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Cotton Variety Tests
in the
Yazoo-Mississippi Delta
1946-49

MISSISSIPPI STATE COLLEGE
AGRICULTURAL EXPERIMENT STATION
FRANK J. WELCH, Director

SUMMARY

The 1946 tests were described in bulletin 445 and the 1947 tests in bulletin 458 of the Mississippi Agricultural Experiment Station and in several issues of Mississippi Farm Research. The 1948 tests and the 1949 tests are described here and the tables presented herewith give detailed information on these tests and for the 2- and 3-year averages at each location.

In all tables the varieties are arranged according to the averages of the money-per-acre values for Middling, Strict Low Middling, and Low Middling grades.

Results at each location may be summarized as follows:

Stoneville: For 1948 the leading varieties were Delfos 9169, Empire, Deltapine 15, and Delfos 651. In 1949 Delfos 9169, Empire, Delfos 651, Deltapine 15, and Coker 100 Staple led. For the three-year period 1947-1948-1949 the high varieties were Delfos 9169, Empire, Deltapine 15 and Delfos 651.

Tunica: In the 1949 test leading varieties were Coker 100 Staple, Coker 100 Wilt, Empire, Delfos 651, and Delfos 9169. Averages for the two tests, 1947 and 1949, showed Stoneville 2B, Delfos 9169, Empire and Coker 100 Wilt to be the leading varieties.

Jonestown: For the 1948 test the highest money-value varieties were Delfos 651, Coker 100 Wilt, Miller, Empire, Deltapine 15 and Delfos 9169, closely grouped: the three-year average for 1946-

1948 places Delfos 9169, Stoneville 2B, Coker 100 Wilt and Deltapine as leaders.

Valley Hill: The leading varieties in the 1948 test were Coker 100 Wilt, Delfos 9169, Bobshaw 1, Deltapine 15 and Empire, two of which are highly tolerant to Fusarium wilt. For the 1946-47-48 period Delfos 9169, Stoneville 2B, Miller and Coker 100 Wilt led.

Money. For the 1948 and 1949 tests the leading varieties were: 1948; Delfos 9169, Delfos 651, Stoneville 2B, Empire, Bobshaw and Deltapine: 1949; Delfos 9169, Empire, Bobshaw, Deltapine 15 and Coker 100 Staple. For the three-year (1947-1949) averages the leaders were Delfos 9169, Empire, Delfos 651, and Stoneville 2B.

Yazoo City: Leaders in the 1948 test were Empire, Delfos 9169, Deltapine 15, Delfos 651 and Coker 100 Wilt. In the 1949 test, Delfos 9169, Delfos 651, Deltapine 15 and Coker 100 Staple. Averages for 1947-1949 placed Delfos 9169, Deltapine 15 and Delfos 651 on top, with Stoneville 2B, Coker 100 Wilt, and Empire grouped closely in fourth place.

Kelso: For the 1948 test the leading commercial varieties were Delfos 9169, Miller, Coker 100 Wilt, Coker 100 Staple and Empire. Averages for the three-years, 1946 to 1948, place the money values of these six varieties very close together—Coker 100 Staple, Delfos 9169, Miller, Stoneville 2B, Coker 100 Wilt and Deltapine.

Cotton Variety Tests in the Yazoo-Mississippi Delta, 1946-49

By JAMES B. DICK and EARLY C. EWING, JR.¹

One of the most important services rendered Delta cotton farmers by the Delta Branch Station over the last four decades has been the study and testing of the many and sundry cotton varieties offered for sale by seedsmen and commercial breeders. These studies have served to determine which varieties could be produced to best advantage in the Delta and which could be relied upon to give highest returns per acre under average conditions. Hundreds of varieties have been impartially tested in the many variety yield tests conducted in cooperation with county agents and interested planters in representative sections of the Yazoo-Mississippi alluvial area over this extensive period. The information obtained and published has been invaluable.

Changing economic conditions, consumer demand, and improved spinning machinery and methods have caused a gradual shift in production of Delta cotton from the fine, long-staple varieties to varieties with from 1-1/16 to 1-5/32 inch staple. Short cotton has never been produced to advantage in the alluvial section of Mississippi and present demand, price range, and labor conditions prohibit the extensive planting of the extra long staple varieties which produce less and require special handling.

Many new varieties and strains of cotton are studied each year at the Delta Station in strains tests, but the "standard variety tests" conducted throughout the Delta embrace only a limited number

of current strains of commercial varieties which are commonly grown in the Delta and new varieties which have "graduated with honors" from the larger strains tests.

Although the variety trials must of necessity be conducted on a limited plot basis, every effort is made to have them represent actual plantation production practices. All plots are randomized, replicated several times, and the data is subjected to statistical analysis.

Characteristics which are determined and reported upon are: yield of seed cotton and of lint in pounds per acre, gin turnout, staple length, number of bolls per pound of seed cotton, earliness, fiber tensile strength, and fiber length uniformity. Total money value per acre is given, based upon Middling, Strict Low Middling and Low Middling grades.

Yields of seed cotton are based upon weights harvested from all plots at each location. Yields of lint are based upon yields of seed cotton and gin turnouts.

For the Stoneville test the gin turnout, staple length, and fiber properties were determined from ten 100-boll samples from each variety. For the other locations 2-pound samples were drawn from the harvested seed cotton of all rows of four series, providing four samples of each variety.

Staple length determinations were made by the Staple Cotton Cooperative Association, Greenwood, Mississippi, and by the Greenwood office of the Board of Cotton Examiners, Production and Marketing Administration, United States Department of Agriculture.

Boll sizes are given only for the Stoneville test and are based upon the average weight of ten 100-boll samples from each variety. Relative boll size of varieties will

¹Agronomist and Associate Breeder, respectively. This report is based upon results from cooperative research conducted by the Mississippi Agricultural Experiment Station and Division of Cotton and Other Fiber Crops, Bureau of Plant Industry, Soils and Agricultural Engineering, United States Department of Agriculture.

hold for the other locations, within reasonable limits.

The percentage of cotton obtained at first picking, which is considered a measure of earliness, was determined by dividing the weight of the first picking by the weight of the total production.

The fiber tensile strength and the fiber length uniformity of these cottons were determined by the Knoxville Laboratory of the Division of Cotton and Other Fiber Crops, United States 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 the three grades, Middling, Strict Low Middling, and Low Middling, are given. The average prices for cotton of the respective grades and several staple lengths for the active Memphis spot cotton market for September and October were used. The seed were evaluated on a basis of average market price, with premiums and discounts in accordance with official standards for grading cottonseed set up by the United States Department of Agriculture. Analyses of samples of seed taken at the first picking were made in the Stoneville Laboratory of the Production and Marketing Administration

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 difference between any two varietal averages in a column must be greater than the item designated as "barely significant." Varieties mentioned as leading varieties generally fall within the range of barely significant difference below the variety with highest value per acre. In some tests several of the varieties are so closely grouped in value per acre that there is no clear cut line of differentiation, and the several varieties are cited.

The current report is divided into three parts: (1) The individual 1948 tests, (2)

the 1949 tests, and (3) the average of tests for two or three years within the 1946-49 period at the same location.

1948 Variety Trials

The season of 1948 was a very favorable one for cotton production and resulted in a "bumper crop" in the middle and lower Delta. Field averages of 1-1/2 bales per acre were not unusual in these sections. In the North Delta much cotton was planted late because of rainy weather and failed to mature fully before the unusually early killing frosts of October 21 and 22, resulting in reduced yields. Weevil damage was low. Good harvesting conditions prevailed during September and October.

During the 1948 season the Delta Branch Experiment Station planted variety trials at Stoneville, Tunica, Jones-town, Money, Valley Hill, Yazoo City and Kelso Plantation. All tests were harvested and considered valid except the Tunica test which had to be replanted and was not harvested because the unfavorable weather of November caused excessive wastage that could not be computed.

Ten varieties were included in these tests, eight of which are commercially grown in the Delta. Wilds, which is also grown to a limited extent, was entered as the best long staple variety available, and Miller was included as the short staple variety best adapted to the area. The design used was a randomized complete block, with eight or ten replications, and single row plots.

A brief summary of conditions peculiar to each test is given below, and footnotes on the tables of results denote dates of planting and harvesting. Results of the 1948 tests at the six locations are given in tables 1, 6, 8, 11, 13, and 16 and in the summary.

The Stoneville test was located at the Delta Branch Experiment Station on sandy loam soil, typical of the banks along upper Deer Creek.

The test near Jonestown was located on the Eagle Nest Plantation and was conducted in cooperation with C. E. Rhett, manager. The soil is a sandy loam. Only one picking was made on this test. Some loss in yield was experienced because of late planting and the early frost which damaged many bolls.

The Money test was located on Wildwood Plantation on the east bank of the Tallahatchie River and was conducted in cooperation with H. L. Gary, owner, and J. S. McBee, County Agent of Leflore county. The soil is a fine sandy loam and is well drained. The season was favorable, boll weevil damage light, and resulting yields were high.

The Valley Hill test was located near the eastern border of the Delta on light colored, well-drained silt loam soil made of outwash from the hills, and was conducted in cooperation with L. S. Hemphill on his plantation near Valley Hill. Early "damping off" damaged the original stand to some extent. Heavy weevil infestation in early August curtailed yield, and Fusarium wilt damage was scattered throughout the plots. One picking on September 27 harvested the test.

In cooperation with Emile "Bud" Schaeffer, owner, and the County Agent of Yazoo County, the variety trial for the southeastern part of the Delta was conducted on the Schaeffer plantation, three miles west of Yazoo City. The soil is a fine sandy loam and is well drained. Weather conditions were most favorable during the growing season; weevil damage came late and yields were very high.

The Kelso test was located near the Sharkey-Issaquena County line, 11 miles south of Cary on Highway 61. It was conducted in cooperation with James Hand, owner. The soil is a fine sandy loam, well-drained, and typical of Deer Creek soil in the above named counties. The test was planted in 40-inch check rows as in previous years, thinned to six plants per hill, and cultivated with 4-row

equipment. Conditions were very favorable throughout the season, with only late, light weevil damage.

1949 Variety Trials

For many years the Delta cotton variety tests have been conducted on sandy loam soil types. Realizing that a large percentage of open farm land in the Delta is "buckshot" or clay soil an effort was made to locate a part of the 1949 variety trials on this type soil. Three such tests were planted; at Stoneville, Tunica, and Clarksdale. Four variety tests were conducted on sandy loam at Stoneville, Tunica, Money and Yazoo City. The tests at Jonestown, Valley Hill and Kelso were discontinued. The current strains of the ten varieties planted in the 1948 tests were used in 1949.

The season of 1949 was disastrous in many parts of the Delta because of excessive rainfall and unprecedented boll weevil infestation. Insect control measures with some of the newer organic insecticides were effective in many places. The dry month of September was followed by a wet October which delayed harvesting and caused heavy losses in grade of lint as well as viability of the seed. November and December were excellent for harvesting.

The Stoneville test was planted on the same area used in 1948. Pickings were made on August 22 and 29, September 6 and 12, and October 17. Earliness was computed from the total of the August 22 and 29 pickings. The insect-control program conducted by the Station entomologists controlled weevil infestation with the resultant high yields for that test.

The Tunica loam test was conducted in cooperation with Wesley R. Bailey, operator, and Jack Barnette, County Agent of Tunica County on the Mangum Estate, three miles west of Tunica. The soil is classed as Robinsonville silt loam.

The Money test was conducted on the same area as the 1948 test. Thorough

control measures and a favorable July prevented excessive weevil damage and yields were higher than in 1948.

The test at Yazoo City was also conducted with the same cooperators and on the same area as in 1948. Insect control measures were practiced to excellent advantage as far as weather permitted.

Results of the 1949 variety trials on sandy loam are given in tables 2, 4, 9 and 14.

1949 "Buckshot" Variety Trials

A number of difficulties were experienced with the three variety tests planted on buckshot or clay soil. The Stoneville test on loamy clay on the Delta Station had to be planted over in May and through error did not receive the full insect control program, with resulting lowered yields. Plots of two varieties could not be used.

The Clarksdale test was located on the Hopson Plantation on loamy buckshot and also had to be replanted in mid-May.

The Tunica buckshot test was conducted on the Ark Bayou place, six miles southeast of Dundee in cooperation with Ransome A. Meyer, and County Agent Jack Barnette. This test was subjected to extremely wet weather during the entire season, and attempted insect control measures could not reach full effectiveness. Yields were quite low.

Because of these difficulties much of the detailed information like that obtained from the sandy loam tests is not available. In table 18 is given the yield of seed cotton and of lint per acre, gin turnout, and staple length for each test. The data given should be considered as indicative rather than conclusive.

2- and 3-Year Variety Studies

Seasonal conditions greatly affect the yield of cotton and modify to some extent other characteristics and properties of varieties. Average results of the several variety trials conducted at different locations in the Delta in one year provide interesting and useful information on

some varietal characteristics, but are probably not indicative of long-time performance. It is believed that the average results of tests conducted over a period of several years in a given locality provide the grower residing in the vicinity of the test, or farming on a similar soil type, with more reliable information as to the behavior of a variety under average conditions than a single year's results.

Methods used in conducting the individual tests for 1948 and 1949 have been briefly described above. For the 3-year periods the yield of seed cotton was determined by averaging the seed cotton yields of each variety obtained during each season that the tests were conducted at a given locality. The yields of lint were obtained by multiplying the average gin turnout by the average yield of seed cotton per acre.

The gin turnout, 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 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.

The standard variety trials at Jonestown, Valley Hill and Kelso were discontinued after the 1948 season, but 3-year averages for these locations are available on nine varieties for the period 1946-1948 and are given in tables 7, 12 and 17. In 1947 Empire was placed in the variety trials for the first time and could be included in the 2- and 3-year averages. Table 5 gives the average of the Tunica tests for 1947 and 1949, and tables 3, 10 and 15 give the 3-year averages (1947-1948-1949) for the Stoneville, Money and Yazoo City locations.

Table 1. Yield and other data, cotton variety test, Stoneville, 1948

Variety	Yield per acre		Gin turn-out	Staple length	Bolls per lb. seed cotton	Percent picked first picking	Fiber tensile strength lbs. per sq. inch	Fiber length uniformity	Total money value per acre	
	Lbs.	Lint							Middling	Low middling
Delfos 9169	2818	975	34.6	34.2	65.3	70.9	82.3	80.9	391	378
Empire P43 W.R.	2704	957	35.3	34.0	57.2	73.4	89.1	82.7	378	366
Delapine 15	2474	970	39.2	34.0	75.3	52.6	83.5	84.6	370	358
Delfos 651	2622	871	33.2	34.5	70.8	66.9	87.3	81.4	360	346
Coker 100 Wilt	2516	860	34.2	34.2	68.7	57.0	83.9	83.2	340	329
Miller	2497	876	35.1	32.7	63.2	46.5	84.1	84.8	337	326
Stoneville 2B	2373	821	34.6	34.5	65.3	64.3	86.8	81.3	327	316
Bobshaw 1	2335	789	33.8	34.2	68.0	63.0	90.2	82.9	314	304
Coker 100 Staple	2212	748	33.8	35.0	75.3	55.1	89.0	81.5	308	296
Wilds	1975	598	30.3	39.5	74.7	42.4	96.9	82.8	343	293
Difference barely significant	239	82	4.1	0.6	2.0	5.2	2.8	1.7	33	31
Difference highly significant	318	109	5.5	0.9	2.7	6.9	3.9	2.3	43	41

Note: Planted on April 23, first picking was made on September 2.

Table 2. Yield and other data, cotton variety test, Stoneville, 1949

Variety	Yield per acre		Gin turn-out	Staple length	Bolls per lb. seed cotton	Percent picked first picking	Fiber tensile strength lbs. per sq. inch	Fiber length uniformity	Total money value per acre	
	Lbs.	Lint							Middling	Low middling
Delfos 9169	2837	950	33.5	35.6	67.5	40.0	73.2	76.5	329	288
Empire P45 WR	2684	910	33.9	35.0	57.9	50.1	79.3	79.6	329	311
Delfos 651	2725	877	32.2	35.9	71.9	45.3	77.1	77.4	330	308
Delapine 15	2446	929	38.0	35.1	76.4	46.4	75.5	81.0	327	270
Coker 100 Staple	2562	858	33.5	36.3	72.9	45.5	77.9	76.4	326	301
Bobshaw 1	2618	867	33.1	35.1	71.3	45.9	77.9	77.3	316	298
Coker 100 Wilt	2582	870	33.7	35.5	73.2	45.3	73.8	79.9	317	297
Miller	2499	880	35.2	33.5	67.8	44.1	73.1	82.3	310	293
Stoneville 2B	2565	859	33.5	35.0	65.5	38.5	78.0	78.4	310	293
Wilds	2089	639	30.6	40.4	69.5	28.8	86.2	75.4	356	277
Diff. Barely Sign.	153	52	0.5	0.4	1.8	5.6	3.6	3.1	33	29
Diff. Highly Sign.	203	69	0.6	0.5	2.4	7.4	4.9	4.1	43	41

Note: Planted on April 21, earliness based on cotton picked through August 29.

Table 3. Yield and other data, cotton variety test, Stoneville, average 3-years 1947-48-49

Variety	Yield per acre		Gin turn-out	Staple length	Bolls per lb. seed cotton	Percent picked first picking	Fiber tensile strength lbs. per sq. inch	Fiber length uniformity	Total money value per acre		
	Seed cotton	Lint							Middling	Strict low middling	Low middling
	Lbs.	Lbs.	Pct.	1/32 in.	Bolls	Pct.	1000 lbs.	Ratio	Dols.	Dols.	Dols.
Delfos 9169	2721	924	33.9	35.2	65.4	56.4	78.9	78.9	373	357	308
Empire P45 WR	2619	908	34.6	34.7	57.3	64.5	83.6	81.2	359	345	300
Deltapine 15	2411	925	38.4	34.7	74.1	53.1	79.3	82.9	352	338	291
Delfos 651	2560	842	32.9	35.4	71.8	58.7	81.7	79.3	346	330	283
Stoneville 2B	2503	852	34.1	34.9	64.3	54.9	82.7	80.2	339	326	283
Coker 100 Wilt	2478	838	33.8	35.1	69.8	53.7	79.7	81.1	333	319	275
Bobshaw 1	2452	821	33.5	34.8	69.0	57.0	84.1	80.5	326	314	273
Miller	2394	840	35.1	33.3	64.1	48.4	79.2	83.9	321	309	273
Coker 100 Staple	2313	778	33.7	35.8	72.7	51.9	83.6	79.9	319	303	260
Wilds	1963	592	30.1	40.3	72.6	39.0	92.0	79.5	326	277	207

Table 4. Yield and other data, cotton variety test, Tunica, 1949

Variety	Yield per acre		Gin turn-out	Staple length	Percent picked first picking	Fiber tensile strength lbs. per sq. inch	Fiber length uniformity	Total money value per acre		
	Seed cotton	Lint						Middling	Strict low middling	Low middling
	Lbs.	Lbs.	Pct.	1/32 in.	Pct.	1000 lbs.	Ratio	Dols.	Dols.	Dols.
Coker 100 Staple	2684	870	32.4	38.2	55.1	82.9	78.2	404	352	266
Coker 100 Wilt	2515	817	32.5	37.7	47.3	78.6	80.6	357	319	252
Empire P45 WR	2849	903	31.7	35.7	59.3	81.7	79.9	329	314	274
Delfos 651	2686	841	31.3	36.7	59.7	80.4	76.6	333	304	259
Delfos 9169	2649	842	31.8	36.7	55.2	77.6	78.5	333	304	258
Bobshaw 1	2718	834	30.7	35.9	55.1	79.1	82.1	309	296	258
Deltapine 15	2327	854	36.7	36.1	59.3	76.9	79.8	316	292	253
Miller	2560	863	33.7	33.9	59.2	75.2	82.5	308	283	258
Stoneville 2B	2533	808	31.9	36.0	57.0	79.2	78.4	306	285	248
Wilds	1963	573	29.2	42.2	47.2	90.4	77.4	338	265	187
Diff. Barely Sign.	240	78	0.7	0.9	4.5	4.3	2.7			
Diff. Highly Sign.	319	104	1.0	1.2	5.9	5.8	3.6			

Note: Planted April 22, picked on September 9 and October 22.

Table 5. Yield and other data, cotton variety test, Tunica, average 2-years—1947 and 1949

Variety	Yield per acre		Gin turn-out	Staple length	Percent picked first picking	Fiber		Fiber length uniformity	Total money value per acre		
	Seed cotton	Lint				1/32 in.	1000 lbs.		Ratio	Dols.	Dols.
Stoneville 2B	2281	779	34.4	35.0	57.4	81.4	80.1	309	295	257	
Delfos 9169	2254	767	34.5	35.6	54.0	79.2	78.8	312	294	253	
Empire P45 WR	2306	798	35.5	34.6	59.8	83.4	79.9	305	294	247	
Coker 100 Wilt	2136	735	34.8	36.1	51.6	80.6	80.0	314	292	251	
Bobshaw 1	2326	765	33.3	35.2	56.0	83.4	81.8	298	287	251	
Coker 100 Staple	2073	713	35.2	36.5	57.2	83.6	79.8	318	288	230	
Delfos 651	2213	739	33.9	35.5	59.5	82.3	77.6	301	283	244	
Delatpaine 15	1978	778	39.9	34.7	59.9	79.0	81.2	294	278	243	
Miller	2108	751	36.1	32.7	62.3	79.0	83.3	281	265	239	
Wilds	1709	539	32.0	40.2	51.2	93.4	78.3	290	245	186	

Table 6. Yield and other data, cotton variety test, Jonestown, 1948

Variety	Yield per acre		Gin turn-out	Staple length	Fiber tensile strength lbs. per sq. inch	Fiber length uniformity	Total money value per acre			
	Seed cotton	Lint					1/32 in.	1000 lbs.	Ratio	Dols.
Delfos 651	2036	654	32.1	35.3	73.4	79.5	271	262	224	
Coker 100 Wilt	2000	680	34.0	34.6	72.4	81.2	269	261	225	
Miller	1883	666	35.4	33.3	69.8	82.1	258	250	218	
Empire P43	1818	609	33.5	34.8	75.3	79.0	246	238	205	
Delatpaine 15	1660	632	38.1	34.5	73.1	80.5	242	235	201	
Delfos 9169	1782	595	33.4	34.8	72.0	77.9	241	233	201	
Bobshaw 1	1681	561	33.4	34.6	72.3	79.3	223	216	186	
Coker 100 Staple	1624	528	32.5	35.9	74.9	78.4	221	213	178	
Wilds	1334	403	30.2	40.0	83.7	80.6	230	199	143	
Stoneville 2B	1514	509	33.6	34.6	74.6	78.5	203	197	170	
Difference barely significant	225	77	1.2	0.8	2.6	2.5	32	30	25	
Difference highly significant	299	102	1.6	1.1	3.6	3.4	42	40	34	

Note: Planted May 17, harvested December 1.

Table 7. Yield and other data, cotton variety test, Jonestown, average 3-years—1946-47-48

Variety	Yield per acre		Gin turn-out	Staple length 1/32 in.	Fiber tensile strength lbs. per sq. inch	Fiber length per 1000 lbs.	Fiber uniformity Ratio	Total money value per acre			
	Seed cotton	Lint						Pct.	Middling	Strict low middling	Low middling
Delfos 9169	1993	668	33.5	34.7	76.4	77.5	283	275	243		
Stoneville 2B	1986	671	33.7	34.4	78.5	77.8	282	274	243		
Coker 100 Wilt	1986	668	33.7	34.5	76.9	80.9	278	270	238		
Deltapine 15	1803	697	38.8	34.0	76.5	80.5	278	270	238		
Miller	1930	679	35.2	32.9	75.3	82.5	276	268	238		
Bobshaw 1	1976	655	33.2	34.2	78.6	79.8	275	267	236		
Delfos 651	1909	618	32.5	35.0	77.6	77.6	266	258	227		
Coker 100 Staple	1807	603	33.5	35.4	78.6	78.7	257	249	217		
Wilds	1442	441	30.7	39.2	88.2	77.7	229	209	167		

Table 8. Yield and other data, cotton variety test, Money, 1948

Variety	Yield per acre		Gin turn-out	Staple length 1/32 in.	Fiber tensile strength lbs. per sq. inch	Fiber length per 1000 lbs.	Fiber uniformity Ratio	Total money value per acre			
	Seed cotton	Lint						Pct.	Middling	Strict low middling	Low middling
Delfos 9169	2504	849	33.9	34.8	73.0	80.6	343	332	287		
Delfos 651	2351	769	32.7	35.3	76.9	80.5	318	307	261		
Stoneville 2B	2277	774	34.0	34.4	78.7	80.9	308	299	258		
Empire P43 W.R.	2196	749	34.1	34.4	80.3	82.6	300	291	251		
Bobshaw 1	2198	739	33.6	34.4	81.1	82.7	295	286	247		
Deltapine 15	2018	775	38.4	34.0	74.0	83.4	295	286	246		
Coker 100 Wilt	2054	703	34.2	35.1	74.4	83.0	280	272	232		
Coker 100 Staple	1980	663	33.5	35.4	79.1	80.7	270	261	221		
Miller	1917	667	34.8	32.9	74.2	84.1	257	249	219		
Wilds (1848)	1685	502	29.8	39.9	88.1	83.1	287	249	180		
Difference barely significant	173	58	.8	1.2	2.2	1.7	25	23	17		
Difference highly significant	230	77	1.0	1.6	3.0	2.3	32	31	23		

Note: Planted April 21, first picking was on September 21, too late for "earlyness" data.

Table 9. Yield and other data, cotton variety test, Money, 1949

Variety	Yield per acre		Gin turn-out	Staple length	Percent first picking	Fiber tensile strength lbs. per sq. inch	Fiber length uniformity	Total money value per acre		
	Seed cotton	Lint						Middling	Strict low middling	Low middling
	Lbs.	Lbs.	Pct.	1/32 in.	Pct.	1000 lbs.	Ratio	Dols.	Dols.	Dols.
Delfos 9169	2850	943	33.1	36.4	45.5	85.4	79.7	388	335	288
Empire P45 WR	2781	957	34.4	35.2	54.9	90.6	81.3	346	327	288
Delfos 651	2552	817	32.0	36.6	45.0	89.4	80.0	322	294	251
Bobshaw 1	2587	851	32.9	35.6	45.8	91.3	80.4	309	294	257
Deltapine 15	2275	864	38.0	35.1	44.3	86.6	83.9	303	286	251
Coker 100 Staple	2364	797	33.7	36.7	39.4	92.3	78.7	312	284	241
Miller	2370	848	35.8	33.4	32.0	89.8	82.8	297	281	248
Coker 100 Wilt	2352	797	33.9	35.7	37.7	88.3	82.1	287	273	238
Stoneville 2B	2309	771	33.4	35.6	40.5	90.9	78.8	280	266	232
Wilds	1869	553	29.6	41.6	29.1	97.9	78.4	326	253	180
Difference barely significant	234	79	1.0	0.7	5.1	3.2	2.7			
Difference highly significant	310	104	1.4	0.9	6.7	4.4	3.6			

Note: Planted April 26, first picking was made on September 15.

Table 10. Yield and other data, cotton variety test, Money, average 3-years—1947-48-49

Variety	Yield per acre		Gin turn-out	Staple length	Percent first picking	Fiber tensile strength lbs. per sq. inch	Fiber length uniformity	Total money value per acre		
	Seed cotton	Lint						Middling	Strict low middling	Low middling
	Lbs.	Lbs.	Pct.	1/32 in.	Pct.	1000 lbs.	Ratio	Dols.	Dols.	Dols.
Delfos 9169	2615	909	34.8	35.0	65.0	79.0	79.2	365	349	303
Empire P45 WR	2422	861	35.6	34.4	72.0	85.1	80.4	335	323	283
Delfos 651	2433	819	33.7	35.4	64.5	82.0	79.1	336	320	275
Stoneville 2B	2337	817	34.9	34.7	61.8	83.7	79.8	321	310	270
Bobshaw 1	2331	802	34.5	34.6	66.5	85.8	81.0	314	303	265
Deltapine 15	2075	822	39.7	34.2	62.0	80.5	82.7	307	295	257
Coker 100 Wilt	2196	767	34.9	34.9	60.2	81.4	81.0	298	288	250
Coker 100 Staple	2075	722	34.9	35.5	61.8	84.6	79.2	292	277	237
Miller	2094	759	36.3	32.6	56.4	81.5	82.4	286	275	243
Wilds	1748	541	31.0	40.3	51.9	93.5	79.7	298	254	190

Table 11. Yield and other data, cotton variety test, Valley Hill, 1948

Variety	Yield per acre		Gin turn-out	Staple length	Fiber tensile strength lbs. per sq. inch	Fiber length uniformity	Total money value	
	Seed cotton	Lint					Middling	Low midding
Coker 100	1472	509	34.5	1/32 in.	1000 lbs.	Ratio	Dols.	Dols.
Delfos 9169	1431	494	34.5	34.5	75.7	80.6	193	186
Bobshaw 1	1247	424	34.0	34.3	77.1	78.5	192	185
Deltapine 15	1110	432	38.9	34.3	80.5	79.6	164	155
Empire P43 W.R.	1141	407	35.7	34.0	79.2	81.0	158	153
Miller	1110	398	35.9	32.6	82.5	81.0	157	152
Stoneville 2B	1049	357	34.0	34.6	80.7	84.8	149	144
Delfos 651	1024	340	33.2	34.5	78.1	78.2	136	132
Coker 100 Staple	959	322	33.6	35.3	79.4	79.4	132	128
Wilds (1948)	644	193	29.9	39.4	78.5	78.2	125	121
Difference barely significant	122	42	0.6	0.7	87.9	81.7	110	94
Difference highly significant	162	56	0.8	0.9	1.9	3.2	18	17
					2.6	4.4	24	23

Note: Planted April 24, picked September 27.

Table 12. Yield and other data, cotton variety test, Valley Hill, average 3-years—1946-47-48

Variety	Yield per acre		Gin turn-out	Staple length	Fiber tensile strength lbs. per sq. inch	Fiber length uniformity	Total money value	
	Seed cotton	Lint					Middling	Low midding
Delfos 9169	1505	514	34.2	35.1	78.5	80.3	217	210
Stoneville 2B	1422	508	35.8	34.7	80.4	81.3	210	204
Miller	1453	491	33.8	35.0	80.9	84.4	206	200
Coker 100 Wilt	1431	486	34.0	34.2	79.7	81.8	204	198
Bobshaw 1	1289	498	38.7	34.6	84.5	82.7	203	196
Deltapine 15	1243	423	35.6	34.6	80.8	82.0	198	192
Coker 100 Staple	1228	405	33.5	34.9	80.4	80.8	179	174
Delfos 651	936	287	30.5	39.8	80.2	80.3	172	167
Wilds					90.2	82.3	149	137

Table 13. Seed and other data, cotton variety test, Yazoo City, 1948

Table 13. Yield and other data, cotton variety test, Yazoo City, 1948

Variety	Yield per acre		Gin turn-out	Staple length	Percent picked first picking	Fiber tensile strength lbs. per sq. inch	Fiber length uniformity	Total money value per acre			
	Seed cotton	Lint						Dols.	Middling	Strict low	Low middling
Empire	2522	918	36.4	34.1	61.8	88.9	84.4	359	348	300	
Delfos 9169	2477	897	36.2	34.4	53.4	80.2	80.2	353	342	294	
Deltapine 15	2203	927	42.1	33.4	48.5	82.3	85.3	343	332	286	
Delfos 651	2455	852	34.7	34.4	59.6	87.5	81.8	338	327	282	
Coker 100 Wilt	2401	869	36.2	34.0	60.7	82.9	83.8	334	324	279	
Miller	2318	846	36.5	31.6	60.9	84.9	86.0	321	310	273	
Stoneville 2B	2298	823	35.8	34.2	56.9	87.4	82.6	322	312	269	
Wilds	2041	651	31.9	39.1	47.8	94.6	83.6	354	311	225	
Bobshaw 1	2219	772	34.8	33.9	58.1	90.3	84.0	302	293	254	
Coker 100 Staple	2090	738	35.3	34.5	59.2	88.1	81.6	291	282	243	
Difference barely significant	215	77	2.1	7	5.4	2.8	1.8	31	30	25	
Difference highly significant	285	103	2.8	1.0	7.2	3.9	2.5	41	40	34	

Note: Planted April 19, first picking made on August 26.

Table 14. Yield and other data, cotton variety test, Yazoo City, 1949

Variety	Yield per acre		Gin turn-out	Staple length	Percent picked first picking	Fiber tensile strength lbs. per sq. inch	Fiber length uniformity	Total money value per acre			
	Seed cotton	Lint						Dols.	Middling	Strict low	Low middling
Delfos 9169	2605	826	31.7	35.9	43.0	76.5	77.0	306	293	256	
Delfos 651	2527	809	32.0	36.2	48.6	79.8	76.7	311	288	249	
Deltapine 15	2187	803	36.7	35.2	44.3	79.1	80.9	285	270	236	
Coker 100 Staple	2252	739	32.8	36.9	43.6	78.7	78.9	296	268	226	
Coker 100 Wilt	2304	756	32.8	35.7	43.1	79.1	78.5	275	262	229	
Bobshaw 1	2322	741	31.9	35.0	44.3	81.5	79.1	271	256	226	
Empire P45 WR	2272	727	32.0	35.5	54.2	83.2	77.9	268	255	224	
Stoneville 2B	2182	716	32.8	35.5	36.1	82.8	77.3	261	248	218	
Miller	2052	702	34.2	33.5	47.4	76.2	78.8	249	236	209	
Wilds	1768	513	29.0	40.6	33.9	86.6	75.3	291	232	166	
Difference barely significant	252	82	0.8	0.9	5.4	2.4	2.8				
Difference highly significant	335	109	1.1	0.6	7.1	3.3	NS				

Note: Planted April 19, picked September 7 and October 18.

Table 15. Yield and other data, cotton variety test, Yazoo City, average 3-years—1947-48-49

Variety	Yield per acre		Gin turn-out	Staple length	Percent picked first picking	Fiber tensile strength lbs. per sq. inch	Fiber length uniformity	Total money value		
	Seed cotton	Lint						Middling	Strict low middling	Low middling
	Lbs.	Lbs.								
Delfos 9169	2254	890	34.9	1/32 in. 34.9	53.7	78.8	78.6	352	340	296
Deltapine 15	2246	906	40.3	34.1	51.3	79.9	82.8	338	326	283
Delfos 651	2441	834	34.2	35.0	58.0	82.9	79.0	335	320	278
Stoneville 2B	2369	834	35.1	34.6	53.2	83.7	79.9	327	316	276
Coker 100 Wilt	2387	846	35.4	34.6	56.1	80.9	80.4	327	316	275
Empire P45 WR	2350	836	35.6	34.4	63.5	85.3	80.7	326	315	275
Bobshaw 1	2367	815	34.4	34.3	57.8	85.6	81.0	320	308	270
Miller	2211	800	36.1	32.5	59.5	79.8	82.6	304	292	258
Coker 100 Staple	2127	745	35.1	35.4	56.6	83.2	79.8	301	285	244
Wilds	1842	580	31.5	39.7	46.1	91.2	78.9	309	268	201

Table 16. Yield and other data, cotton variety test, Kelso, 1948

Variety	Yield per acre		Gin turn-out	Staple length	Percent picked first picking	Fiber tensile strength lbs. per sq. inch	Fiber length uniformity	Total money value		
	Seed cotton	Lint						Middling	Strict low middling	Low middling
	Lbs.	Lbs.								
Delfos 9169	2372	849	35.8	34.8	83.3	80.0	81.2	337	326	280
Miller	2367	857	36.2	33.1	78.5	78.3	84.5	329	319	277
Coker 100 Wilt	2324	823	35.4	34.9	81.2	81.4	81.3	323	313	268
Coker 100 Staple	2244	779	34.7	36.0	75.5	85.8	81.2	323	309	257
Empire P43	2204	796	36.1	34.4	89.0	85.1	81.3	313	303	261
Delfos 651	2256	769	34.1	35.0	83.3	83.5	81.8	310	300	257
Wilds	1919	608	31.7	40.8	69.9	95.5	82.0	353	301	213
Stoneville 2B	2173	771	35.5	34.9	81.2	85.9	80.1	306	296	253
Bobshaw 1	2145	734	34.2	34.8	80.8	87.1	83.3	293	283	243
Deltapine 15	1923	773	40.2	34.2	77.7	80.3	82.7	291	282	241
Difference barely significant	135	48	.9	.8	3.9	2.8	1.5	20	19	16
Difference highly significant	179	63	1.2	1.1	5.2	3.8	2.0	26	25	21

Note: Planted on April 20, first picking was on September 17.

Table 17. Yield and other data, cotton variety test, Kelso, average 3-years—1946-47-48

Variety	Yield per acre		Gin turn-out Pct.	Staple length 1/32 in.	Fiber tensile strength lbs. per sq. inch	Fiber length uniformity	Total money value	
	Seed cotton	Lint					Strict low middling	Low middling
	Lbs.	Lbs.					Dols.	Dols.
Coker 100 Staple	1711	593	34.6	35.5	79.2	80.6	251	242
Delfos 9169	1712	597	34.6	34.8	76.7	79.8	248	241
Miller	1693	612	36.1	32.8	75.1	83.5	245	238
Stoneville 2B	1698	591	34.8	34.7	80.3	80.1	246	237
Coker 100 Wilt	1707	597	34.8	34.6	77.3	81.7	245	238
Deltapine 15	1569	620	39.4	34.2	76.4	81.5	245	238
Delfos 651	1678	567	33.7	34.9	78.6	80.0	239	232
Bobshaw 1	1631	557	34.1	34.3	81.5	82.8	231	224
Wilds	1442	449	31.1	39.6	90.5	81.3	241	216

Table 18. Yield of seed cotton and of lint, gin turnout, and classers staple length for ten varieties grown in cotton variety tests on "buckshot" soils at three locations in the Delta, 1949

Variety	STONEVILLE			CLARKSDALE			TUNICA		
	Yield per acre		Percent lint	Yield per acre		Percent lint	Yield per acre		Percent lint
	Seed cotton	Lint		Seed cotton	Lint		Seed cotton	Lint	
Bobshaw	Lbs.	Lbs.	Pct.	Lbs.	Lbs.	Pct.	Lbs.	Lbs.	Pct.
Coker 100 Staple	1266	414	31.2	1121	391	34.9	950	310	32.7
Coker 100 Wilt	1521	506	33.3	1275	450	35.3	967	321	33.2
Delfos 651	1313	406	30.9	1205	416	34.5	946	332	35.1
Delfos 9169	1213	386	31.8	1444	504	34.9	960	316	32.9
Deltapine 15	1380	492	35.6	1406	489	34.8	960	327	34.1
Empire	1422	454	31.9	1131	440	38.9	1063	407	38.3
Miller	1646	574	34.9	1506	527	35.0	1010	363	36.0
Stoneville 2B	1353	441	32.6	1482	550	37.1	1055	380	36.1
Wilds	1353	441	27.8	1330	466	35.1	936	317	33.9
				1096	357	32.6	780	230	29.5

Note: Planted on May 12

Planted on May 13

Planted on April 22