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Cotton Varieties
in the
Yazoo-Mississippi Delta
1944-1946

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COTTON VARIETIES IN THE YAZOO-MISSISSIPPI DELTA

By JAMES B. DICK and SIDNEY G. BRAIN

Cotton variety tests have been conducted for many years by the Delta Branch Station at Stoneville and upon plantations in representative sections of the Yazoo-Mississippi alluvial area to obtain information concerning the relative performance of the leading varieties with production conditions approximating those under which cotton is grown in the Delta. A continuous effort is made to adapt the variety tests to the current needs of producers, buyers, spinners, and oil mill operators, and to furnish information to all who are interested in the characteristics of the varieties of cotton tested.

More attention is being given to the spinning quality of cotton than ever before. Fiber properties which influence yarn strength and spinning quality most are length, tensile strength, and uniformity. These properties are reported upon, as in the three previous years. Other characteristics which have been determined are: Yield of seed cotton and of lint in pounds per acre, gin turn-out, number of bolls required to make a pound of seed cotton, earliness, and total money value per acre based upon Middling, Strict Low Middling, and Low Middling grades.

The yields of seed cotton are based upon the weights harvested from ten one-row plots at each location each season. The yields of lint are based upon the respective yields of seed cotton and gin turn-outs.

Gin turn-out values are the results of ginning ten 100-boll samples from each variety for each location.

The staple lengths of each variety for each location are determinations by classifiers of the State Cotton Cooperative Association, Greenwood, Mississippi, and of the Greenwood Office of the Board of Cotton Examiners, Production and Marketing Administration, U. S. Department of Agriculture.

The sizes of bolls are based upon the

average weight of ten 100-boll samples from each variety at each location.

The percentage of cotton from the first picking, which is considered a measure of earliness, is calculated by dividing the weight of the first picking by the weight of the total production.

The fiber tensile strength and the length uniformity of fiber are the findings from tests made of these cottons in the Knoxville Laboratory of the Division of Cotton and Other Fiber Crops, U. S. Department of Agriculture.

The money values per acre are based upon: (1) Yields of seed and lint, (2) staple lengths, and (3) seed grades. The values for three grades—Middling, Strict Low Middling, and Low Middling—are given. The average prices for cotton of the respective grades and several lengths are for 10 weeks of the 1946 marketing season, Memphis market. The seed is evaluated upon a basis of \$70 per ton, with premiums and discounts in accordance with official standards for grading cottonseed set up by the U. S. Department of Agriculture. The seed analyses were made by the Barrow-Agee Laboratory, Inc., Leland, Mississippi.

Differences representing significance between varietal averages for each of the characteristics are included in the bottom two lines of the tables. To be considered significant, the differences between any two varietal averages in a column must be greater than the item designated as "barely significant."

Rainfall was ample at each test location and original stands for the 1946 tests were good to excellent. Abnormally high rainfall during the early growing season was followed by a dry, late growing season and an excellent harvesting season.

The current report is divided into two parts: (1) The 1946 tests, and (2) the average of 2- and 3-year tests at the same location.

Table 1. Stoneville cotton variety test, 1946.

Variety	Yield per acre		Gin turn-out	Staple length	Bolls per lb. seed cotton	Percent picked first picking	Fiber tensile strength	Fiber length uniformity	Total money value per acre		
	Seed cotton	Lint							Mid-dling	Strict low mid-dling	Low mid-dling
	Lbs.	Lbs.	Pct.	1/32 in.	Bolls	Pct.	Lbs./sq.in.	Ratio	Dols.	Dols.	Dols.
Stoneville 2B	2325	746	32.1	35.3	63.6	43.9	79,300	86.6	329	320	289
Deltapine 15	2073	752	36.3	34.8	76.7	47.6	77,700	86.9	318	309	279
Delfos 9169	2140	695	32.5	35.0	67.5	44.0	77,200	84.7	307	298	270
Coker 100- Staple ('46)	2116	694	32.8	35.8	72.6	39.6	77,700	85.8	304	296	266
Coker 100- Wilt ('46)	2053	663	32.3	35.1	73.2	42.7	77,400	87.0	290	282	254
Bobshaw 1..	2054	649	31.6	34.8	69.9	45.3	80,600	86.7	286	278	252
Miller	2003	657	32.8	32.2	65.7	39.6	73,100	87.8	283	275	248
Bobdel	2059	622	30.2	35.4	74.6	55.9	81,200	84.4	280	273	247
Delfos 651..	1969	624	31.7	35.5	77.4	43.7	76,600	84.4	279	271	245
Delfos 444..	2077	588	28.3	36.0	81.9	50.1	71,200	84.7	270	263	237
Delfos 531C	1905	587	30.8	35.8	80.3	55.1	77,200	82.9	267	259	233
Wilds ('46)	1649	475	28.8	39.9	70.2	33.8	86,600	84.5	242	228	196
Dif. barely significant....	141	45	.4	.4	1.7	4.2	2,000	2.3	20	20	17
Dif. highly significant....	186	59	.6	.6	2.3	5.5	2,800	3.1	27	26	23

Varieties are arranged according to the average of the money values for Middling, Strict Low Middling, and Low Middling grades.

Table 2. Tunica cotton variety test, 1946.

Variety	Yield per acre		Gin turn-out	Staple length	Bolls per lb. seed cotton	Percent picked first picking	Fiber tensile strength	Fiber length uniformity	Total money value per acre		
	Seed cotton	Lint							Mid-dling	Strict low mid-dling	Low mid-dling
	Lbs.	Lbs.	Pct.	1/32 in.	Bolls	Pct.	Lbs./sq.in.	Ratio	Dols.	Dols.	Dols.
Bobshaw 1..	2529	875	34.6	34.7	69.6	35.5	87,100	86.8	377	366	331
Coker 100- Staple ('46)	2430	853	35.1	35.8	75.8	33.5	85,000	85.5	369	358	321
Coker 100- Wilt ('46)	2397	853	35.6	34.8	70.5	37.4	84,200	87.5	363	353	318
Miller	2358	861	36.5	32.5	65.0	34.9	83,100	87.6	361	351	316
Delfos 651..	2391	815	34.1	35.1	74.8	37.1	85,300	85.5	356	346	312
Stoneville 2B	2356	815	34.6	35.0	65.1	26.9	84,800	85.1	351	341	308
Delfos 9169	2217	785	35.4	35.5	66.6	28.6	83,300	85.6	340	330	297
Wilds ('46)	2200	678	30.8	40.5	73.0	46.2	94,500	86.0	342	321	273
Deltapine 15	1999	794	39.7	34.5	80.6	26.1	84,200	88.2	326	317	285
Bobdel	2193	706	32.2	34.9	72.7	47.3	89,300	85.4	311	303	274
Delfos 531C	2025	670	33.1	35.5	77.9	41.7	81,000	84.9	297	288	260
Delfos 444..	2015	613	30.4	36.0	81.8	46.1	78,500	87.2	279	270	243
Dif. barely significant....	189	65	.4	.5	2.6	5.5	3,300	2.6	29	28	25
Dif. highly significant....	251	86	.6	.7	3.5	7.3	4,500	3.5	38	37	33

Varieties are arranged according to the average of the money values for Middling, Strict Low Middling, and Low Middling grades.

Results of the 1946 Variety Trials

The 1946 variety trials were located at Stoneville, Tunica, Jonestown, Money, Valley Hill, Yazoo City, and Kelso Plantation, Cary, Mississippi. There are 12 varieties of cotton included. Most of them are grown commercially in the Delta.

In each test the varieties are arranged according to the average of the money value per acre for the 3 grades: Middling, Strict Low Middling, and Low Middling.

Stoneville Test

The Stoneville test was located at the Delta Branch Experiment Station. The soil is a sandy loam, typical of the banks along upper Deer Creek. A nitrogenous fertilizer was "bedded on" about 2 weeks before planting. The test was planted on April 21. The first picking was made September 9, and the second picking on October 24. Results of the test are given in table 1.

The leading varieties in the Stoneville test, based upon the average of the rankings of money value per acre for Middling, Strict Low Middling, and Low Middling grades were Stoneville 2B, Deltapine 15, Delfos 9169, and Coker 100-Staple (1946). There was no difference in ranking of varieties for the 3 grades.

Tunica Test

In cooperation with E. G. (Gene) Johnson, landowner, and H. J. Vickery, County Agent, a variety test was conducted in the northern part of the Delta in Tunica County, 9 miles south of Tunica on Highway 61. The test was on Forrestdale silty loam soil, classification number 425, commonly known as white oak or white sandy land. A nitrogenous fertilizer was "bedded on" and the test planted on April 23. Excessive rainfall during May damaged the test to a limited extent. Favorable conditions during June and July were followed by a hot, dry August. The plants were small but well fruited. The first picking was made on September 11, and the second pick-

ing on October 22. Results of the Tunica test are given in table 2.

The leading varieties were Bobshaw 1, Coker 100 Staple, Coker 100 Wilt, Miller, Delfos 651, and Stoneville 2B.

Jonestown Test

The test near Jonestown was conducted in cooperation with Carey Cocke, Jr., farm operator, and Harris Barnes, County Agent of Coahoma County, and was located on the Eagle Nest Plantation west of Jonestown. The soil is a sandy loam, generally well drained. A nitrogenous fertilizer was "bedded on" and the test planted on April 22. Excessive rains in June damaged the west end of the test and dwarfed the plants. Growth throughout the balance of the test was rank with considerable boll rot. Pathogenic wilt was present but was probably of little consequence. The first picking was made October 8, and the second picking on December 16. Results of the Jonestown test are given in table 3.

The varieties with highest average rankings are Deltapine 15, Coker 100 Staple, Stoneville 2B, Coker 100 Wilt, Miller, and Bobshaw 1.

Money Test

The Money variety trial was conducted in cooperation with H. L. Gary, president of Wildwood, Inc. The test was located on the east banks of the Tallahatchie River on Wildwood Plantation. The soil is a fine sandy loam and is well drained. A nitrogenous fertilizer was "bedded on" and the test planted April 26. Stands were very good. Boll weevils were plentiful late in the season. Heavy rains caused excessive growth and reduced yields considerably. The first and second pickings were made on September 20 and October 31, respectively. The results of the test conducted at Money are given in table 4.

Leading varieties in the Money test were Delfos 651, Bobshaw 1, Stoneville 2B, and Delfos 9169.

Table 3. Jonestown cotton variety test, 1946.

Variety	Yield per acre		Gin turn-out	Staple length	Bolls per lb. seed cotton	Percent picked first picking	Fiber tensile strength	Fiber length uniformity	Total money value per acre		
	Seed cotton	Lint							Mid-dling	Strict low mid-dling	Low mid-dling
	Lbs.	Lbs.	Pct.	1/32 in.	Bolls	Pct.	Lbs./sq.in.	Ratio	Dols.	Dols.	Dols.
Deltapine 15	2054	754	36.7	34.2	73.7	41.0	74,200	79.5	318	309	279
Coker 100- Staple ('46)	2195	700	31.9	35.7	71.8	36.3	75,800	79.0	311	301	270
Stoneville 2B	2166	691	31.9	34.6	63.2	34.5	77,900	77.8	305	296	269
Coker 100- Wilt ('46)	2121	674	31.8	34.5	70.8	30.4	73,400	83.1	295	286	259
Miller	2039	675	33.1	32.6	63.0	33.1	71,200	83.8	291	283	255
Bobshaw 1	2108	643	30.5	33.9	67.0	34.9	76,600	81.1	285	277	252
Delfos 9169	2021	631	31.2	34.9	66.4	35.0	76,300	78.4	280	273	247
Delfos 651	1947	594	30.5	35.2	75.8	38.0	75,800	76.1	268	261	236
Delfos 444	1839	506	27.5	35.5	80.9	45.0	69,800	75.9	234	228	207
Delfos 531C	1715	516	30.1	35.5	76.5	39.6	73,900	74.7	234	228	206
Wilds ('46)	1647	476	28.9	38.6	67.1	31.0	86,000	75.1	239	225	195
Bobdel ...	1679	502	29.9	34.6	72.6	46.1	78,300	80.7	225	219	199
Dif. barely significant	232	72	.6	.5	2.6	5.6	2,000	3.3	33	31	28
Dif. highly significant	307	95	.8	.7	3.5	7.5	2,800	4.4	43	42	37

Varieties are arranged according to the average of the money values for Middling, Strict Low Middling, and Low Middling grades.

Table 4. Money cotton variety test, 1946.

Variety	Yield per acre		Gin turn-out	Staple length	Bolls per lb. seed cotton	Percent picked first picking	Fiber tensile strength	Fiber length uniformity	Total money value per acre		
	Seed cotton	Lint							Mid-dling	Strict low mid-dling	Low mid-dling
	Lbs.	Lbs.	Pct.	1/32 in.	Bolls	Pct.	Lbs./sq.in.	Ratio	Dols.	Dols.	Dols.
Delfos 651	1815	554	30.5	35.9	78.5	66.4	81,000	85.3	251	244	220
Bobshaw 1	1784	558	31.3	34.9	70.5	61.3	83,700	86.5	245	239	216
Stoneville 2B	1667	527	31.6	35.3	69.1	63.6	82,600	84.5	231	225	203
Delfos 9169	1643	519	31.6	35.9	71.6	65.1	80,100	86.1	232	224	202
Coker 100- Wilt ('46)	1469	458	31.2	35.2	76.7	51.0	80,400	86.8	201	196	177
Coker 100- Staple ('46)	1414	450	31.8	36.2	77.8	60.3	81,700	86.8	199	193	173
Delfos 531C	1434	427	29.8	36.7	83.3	74.5	79,600	84.9	199	191	170
Delfos 444	1509	406	26.9	36.6	83.4	65.5	77,200	85.6	191	184	165
Miller	1334	436	32.7	33.2	69.7	60.3	78,300	88.9	187	182	165
Deltapine 15	1172	417	35.6	35.1	86.5	77.7	83,700	88.1	176	171	153
Bobdel	1268	364	28.7	35.5	78.6	74.7	85,000	87.5	164	160	145
Wilds ('46)	853	235	27.5	40.3	75.7	56.7	90,900	84.2	121	114	97
Dif. barely significant	178	58	.5	.4	3.5	5.5	2,000	1.8	25	25	22
Dif. highly significant	236	77	.7	.6	4.6	7.3	2,800	2.4	34	32	29

Varieties are arranged according to the average of the money values for Middling, Strict Low Middling, and Low Middling grades.

Table 5. Valley Hill cotton variety test, 1946.

Variety	Yield per acre		Gin turn-out	Staple length	Bolls per lb. seed cotton	Percent picked first picking	Fiber tensile strength	Fiber length uniformity	Total money value per acre		
	Seed cotton	Lint							Mid-dling	Strict low mid-dling	Low mid-dling
Stoneville 2B	1676	561	33.5	34.7	64.7	63.7	83,300	85.2	243	236	214
Miller	1611	556	34.5	32.9	64.9	62.5	81,000	84.9	237	230	209
Bobshaw 1	1626	545	33.5	33.9	74.7	59.4	88,200	87.4	235	229	207
Delfos 9169	1613	534	33.1	35.4	66.4	65.5	80,400	85.5	235	228	206
Coker 100-											
Staple ('46)	1539	511	33.2	35.9	72.1	54.7	83,100	85.4	224	218	195
Deltapine 15	1381	515	37.3	35.1	76.6	62.7	83,100	84.8	215	209	188
Delfos 651..	1417	453	32.0	35.2	74.3	63.7	80,600	84.7	201	196	177
Coker 100-											
Wilt ('46)	1390	453	32.6	35.0	71.0	54.7	81,700	84.8	198	192	173
Delfos 444..	1432	410	28.6	36.6	81.0	69.5	75,800	84.3	192	184	165
Bobdel	1347	411	30.5	35.3	73.2	68.9	86,400	86.0	184	179	162
Delfos 531C	1155	359	31.1	36.1	76.9	71.5	80,600	84.4	162	158	142
Wilds ('46)	1085	321	29.6	40.0	72.4	53.8	91,800	84.4	162	153	131
Dif. barely significant.	142	46	.4	.5	2.1	4.7	2,600	2.3	20	20	18
Dif. highly significant.	188	60	.6	.6	2.8	6.2	3,400	3.1	27	26	23

Varieties are arranged according to the average of the money values for Middling, Strict Low Middling, and Low Middling grades.

Table 6. Yazoo City cotton variety test, 1946.

Variety	Yield per acre		Gin turn-out	Staple length	Bolls per lb. seed cotton	Fiber tensile strength	Fiber length uniformity	Total money value per acre		
	Seed cotton	Lint						Mid-dling	Strict low mid-dling	Low mid-dling
Coker 100-Staple (1946)	1725	555	32.2	35.9	68.6	76,900	84.4	246	239	215
Delfos 9169	1749	544	31.1	35.2	63.7	77,400	82.8	244	238	215
Stoneville 2B	1693	528	31.2	34.7	62.0	81,500	83.8	235	229	207
Delfos 651	1516	462	30.5	35.7	71.7	77,900	84.0	210	204	184
Bobshaw 1	1544	469	30.4	34.6	67.6	78,800	84.6	209	204	185
Delfos 531C	1511	450	29.8	36.2	72.3	77,400	83.1	208	201	181
Deltapine 15	1332	486	36.5	34.8	71.1	80,100	84.7	206	200	180
Coker 100-Wilt (1946)	1469	457	31.1	35.3	66.7	77,700	84.5	203	197	178
Delfos 444	1560	434	27.8	35.9	76.0	73,600	84.7	203	197	177
Miller	1401	461	32.9	32.6	61.9	73,900	86.5	199	194	175
Bobdel	1438	417	29.0	35.8	69.9	82,800	84.8	191	186	168
Wilds (1946)	1066	306	28.7	40.1	66.5	89,600	80.9	157	147	126
Dif. barely significant	185	58	.4	.5	1.7	3,100	3.2	26	25	23
Dif. highly significant	245	77	.6	.7	2.3	4,200	4.2	35	34	30

Varieties are arranged according to the average of the money values for Middling, Strict Low Middling, and Low Middling grades.

Valley Hill Test

In cooperation with L. S. Heriphill, landowner, a test was conducted at Valley Hill in Carroll County about 6 miles east of Greenwood on Highway 82. The test is located at the eastern border of the Delta and is on a light colored, well drained silt loam made up of outwash from the hills. A nitrogenous fertilizer was "bedded on" before planting. The test was planted April 19. Good stands were obtained on most varieties but early "damping off" of seedlings resulted in irregular stands. However, later counts showed an average stand for all varieties. Damage from pathogenic wilt was severe on the Delfos 531C and Delfos 444 varieties. Coker 100 Wilt and Miller were highly resistant to the wilt. Boll weevil infestation was heavy, and the yield of all varieties was affected. First and second pickings were made on September 19 and October 29, respectively. The results of the Valley Hill test are given in table 5.

Stoneville 2B, Miller, Bobshaw 1, Delfos 9169, and Coker 100 Staple were the leading money-value-per-acre producers in the Valley Hill test.

Yazoo City Test

In cooperation with Marx Schaefer, landowner, and A. R. Ruby, County Agent, the Yazoo City variety trial was conducted on the Schaefer Farm 3 miles west of Yazoo City. The soil is a fine sandy loam and is well drained. A nitrogenous fertilizer was "bedded on" and the test planted on April 18. The plants grew tall and the foliage was very heavy. Boll weevils appeared early and caused serious damage to all varieties, entirely destroying the top crop. The entire production was harvested on September 30, and no data on "earliness" are available. Results of the Yazoo City test are given in table 6.

Leading average money value producers were Coker 100 Staple, Delfos 9169, and Stoneville 2B.

Kelso Test

The Kelso test was conducted in cooperation with James Hand of Kelso Plantation and C. L. Cary, County Agent of Sharkey County. It is located on the Sharkey-Issaquena county line 11 miles south of Cary on Highway 61. The soil is very productive fine sandy loam, well drained, and typical of lower Deer Creek soil. The test was planted in check rows on April 29. The rows were 40 inches apart each way and were cultivated with four-row equipment throughout. Six plants were left in each hill. Excessive rains occurred during the early season and the boll weevil infestations were very heavy. The plants were tall with rank foliage. Considerable boll rot occurred. The cotton was late in opening, and the entire production was picked on November 22. No data on earliness were available. Results of the Kelso test are given in table 7.

Deltapine 15, Stoneville 2B, Coker 100 Staple (1946), and Miller were the highest ranking varieties in total value per acre.

Averages of Results from 2- and 3-Year Variety Studies

The yield of cotton is greatly affected by seasonal conditions. Average results of the several variety tests conducted at different locations in the Delta in any one year provide interesting and useful information on some varietal characteristics. It is believed that the average results of tests conducted over a period of several years in a given locality provide the grower in the vicinity of the test or farming on a similar soil type, with more reliable information on the behavior of a variety under average conditions. Average results of tests conducted at the same locality during the years from 1944 to 1946 are given.

Variety trials similar to those described above were conducted during the 3 years, 1944 to 1946, at Stoneville,

Table 7. Kelso cotton variety test, 1946.

Variety	Yield per acre		Gin turn-out	Staple length	Bolls per lb. seed cotton	Fiber tensile strength	Fiber length uniformity	Total money value per acre		
	Seed cotton	Lint						Pct.	1/32 in.	Bolls
Deltapine 15.....	1361	498	36.6	34.4	75.3	76,100	81.1	211	205	185
Stoneville 2B.....	1484	476	32.1	34.6	64.2	78,500	80.4	210	204	185
Coker 100-Staple (1946).....	1416	462	32.6	35.4	72.8	75,800	81.6	203	197	178
Miller.....	1334	456	34.2	32.6	66.0	73,600	84.5	195	190	172
Delfos 9169.....	1351	426	31.5	35.0	65.9	76,600	79.3	189	184	167
Coker 100-Wilt (1946).....	1342	433	32.3	34.4	72.1	75,000	82.9	189	184	166
Delfos 531C.....	1371	410	29.9	35.2	76.4	75,600	78.8	187	182	165
Bobshaw 1.....	1338	421	31.5	34.2	71.4	79,600	82.5	186	181	164
Wilds (1946).....	1307	380	29.1	38.5	69.3	88,000	83.0	190	180	156
Delfos 444.....	1430	400	28.0	35.2	81.4	73,100	80.1	184	179	163
Delfos 651.....	1297	405	31.2	35.0	77.3	77,900	80.2	182	177	160
Bobdel.....	1273	386	30.3	34.9	73.3	81,700	80.4	173	169	153
Dif. barely significant.....	134	30	.6	.5	2.4	2,600	2.4	18	18	16
Dif. highly significant.....	177	53	.8	.7	3.2	3,400	3.2	24	23	21

Varieties are arranged according to the average of the money values for Middling, Strict Low Middling, and Low Middling grades.

Table 8. Yield and other data from cotton variety tests Stoneville; 3-year averages, 1944-46.

Variety	Yield per acre		Gin turn-out	Staple length	Bolls per lb. seed cotton	Percent picked first picking	Fiber tensile strength	Fiber length uniformity	Total money value per acre		
	Seed cotton	Lint							Pct.	1/32 in.	Bolls
Stoneville 2B	2662	902	33.9	35.3	62.7	40.6	82,000	82.2	314	297	262
Deltapine**	2364	910	38.5	34.7	74.0	39.9	77,900	84.1	297	282	250
Coker 100*	2435	850	34.9	35.6	69.5	40.3	80,000	80.7	296	278	242
Bobshaw 1	2477	832	33.6	34.7	68.4	44.2	83,500	83.4	281	268	239
Miller.....	2469	864	35.0	32.0	62.4	42.9	77,500	85.5	275	265	238
Bobdel.....	2405	765	31.8	35.4	71.5	52.4	84,200	82.1	270	258	228
Delfos 651..	2284	747	32.7	35.9	76.1	45.2	78,800	79.8	275	257	223
Delfos 444..	2463	722	29.3	36.3	81.4	46.1	75,100	81.7	273	255	221
Delfos 531C	2262	722	31.9	36.3	78.0	50.7	78,800	78.9	271	253	218
Wilds***..	2007	622	31.0	40.2	69.7	35.4	89,600	79.9	264	241	191

*Coker 100-8 in 1944; Coker 100-Staple Str. 1 in 1945; Coker 100-Staple (1946) in 1946.

**Deltapine 14 in 1944 and 1945; Deltapine 15 in 1946.

***Wilds 16 in 1944, Wilds 17 in 1945, Wilds (1946) in 1946.

Varieties are arranged according to the average of the money values for Middling, Strict Low Middling, and Low Middling grades.

Money, Valley Hill, Yazoo City, and Kelso, and during the years 1945 and 1946 at Jonestown. The 1946 test near Tunica was on Forrestdale silty

loam soil, and was several miles south of the land on which the 1944 test was conducted. The 1944 test was on Dundee silt loam. The 1944 and 1946 tests are

averaged to obtain the results and are shown in table 9.

Methods used in conducting the tests, collecting samples, and analyzing data were the same as outlined for the 1946 tests. Descriptions of the 1944 and 1945 tests, with results of each test, are given

in bulletins 416 and 435 of the Mississippi Agricultural Experiment Station. The 1946 tests were described earlier in this report.

The 1944 growing season in the Yazoo-Mississippi Delta was characterized by a marked deficiency of soil mois-

Table 9. Yield and other data from cotton variety tests Tunica; 2-year averages, 1944 and 1946.

Variety	Yield per acre		Gin turn-out	Staple length	Bolls per lb. seed cotton	Percent picked first picking	Fiber tensile strength	Fiber length uniformity	Total money value per acre		
	Seed cotton	Lint							Mid-dling	Strict low mid-dling	Low mid-dling
	Lbs.	Lbs.	Pct.	1/32 in.	Bolls	Pct.	Lbs./sq.in.	Ratio	Dols.	Dols.	Dols.
Bobshaw 1..	2187	741	33.9	35.0	67.5	36.9	82,900	82.9	282	270	242
Coker 100*	2097	738	35.2	35.8	72.2	39.7	80,500	81.6	281	268	236
Stoneville 2B	2143	731	34.1	35.2	62.2	34.9	81,000	81.9	276	263	234
Miller	1990	720	36.2	32.7	61.7	43.3	78,800	85.3	260	251	226
Deltapine***	1862	728	39.1	35.0	78.2	32.4	79,600	84.3	262	249	221
Delfos 651..	1948	643	33.0	35.6	73.0	40.3	80,700	82.1	257	246	218
Wilds***.....	1823	565	31.0	40.5	70.4	47.4	90,600	81.7	258	239	196
Bobdel	1938	612	31.6	35.5	71.4	48.4	84,700	84.0	243	231	205
Delfos 531C	1904	617	32.4	35.9	75.8	44.2	78,000	81.0	243	231	204
Delfos 444..	1912	551	28.8	36.3	80.8	45.4	75,100	83.0	227	215	189

*Coker 100-8 in 1944 and Coker 100-Stable (1946) in 1946.

**Deltapine 14 in 1944 and Deltapine 15 in 1946.

***Wilds 16 in 1944 and Wilds (1946) in 1946.

Varieties are arranged according to the average of the money values for Middling, Strict Low Middling, and Low Middling grades.

Table 10. Yield and other data from cotton variety tests Jonestown; 2-year averages, 1945 and 1946.

Variety	Yield per acre		Gin turn-out	Staple length	Bolls per lb. seed cotton	Percent picked first picking	Fiber tensile strength	Fiber length uniformity	Total money value per acre		
	Seed cotton	Lint							Mid-dling	Strict low mid-dling	Low mid-dling
	Lbs.	Lbs.	Pct.	1/32 in.	Bolls	Pct.	Lbs./sq.in.	Ratio	Dols.	Dols.	Dols.
Coker 100- Staple*.....	1807	585	32.4	36.4	71.0	53.6	78,300	75.6	237	225	196
Deltapine***	1672	624	37.3	34.9	75.2	52.6	76,000	78.5	234	224	200
Delfos 9169	1806	578	32.0	35.4	65.1	53.6	76,800	76.4	226	216	193
Bobshaw 1..	1867	579	31.0	34.6	66.4	53.5	79,600	78.6	224	215	194
Stoneville 2B	1769	571	32.3	35.0	62.7	51.1	79,100	76.4	224	215	193
Miller	1801	605	33.6	32.8	60.7	49.4	74,100	80.8	223	215	193
Delfos 651..	1673	512	30.6	35.9	73.4	57.9	77,100	74.8	209	199	177
Bobdel	1651	495	30.0	35.5	71.2	61.1	80,800	78.6	198	188	166
Delfos 531C	1577	481	30.5	36.2	75.5	57.8	76,100	73.7	196	186	154
Delfos 444..	1602	434	27.1	36.4	80.0	60.4	72,100	74.7	186	177	155
Wilds***.....	1274	372	29.2	39.8	66.6	36.7	86,200	75.2	175	162	135

*Coker 100-Staple Str. 1 in 1945; Coker 100-Staple (1946) in 1946.

**Deltapine 14 in 1945; Deltapine 15 in 1946.

***Wilds 17 in 1945; Wilds (1946) in 1946.

Varieties are arranged according to the average of the money values for Middling, Strict Low Middling, and Low Middling grades.

ture during the boll-maturation period. The staple lengths of all varieties were shorter than normal. Excessive amounts of rainfall during the planting, growing and harvesting seasons occurred at all locations in 1945. The amount of rainfall during the early 1946 growing season was generally excessive, followed by a

dry late growing season and excellent harvesting season. Staple lengths were about normal.

The yield of seed cotton and lint, gin turn-out, staple length, boll size, earliness, fiber tensile strength, uniformity of fiber length, and total money values, based upon Middling, Strict Low Mid-

Table 11. Yield and other data from cotton variety tests Money; 3-year averages, 1944-46.

Variety	Yield per acre		Gin turn-out	Staple length	Bolls per lb. seed cotton	Percent picked first picking	Fiber tensile strength	Fiber length uniformity	Total money value per acre		
	Seed cotton	Lint							Mid-dling	Strict low mid-dling	Low mid-dling
	Lbs.	Lbs.	Pct.	1/32 in.	Bolls	Pct.	Lbs./sq.in.	Ratio	Dols.	Dols.	Dols.
Bobshaw 1..	2091	686	32.8	35.0	68.3	58.2	80,600	80.9	235	224	199
Stoneville 2B	2049	680	33.2	35.3	63.9	58.4	80,600	79.0	234	222	196
Delfos 651..	1939	615	31.7	36.1	73.9	62.0	79,000	77.5	229	214	187
Coker 100*..	1781	609	34.2	35.9	71.6	55.2	78,200	78.3	212	198	173
Deltapine**..	1697	643	37.9	34.9	77.7	59.0	78,000	82.4	207	196	173
Delfos 531C	1807	567	31.4	36.3	77.2	65.2	77,700	77.7	209	195	170
Delfos 444..	1942	546	28.1	36.6	80.1	60.1	73,700	78.8	207	194	168
Miller	1754	609	34.7	32.7	63.1	58.3	76,500	83.5	193	186	167
Bobdel	1727	523	30.3	35.4	72.6	65.2	83,000	81.1	185	175	155
Wilds***.....	1284	380	29.6	40.2	70.2	50.4	88,500	78.2	161	147	116

*Coker 100-8 in 1944; Coker 100-Staple Str. 1 in 1945; Coker 100-Staple (1946) in 1946.

**Deltapine 14 in 1944 and 1945; Deltapine 15 in 1946.

***Wilds 16 in 1944; Wilds 17 in 1945. Wilds (1946) in 1946.

Varieties are arranged according to the average of the money values for Middling, Strict Low Middling, and Low Middling grades.

Table 12. Yield and other data from cotton variety tests Valley Hill; 3-year averages, 1944-46.

Variety	Yield per acre		Gin turn-out	Staple length	Bolls per lb. seed cotton	Percent picked first picking****	Fiber tensile strength	Fiber length uniformity	Total money value per acre		
	Seed cotton	Lint							Mid-dling	Strict low mid-dling	Low mid-dling
	Lbs.	Lbs.	Pct.	1/32 in.	Bolls	Pct.	Lbs./sq.in.	Ratio	Dols.	Dols.	Dols.
Stoneville 2B	1287	432	33.6	34.7	64.7	62.4	79,400	78.8	155	148	133
Bobshaw 1..	1279	425	33.2	34.1	71.3	63.5	82,500	80.9	151	145	130
Miller	1206	425	35.2	32.5	64.6	62.3	76,600	81.9	145	141	127
Coker 100*..	1156	398	34.4	35.5	71.6	63.8	78,100	78.2	144	137	120
Deltapine**..	1049	399	38.0	35.0	77.1	57.0	77,700	80.7	138	132	117
Bobdel	1207	371	30.7	35.2	71.6	70.9	82,700	80.4	135	129	115
Delfos 651..	1047	333	31.8	35.4	74.5	63.6	77,500	78.5	127	120	107
Delfos 444..	1124	320	28.5	36.2	80.4	70.7	72,200	78.4	127	120	105
Delfos 531C	872	275	31.5	36.0	78.8	69.5	76,800	76.5	105	100	88
Wilds***.....	814	243	29.8	39.8	72.9	57.1	87,900	76.7	106	98	80

*Coker 100-8 in 1944; Coker 100-Staple Str. 1 in 1945; Coker 100-Staple (1946) in 1946.

**Deltapine 14 in 1944 and 1945; Deltapine 15 in 1946.

***Wilds 16 in 1944; Wilds 17 in 1945; Wilds (1946) in 1946.

****Based on 1944 and 1946 tests.

Varieties are arranged according to the average of the money values for Middling, Strict Low Middling, and Low Middling grades.

Table 13. Yield and other data from cotton variety tests Yazoo City; 3-year averages, 1944-46

Variety	Yield per acre		Gin turn-out	Staple length	Bolls per lb. seed cotton	Percent picked first picking****	Fiber tensile strength:	Fiber length uniformity	Total money value per acre		
	Seed cotton	Lint							Mid-dling	Strict low mid-dling	Low mid-dling
	Lbs.	Lbs.	Pct.	1/32 in.	Bolls	Pct.	Lbs./sq.in.	Ratio	Dols.	Dols.	Dols.
Stoneville 2B	2069	697	33.7	34.7	64.5	82.6	79,300	78.7	235	224	199
Coker 100*	1986	695	35.0	35.6	72.1	78.8	76,100	78.5	237	223	195
Deltapine**	1880	729	38.8	34.4	76.1	77.6	76,100	81.4	229	219	194
Bobshaw 1.	2033	675	33.2	34.6	69.8	80.0	79,000	80.0	229	218	194
Delfos 531C	1920	614	32.0	35.9	77.9	85.8	76,500	77.0	219	205	180
Delfos 651	1915	617	32.2	35.5	75.1	84.4	76,600	77.8	218	205	181
Delfos 444	1989	575	28.9	35.9	81.9	82.7	72,900	79.5	211	198	173
Miller	1862	655	35.2	32.3	63.3	73.7	74,100	82.6	206	198	178
Bobdel	1799	556	30.9	35.3	73.0	84.7	81,200	79.9	197	187	166
Wilds***	1547	473	30.6	39.9	69.0	74.2	87,500	75.8	203	185	147

*Coker 100-8 in 1944; Coker 100-Staple Str. 1 in 1945; Coker 100-Staple (1946) in 1946.

**Deltapine 14 in 1944 and 1945; Deltapine 15 in 1946.

***Wilds 16 in 1944; Wilds 17 in 1945; Wilds (1946) in 1946.

****Based on 1944 and 1945 tests.

Varieties are arranged according to the average of the money values for Middling, Strict Low Middling, and Low Middling grades.

Table 14. Yield and other data from cotton variety tests Kelso; 3-year averages, 1944-46.

Variety	Yield per acre		Gin turn-out	Staple length	Bolls per lb. seed cotton	Percent picked first picking****	Fiber tensile strength:	Fiber length uniformity	Total money value per acre		
	Seed cotton	Lint							Mid-dling	Strict low mid-dling	Low mid-dling
	Lbs.	Lbs.	Pct.	1/32 in.	Bolls	Pct.	Lbs./sq.in.	Ratio	Dols.	Dols.	Dols.
Stoneville 2B	1747	573	32.8	35.0	64.0	73.8	77,200	77.8	201	189	168
Delfos 531C	1713	528	30.8	35.8	76.6	82.5	74,300	75.3	196	184	161
Coker 100*	1638	550	33.6	35.6	72.1	76.4	74,900	77.6	193	182	159
Deltapine**	1493	563	37.7	34.8	75.1	73.9	73,300	79.5	188	179	159
Delfos 651	1636	510	31.2	35.5	76.1	87.9	75,000	76.8	186	175	154
Bobshaw 1.	1645	531	32.3	34.5	70.1	81.4	78,100	80.1	182	173	155
Delfos 444	1717	474	27.6	36.0	82.5	70.2	71,000	77.3	182	170	149
Miller	1529	531	34.7	32.8	64.1	78.5	72,600	81.8	173	167	150
Bobdel	1524	471	30.9	35.4	73.1	81.9	79,100	78.5	170	160	141
Wilds****	1364	402	29.5	39.5	68.3	74.7	86,000	78.3	173	159	128

*Coker 100-8 in 1944; Coker 100-Staple Str. 1 in 1945; Coker 100-Staple (1946) in 1946.

**Deltapine 14 in 1944 and 1945; Deltapine 15 in 1946.

***Wilds 16 in 1944; Wilds 17 in 1945; Wilds (1946) in 1946.

****Based on 1944 only.

Varieties are arranged according to the average of the money values for Middling, Strict Low Middling, and Low Middling grades.

dling, and Low Middling grades are given in tables 8 to 14 for the respective locations.

The yields of seed cotton were determined by averaging the seed cotton yields obtained during each of the seasons that the tests were conducted at a

given locality. The yield of lint was obtained by multiplying the average gin turn-out by the average yield of seed cotton per acre.

The gin turn-out, the staple length, the number of bolls required for a pound of seed cotton, the percent of seed cotton

picked during the first picking, the fiber tensile strength, and the fiber length uniformity ratio, were determined by averaging the values obtained for each variety during the seasons that the tests were conducted at a given location.

The total money values per acre for each grade were obtained by averaging the total money-per-acre values for the 2- or 3- year period for that particular grade for each variety. Money values for Middling, Strict Low Middling and Low Middling grades were averaged, and in each table the varieties are arranged according to these averages.

During the 3-year period, 1944-1946 the leading varieties at Stoneville were Stoneville 2-B, Deltapine, Coker 100, and Bobshaw 1.

Bobshaw 1, Coker 100, Stoneville 2B, Miller and Deltapine were the leading

varieties at Tunica for the 2 years, 1944 and 1946.

At Jonestown the leading money-value producing varieties during the 2-year period, 1945 and 1946, were Coker 100 Staple, Deltapine, Delfos 9169, Bobshaw 1, Stoneville 2B and Miller.

Leading varieties at Money for the 3-year period were Bobshaw 1, Stoneville 2B and Delfos 651.

Stoneville 2B, Bobshaw 1, Miller and Coker 100 were leading money-value producers during the 3-year period at Valley Hill.

Leading varieties at Yazoo City for the 3-year period were Stoneville 2B, Coker 100, Deltapine and Bobshaw 1.

At Keso the highest ranking varieties were Stoneville 2B, Delfos 531C, Coker 100 and Deltapine.