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Joseph Fred O'Kelly

S. P. Crockett

B. C. Hurt Jr.

K. C. Freeman

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MISSISSIPPI
COTTON VARIETY TESTS

1953

MISSISSIPPI STATE COLLEGE
AGRICULTURAL EXPERIMENT STATION
CLAY LYLE, Director

1953 Cotton Variety Tests IN HILL SECTIONS

By J. F. O'KELLY, S. P. CROCKETT, B. C. HURT and K. C. FREEMAN

There are several cotton varieties well adapted to the cotton producing areas of the state and the tables which follow report comparative results obtained with these during the 1953 season. It will be seen from the average results that there is not always a great deal of difference between the high and low producers and that even the low producers provide attractive returns in total value per acre.

Soil moisture, as in 1952, was so low during the flowering season that yields were reduced, except possibly at State College. Rainfall in mid-July was a little more than five inches at State College. This made possible the development of a vigorous, well-rooted plant which was able to set a good crop of bolls in spite of later moisture deficiencies. At the other locations moisture was never quite adequate after the plants started flowering.

The fertilizer used varied considerably. That at Holly Springs was 500 pounds 8-8-4 per acre; at Pontotoc (both tests) it was 600 pounds 12-8-8; at State College it was 700 pounds 6-8-8; and New-

ton it was 600 pounds 12-8-8. Some of the low yields in the Newton test are due in part to a hard pan in the subsoil. This reduces yields in dry seasons and in some seasons when there is excessive rainfall. Even so, it is difficult to find a crop which will give more return per acre on this type of soil than cotton.

The use of insecticides together with the dry weather controlled the boll weevil until the beginning of migration in late summer.

There was no appreciable damage from fusarium wilt but it may be well to point out that, among the varieties tested, Coker Wilt, Plains, Empire, and Auburn 56 are the most resistant to this disease.

As usual the prices used for lint cotton were averages of ten weeks of the marketing season beginning with the last week in August. The value used for seed was \$55.00 a ton.

In the tables reporting averages the acre values are based on lint of middling grade and the value of the seed. In these averages Delfos 651 was used in 1949 and 1950 and Bobshaw 1 was used in 1949.

Cotton varieties, State College, 1953.

	Pounds lint per acre	Total acre value			Lint percentage	Length, inches	Bolls per lb. lint
		Middling	Strict low middling	Low middling			
Miller ..	775.6	295.14	288.93	267.99	37.4	1	164
Louisiana 33	773.6	295.70	289.51	268.63	38.6	1 1/32	176
Delfos 7343	771.2	304.65	298.48	274.96	36.9	1 3/32	195
Hi-Bred ..	758.3	262.44	255.24	242.35	39.8	7/8	149
Coker Staple ..	750.1	299.51	293.51	270.64	34.9	1 3/32	200
Arkot 2-1	741.9	298.43	291.50	268.87	34.2	1 3/32	181
Fox ..	732.3	288.71	282.12	261.25	35.6	1 1/16	207
Empire ..	730.2	287.25	280.68	259.87	36.0	1 1/16	162
Deltapine 15	726.3	282.39	275.85	255.15	38.3	1 1/16	201
Stoneville 2B	717.6	283.38	276.92	256.47	35.3	1 1/16	175
Stoneville 5A	690.3	265.99	260.46	241.83	37.0	1 1/32	188
Plains ..	683.2	268.90	262.75	243.28	35.9	1 1/16	170
Auburn 56	653.2	257.52	251.64	233.02	35.6	1 1/16	183
Delfos 9169	644.6	257.24	252.08	232.42	35.0	1 3/32	187
Coker Wilt	620.6	245.79	240.82	221.90	36.4	1 3/32	187
Bobshaw 1A	617.0	242.72	237.16	219.58	36.0	1 1/16	194

Average results from cotton varieties, State College.

	Pounds lint per acre					Averages				
						Lint	Acre value	Lint per-centage	Length inches	Bolls per lb. lint
	1949	1950	1951	1952	1953					
Deltapine 15	345	556	523	601	726	550	230	40.0	1 1/16	186
Plains	403	469	514	640	683	542	226	37.7	1 1/32	174
Delfos 7343	339	431	532	615	771	538	228	37.3	1 3/32	197
Miller	308	465	516	602	776	533	220	37.6	31/32	172
Coker Staple	347	436	485	627	750	529	226	36.1	1 3/32	199
Delfos 9169	361	360	477	688	645	502	213	36.1	1 3/32	184
Hi-Bred	340	336	548	520	758	501	190	41.5	7/8	149
Empire	387	307	503	569	730	499	207	37.2	1 1/32	163
Coker Wilt	343	411	509	586	621	494	210	36.8	1 1/16	187
Stoneville 2B	300	347	455	632	718	490	205	36.9	1 1/32	178
Bobshaw 1A	381	396	442	556	617	478	200	36.8	1 1/32	197

Cotton varieties, Newton, 1953.

	Pounds lint per acre	Total acre value			Lint per-centage	Length, inches	Bolls per lb. lint
		Middling	Strict low middling	Low middling			
Hi-Bred ..	355.6	121.29	117.97	111.87	42.9	7/8	186
Fox ..	344.1	131.41	128.66	119.36	38.3	1 1/32	241
Auburn 56	320.2	122.57	120.01	111.04	38.3	1 1/32	216
Deltapine 15	318.2	119.55	117.01	108.10	42.5	1 1/32	228
Coker Wilt	297.0	115.15	112.47	104.01	38.9	1 1/16	198
Miller ..	295.8	110.22	107.12	99.13	39.5	31/32	203
Arkot 2-1	293.7	114.70	112.06	103.69	37.4	1 1/16	225
Empire ..	282.9	106.77	104.51	96.59	41.4	1 1/32	199
Coker Staple	276.1	107.72	105.23	97.36	37.6	1 1/16	243
Plains ..	275.5	104.68	102.47	94.76	39.9	1 1/32	223
Stoneville 2B	269.4	102.97	100.82	93.27	38.6	1 1/32	198
Louisiana 33	266.3	98.68	95.89	88.70	40.7	31/32	228
Bobshaw 1A	261.1	98.15	96.06	89.01	39.9	1	255
Stoneville 5A	259.1	97.14	95.07	88.07	40.5	1	241
Delfos 7343	246.2	92.76	90.79	83.90	41.8	1 1/32	240
Delfos 9169	242.9	92.93	90.99	84.19	38.4	1 1/32	232

Average results from cotton varieties, Newton.

	Pounds lint per acre					Averages				
						Lint	Acre value	Lint per-centage	Length inches	Bolls per lb. lint
	1949	1950	1951	1952	1953					
Bobshaw 1A	245	556	452	160	261	335	142	38.1	1	247
Hi-Bred ..	274	420	466	154	355	334	128	42.1	27/32	197
Empire ..	283	577	336	164	283	329	139	39.1	1 1/32	199
Stoneville 2B	267	518	411	168	269	327	140	37.6	1 1/32	214
Coker Wilt	258	510	401	166	297	326	140	37.2	1 1/16	231
Deltapine 15	308	529	331	137	318	325	135	40.8	1 1/32	230
Miller ..	191	495	412	151	296	309	130	38.0	31/32	223
Plains ..	245	518	318	164	275	304	129	38.3	1 1/32	236
Delfos 9169	233	474	367	155	243	294	128	37.4	1 1/16	223
Coker Staple	181	464	372	166	276	292	127	36.7	1 1/16	258
Delfos 7343	223	414	377	142	246	280	119	38.7	1 1/16	249

Cotton varieties, Holly Springs, 1953

	Pounds lint per acre	Total acre value			Lint percent- age	Length, inches	Bolls per lb. lint
		Middling	Strict low middling	Low middling			
Hi-Bred	596.7	211.36	205.99	191.08	40.6	29/32	176
Plains	494.7	193.78	189.33	175.23	36.8	1 1/16	203
Fox	487.9	191.93	187.54	173.64	36.0	1 1/16	246
Miller	485.6	187.02	183.13	170.02	37.1	1 1/32	208
Empire	473.3	186.09	181.83	168.34	36.1	1 1/16	189
Auburn 56	473.0	188.86	185.08	170.65	34.9	1 3/32	217
Stoneville 5A	449.2	172.55	168.96	156.83	37.6	1 1/32	233
Coker Wilt	443.5	176.02	172.47	158.94	36.0	1 3/32	234
Delfos 7343	435.6	171.55	168.06	154.78	37.5	1 3/32	243
Delfos 9169	431.2	169.91	166.03	153.74	35.7	1 1/16	209
Louisiana 33	430.6	163.78	160.33	148.70	37.5	1	218
Arkot 2-1	418.6	167.92	164.57	151.81	34.1	1 3/32	247
Deltapine 15	401.2	155.61	152.00	140.57	38.8	1 1/16	225
Coker Staple	393.9	157.65	154.50	142.48	34.5	1 3/32	245
Stoneville 2B	379.1	149.46	146.05	135.24	35.6	1 1/16	211
Bobshaw 1A	374.6	147.37	144.00	133.32	36.0	1 1/16	228

Average results from cotton varieties, Holly Springs.

	Pounds lint per acre					Averages				
						Lint	Acre value	Lint per- centage	Length inches	Bolls per lb. lint
	1949	1950	1951	1952	1953					
Delfos 9169	563	568	456	447	431	513	207	37.0	1 1/16	193
Plains	470	593	404	450	495	482	199	38.7	1	190
Empire	565	502	381	456	473	476	195	39.0	1 1/32	168
Hi-Bred	528	426	411	415	597	475	178	42.6	27/32	159
Coker Wilt	514	573	406	414	444	470	196	37.7	1 1/32	197
Deltapine 15	551	526	399	452	401	466	189	40.6	1	200
Coker Staple	547	566	374	435	394	463	194	36.9	1 1/16	214
Miller	498	484	408	405	486	456	183	38.4	15/16	187
Delfos 7343	496	478	436	409	436	451	187	38.4	1 1/32	213
Stoneville 2B	457	518	430	460	379	449	188	37.2	1 1/32	190
Bobshaw 1A	447	534	424	439	375	444	184	37.6	1	214

Cotton varieties, Flatwoods Soil, 1953

	Pounds lint per acre	Total acre value			Lint percent- age	Length, inches	Bolls per lb. lint
		Middling	Strict low middling	Low middling			
Louisiana 33	399.3	156.83	153.24	141.86	36.3	1 1/16	217
Hi-Bred	392.4	139.67	136.14	126.33	39.6	29/32	200
Miller	389.2	153.53	150.03	138.93	35.5	1 1/16	204
Stoneville 5A	385.2	150.66	147.19	136.22	37.1	1 1/16	220
Empire	381.1	148.46	145.03	134.17	37.9	1 1/16	178
Delfos 9169	374.3	149.71	146.71	135.30	34.6	1 3/32	211
Arkot 2-1	372.6	148.86	145.88	134.52	34.8	1 3/32	196
Stoneville 2B	364.4	144.57	141.29	130.90	34.5	1 1/16	221
Coker Staple	359.8	143.67	140.79	129.82	34.9	1 3/32	233
Auburn 56	352.6	141.35	138.53	127.78	34.2	1 3/32	219
Plains	325.5	138.90	135.72	125.68	35.7	1 1/16	216
Delfos 7343	350.7	137.03	133.87	123.87	37.3	1 1/16	229
Deltapine 15	344.2	134.77	131.67	121.86	36.9	1 1/16	246
Coker Wilt	341.6	136.64	133.90	123.49	34.6	1 3/32	219
Bobshaw 1A	340.5	134.09	131.03	121.32	35.8	1 1/16	222
Fox	338.9	133.68	130.63	120.97	35.5	1 1/16	236

Average results from cotton varieties, Flatwoods Soil, Pontotoc.

	Pounds lint per acre		Averages				
			Lint	Total acre value	Lint per- centage	Length inches	Bolls per lb. lint
	1952	1953					
Hi-Bred ..	388	392	390	142.98	41.1	13/16	184
Stoneville 5A ..	326	385	356	142.92	38.2	31/32	214
Stoneville 2B ..	344	364	354	146.65	36.2	1	218
Plains ..	355	352	354	143.86	37.6	1	201
Arkot 2-1 ..	334	373	353	147.26	35.8	1 1/32	202
Empire ..	324	381	352	143.08	39.1	1	164
Miller ..	308	389	349	140.16	36.8	15/16	196
Auburn 56 ..	335	353	344	141.21	36.2	1	208
Fox ..	346	339	343	139.84	36.9	1	230
Delfos 9169 ..	300	374	337	141.26	36.0	1 1/16	195
Bobshaw 1A ..	326	340	334	137.90	36.6	1	218
Delfos 7343 ..	298	351	324	131.90	38.9	1	222
Coker Staple ..	288	360	324	135.55	36.0	1 1/16	220
Deltapine ..	302	344	323	131.25	39.2	1	224
Coker Wilt ..	300	342	321	133.42	36.0	1 1/32	212

Cotton varieties, Pontotoc Ridge Soil.

	Pounds lint per acre	Total acre value			Lint percent- age	Length, inches	Bolls per lb. lint
		Middling	Strict low middling	Low middling			
Hi-Bred ..	382.4	140.70	136.69	123.49	39.6	15/16	186
Empire ..	375.0	144.88	141.88	131.75	36.5	1 1/32	181
Plains ..	354.7	140.39	137.20	127.09	34.9	1 1/16	216
Bobshaw 1A ..	352.5	136.48	133.66	124.14	36.1	1 1/32	233
Arkot 2-1 ..	348.5	140.42	137.28	127.35	32.0	1 1/16	247
Delfos 9169 ..	344.0	137.20	134.10	124.30	33.6	1 1/16	223
Miller ..	343.0	132.25	129.51	120.25	35.0	1	222
Delfos 7343 ..	336.9	132.75	129.72	120.12	35.7	1 1/16	245
Stoneville 5A ..	336.6	130.54	127.85	118.76	35.8	1 1/32	249
Fox ..	336.6	133.46	130.43	120.84	34.6	1 1/16	255
Coker Staple ..	336.4	135.77	133.08	122.82	33.1	1 3/32	251
Stoneville 2B ..	333.9	132.10	129.42	120.41	32.5	1 1/32	227
Auburn 56 ..	330.5	131.82	128.84	119.42	33.6	1 1/16	232
Coker Wilt ..	317.9	127.43	124.57	115.52	32.8	1 1/16	239
Deltapine 15 ..	313.2	121.27	118.76	110.31	36.1	1 1/32	243
Louisiana 33 ..	307.6	117.99	115.53	107.23	35.9	1	242

Average results from cotton varieties, Pontotoc Ridge Soil.

	Pounds lint per acre		Averages				
	1952	1953	Lint	Total acre value	Lint percentage	Length inches	Bolls per lb. lint
Hi-Bred	300	382	341	126.96	41.1	13/16	177
Empire	292	375	334	134.58	38.4	1	165
Plains	283	355	319	129.54	37.2	1	201
Bobshaw 1A	284	352	318	129.92	36.8	1	224
Delfos 7343	292	337	315	128.52	38.1	1	230
Fox	292	337	314	128.28	36.4	1	240
Deltapine 15	312	313	312	126.54	38.1	1	222
Miller	280	343	312	123.82	36.6	15/16	205
Delfos 9169	269	344	306	128.06	35.5	1 1/16	201
Auburn 56	281	330	306	125.23	35.9	1	214
Arkot 2-1	254	348	301	125.70	34.4	1	227
Coker Staple	265	336	301	126.60	35.0	1 1/16	228
Stoneville 5A	263	337	300	119.67	37.5	31/32	229
Stoneville 2B	260	334	297	122.31	35.2	1	208
Coker Wilt	256	318	287	119.16	35.2	1	222

IN THE DELTA

By JAMES B. DICK and ZANE F. LUND

Standard cotton variety field trials were conducted in 1953 at Stoneville and Yazoo City by the Delta Branch Experiment Station. Two other variety trials, at Money and Tunica, did not survive early season conditions. The Stoneville trial was planted on April 23 and produced an average seed cotton yield of 2730 pounds per acre. The Yazoo City test, conducted on the Schaffer Plantation, was planted on April 18. Because of heavy mortality from seedling diseases it was necessary to plant the test over on May 8. Average seed cotton yield was 1660 pounds per acre.

Temperatures in the Delta during most of the 1953 season were abnormally high. Some areas received sufficient rainfall and made "bumper crops."

Rainfall at Yazoo City was deficient, as in 1952, with resulting reduced yields and shorter staple.

Boll weevil infestation throughout the season was generally light and was controlled by a thorough program of insect control on the test areas.

All varieties in the yield trials were the current improved strains of the reliable breeders or firms whose cottons are commonly grown on a large percentage of the Delta cotton acreage. Varieties are listed in each test in order of yield of lint per acre.

Yields of seed cotton and of lint per acre, gin turnout, and earliness are given for the two trials. The data is presented as a progress report.

Results of cotton variety yield trials Yazoo-Mississippi Delta, 1953.

Variety	Yield per acre		Gin turn out	Percent at first picking
	Seed cotton	Lint		
	Lbs.	Lbs.	Pct.	Pct.
STONEVILLE				
Empire	3100	1072	34.6	57
Deltapine 15	2695	1020	37.8	42
Stoneville 2B	3034	1014	33.4	36
D.E.S. 7343	2749	1006	36.6	46
Delfos 9169	2969	975	32.8	45
Stoneville 3202	2654	950	35.8	51
Bobshaw 1A	2563	894	34.9	44
Coker 100 Wilt	2666	898	33.7	45
Coker 100 Staple	2682	879	32.8	45
Fox	2540	874	34.4	59
Deltapride ..	2490	778	31.3	32
Wilds ..	2565	762	29.7	32

Planted April 23, first picking August 31

YAZOO CITY				
Stoneville 3202	1893	720	36.5	
Fox ..	1789	674	36.3	
Empire ..	1763	652	36.0	
D.E.S. 7343	1665	621	37.6	
Delfos 9169	1687	614	35.5	
Stoneville 2B	1612	587	35.5	
Coker 100 Staple	1684	582	34.2	
Coker 100 Wilt	1655	572	35.3	
Bobshaw 1A	1537	552	36.5	
Deltapine 15	1313	531	39.1	

Planted May 8, picked October 9

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