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Cotton Varieties
in the
Hill Section of Mississippi
1944

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COTTON VARIETIES IN THE HILL SECTION OF MISSISSIPPI

By J. FRED O'KELLY

E. B. Ferris, H. A. York, and T. E. Ashley collected the field data for these tests at Holly Springs, Raymond, and Poplarville, respectively.

Aside from a late start the 1944 season was favorable for cotton production in practically all areas of the State. Frequent rains at the normal planting time delayed planting 2 to 3 weeks. After the crop was planted, germination was slow in some cases due to insufficient rainfall. The months of June and July were sufficiently dry and hot for better than usual boll weevil control and for a limited labor supply to control weeds.

Lint cotton prices used in computing

acre values are averages for 10 weeks as reported for the Memphis, Tennessee, market, beginning early in September. Seed were valued at \$54.10 a ton. Staple length determinations were made by commercial cotton classers.

The late spring and summer drouth was probably more severe at Holly Springs than in most other areas. The acre yields and staple lengths, especially for the hill test, show that there was not enough moisture even for cotton.

Both the hill and valley tests were planted on soil where a light growth of a winter legume had been turned and 400 pounds to the acre of a 6-8-4 fertilizer had

Table 1. Cotton varieties: average results, State College, 1940-1944

Variety	Pounds lint per acre						Average total ¹ value	Length inches	Lint per-centage	Bolls per lb. lint
	1940	1941	1942	1943	1944	Av.				
Deltapine 14	244.3	209.8	621.0	585.9	607.4	453.7	\$105.72	1 1/16	40.4	201
Hi-Bred	291.2	251.3	574.6	612.3	436.3	433.1	86.84	7/8	42.5	158
Cleveland 54	277.0	221.9	599.8	494.2	571.4	432.9	95.26	15/16	37.1	207
Coker 100-7 ²	302.1	269.8	551.2	423.0	562.4	421.7	104.32	1 1/8	38.1	204
Stoneville 2B	301.1	205.1	571.7	511.1	509.6	419.7	102.24	1 3/32	35.3	199
Miller	212.5	210.5	584.4	541.5	548.2	419.4	95.71	31/32	37.2	186
Bobshaw 1	285.2	224.1	527.3	480.4	488.7	401.1	91.69	1 1/32	36.9	229
Delfos 531C	307.3	173.7	515.3	486.5	465.7	389.7	105.25	1 5/32	35.3	234
Delfos 651 ³	265.5	163.9	520.5	481.6	480.2	382.3	99.81	1 1/8	34.4	232

¹Based on middling grade. ²Coker 100-4, 1940; 100-5, 1941 and 1942. ³Delfos 6, 1940; 3506, 1941.

Table 2. Cotton varieties: State College, 1944

Total acre value, expressed in three grades

Variety	Pounds lint per acre	Strict low middling			Length inches	Lint per-centage	Bolls per lb. lint
		Middling	Low middling	Low middling			
Deltapine 14	607.4	\$157.62	\$150.33	\$134.54	1 1/32	40.6	198
Delfos 9169	588.1	166.94	156.06	136.95	1 3/32	36.8	194
Cleveland 54	571.4	147.14	140.00	127.43	15/16	38.3	195
Coker 100-7	562.4	152.44	144.57	127.70	1 1/16	38.0	203
Miller	548.2	141.77	134.92	122.86	15/16	37.7	190
Empire	539.0	141.02	134.01	120.81	1	38.5	177
Coker 100W-3	537.0	141.49	134.51	121.36	1	37.5	193
Stoneville 5A	525.5	135.84	130.06	117.19	31/32	38.3	212
Stoneville 2B	509.6	136.15	130.04	116.79	1 1/32	36.4	193
Bobshaw 1	488.7	129.44	123.09	111.11	1	36.8	211
Delfos 651	480.2	133.20	126.47	112.07	1 1/16	34.9	228
Delfos 9431	467.0	134.43	125.79	110.62	1 3/32	34.9	238
Delfos 531C	465.7	134.37	125.76	110.62	1 3/32	34.6	232
Boboak	449.4	130.18	121.87	107.26	1 3/32	34.1	240
Hi-Pred	436.3	98.38	94.46	85.73	13/16	42.2	155
Bobdel	414.3	115.48	109.68	97.25	1 1/16	34.3	225

Table 3. Cotton varieties: average results, Holly Springs, hill soil, 1940-1944

Variety	Pounds lint per acre						Average total ¹ value	Length inches	Lint percentage	Bolls per lb. lint
	1940	1941	1942	1943	1944	Av.				
Hi-Bred	586.9	568.2	735.2	368.6	413.3	534.4	\$ 99.33	27/32	42.9	172
Stoneville 2B	609.0	548.3	737.5	320.1	437.1	530.4	113.39	1 1/16	36.0	200
Bobshaw 1	520.2	569.7	789.7	327.8	362.2	513.9	107.48	1	37.1	216
Deltapine 14	445.8	647.6	669.6	348.6	408.6	504.0	105.98	1 1/32	40.1	208
Miller	461.2	580.2	652.9	373.2	364.5	486.4	100.75	31/32	38.0	179
Cleveland 54	471.2	564.2	621.6	313.0	361.6	466.3	94.24	29/32	37.1	213
Delfos 651 ²	466.9	526.3	665.1	298.4	342.6	459.9	104.95	1 3/32	35.7	238
Delfos 531C	509.9	525.2	615.0	293.5	333.7	455.5	108.75	1 1/8	35.3	240
Coker 100-7 ³	499.0	495.4	621.2	311.7	347.4	454.9	100.08	1 3/32	38.5	213

¹Based on middling grade.²Delfos 6, 1940; Delfos 3506, 1941.³Coker 100-4, 1940; Coker 100-5, 1941 and 1942.

Table 4. Cotton varieties: Holly Springs, hill soil, 1944

Total acre value, expressed in these grades

Variety	Pounds lint per acre	Middling	Strict low middling	Low middling	Length inches	Lint percentage	Bolls per lb. lint
Stoneville 2B	437.1	\$115.91	\$110.67	\$ 99.30	1 1/32	37.4	205
Hi-Bred	413.3	91.88	88.16	79.89	13/16	44.4	166
Delfos 9169	412.2	112.28	106.51	94.14	1 1/16	37.3	198
Deltapine 14	408.6	106.10	101.20	90.58	1 1/32	40.5	201
Coker 100W-3	407.7	106.89	101.59	91.60	1	38.2	194
Empire	385.2	98.81	94.57	85.13	31/32	39.4	180
Miller	364.5	93.01	88.46	80.44	15/16	39.6	178
Bobshaw 1	362.2	95.98	91.64	82.22	1 1/32	37.5	203
Cleveland 54	361.6	90.89	87.46	79.32	29/32	38.1	197
Coker 100-7	347.4	94.23	89.37	78.94	1 1/16	37.9	229
Stoneville 5A	347.1	90.69	86.18	77.68	1	38.7	222
Delfos 9431	345.8	95.17	90.33	79.95	1 1/16	35.9	245
Delfos 651	342.6	94.00	89.20	78.93	1 1/16	36.3	246
Delfos 531C	333.7	95.48	89.31	78.47	1 3/32	35.7	250
Boboak	332.1	92.05	87.40	77.43	1 1/16	35.0	242
Bobdel	304.0	82.26	78.61	70.71	1 1/32	34.8	235

Table 5. Cotton varieties: average results, Holly Springs, valley soil, 1940-1944¹

Variety	Pounds lint per acre					Average total ² value	Length inches	Lint percentage	Bolls per lb. lint
	1940	1942	1943	1944	Av.				
Bobshaw 1	343.4	705.9	561.0	641.0	562.8	\$124.44	1 1/16	34.6	216
Stoneville 2B	376.7	604.9	641.2	537.6	540.1	136.80	1 1/8	34.3	191
Cleveland 54	265.1	684.6	579.8	626.2	538.9	124.45	31/32	34.3	215
Hi-Bred	247.1	705.9	635.5	565.5	538.5	115.09	29/32	39.8	168
Miller	204.7	733.5	589.4	622.0	537.4	127.03	1	35.3	186
Deltapine 14	193.9	646.6	652.5	588.3	520.3	128.54	1 3/32	37.1	231
Coker 100-7 ³	359.9	579.6	570.4	551.6	515.4	140.58	1 5/32	35.1	207
Delfos 531C	291.0	537.6	536.9	558.2	480.9	144.47	1 3/16	32.6	246
Delfos 651 ⁴	272.6	566.9	527.9	540.8	477.0	139.64	1 3/16	32.5	244

¹Averages are for 4 years; no data were obtained in 1941.²Based on middling grade.³Coker 100-4, 1940; Coker 100-5, 1942.⁴Delfos 6, 1940.

been applied. Planting was done about the middle of May. Normal cultural practices were followed thereafter.

The test at State College was planted May 11. The soil had been previously fertilized with about 400 pounds of 6-8-4 to the acre. No winter legume was used. The soil was a modified Houston clay sometimes classed as Bell.

The soil for the Raymond tests produced a good crop of vetch. After this was turned, fertilizer was applied at the rate of 250 pounds 6-8-8 to the acre. Planting was done on May 9.

The high yields on the valley test can be attributed to the fact that this piece

of soil retains moisture quite well. Adequate soil fertility and moisture combined with a season dry enough for insect control provide an environment favorable to high cotton yields.

The soil for the Poplarville test was fertilized at the rate of 600 pounds 6-8-4 to the acre and was planted April 25. Soil moisture deficiencies were not as serious here as in other areas but the season was dry enough for fair boll weevil control. The yields were excellent for this area.

In planning a long-time cotton production program in the State, too much weight should not be given to the very

Table 6. Cotton varieties: Holly Springs, valley soil, 1944
Total acre value, expressed in three grades

Variety	Pounds lint per acre	Middling	Strict low middling	Low middling	Length inches	Lint percentage	Bolls per lb. lint
Stoneville 5A	641.0	\$169.38	\$161.69	\$145.02	1 1/32	37.9	210
Delfos 9169	626.9	171.38	162.60	143.79	1 1/16	36.8	193
Cleveland 54	626.2	161.59	153.76	139.98	15/16	38.0	192
Miller	622.0	162.29	154.20	138.96	1	38.9	169
Coker 100W-3	596.8	157.37	149.61	134.99	1	37.4	189
Deltapine 14	588.3	152.96	145.90	130.60	1 1/32	40.3	185
Hi-Bred	565.5	134.83	129.74	119.56	7/8	33.1	152
Delfos 531C	558.2	172.44	157.37	134.77	1 1/8	35.1	232
Empire	557.6	145.59	138.34	124.68	1	38.8	166
Coker 100-7	551.6	155.19	144.99	127.06	1 3/32	38.1	189
Delfos 651	540.8	155.32	145.32	127.74	1 3/32	35.2	224
Delfos 9431	539.5	155.42	145.44	127.91	1 3/32	34.8	226
Stoneville 2B	537.6	146.75	139.22	123.09	1 1/16	37.0	178
Bobshaw 1	511.1	136.04	129.91	116.62	1 1/32	36.9	193
Boboak	497.8	143.97	134.76	118.58	1 3/32	34.3	232
Bobdel	458.4	124.55	119.05	107.13	1 1/32	34.3	227

Table 7. Cotton varieties: average results, Raymond, hill soil, 1940-1944

Variety	Pounds lint per acre						Average total ¹ value	Length inches	Lint percentage	Bolls per lb lint
	1940	1941	1942	1943	1944	Av.				
Hi-Bred	583.2	479.1	710.4	633.8	630.2	607.3	\$140.27	13/16	41.7	173
Stoneville 2B	578.0	541.8	758.0	550.7	549.0	595.5	144.88	1 1/16	35.9	205
Deltapine 14	551.8	494.0	761.9	567.9	600.7	595.3	151.64	1 1/32	39.9	221
Bobshaw 1	530.0	570.8	718.0	607.1	533.9	592.0	143.88	1	36.7	227
Cleveland 54	535.0	511.1	713.2	590.4	555.7	581.1	135.87	29/32	36.4	218
Coker 100-7 ²	512.7	487.7	768.8	563.4	541.5	574.8	141.71	1 3/32	38.2	212
Miller	548.3	522.5	693.7	550.6	548.1	572.6	137.07	15/16	37.1	190
Delfos 531C	474.3	454.6	702.6	483.0	488.9	520.7	133.85	1 1/8	35.1	244
Delfos 651 ³	484.9	416.2	683.3	498.4	487.6	514.1	130.17	1 3/32	34.7	242

¹Based on middling grade.

²Coker 100-4, 1940; Coker 100-5, 1941 and 1942.

³Delfos 6, 1940; Delfos 3506, 1941.

Table 8. Cotton varieties: Raymond, hill soil, 1944
Total acre value, expressed in three grades

Variety	Pounds lint per acre	Middling	Strict low middling	Low middling	Length inches	Lint percent- age	Bolls per lb. lint
Hi-Bred	630.2	\$140.27	\$134.60	\$122.00	13/16	44.2	154
Coker 100W-3	607.5	158.66	151.98	138.10	31/32	36.9	200
Deltapine 14	600.7	151.64	145.03	130.32	31/32	41.9	189
Cleveland 54	555.7	135.87	130.86	120.86	7/8	38.3	199
Bobshaw 1	553.9	143.88	136.96	124.78	15/16	37.1	214
Stoneville 2B	549.0	144.88	137.74	124.29	1	37.3	196
Miller	548.1	137.07	131.86	119.53	29/32	38.8	182
Stoneville 5A	543.9	140.39	134.41	122.08	31/32	38.5	220
Coker 100-7	541.5	141.71	135.21	121.13	1 1/32	39.3	208
Empire	538.5	138.91	132.98	119.79	31/32	38.6	179
Delfos 9169	508.9	134.57	128.46	115.23	1 1/32	37.8	193
Delfos 9431	491.2	131.43	125.54	112.77	1 1/32	36.2	232
Delfos 531C	488.9	133.85	127.01	112.34	1 1/16	36.6	237
Delfos 651	487.6	130.17	124.32	111.64	1 1/32	36.5	224
Bobdel	454.3	120.16	115.17	104.04	31/32	35.3	232
Boboak	451.0	121.87	116.01	104.96	1	34.3	244

Table 9. Cotton varieties: average results, Raymond, valley soil, 1940-1944

Variety	Pounds lint per acre						Average total ¹ value	Length inches	Lint per- centage	Bolls per lb lint
	1940	1941	1942	1943	1944	Av.				
Bobshaw 1	527.6	403.4	790.6	826.3	1022.5	714.1	\$169.04	1 1/16	35.0	206
Deltapine 14	527.2	396.1	731.1	921.1	985.3	712.2	176.35	1 3/32	38.7	199
Cleveland 54	463.5	385.3	679.3	747.4	1067.7	668.6	152.47	31/32	34.2	209
Coker 100-7 ²	559.3	371.1	632.4	782.3	990.8	667.2	181.98	1 5/32	35.2	195
Hi-Bred	490.1	350.6	561.0	923.4	1002.9	665.6	138.00	7/8	39.3	164
Stoneville 2B	529.6	345.9	651.2	786.4	1007.0	664.0	171.63	1 3/32	33.7	193
Miller	485.7	369.1	650.5	727.3	1039.1	654.3	148.37	1	35.3	177
Delfos 531C	475.6	321.0	626.8	671.0	915.3	601.9	175.55	1 3/16	32.7	223
Delfos 651 ³	434.9	274.8	658.2	658.8	916.0	588.5	167.10	1 5/32	32.9	233

¹Based on middling grade.

²Coker 100-4, 1940; Coker 100-5, 1941 and 1942.

³Delfos 6, 1940; Delfos 3506, 1941.

Table 10. Cotton varieties: Raymond, valley soil, 1944
Total acre value, expressed in three grades

Variety	Pounds lint per acre	Middling	Strict low middling	Low middling	Length inches	Lint percent- age	Bolls per lb lint
Cleveland 54	1067.7	\$274.34	\$260.99	\$237.50	15/16	38.6	171
Empire	1039.3	271.17	257.66	232.19	1	38.9	156
Miller	1039.1	265.70	252.71	229.85	15/16	39.3	150
Delfos 9169	1032.0	280.70	266.26	235.30	1 1/16	37.5	164
Bobshaw 1	1022.5	268.84	255.54	230.49	1	37.8	181
Stoneville 2B	1007.0	267.24	255.16	228.97	1 1/32	37.3	163
Hi-Bred	1002.9	236.19	227.17	209.11	7/8	43.9	135
Coker 100W-3	994.0	262.28	250.35	224.51	1 1/32	38.1	178
Coker 100-7	990.8	266.58	252.71	222.99	1 1/16	39.1	170
Deltapine 14	985.3	254.11	242.28	216.66	1 1/32	41.6	166
Stoneville 5A	957.8	250.94	238.49	215.02	1	38.3	182
Delfos 9431	925.5	263.66	246.53	216.46	1 3/32	36.3	194
Delfos 651	916.0	261.14	244.19	214.42	1 3/32	36.2	199
Delfos 531C	915.3	281.19	256.48	219.41	1 1/8	35.9	213
Boboak	911.0	262.44	245.59	215.98	1 3/32	34.8	189
Bobdel	824.2	228.78	217.24	192.52	1 1/16	34.8	193

high yields of 1944. Weather conditions are not always so favorable. The 5-year averages are a better guide to cotton production in general and to the choice of a variety in particular.

It may be well to point out that among new strains tried, Delfos 9169 has made an excellent record for 2 years. If it

compares as favorably with other varieties in seasons of too much rainfall, this variety will have much promise. It should be noted that Coker 100-W has performed good to well in nearly all tests in recent years, and on soil with moderate wilt infestation it is usually a top producer.

Table 11. Cotton varieties: average results, Poplarville, 1940-1944

Variety	Pounds lint per acre						Average total ¹ value	Length inches	Lint per-centage	Bolls per lb. lint
	1940	1941	1942	1943	1944	Av.				
Hi-Bred	524.2	511.6	278.0	345.3	610.5	453.9	\$84.94	27/32	43.2	180
Cleveland 54	498.9	489.7	290.0	363.8	513.5	431.2	86.58	29/32	38.2	221
Miller	444.1	437.6	341.2	229.1	540.0	398.4	81.56	15/16	38.9	192
Stoneville 2B	533.9	469.2	270.3	261.3	439.7	394.9	82.97	1 1/16	36.7	223
Bobshaw 1	406.7	457.5	349.7	280.8	418.1	382.6	80.09	1	37.5	232
Deltapine 14	414.2	431.5	259.7	252.0	540.5	379.6	78.75	1 1/32	41.9	218
Coker 100-7 ²	398.9	486.8	274.6	204.1	455.6	364.0	79.87	1 3/32	38.5	212
Delfos 651 ³	367.0	369.1	154.7	268.7	456.0	323.1	75.05	1 1/8	35.7	244
Delfos 531C	363.3	382.8	178.5	165.1	482.3	314.4	74.45	1 1/8	36.0	260

¹Based on middling grade.

²Coker 100-4, 1940; Coker 100-5, 1941 and 1942.

³Delfos 6, 1940; Delfos 3505, 1941.

Table 12. Cotton varieties: Poplarville, 1944

Total acre value, expressed in three grades

Variety	Pounds lint per acre		Strict low middling	Low middling	Length inches	Lint per-centage	Bolls per lb. lint
		Middling					
Hi-Bred	610.5	\$140.64	\$134.53	\$122.93	27/32	43.3	141
Deltapine 14	540.5	137.53	130.50	117.26	1	42.9	180
Miller	540.0	137.16	130.41	118.53	15/16	40.3	160
Delfos 9169	534.5	143.62	136.04	120.00	1 1/16	39.3	183
Cleveland 54	513.5	131.40	124.98	113.68	15/16	39.2	179
Coker 100W-3	486.8	125.13	119.78	107.85	31/32	39.1	172
Stoneville 5A	486.4	125.74	120.39	108.47	31/32	38.3	183
Delfos 531C	482.3	131.56	124.81	110.34	1 1/16	37.1	218
Empire	482.2	126.55	120.28	108.47	1	39.2	158
Bobdel	477.3	127.63	121.90	109.49	1 1/32	36.3	201
Delfos 651	456.0	123.60	117.22	103.54	1 1/16	38.0	197
Coker 100-7	455.6	117.62	111.70	100.53	1	40.5	191
Boboak	448.3	120.82	115.44	103.78	1 1/32	35.3	223
Stoneville 2B	439.7	115.11	109.40	98.63	1	38.4	176
Delfos 9431	433.8	118.08	112.01	99.00	1 1/16	37.4	217
Bobshaw 1	418.1	111.25	105.82	95.58	1	36.2	178

Table 13. Cotton varieties, six locations, 1944

Variety	Pounds lint per acre							Averages		
	Holly Springs		State College	Raymond		Poplarville	Average	Staple length inches	Lint percentage	Bolls per lb. lint
	Hill	Valley		Hill	Valley					
Deltapine 14	409	588	607	601	985	540	622	1	41.3	186
Delfos 9169	412	627	588	509	1032	534	617	1 1/16	37.6	187
Cleveland 54	362	626	571	556	1068	513	616	29/32	38.4	189
Miller	364	622	548	548	1039	540	610	15/16	39.1	171
Hi-Bred	413	565	436	630	1003	610	609	27/32	43.5	150
Coker 100W-3	408	597	537	607	994	487	605	1	37.9	188
Empire	385	558	539	539	1039	482	590	1	38.9	169
Stoneville 5A	347	641	525	544	958	486	583	1	38.3	205
Stoneville 2B	437	538	510	549	1007	440	580	1 1/32	37.3	185
Coker 100-7	347	552	562	541	991	456	575	1 1/16	38.8	198
Bobshaw 1	362	511	489	554	1022	418	559	1	37.0	197
Delfos 531C	334	558	466	489	915	482	541	1 3/32	35.8	230
Delfos 651	343	541	480	488	916	456	537	1 1/16	36.2	220
Delfos 9431	346	539	467	491	925	434	534	1 1/16	35.9	225
Boboak	332	498	449	451	911	448	515	1 1/16	34.6	228
Bobdel	304	458	414	454	824	477	488	1 1/32	35.0	219

Seed Sources, 1944

Bobdel—Bobshaw Seed Co., Heathman, Mississippi.

Boboak—Bobshaw Seed Co., Heathman, Mississippi.

Bobshaw 1—Bobshaw Seed Co., Heathman, Mississippi.

Cleveland 54—Mississippi Experiment Station, State College, Mississippi.

Coker 100-7 and 100W-3—Coker Pedigreed Seed Co., Hartsville, South Carolina.

Delfos 531C and 9169—Stoneville Pedigreed Seed Co., Stoneville, Mississippi.

Delfos 651 and 9431—Delta Experiment Station, Stoneville, Mississippi.

Deltapine 14—Delta and Pine Land Co., Scott, Mississippi.

Empire—Georgia Experiment Station, Experiment, Georgia.

Hi-Bred—B. F. Summerour, Norcross, Georgia.

Miller—Mississippi Experiment Station, State College, Mississippi.

Stoneville 2B and 5A—Stoneville Pedigreed Seed Co., Stoneville, Mississippi.

The seed sources given are, in all cases, the originator of the variety or strain. If farmers are unable to obtain seed from the originator they may be able to purchase through an authorized dealer. Seed of many of the varieties were certified in 1944. A list of certified seed and the producers may be had by writing the Secretary Seed Improvement Association, State College, Mississippi.