

1-1-1952

1951 cotton variety tests in Mississippi

James B. Dick

Zane F. Lund

Follow this and additional works at: <https://scholarsjunction.msstate.edu/mafes-bulletins>

Recommended Citation

Dick, James B. and Lund, Zane F., "1951 cotton variety tests in Mississippi" (1952). *Bulletins*. 152.
<https://scholarsjunction.msstate.edu/mafes-bulletins/152>

This Article is brought to you for free and open access by the Mississippi Agricultural and Forestry Experiment Station (MAFES) at Scholars Junction. It has been accepted for inclusion in Bulletins by an authorized administrator of Scholars Junction. For more information, please contact scholcomm@msstate.libanswers.com.

1951 Cotton Variety Tests in Mississippi

MISSISSIPPI STATE COLLEGE
AGRICULTURAL EXPERIMENT STATION

CLAY LYLE, Director

STATE COLLEGE

MISSISSIPPI

TABLE OF CONTENTS

COTTON VARIETY TESTS IN THE YAZOO-MISSISSIPPI DELTA, 1951	3
Tunica, Money, and Yazoo City.....	4
COTTON VARIETY TESTS, HILL SECTIONS, 1951.....	5
Central Experiment Station, State College.....	5
Coastal Plain Branch Experiment Station, Newton.....	6
North Mississippi Branch Experiment Station, Holly Springs	7
Brown Loam Branch Experiment Station, Oakley.....	8

Cotton Variety Tests in the Yazoo-Mississippi Delta, 1951

By JAMES B. DICK and ZANE F. LUND

Three standard cotton variety yield trials were conducted on sandy loam soil in the Delta in 1951 by the Delta Branch Experiment Station in cooperation with Delta farmers. One other test planted on sandy loam and two variety tests planted on "buckshot" soils were abandoned due to poor stands. One variety trial under full mechanization was conducted on Kelson Plantation, but the one at Stoneville could not be used because of uneven emergence due to poor seed and unfavorable weather conditions. Preliminary or partial reports on the three standard tests at Tunica, Money, and Yazoo City are presented in the accompanying tables. Detailed reports on these tests and on the "mechanized" test will be given at a later date.

Due to a late spring, faulty seed from the 1950 crop, and the extremely dry period from April 25 to June 10 in many sections of the Delta the cotton crop was very slow in getting started and much cotton was extremely late, particularly in the middle and upper Delta. Three weeks of rain in late June were followed by a severe drought lasting until mid-September. During this drought the average temperatures were several degrees above normal and cotton on the lighter soils suffered heavily. This was particularly true with late cotton. Early cotton on the better sandy loams and lighter clay soils suffered less and in some areas produced more cotton per acre than in 1950.

Boll weevil infestation throughout the season was generally light, but the dam-

age from heavy infestations of bollworms was the heaviest experienced in many years and required constant watchfulness and control measures.

In spite of the difficulties experienced in 1951 the average yields per acre in the variety trials at Tunica, Money and Yazoo City were considerably above those of 1950. Gin turnouts for the 12 varieties used were slightly lower than for 1950. Staple length was slightly better at Tunica and Money, slightly shorter at Yazoo City. As a whole the 1951 Delta cotton crop was much higher in grade and general quality than the crop of any recent year.

Yield of seed cotton and of lint per acre, gin turnout, staple length, percent earliness, and total money-value-per-acre are given for the three tests. Lint prices used in determining the dollar-per-acre were averages of ten weeks of the Memphis marketing season beginning in early September. Seed were valued at \$70 per ton, basis prime.

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, and are similar to those entered in 1950. The 1951 results are presented as a progress report. As several new varieties and strains entered the yield trials in 1950, no 3-year averages are available. On the other varieties 3-year averages (1947-1949) were previously published in the December 1950 issue of Mississippi Farm Research.

Results of cotton variety yield trial, Yazoo-Mississippi Delta, 1951.

Variety	Yield per acre		Gin turn- out	Staple length	Percent picked first picking	Total money value per acre		
	Seed cotton	Lint				Middling	Strict Low Middling	Low Middling
	Lbs.	Lbs.	Pct.	1/32 in.	Pct.	Dols.	Dols.	Dols.
TUNICA								
Delfos 9169	2722	953	35.0	35	56	484	465	440
D & P L Fox	2642	934	35.3	34	66	460	443	420
Coker 100 Staple	2583	886	34.4	35	65	453	436	412
Stoneville 2B	2517	898	35.6	34	66	446	430	408
Empire	2524	872	34.6	35	68	447	430	407
Arkot 2-1	2532	844	33.4	35	63	436	419	397
Deltapine 15	2313	884	38.2	35	61	430	413	390
Coker 100 Wilt	2466	845	34.0	35	60	426	410	387
Bobshaw 1-A	2380	839	35.2	34	62	415	401	381
Miller	2318	839	36.3	33	66	409	395	376
Delfos 7343	2199	832	37.8	35	67	406	390	368
Wilds	2026	634	31.3	41	60	405	371	311
Planted April 30, first picking September 11.								
MONEY								
Delfos 7343	2929	1056	36.0	35	55	522	501	473
Empire	2926	955	32.6	34	52	494	477	454
Coker 100 Wilt	2970	969	32.6	34	51	487	470	443
Miller	2774	964	34.7	32	49	473	457	436
Delfos 9169	2752	901	32.7	35	53	469	451	428
Deltapine 15	2559	969	37.9	34	51	463	447	423
Bobshaw 1-A	2570	893	34.8	34	51	444	428	406
D & P L Fox	2540	893	35.2	34	54	436	420	398
Arkot 2-1	2619	836	31.9	35	53	436	419	397
Stoneville 2B	2458	849	34.4	34	52	422	407	386
Coker 100 Staple	2425	781	32.2	35	54	403	388	367
Wilds	2262	659	29.1	41	44	424	391	329
Planted April 30, first picking September 17.								
YAZOO CITY								
Coker 100 Wilt	3582	1197	33.6	34	21	604	583	553
Delfos 9169	3422	1157	33.9	34	25	593	573	544
Delfos 7343	3251	1208	37.2	34	25	586	564	535
Arkot 2-1	3391	1139	33.5	34	31	581	561	533
Stoneville 2B	3274	1159	35.5	34	24	576	555	527
Deltapine 15	3017	1193	39.6	34	25	562	541	512
D & P L Fox	3197	1157	36.1	34	27	561	540	512
Empire	3182	1096	34.4	34	28	554	535	508
Coker 100 Staple	3179	1073	33.7	34	23	543	524	498
Bobshaw 1-A	3094	1053	34.0	34	19	532	514	488
Miller	3060	1078	35.2	33	30	531	513	488
Wilds	2646	808	30.5	42	17	516	472	394
Planted April 20, first picking August 24.								

Cotton Varieties, Hill Sections, 1951

J. F. O'KELLY, S. P. CROCKETT, K. C. FREEMAN and R. E. COATS

Only a few farm crops vary in yield as a result of weather conditions as much as cotton. Changes in the weather and other environment affect not only the cotton plant but also the insects which attack it. It is difficult to acquire averages covering enough years and varieties to evaluate them correctly.

A look at the averages at each location shows that a farmer in one of these areas

can choose one of several varieties and obtain about the same average return. The cotton grower should select a good variety with the characters he likes, as staple length, boll type, lint percentage, earliness, etc., and having done this, should continue to use the variety over a period of several years. Following a policy of this kind makes for stability in the variety picture especially if it can be done on a community-wide scale.

Average results from cotton varieties, State College

	Pounds lint per acre					Averages				
	1947	1948	1949	1950	1951	Lint	Acre value	Staple inches	Lint percent-age	Bolls per lb. lint
Deltapine 15	398	743	345	556	523	513	209.56	1 1/16	39.8	185
Miller	480	730	308	465	516	500	200.30	31/32	37.7	172
Coker, staple	458	709	347	436	485	487	205.93	1 3/32	36.6	194
Delfos 7272 (1)	385	700	339	431	518	475	200.07	1 3/32	35.6	204
Bobshaw 1A (2)	423	723	381	396	442	473	192.10	1 1/16	36.7	196
Hi-Bred	439	685	340	336	547	470	176.16	29/32	42.0	147
Coker, wilt	357	707	343	411	509	465	192.54	1 3/32	36.5	185
Delfos 9169	370	694	360	360	477	452	186.78	1 3/32	36.2	183
Empire	364	678	387	307	503	448	181.51	1 1/16	37.2	160
Stoneville 2B	390	727	300	347	455	444	181.38	1 1/16	36.8	179

(1) Delfos 651, 1947-50.

(2) Bobshaw 1, 1947-50.

Cotton varieties, State College, 1951

	Pounds lint per acre	Total acre value			Lint percent-age	Staple inches	Bolls per lb. lint
		Middling	Strict low middling	Low middling			
Fox	555.9	238.72	228.99	215.37	36.2	1 1/16	201
Hi-Bred	547.5	223.93	215.72	203.13	41.2	15/16	139
Delfos 7343	531.9	226.55	217.24	204.21	37.6	1 1/16	185
Deltapine 15	522.9	221.13	211.98	199.17	38.9	1 1/16	181
Delfos 7272	518.2	225.67	215.56	201.83	35.8	1 3/32	194
Miller	516.2	217.93	209.93	198.06	36.1	31/32	172
Plains	514.5	220.41	211.40	198.80	36.6	1 1/16	170
Coker, wilt	509.0	222.76	212.83	199.35	35.0	1 3/32	179
Empire	503.2	217.29	208.49	196.16	35.3	1 1/16	158
Coker, staple	485.0	218.28	208.58	191.12	34.5	1 1/8	195
Hybrid 56	480.8	210.69	201.31	188.57	34.8	1 3/32	184
Delfos 9169	477.1	209.20	199.90	187.26	34.7	1 3/32	175
Stoneville 2B	455.0	192.98	185.24	174.78	36.9	1 1/32	160
Stoneville 2492	449.4	194.30	186.44	175.43	35.1	1 1/16	166
Arkot 2-1	447.3	197.03	188.31	176.46	34.0	1 3/32	177
Bobshaw 1A	441.9	188.56	181.04	170.88	35.9	1 1/32	195

Two new varieties, Fox and Arkot 2-1, have not been in the tests long enough to appear in the averages. They are a little earlier than many of the other varieties and should be considered where earliness is important.

Where trouble from fusarium wilt is mild it may be well to fertilize liberally and use one of the varieties now generally grown which may have only slight

tolerance to the disease. If, however, trouble from this disease is usually severe it may be well to use one of the more resistant varieties. Among the best of these are Plains, Coker wilt, and Empire. It is not possible to make definite statements concerning Verticillium wilt at this time.

All of the 1951 tests were well fertilized before planting with a complete fertilizer. Insect control was adequate and

Average results from cotton varieties, Newton

	Pounds lint per acre				Averages				
	1948	1949	1950	1951	Lint	Acres Value	Staple inches	Lint percent-age	Bolls per lb. lint
Bobshaw 1A (1) ---	471.9	245.1	555.7	452.2	431.2	180.02	1 1/32	37.6	223
Stoneville 2B	498.8	267.3	518.3	410.9	423.8	177.90	1 1/16	38.0	201
Hi-Bred -	515.4	273.6	420.3	466.5	418.9	155.38	7/8	42.7	175
Coker, wilt	489.8	258.0	510.2	401.0	414.7	172.34	1 1/32	37.6	218
Empire -	459.4	283.2	576.6	336.2	413.8	171.79	1 1/32	38.9	186
Deltapine 15	459.7	308.2	528.9	330.9	406.9	165.87	1 1/32	41.0	217
Miller -	501.6	194.1	495.5	412.5	400.9	164.64	31/32	38.2	205
Delfos 9169	450.8	232.7	479.3	367.4	382.5	161.56	1 1/16	37.5	202
Coker, staple	450.4	180.6	463.9	372.0	366.7	156.27	1 1/16	37.2	235
Delfos 7272 (2) ---	432.8	223.1	413.9	334.9	351.2	146.52	1 1/16	36.9	234

(1) Bobshaw 1, 1948 and 1949.

(2) Delfos 651, 1948, 1949 and 1950.

Cotton varieties, Newton, 1951

	Pounds lint per acre	Acres value seed and lint			Lint percent-age	Staple inches	Bolls per lb. lint
		Middling	Strict low middling	Low middling			
Hi-Bred -	466.5	184.25	182.15	171.42	42.0	27/32	216
Bobshaw 1A ---	452.2	188.89	181.88	171.48	37.9	31/32	263
Hybrid 56	414.6	176.48	169.44	159.90	36.3	1 1/32	249
Miller -	412.5	172.29	166.10	156.61	37.3	15/16	242
Stoneville 2B ---	410.9	172.46	165.68	156.43	37.9	1	235
Coker, wilt	401.0	168.78	162.17	153.14	37.4	1	255
Delfos 7343	376.6	157.12	150.71	142.05	39.9	1 1/32	259
Coker, staple ---	372.0	158.63	152.31	143.75	36.0	1 1/32	295
Delfos 9169	367.4	155.46	149.21	140.76	37.3	1 1/32	207
Arkot 2-1	360.8	153.77	147.64	139.34	36.1	1 1/32	234
Stoneville 2492 ..	351.0	148.16	142.37	134.47	36.9	1	223
Fox -	341.2	143.54	137.91	130.23	37.5	1	290
Empire -	336.2	140.49	134.94	127.37	38.7	1	212
Delfos 7272	334.9	140.96	135.44	127.90	37.4	1	285
Deltapine 15 ---	330.9	136.60	131.47	123.86	40.1	31/32	252
Plains -	317.8	134.00	128.76	121.60	37.1	1	272

especially thorough at Newton. The tests were handicapped by too little rain in the early part of the season and again at the critical stage of fruiting. For a short period early in July the Oakley test suffered from too much rain.

If low soil moisture and high temperature cause the cotton plants to wilt a great deal in mid-day flower buds and young bolls will be shed in proportion to the severity of the wilting. This contributed much to the low yields in these tests

in 1951. The very small boll sizes at Newton and Oakley are due to this in part.

The acre values were computed in the usual way. The lint prices were averages of ten weeks of the Memphis marketing season beginning in late August. Seed was valued at \$68.00 a ton. Values were computed for three grades in order to show how the value is reduced by deterioration due to weather and other damage.

Average results from cotton varieties, Holly Springs

	Pounds lint per acre					Averages				
	1947	1948	1948	1950	1951	Lint	Acre value	Staple inches	Lint percentage	Bolls per lb. lint
Delfos 9169	639	732	563	568	456	591	243.34	1 1/16	37.0	188
Coker, staple	621	731	547	566	374	568	232.17	1 1/16	37.4	204
Stoneville 2B	665	756	457	518	430	565	229.93	1 1/32	37.4	181
Coker, wilt	623	703	514	573	406	564	230.00	1 1/32	37.6	191
Miller	673	742	498	484	408	561	220.07	31/32	38.4	181
Hi-Bred	667	746	528	426	411	556	206.17	7/8	42.4	157
Empire	620	708	565	502	381	555	222.82	1 1/32	38.4	168
Deltapine 15	608	690	551	526	399	555	220.00	1 1/32	40.5	197
Delfos 7272 (1)	640	675	496	478	437	545	223.92	1 1/16	36.4	209
Bobshaw 1A (2)	624	657	447	534	424	537	217.62	1	37.2	205

(1) Delfos 651, 1947-50.

(2) Bobshaw 1, 1947-49.

Cotton varieties, Holly Springs, 1951

	Pounds lint per acre	Acre value seed and lint			Lint percentage	Staple inches	Bolls per lb. lint
		Middling	Strict low middling	Low middling			
Fox	474.3	197.90	190.54	179.64	38.1	31/32	237
Delfos 9169	455.7	192.51	184.76	174.28	37.6	1 1/32	201
Delfos 7272	436.9	183.16	175.95	166.12	38.1	1	223
Delfos 7343	436.0	180.94	173.75	163.94	40.0	1	206
Stoneville 2B	430.5	179.79	172.69	163.00	38.8	1	186
Arkot 2-1	429.3	182.22	175.13	165.47	36.0	1	200
Bobshaw 1A	423.8	176.69	170.33	160.59	37.6	15/16	219
Hybrid 56	415.2	174.65	168.22	158.67	36.7	31/32	219
Stoneville 2492	413.0	173.42	167.01	157.52	37.0	31/32	196
Hi-Bred	410.6	161.25	159.40	149.96	43.2	27/32	161
Miller	407.6	166.49	163.03	153.65	38.0	29/32	188
Coker, wilt	406.0	171.19	164.49	155.36	37.1	1	192
Plains	404.3	167.80	161.74	152.44	38.4	15/16	198
Deltapine 15	399.3	164.33	158.14	148.95	40.7	31/32	203
Empire	381.3	159.33	153.04	144.46	38.7	1	169
Coker, staple	373.6	158.65	152.30	143.70	36.7	1 1/32	219

Average results from cotton varieties, Oakley

	Pounds lint per acre			Averages				
	1948	1949	1951	Lint	Acre value	Staple inches	Lint percent-age	Bolls per lb. lint
Empire --	225.4	380.4	408.2	338.0	130.06	1 1/32	37.9	189
Hi-Bred --	262.7	301.7	423.8	329.4	115.33	27/32	42.1	182
Miller --	249.6	344.2	368.1	320.6	121.52	31/32	37.6	210
Deltapine 15	271.3	358.8	320.0	316.7	119.08	1	39.5	214
Stoneville 2B	240.5	286.8	388.9	305.4	119.44	1 1/32	36.3	220
Delfos 9169	230.8	257.2	414.7	300.9	119.69	1 1/16	36.0	210
Delfos 7272 (1)	229.7	322.4	325.2	292.4	113.85	1 1/16	35.8	235
Coker, staple	222.3	338.5	315.8	292.2	114.19	1 1/16	35.7	236
Bobshaw 1A (2)	217.2	265.0	382.5	288.2	113.10	1 1/32	35.8	228
Coker, wilt	227.2	300.1	334.4	287.2	111.80	1 1/32	36.5	223

(1) Delfos 651, 1948 and 1949.

(2) Bobshaw 1, 1948 and 1949.

Cotton varieties, Oakley, 1951

	Pounds lint per acre	Acre value seed and lint			Lint percent-age	Staple inches	Bolls per lb lint
		Middling	Strict low middling	Low middling			
Hi-Bred --	423.8	170.02	168.12	158.37	39.0	27/32	209
Delfos 9169	414.7	180.84	173.58	163.42	33.8	1 1/16	250
Empire --	408.2	175.18	168.24	158.85	35.0	1 1/32	219
Stoneville 2492	407.9	174.93	168.20	159.02	34.4	1	244
Stoneville 2B	388.9	167.34	160.92	152.17	33.9	1	269
Arkot 2-1	385.3	170.08	163.34	153.90	32.1	1 1/16	269
Bobshaw 1A	382.5	164.81	158.50	149.89	33.7	1	295
Miller --	368.1	157.21	151.69	143.22	33.8	15/16	255
Plains --	357.4	153.38	147.30	139.08	35.0	1 1/32	274
Fox --	357.1	154.27	148.20	139.98	34.0	1 1/32	314
Delfos 7343	346.1	149.21	143.33	135.37	34.3	1 1/32	320
Hybrid 56	337.0	146.60	140.87	133.12	33.0	1 1/32	270
Coker, wilt	334.4	145.93	140.08	131.89	33.7	1 1/16	262
Delfos 7272	325.2	140.78	135.09	127.12	34.9	1 1/16	289
Deltapine 15	320.0	135.66	130.38	123.18	36.2	1	281
Coker, staple	315.8	139.19	133.66	125.92	32.3	1 1/16	308