43.7	168
Coker, Staple	222.3	338.5	280.4	101.68	1 1/16	37.3	200
Deltapine 14	247.5	308.8	278.2	99.48	1 1/32	39.7	186
Delfos 651	229.7	322.4	276.0	100.39	1 1/16	36.2	208
Coker, Wilt	227.2	300.1	263.6	94.73	1 1/32	37.9	203
Stoneville 2B	240.5	286.8	263.6	95.48	1 1/32	37.5	195
Delfos 9169	230.8	257.2	244.0	89.11	1 1/16	37.1	190
Bobshaw 1	217.2	265.0	241.1	87.25	1 1/32	36.9	194

Cotton varieties, Oakley, 1949

	Pounds lint per acre	Acre value seed and lint			Staple inches	Lint percentage	Bolls per lb. lint
		Middling	Strict low middling	Low middling			
Empire	380.4	131.62	124.02	109.18	1 1/16	39.3	181
Deltapine 15	358.8	122.68	115.90	102.41	1 1/32	40.4	186
Miller	344.2	115.96	109.59	97.89	31/32	39.4	188
Coker, Staple	338.5	119.26	112.49	98.78	1 3/32	37.2	214
Delfos 651	322.4	113.12	106.67	94.09	1 1/16	36.3	207
Stoneville 2492	314.6	108.09	101.80	89.53	1 1/16	38.8	186
Deltapine 14	308.8	106.76	100.59	88.54	1 1/16	39.5	191
Hi-Bred	301.7	94.99	91.22	82.62	7/8	42.7	175
Coker, Wilt	300.1	103.79	98.12	86.84	1 1/32	37.8	199
Stoneville 2B	286.8	100.04	94.31	83.12	1 1/16	37.5	193
CSS9	274.1	94.03	88.85	78.55	1 1/32	39.6	187
Bobshaw 1	265.0	92.22	87.21	77.25	1 1/32	36.5	205
Delfos 9169	257.2	89.98	84.84	74.81	1 1/16	36.9	206