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1971 Performance of Cotton Varieties

University of Tennessee Agricultural Experiment Station

P. E. Hoskinson

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JANUARY 1972

University of Tennessee
Agricultural Experiment Station
K. Ewing, Dean
Knoxville

1971 Performance of Cotton Varieties

by P.E. Hoskinson



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1971

Performance of Cotton Varieties

by
P. E. Hoskinson *

Data for 1971 with summaries of results from previous years

Station Hatch Project No. 79

Cotton Variety Improvement

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Fort Pillow State Farm, Fort Pillow

RECOMMENDED COTTON VARIETIES

Early – Auburn M, Hancock

Mid-Season – Deltapine 45A¹, Dixie King II, Hy-Bee 200A, Stoneville 213.

Mid-Season to Late – Deltapine 16.

*Assistant Professor, Department of Plant and Soil Science.

¹Present plans indicate that this variety will not be recommended after this year.

CHARACTERISTICS OF RECOMMENDED COTTON VARIETIES

Auburn M: A dwarfy, very early maturing variety released by Missouri. Has done especially well, comparatively, when planted after May 20. Yields well on bottoms, but may cut-out too quickly on upland when moisture is scarce. Has adequate Fusarium wilt resistance, but little Verticillium wilt tolerance. Auburn M's earliness enables it to set good crops when wilt conditions are moderate. Lint percentage has ranged from 36 to 39. Fiber properties for 3 years, 1968-1970, averaged: Length (1.08), strength (18.07), micronaire (4.46), and yarn strength (112).

Deltapine 16: A medium to late variety with a lint percentage of 37 to 41 and with small bolls. Plants are slightly smaller than average, have smooth leaves, average seedling vigor and is tolerant to Verticillium wilt. Deltapine 16 has yielded especially well in the Delta and very well on other bottom soils. Tends to become later in Middle Tennessee. Excellent grades have been obtained from Deltapine 16 lint. Averaged fiber properties are: Length (1.13), strength (19.14), micronaire (4.75), and yarn strength (119).

Deltapine 45A: Has mid-season maturity and excellent seedling vigor, but tends to be late in Middle Tennessee. Has about the same level of Verticillium wilt as that of Deltapine 16. Plants are average height, but rank growth may be a problem when 45A is grown under surplus moisture conditions. Fiber length and fineness (micronaire values) are average, while fiber strength is good and yarn strength is above average. Present plans indicate that Deltapine 45A will not be recommended after this year. Fiber properties are: Length (1.09), strength (18.93), micronaire (4.85), and yarn strength (118).

Dixie King II: A mid-season variety that has large bolls. Is widely adapted on upland soils across Tennessee. Chief advantage of Dixie King II over Dixie King is its increased lint percentage. May grow too rank in bottoms as its lateral limbs tend to be longer than some varieties. May retain its leaves longer than some varieties. Dixie King II exhibits an indeterminate growth habit when moisture is not limiting. Dixie King II has a lint percentage of 37 to 40. Is tolerant to Fusarium wilt. Fiber properties are: Length (1.07), strength (17.48), micronaire (4.63), and yarn strength (114).

Hancock: A very early large boll variety with lint percentage of 38 to 41. Good seedling vigor and very good gin turnout characterize this variety. Is susceptible to Verticillium and Fusarium wilts. Has yielded especially well on upland soils across Tennessee. May be slightly shorter staple than many other varieties. May show rank growth in some bottoms, but may continue to grow and fruit longer than more determinate varieties under dry upland management. Fiber properties are: Length (1.05), strength (17.86), Micronaire (4.60), and yarn strength (114).

Hy-Bee 200A: A mid-season variety that has small bolls. Has yielded well in Tennessee tests. Its indeterminate growth habit produces larger than average

plants. Has little tolerance to Verticillium wilt. Plant type is not as uniform as many varieties. Has above average fiber properties. Fiber properties are: Length (1.11), strength (18.12), micronaire (4.87), and yarn strength (114).

Stoneville 213: Very widely adapted in Tennessee. Yields well on both upland and bottom soils. Has some tolerance to Verticillium wilt, and yields very well when wilt is not too severe. Has highest micronaire of any variety commonly grown in Tennessee. Stoneville 213 has small bolls with a lint percentage of 38 to 41. It has behaved as a mid-season variety for the last 3 years in the Tennessee variety tests. It is highly responsive to available moisture and may be early under dry conditions and late under others; average plant height. Fiber properties are: Length (1.10), strength (18.32), micronaire (4.98), and yarn strength (115).

PERFORMANCE OF COTTON VARIETIES

The 1971 Cotton Variety Tests were conducted at Jackson, Ames Plantation, Milan and Fort Pillow.

Two tests were conducted at Milan (one on Falaya silt loam and another on Memphis silt loam). Each test at Milan consisted of 16 entries and both were harvested twice with a two-row spindle picker. The test on Memphis showed fairly severe symptoms of chemical preemerge damage early in the growing season and hail damage in July. Relative varietal earliness was influenced by the chemical damage; total yields apparently were not. Cotton was 10 inches taller on the Falaya, but yield and earliness data for the two sites were similar.

The tests at Jackson and Ames Plantation consisted of 23 entries and both were harvested twice with a one-row spindle picker. Both tests were quite uniform and yielded well. However, cotton varieties at Jackson were considerably taller. A small amount of Verticillium wilt was present in the Jackson test and may have influenced relative varietal performance.

The test at Fort Pillow consisted of 24 entries. This test was badly damaged by boll weevils and by Verticillium wilt, and data from this test have not been included in state averages. All varieties in the Fort Pillow test were tall, rank, late, and were harvested once with a two-row spindle picker. Lint from most varieties from the Fort Pillow test had shorter staple and poorer grades than lint of the same varieties grown in the other tests.

Two boll samples of each variety were taken at Jackson and Fort Pillow and one sample of each variety at Milan and Ames Plantation. These hand-picked samples were ginned on a 10-saw laboratory gin. Lint percentage, seed index, and boll size were obtained from these samples. A grab sample from each replication of each variety from the spindle-picked cotton was taken, weighed, and composited for ginning on a modified commercial gin with seed cotton and lint cleaners. The gin turnout from the modified gin was used to calculate lint yields.

Fiber data were not available for 1971 because it takes several months to process samples in the laboratory. The 2.5% span length, micronaire fineness reading, fiber strength (T_1 and E_1), and yarn strength for 1970 are presented. The 2.5% span length and 50% span length were measured on the digital fibrograph; 2.5% span length approximates classer's length, while 50% span length indicates the modal length of all fibers in the bundle and gives an indication of the uniformity of these fibers. The Micronaire reading is a relative measure of fineness of the fiber. Fibers with micronaire readings above 4.9 are penalized for being too coarse; fibers with micronaire readings less than 3.5 are penalized for being too fine. The fiber strength (T_1) was measured on a stelometer. Higher readings of T_1 indicate fiber of greater strength and lower readings indicate fiber of lesser strength.

Coker 310, Deltapine 16, Stoneville 213, Brycot XP-4, and Stoneville 603 were leading yielders in 1971. Many varieties yielded very well at some locations and poorly in others. T59-538 was the yield leader on Memphis soil at Milan, but was last on Falaya soil at Milan. TH-149 was the leading yielder at Fort Pillow and second at Ames Plantation, but gave mediocre yields at Jackson and

Milan. Deltapine 16 was outstanding at Jackson and on Falaya at Milan, and had the second highest average yield.

In 1971, Brycot XP-4 and Deltapine 6225 were included in the Tennessee tests for the first time. Brycot XP-4 is very similar to Stoneville 213 in plant type, turnout, grade, staple, and earliness. Deltapine 6225 had a tall plant in 1971, is quite indeterminate, yields well, and has an outstanding lint percentage. It is a full-season cotton and may be too late for Tennessee.

Yield data and other characteristics of the varieties tested at each location are shown in Tables 1-32.

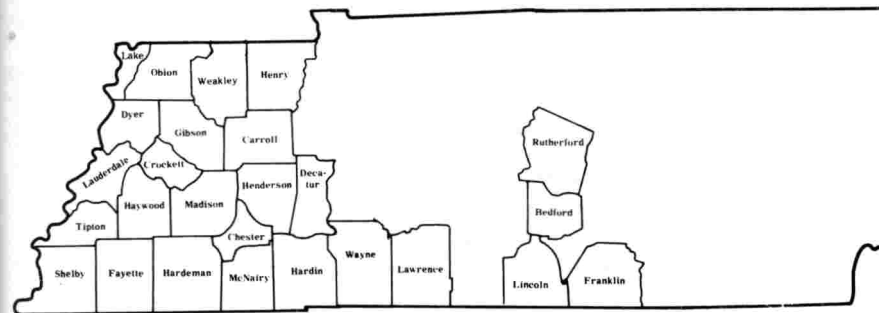


Figure 1. Important cotton-producing counties in Tennessee.

Table 1. Lint yield of 16 cotton varieties spindle picked at four locations in 1971

Variety	Avg.	Milan ¹ Bottom	Milan ² Upland	Jackson ³	Ames ⁴ Plantation
Pounds per acre					
Coker 310	1176	1173	1085	1136	1309
Deltapine 16	1171	1228	1008	1231	1215
Stoneville 213	1149	1109	1123	1169	1196
Brycot XP-4	1139	1045	1043	1152	1316
Stoneville 603	1133	1103	935	1156	1339
Deltapine 6225	1090	1049	1000	1101	1211
Hancock	1079	990	986	1041	1299
Auburn M	1072	849	1103	1084	1253
Dixie King II	1070	959	1011	1025	1285
T59-538	1060	780	1125	1064	1271
Hy-Bee 200A	1055	991	955	1076	1197
TH-149	1054	819	997	1062	1339
Hy-Bee 100A	1051	936	973	1085	1209
Delcot 277	1022	857	876	1063	1292
McNair 210	993	936	904	945	1188
Deltapine 45A	989	827	882	1052	1196
Average	1065.6	978.3	1000.3	1063.4	1220.4
L.S.D. .05		108.9	82.9	95.4	103.2
C.V. %		10.4	7.2	7.8	7.4

¹Falaya silt loam (0% to 2% slopes)

²Memphis silt loam (2% to 5% slopes)

³Memphis silt loam (0% to 2% slopes)

⁴Loring silt loam (2% to 5% slopes)

Table 2. Lint yield of 23 cotton varieties spindle picked at two locations in 1971.

Variety	Avg.	Jackson	Ames
			Plantation
		Pounds per acre	
Stoneville 603	1248	1156	1339
Brycot XP-4	1234	1152	1316
Deltapine 16	1223	1231	1215
Coker 310	1223	1136	1309
TH-149	1201	1062	1339
Stoneville 213	1183	1169	1196
Delcot 277	1178	1063	1292
Coker 417	1174	1105	1242
Hancock	1170	1041	1299
Auburn M	1169	1084	1253
T59-538	1168	1064	1271
Deltapine 6225	1156	1101	1211
Dixie King II	1155	1025	1285
Hy-Bee 100A	1147	1085	1209
Coker 201	1138	997	1279
Hy-Bee 200A	1137	1076	1197
Deltapine 45A	1124	1052	1196
McNair 9511	1096	1064	1128
McNair 9512	1077	1000	1153
McNair 210	1067	945	1188
Acala SJ-1	1045	944	1146
Paymaster 111	983	878	1088
Coker 711	970	1027	912
Average	1141.9	1063.4	1220.4
L.S.D. .05		95.4	103.2
C.V. %		7.8	7.4

Table 3. Lint yield and other characteristics of 23 cotton varieties tested at Jackson in 1971¹

Variety	Lint yield per acre	First Harvest	Lint	Bolls per lb.	(Gin turnout	
					First harvest	Second harvest
	Lb.	Percent		No.	Percent	
Deltapine 16	1231	77	40.9	66	35.7	33.7
Stoneville 213	1169	77	41.2	68	35.2	31.4
Stoneville 603	1156	77	39.1	68	34.6	33.1
Brycot XP-4	1152	72	40.5	67	35.5	33.7
Coker 310	1136	73	43.5	68	35.4	34.4
Coker 417	1105	68	40.7	66	33.7	34.8
Deltapine 6225	1101	64	42.3	69	36.1	35.9
Hy-Bee 100A	1085	69	40.6	64	33.9	33.5
Auburn M	1084	84	39.9	63	34.8	30.7
Hy-Bee 200A	1076	73	41.0	67	34.0	32.7
T59-538	1064	86	39.0	64	34.5	30.5
McNair 9511	1064	59	38.8	72	32.1	32.4
Delcot 277	1063	75	40.5	59	33.2	32.0
TH-149	1062	80	38.4	56	33.0	31.4
Deltapine 45A	1052	67	40.7	69	34.3	34.6
Hancock	1041	78	41.2	59	34.0	32.0
Coker 711	1027	64	41.7	71	34.5	32.0
Dixie King II	1025	71	41.2	59	32.4	33.0
McNair 9512	1000	69	38.6	69	32.7	32.1
Coker 201	997	70	42.0	64	35.0	33.7
McNair 210	945	81	37.8	63	31.7	30.3
Acala SJ-1	944	80	38.4	59	31.3	29.8
Paymaster III	878	70	37.1	58	31.8	29.9
Average	1063.4	73.3	40.22	64.7	33.89	32.50
LSD .05	95.4					
C.V. %	7.8					

¹Memphis silt loam (0-2% slopes)

Table 4. Lint yield and other characteristics of 23 cotton varieties tested at Ames Plantation in 1971¹

Variety	Lint yield per acre	First harvest	Lint	Bolls per lb.	Gin turnout	
					First Harvest	Second Harvest
	Lb.	Percent		No.	Percent	
Stoneville 603	1339	80	38.4	69	34.8	36.0
TH-149	1339	84	37.8	59	35.1	32.9
Brycot XP-4	1316	81	39.6	69	35.6	35.5
Coker 310	1309	81	41.7	74	36.0	38.6
Hancock	1299	85	40.3	61	36.6	34.9
Delcot 277	1292	87	39.7	62	36.3	32.1
Dixie King II	1285	77	39.8	58	35.7	35.6
Coker 201	1279	79	41.4	68	37.1	37.1
T59-538	1271	89	38.0	67	35.1	33.0
Auburn M	1253	81	38.1	63	34.2	33.4
Coker 417	1242	78	39.7	65	35.4	35.3
Deltapine 16	1215	76	39.8	68	34.8	35.5
Deltapine 6225	1211	75	41.6	73	37.7	36.9
Hy-Bee 100A	1209	75	40.2	64	36.0	36.2
Hy-Bee 200A	1197	75	39.9	70	36.0	35.4
Stoneville 213	1196	72	38.8	69	35.5	36.1
Deltapine 45A	1196	79	40.8	73	36.1	35.7
McNair 210	1188	87	36.7	66	33.7	32.6
McNair 9512	1153	72	39.0	70	35.6	35.5
Acala SJ-1	1146	83	38.7	59	33.5	32.0
McNair 9511	1128	63	38.9	74	35.1	35.1
Paymaster III	1088	81	37.5	56	34.3	32.9
Coker 711	912	62	41.8	73	36.1	37.1
Average	1220.4	78.6	39.49	66.5	35.49	35.02
LSD .05	103.2					
C.V. %	7.4					

¹Loring silt loam (2% to 5% slopes).

Table 5. Average yield of lint and other characteristics of 16 cotton varieties grown on Memphis and Falaya soils at Milan in 1971

Variety	Lint yield per acre	First Harvest	Lint	Bolls per lb.	Gin turnout	
					First harvest	Second harvest
	Lb.	Percent		No.	Percent	
Coker 310	1129	58	44.3	71	38.6	38.6
Deltapine 16	1118	46	41.0	68	37.3	37.7
Stoneville 213	1116	45	40.6	73	37.4	37.0
Brycot XP-4	1044	41	41.0	73	37.2	36.5
Deltapine 6225	1025	41	43.3	73	38.7	38.6
Stoneville 603	1019	47	40.2	66	36.2	35.8
Hancock	988	52	41.5	58	38.0	37.5
Dixie King II	985	40	42.0	58	36.1	37.1
Auburn M	976	64	40.3	68	36.0	34.4
Hy-Bee 200A	973	43	41.0	70	35.8	36.1
Hy-Bee 100A	955	52	41.4	75	37.5	36.6
T59-538	953	80	40.0	68	36.2	31.9
McNair 210	920	66	38.9	66	34.8	33.9
TH-149	908	57	38.9	58	35.1	34.7
Delcot 277	866	50	40.7	63	35.3	35.8
Deltapine 45A	855	40	41.7	75	37.4	35.7
Average	989.3	51.1	41.02	67.6	36.70	36.10

Table 6. Lint yield and other characteristics of 16 cotton varieties tested on Memphis silt loam at Milan in 1971

Variety	Lint yield per acre	First harvest	Lint	Bolls per lb.	Gin turnout	
					First harvest	Second harvest
	Lb.	Percent		No.	Percent	
T59-538	1125	79	40.2	68	36.3	36.0
Stoneville 213	1123	51	40.2	77	36.5	38.3
Auburn M	1103	62	40.7	68	35.4	36.5
Coker 310	1085	56	44.2	72	37.5	39.7
Brycot XP-4	1043	45	41.3	69	35.8	38.5
Dixie King II	1011	32	41.8	57	33.8	38.3
Deltapine 16	1008	46	41.4	68	35.5	39.1
Deltapine 6225	1000	42	43.7	73	37.4	40.0
TH-149	997	49	39.1	55	33.5	36.7
Hancock	986	47	40.9	59	37.2	38.7
Hy-Bee 100A	973	51	42.4	71	36.3	38.7
Hy-Bee 200A	955	44	41.2	68	33.8	37.7
Stoneville 603	935	45	40.2	66	33.9	38.5
McNair 210	904	67	38.6	67	34.0	35.5
Deltapine 45A	882	44	42.2	75	35.6	39.2
Delcot 277	876	45	40.3	66	33.9	36.6
Average	1000.3	50.3	41.15	67.5	35.40	38.00
LSD .05	82.9					
C.V. %	7.2					

Table 7. Lint yield and other characteristics of 16 cotton varieties tested on Falaya silt loam at Milan in 1971

Variety	Lint yield per acre	First harvest	Lint	Bolls per lb.	Gin turnout	
					First harvest	Second harvest
	Lb.	Percent		No.	Percent	
Deltapine 16	1228	45	40.6	69	36.0	39.3
Coker 310	1178	60	44.4	70	36.9	40.3
Stoneville 213	1109	40	40.9	68	35.6	38.4
Stoneville 603	1104	50	40.1	66	33.4	38.2
Deltapine 6225	1049	39	42.8	75	36.3	40.8
Brycot XP-4	1045	37	40.7	77	34.7	38.2
Hy-Bee 200A	991	42	40.7	72	33.9	38.3
Hancock	990	57	42.1	57	36.7	38.2
Dixie King II	959	48	42.2	59	35.5	38.6
Hy-Bee 100A	936	52	40.4	78	35.0	38.1
McNair 210	936	66	39.3	64	34.0	33.8
Delcot 277	857	56	41.0	60	35.0	36.6
Auburn M	849	65	39.9	67	30.9	37.8
Deltapine 45A	827	36	41.1	74	33.2	38.2
TH-149	819	65	38.6	61	35.8	36.6
T59-538	780	81	39.7	67	35.3	28.5
Average	978.3	51.7	40.91	67.7	34.89	37.49
LSD .05	116.9					
C.V. %	10.4					

Table 8. Lint yield and other characteristics of 24 varieties tested at Fort Pillow in 1971

Variety	Lint yield per A.	Lint	Bolls per lb.	Seed index	Gin turnout
	Lb.	%	No.		%
TH-149	465	36.0	66	13.6	27.5
Stoneville 603	441	37.1	78	12.4	28.3
McNair 210	374	35.7	70	13.5	25.9
Coker 417	369	38.9	78	11.4	27.9
T59-538	365	35.8	74	12.5	28.3
Hancock	353	38.0	70	12.1	27.4
Hy-Bee 200A	345	38.0	82	11.2	27.5
Auburn M	345	36.4	71	13.3	26.3
Coker 310	339	40.7	85	10.3	29.6
Delcot 277	336	38.6	70	12.0	28.5
Deltapine 16	326	38.9	77	11.3	28.4
Stoneville 213	322	38.3	79	11.6	26.2
Stoneville 7A	320	38.3	80	11.1	26.5
Dixie King II	304	37.5	64	13.1	27.4
McNair 9512	287	36.8	82	11.7	25.8
Deltapine 45A	286	39.1	83	11.0	26.7
Coker 201	280	39.9	77	10.9	28.0
Brycot XP-4	273	37.1	84	11.4	25.1
Paymaster III	264	35.7	67	12.0	24.4
McNair 9511	234	37.6	89	11.4	24.7
Hy-Bee 100A	231	38.2	79	11.3	24.6
Acala SJ-1	214	36.5	69	13.9	24.3
Deltapine 6225	194	38.7	85	10.9	25.6
Coker 711	150	38.5	82	11.3	25.4
Average	308.7	37.76	76.7	11.88	26.83
LSD .05	85.1				
C.V. %	24.1				

Table 9. Average plant height in inches for 23 cotton varieties grown at Jackson, Ames Plantation, and Fort Pillow in 1971

Variety	LOCATION			Avg.
	Jackson ¹	Fort Pillow ²	Ames Plantation ³	
		Inches		
Acala SJ-1	57	62	49	56.2
McNair 9512	58	63	47	55.8
Coker 711	57	60	49	55.3
Deltapine 6225	58	64	43	55.1
Hy-Bee 100A	56	61	44	53.7
Coker 417	59	56	47	53.7
McNair 9511	56	59	44	53.1
Coker 201	55	60	44	53.0
Stoneville 213	50	59	49	52.9
Hancock	54	63	42	52.9
Hy-Bee 200A	54	60	44	52.7
Brycot XP-4	53	63	40	52.1
Dixie King II	52	59	44	51.6
Deltapine 45A	54	55	42	50.5
TH-149	50	59	43	50.2
Delcot 277	52	55	42	49.6
Coker 310	51	57	41	49.6
Deltapine 16	51	55	42	49.1
Stoneville 603	49	58	41	49.0
Paymaster III	51	55	40	48.3
Auburn M	44	57	40	47.1
McNair 210	48	54	37	46.2
T59-538	40	51	32	41.3
Stoneville 7A		60		
Average	52.5	58.5	42.8	51.4
LSD .05	6.79	6.03	4.14	
LSD .01	8.99	7.99	5.49	
C.V. %	11.3	9.0	8.5	

¹Memphis silt loam (0% to 2% slope)

²Collins silt loam (0% to 2% slope)

³Loring silt loam (2% to 5% slope)

Table 10. Average plant height in inches for 16 cotton varieties grown on Falaya silt loam and Memphis silt loam at Milan in 1971

Variety	Location		Avg.
	Falaya	Memphis	
		Inches	
Brycot XP-4	53	39	45.9
Hancock	48	42	44.8
TH-149	46	43	44.6
Stoneville 213	51	39	44.6
Deltapine 6225	50	38	44.3
Hy-Bee 200A	49	38	43.8
Hy-Bee 100A	49	39	43.6
Deltapine 45A	49	38	43.1
Delcot 277	48	38	43.0
Dixie King II	47	39	42.8
Deltapine 16	47	36	41.5
Stoneville 603	45	37	41.1
Coker 310	43	36	39.8
McNair 210	42	34	37.9
Auburn M	42	33	37.4
T59-538	40	27	33.3
Average	46.8	37.1	42.0
LSD .05	4.13	3.43	
LSD .01	5.48	4.55	
C.V. %	7.7	8.0	

Table 11. Classer's grade and staple of 23 cotton varieties mechanically harvested at Jackson in 1971¹

Variety	First harvest		Second harvest	
	Grade	Staple in 32's	Grade	Staple in 32's
Dixie King II	LM+	34	LM	34
Stoneville 213	SLM Lt. Sp.	34	LM	34
Auburn M	SLM	33	LM	34
Hancock	SLM	33	SGO Bark/51 ²	34
Hy-Bee 200A	SLM Lt. Sp.	34	LM	34
Deltapine 45A	LM	33	LM	35
Coker 201	LM	34	LM	34
Deltapine 16	M	34	LM	35
T59-538	LM+	33	SGO	34
Acala SJ-1	LM	34	LM Lt. Sp.	35
TH-149	LM	34	LM	35
Delcot 277	LM	34	LM	35
Stoneville 603	LM	34	LM	35
Coker 310	LM	34	LM	35
Coker 417	SLM	34	LM	35
Paymaster III	SLM	34	SGO	34
Coker 711	SLM Lt. Sp.	35	LM	35
McNair 9511	SLM Lt. Sp.	34	LM	34
McNair 210	SLM	34	LM	35
McNair 9512	SLM Lt. Sp.	33	LM	34
Deltapine 6225	SLM	34	LM	34
Brycot XP-4	SLM	34	LM	35
Hy-Bee 100A	SLM Lt. Sp.	34	LM	35

¹Memphis silt loam.

²One full grade reduction due to bark.

Table 12. Classifier's grade and staple of 23 cotton varieties mechanically harvested at Ames Plantation in 1971¹

Variety	First harvest		Second harvest	
	Grade	Staple in 32's	Grade	Staple in 32's
Dixie King II	SLM	34	LM	33
Stoneville 213	SLM	34	SLM	33
Auburn M	SLM	35	SLM	33
Hancock	LM	34	LM	32
Hy-Bee 200A	SLM	34	SLM	34
Deltapine 45A	SLM	35	LM+	33
Coker 201	SLM	34	SLM	34
Deltapine 16	SLM	35	SLM	34
T59-538	LM	34	LM	34
Acala SJ-1	LM	35	LM	33
TH-149	LM+	35	LM	34
Delcot 277	SLM	35	LM	34
Stoneville 603	SLM	35	LM+	35
Coker 310	LM	35	LM	35
Coker 417	SLM	35	LM+	35
Paymaster III	SLM	34	LM	33
Coker 711	M. Lt. Sp.	34	SLM	35
McNair 9511	SLM Lt. Sp.	34	LM	34
McNair 210	LM+	34	LM	34
McNair 9512	SLM	33	LM+	34
Deltapine 6225	M Lt. Sp.	34	SLM	34
Brycot XP-4	SLM	34	LM	33
Hy-Bee 100A	LM+	35	SLM	35

¹Loring silt loam.

Table 13. Classer's grade and staple of 16 cotton varieties mechanically harvested at Milan in 1971¹

Variety	First harvest		Second harvest	
	Grade	Staple in 32's	Grade	Staple in 32's
Dixie King II	LM Lt. Sp.	33	LM	34
Stoneville 213	SLM Lt. Sp.	34	SLM	34
Auburn M	SLM	33	SLM	34
Hancock	LM	34	LM	34
Hy-Bee 200A	LM	34	SLM	35
Deltapine 45A	LM	34	SLM	34
Deltapine 16	SLM Lt. Sp.	35	SLM	35
T59-538	LM	34	LM	34
TH-149	LM	35	LM+	34
Delcot 277	SLM Lt. Sp.	34	LM	35
Stoneville 603	LM	34	LM+	34
Coker 310	SLM Lt. Sp.	34	LM	35
McNair 210	SLM Lt. Sp.	34	SLM	34
Deltapine 6225	LM	34	SLM	33
Brycot XP-4	LM	34	SLM	34
Hy-Bee 100A	LM	35	SLM	34

¹Memphis silt loam.

Table 14. Classer's grade and staple of 16 cotton varieties mechanically harvested at Milan in 1971¹

Variety	First harvest		Second harvest	
	Grade	Staple in 32's	Grade	Staple in 32's
Dixie King II	SLM Lt. Sp.	34	SLM	33
Stoneville 213	SLM	34	SLM	34
Auburn M	SLM	34	SLM	34
Hancock	LM	35	SLM	35
Hy-Bee 200A	LM	35	SLM	35
Deltapine 45A	LM	35	SLM	34
Deltapine 16	SLM	35	SLM	34
T59-538	LM	34	SGO Bark/51 ²	34
TH-149	SLM	35	SGO Bark/51 ²	34
Delcot 277	LM Lt. Sp.	35	SLM	35
Stoneville 603	LM	34	SLM	34
Coker 310	LM	35	LM	34
McNair 210	SLM Lt. Sp.	35	LM	34
Deltapine 6225	SLM	35	SLM	34
Brycot XP-4	LM	34	SLM	35
Hy-Bee 100A	LM	34	LM Bark/41 ²	35

¹Falaya silt loam.

²One full grade reduction due to bark.

Table 15. Classer's grade and staple of 24 cotton varieties mechanically harvested at Fort Pillow State Farm in 1971¹

Variety	Grade	Staple in 32's
Dixie King II	SGO	34
Stoneville 7A	LM	34
Stoneville 213	LM	34
Auburn M	SGO+	33
Hancock	SGO+	33
Hy-Bee 200A	SGO+	33
Deltapine 45A	SGO	33
Coker 201	SGO	33
Deltapine 16	LM	34
T59-538	SGO	33
Acala SJ-1	SGO	33
TH-149	SGO	33
Delcot 277	SGO	34
Stoneville 603	SGO+	33
Coker 310	SGO	34
Coker 417	LM	34
Paymaster III	SGO	33
Coker 711	LM Lt. Sp.	34
McNair 9511	SGO+	33
McNair 210	SGO	33
McNair 9512	LM Lt. Sp.	34
Deltapine 6225	SGO+	33
Brycot XP-4	SGO	33
Hy-Bee 100A	SGO+	34

¹Collins silt loam.

Table 16. Average lint yields and other characteristics of 16 cotton varieties at Jackson from 1969 through 1971¹

Variety	3-year average lint yield per A.	Lint	Bolls per lb.	First harvest
	Lb.	%	No.	%
Deltapine 16	1029	39.9	70	79
Stoneville 213	994	40.4	74	82
Coker 417	992	39.3	69	77
Stoneville 603	988	38.6	74	82
Coker 310	983	41.0	71	80
Hy-Bee 200A	976	40.3	73	81
Hancock	938	41.0	65	84
Coker 201	922	41.6	70	79
TH-149	906	38.0	58	83
Auburn M	894	39.0	68	84
Deltapine 45A	893	40.5	75	78
Dixie King II	893	40.4	61	80
Delcot 277	883	39.0	65	84
T59-538	883	38.6	70	86
Acala SJ-1	834	37.7	64	82
Paymaster III	820	37.2	58	76
Average	926.9	39.54	67.8	81.1

¹Memphis silt loam.

Table 17. Average lint yields and other characteristics for 19 cotton varieties at Ames Plantation for 1970 and 1971¹

Variety	2-year average lint yield per A.	Lint	Bolls per lb.	First harvest
	Lb.	%	No.	%
Stoneville 603	1183	37.6	71	86
T59-538	1110	38.0	70	90
TH-149	1104	36.9	62	85
Hancock	1075	39.7	63	85
Coker 310	1075	40.7	75	82
Delcot 277	1060	39.1	63	85
Hy-Bee 200A	1048	39.1	75	81
Auburn M	1044	37.7	65	84
Coker 201	1041	40.6	71	80
Dixie King II	1039	39.0	60	79
Deltapine 16	1037	38.3	73	80
McNair 210	1025	36.4	70	87
Coker 417	1021	38.6	70	81
Stoneville 213	1001	38.5	72	78
Deltapine 45A	986	39.8	76	81
McNair 9511	922	37.6	76	71
Paymaster III	902	36.9	58	82
Acala SJ-1	891	37.4	63	83
Coker 711	755	40.6	78	68
Average	1016.4	38.55	68.8	81.3

¹ Loring silt loam.

Table 18. Average lint yield and other characteristics of 9 cotton varieties at Milan on a Memphis silt loam from 1969 through 1971.

Variety	3-year average lint yield per A.	Lint	Bolls per lb.	First harvest
	Lb.	%	No.	%
Stoneville 213	1015	40.5	79	68
Hy-Bee 200A	971	40.5	74	67
Dixie King II	953	40.5	60	61
Stoneville 603	952	39.2	76	68
Auburn M	951	39.4	72	76
Coker 310	940	42.2	74	72
Deltapine 16	921	41.0	75	64
Hancock	911	41.0	68	69
Deltapine 45A	861	41.0	76	66
Average	941.6	40.59	72.7	67.9

Table 19. Average yield and other characteristics of 9 cotton varieties at Milan on a bottom soil from 1969 through 1971¹

Variety	3-year average lint yield per A.	Lint	Bolls per lb.	First harvest
	Lb.	%	No.	%
Coker 310	1017	42.4	75	71
Deltapine 16	1011	40.4	74	70
Stoneville 213	991	40.6	73	69
Stoneville 603	981	40.1	72	71
Hy-Bee 200A	951	40.7	77	69
Hancock	943	41.4	65	76
Auburn M	882	38.8	69	81
Deltapine 45A	857	40.9	75	68
Dixie King II	838	42.3	67	70
Average	941.1	40.85	72.0	71.7

¹Collins silt loam 1969 and 1970; Falaya silt loam 1971.

Table 20. Average lint yields and other characteristics of 17 cotton varieties at Fort Pillow from 1969 through 1971¹

Variety	3-year average lint yield per A.	Lint	Bolls per lb.	First harvest ²
	Lb.	%	No.	%
Stoneville 603	771	36.2	74	84
Stoneville 213	707	37.6	73	78
Auburn M	702	36.3	66	81
Hy-Bee 200A	688	36.9	74	79
Stoneville 7A	635	37.3	74	78
Delcot 277	633	37.1	68	89
Deltapine 45A	630	38.4	76	82
Hancock	628	38.0	66	89
Coker 417	621	37.5	72	77
Deltapine 16	615	37.5	75	74
Coker 310	611	38.7	77	77
Dixie King II	605	36.9	61	83
T59-538	600	35.7	73	91
Coker 201	576	39.1	71	80
TH-149	532	35.1	65	89
Paymaster III	531	35.6	63	78
Acala SJ-1	448	35.5	65	82
Average	619.6	37.02	70.1	81.8

¹Collins silt loam.

²1969 data only.

Table 21. Average fiber data from hand-picked samples obtained prior to first harvest of 17 cotton varieties tested at five locations in 1970

Variety	Length		Strength		Micro- naire	Yarn strength
	2.5 SL	.50SL	T ₁	E ₁		
Dixie King II	1.09	.51	16.75	7.19	4.66	105
Stoneville 213	1.12	.54	17.25	7.88	4.97	108
Auburn M	1.10	.53	17.02	8.13	4.51	106
Hancock	1.09	.52	16.78	7.51	4.61	108
Hy-Bee 200A	1.13	.55	17.06	8.00	4.85	107
Deltapine 45A	1.11	.54	17.88	8.45	4.85	110
Coker 201	1.14	.55	17.40	7.08	4.72	111
Mo-Del	1.13	.54	18.76	8.94	4.71	116
Deltapine 16	1.16	.55	17.92	9.10	4.66	111
Acala SJ-1	1.15	.56	21.14	7.27	4.65	128
Stoneville 603	1.13	.54	18.37	8.44	4.60	109
Coker 310	1.20	.56	18.27	7.61	4.79	108
Coker 417	1.18	.56	18.14	7.16	4.44	119
Acala 1517-70	1.17	.56	21.91	6.14	4.24	139
Coker 711	1.12	.53	18.34	7.13	4.93	105
McNair 9511	1.11	.53	18.79	7.18	4.85	117
McNair 210	1.12	.54	18.21	6.91	4.73	122
Average	1.132	.543	18.23	7.65	4.69	113.4

Table 22. Average fiber data from first picking of 17 cotton varieties harvested mechanically at five locations in 1970

Variety	Length		Strength		Micro- naire	Yarn strength
	2.5 SL	.50 SL	T ₁	E ₁		
Dixie King II	1.07	.47	16.12	7.14	4.36	92
Stoneville 213	1.09	.48	16.48	8.28	4.55	95
Auburn M	1.08	.47	15.90	7.99	4.10	90
Hancock	1.07	.48	16.34	7.31	4.23	96
Hy-Bee 200A	1.10	.49	16.62	8.03	4.58	96
Deltapine 45A	1.10	.50	17.44	8.44	4.45	100
Coker 210	1.12	.50	16.94	7.74	4.42	98
Mo-Del	1.10	.49	17.94	9.02	4.32	101
Deltapine 16	1.14	.50	17.77	9.44	4.33	104
Acala SJ-1	1.14	.53	20.15	7.23	4.41	118
Stoneville 603	1.10	.49	17.73	8.76	4.21	104
Coker 310	1.16	.50	17.78	7.88	4.36	103
Coker 417	1.16	.52	17.94	7.01	4.14	110
Acala 1517-70	1.15	.52	21.08	6.27	4.00	128
Coker 711	1.10	.49	18.14	7.46	4.51	100
McNair 9511	1.10	.50	17.71	7.57	4.59	112
McNair 210	1.10	.50	17.36	6.96	4.42	111
Average	1.110	.495	17.61	7.80	4.35	103.6

Table 23. Fiber data from hand-picked samples obtained prior to first harvest of 24 cotton varieties tested at Jackson in 1970

Variety	Length		Strength		Micro- naire	Yarn strength
	2.5 SL	.50 SL	T ₁	E ₁		
Dixie King II	1.02	.47	16.11	7.20	4.70	98
Stoneville 213	1.06	.50	17.36	7.86	5.02	104
Auburn M	1.05	.50	16.74	7.90	4.40	109
Hancock	1.02	.48	16.36	7.30	4.66	102
Hy-Bee 200A	1.10	.52	17.21	7.79	4.89	112
Deltapine 45A	1.06	.53	17.80	8.40	5.00	106
Coker 201	1.08	.51	17.90	7.12	4.63	111
Mo-Del	1.08	.51	19.03	9.07	4.45	120
Deltapine 16	1.12	.53	17.80	9.38	4.63	114
T59-538	1.10	.51	17.34	8.20	3.97	118
Atlas 67	1.05	.53	21.15	6.26	4.75	136
Acala SJ-1	1.10	.55	22.30	7.42	4.76	134
Hy-Bee 401	1.11	.54	17.46	9.44	4.91	111
TH-149	1.08	.52	18.71	6.65	4.86	123
Deltcot 277	1.10	.54	19.96	9.72	4.38	124
Stoneville 603	1.09	.52	17.84	8.84	4.57	106
Coker 310	1.17	.54	18.51	7.82	4.67	110
Coker 417	1.12	.54	18.17	7.20	4.43	116
Paymaster III	1.05	.51	17.77	6.91	4.75	108
McNair 1032B	1.04	.50	17.86	7.42	4.84	112
Acala 1517-70	1.12	.56	23.46	6.34	4.11	148
Coker 711	1.06	.51	18.98	7.00	4.95	107
McNair 9511	1.06	.53	18.88	7.38	4.98	116
McNair 210	1.10	.55	18.60	7.09	4.39	118
Average	1.081	.521	18.47	7.74	4.65	115.5

Table 24. Fiber data from first picking of 24 cotton varieties harvested mechanically at Jackson in 1970

Variety	Length		Strength		Micro- naire	Yarn strength
	2.5 SL	.50 SL	T ₁	E ₁		
Dixie King II	1.01	.45	14.58	6.93	4.13	89
Stoneville 213	1.06	.47	17.99	8.24	4.48	98
Auburn M	1.07	.47	16.03	7.95	3.85	96
Hancock	1.03	.47	16.40	7.39	4.25	97
Hy-Bee 200A	1.09	.51	18.40	7.58	4.53	96
Deltapine 45A	1.08	.50	17.86	8.79	4.43	98
Coker 201	1.08	.47	17.26	7.94	4.28	101
Mo-Del	1.07	.48	19.67	8.84	4.13	109
Deltapine 16	1.12	.49	17.23	9.56	4.23	107
T59-538	1.11	.47	15.96	7.88	3.68	102
Atlas 67	1.06	.50	20.36	6.46	4.23	122
Acala SJ-1	1.11	.52	21.92	6.95	4.30	120
Hy-Bee 401	1.12	.52	17.26	9.23	4.40	105
TH-149	1.09	.52	18.41	6.96	4.40	116
Delcot 277	1.11	.50	18.91	9.35	3.86	113
Stoneville 603	1.07	.48	18.72	8.41	4.00	101
Coker 310	1.12	.48	18.51	8.03	4.25	107
Coker 417	1.13	.51	17.44	7.17	4.03	110
Paymaster III	1.00	.45	17.69	7.78	4.10	97
McNair 1032B	0.99	.46	17.36	7.95	4.38	107
Acala 1517-70	1.10	.51	21.43	6.28	4.08	129
Coker 711	1.04	.47	18.99	7.24	4.44	101
McNair 9511	1.06	.49	17.58	8.21	4.45	111
McNair 210	1.07	.48	17.00	7.05	4.23	107
Average	1.075	.486	18.04	7.84	4.21	105.8

Table 25. Fiber data from hand-picked samples obtained prior to first harvest of 24 cotton varieties tested at Ames Plantation in 1970

Variety	Length		Strength		Micro- naire	Yarn strength
	2.5 SL	.50 SL	T ₁	E ₁		
Dixie King II	1.14	.54	16.73	7.39	4.60	109
Stoneville 213	1.18	.58	17.91	8.78	4.90	111
Auburn M	1.14	.54	16.92	8.16	4.48	102
Hancock	1.15	.57	17.33	7.72	4.43	111
Hy-Bee 200A	1.16	.56	17.24	8.14	4.73	107
Deltapine 45A	1.17	.56	18.21	8.55	4.73	108
Coker 201	1.16	.55	17.28	6.91	4.58	114
Mo-Del	1.16	.56	19.11	9.33	4.70	118
Deltapine 16	1.20	.57	17.75	9.39	4.65	107
T59-538	1.16	.53	16.93	8.55	4.27	115
Atlas 67	1.14	.56	20.95	6.42	4.93	138
Acala SJ-1	1.20	.59	20.64	7.57	4.48	127
Hy-Bee 401	1.17	.54	17.94	9.12	4.53	114
TH-149	1.17	.58	20.21	6.89	4.73	134
Delcot 277	1.22	.57	19.94	8.60	4.23	123
Stoneville 603	1.18	.56	18.78	8.41	4.68	115
Coker 310	1.22	.57	17.98	8.29	4.73	112
Coker 417	1.21	.56	17.59	7.43	4.35	106
Paymaster III	1.12	.54	17.81	7.36	4.73	117
McNair 1032B	1.13	.55	18.09	7.37	4.95	116
Acala 1517-70	1.22	.57	21.91	6.56	4.03	143
Coker 711	1.15	.53	17.41	7.45	4.68	111
McNair 9511	1.14	.54	18.90	7.36	4.63	121
McNair 210	1.14	.52	17.65	6.94	4.73	127
Average	1.168	.556	18.38	7.78	4.60	116.9

Table 26. Fiber data from first picking of 24 cotton varieties harvested mechanically at Ames Plantation in 1970

Variety	Length		Strength		Micro- naire	Yarn strength
	2.5 SL	.50 SL	T ₁	E ₁		
Dixie King II	1.13	.50	16.21	7.31	4.43	95
Stoneville 213	1.14	.51	15.87	8.79	4.38	96
Auburn M	1.11	.47	16.14	8.49	4.08	90
Hancock	1.11	.49	16.64	7.61	4.08	96
Hy-Bee 200A	1.14	.51	15.91	9.18	4.45	103
Deltapine 45A	1.15	.52	17.43	8.24	4.30	100
Coker 201	1.16	.50	17.82	7.90	4.29	98
Mo-Del	1.16	.51	16.83	9.66	4.34	95
Deltapine 16	1.18	.52	17.22	9.56	4.28	104
T59-538	1.17	.51	18.01	8.21	3.88	101
Atlas 67	1.13	.54	18.36	7.72	4.68	118
Acala SJ-1	1.17	.54	19.98	7.14	4.36	115
Hy-Bee 401	1.16	.51	17.94	8.86	4.19	104
TH-149	1.13	.53	18.61	7.26	4.53	114
Delcot 277	1.21	.54	19.72	10.33	3.83	113
Stoneville 603	1.15	.50	17.36	9.51	4.25	107
Coker 310	1.22	.53	18.54	8.02	4.26	102
Coker 417	1.19	.52	18.63	7.14	4.10	107
Paymaster III	1.10	.49	16.93	7.51	4.28	97
McNair 1032B	1.12	.51	17.42	8.09	4.45	111
Acala 1517-70	1.19	.53	20.26	6.56	3.79	127
Coker 711	1.13	.50	17.85	8.19	4.43	97
McNair 9511	1.14	.52	18.27	7.66	4.45	112
McNair 210	1.15	.53	17.99	7.65	4.48	113
Average	1.152	.514	17.75	8.19	4.27	104.8

Table 27. Fiber data from hand-picked samples obtained prior to first harvest of 17 cotton varieties tested at Milan on Memphis silt loam in 1970

Variety	Length		Strength		Micro- naire	Yarn strength
	2.5 SL	.50 SL	T ₁	E ₁		
Dixie King II	1.08	.50	16.74	7.46	4.98	107
Stoneville 213	1.12	.55	17.04	7.18	5.25	106
Auburn M	1.04	.50	17.69	9.23	4.93	97
Hancock	1.07	.52	16.56	7.78	4.98	112
Hy-Bee 200A	1.11	.55	17.87	8.16	5.23	102
Deltapine 45A	1.08	.53	18.66	8.60	5.08	117
Coker 201	1.11	.54	17.94	6.77	5.08	116
Mo-Del	1.09	.52	19.51	9.23	4.90	115
Deltapine 16	1.15	.55	19.53	9.61	5.28	106
Acala SJ-1	1.13	.57	22.91	7.11	5.10	133
Stoneville 603	1.10	.53	18.23	8.64	4.78	112
Coker 310	1.16	.55	19.33	7.68	5.28	102
Coker 417	1.14	.57	18.01	7.14	4.73	123
Acala 1517-70	1.15	.55	22.85	6.25	4.75	147
Coker 711	1.08	.53	19.57	7.29	5.38	102
McNair 9511	1.07	.51	18.66	6.63	5.00	112
McNair 210	1.10	.53	18.66	7.11	5.18	
Average	1.105	.535	18.81	7.76	5.05	113.6

Table 28. Fiber data from hand-picked samples obtained prior to first harvest of 17 cotton varieties tested at Milan on Collins silt loam in 1970

Variety	Length		Strength		Micro- naire	Yarn Strength
	2.5 SL	.50 SL	T ₁	E ₁		
Dixie King II	1.15	.55	18.64	7.05	4.65	110
Stoneville 213	1.09	.51	17.48	7.65	4.98	113
Auburn M	1.12	.54	17.47	7.54	4.53	110
Hancock	1.10	.52	16.88	7.62	4.60	109
Hy-Bee 200A	1.14	.55	17.54	8.14	4.85	108
Deltapine 45A	1.14	.56	17.96	8.71	4.90	119
Coker 201	1.19	.58	17.20	7.37	4.88	109
Mo-Del	1.17	.57	18.67	9.07	5.00	117
Deltapine 16	1.17	.59	17.62	8.60	4.78	120
Acala SJ-1	1.18	.58	21.48	7.39	4.70	132
Stoneville 603	1.16	.56	18.97	8.24	4.65	109
Coker 310	1.24	.58	18.09	6.91	4.98	115
Coker 417	1.22	.58	19.40	7.23	4.53	126
Acala 1517-70	1.18	.57	20.95	5.90	4.48	132
Coker 711	1.15	.55	18.27	7.13	5.07	106
McNair 9511	1.11	.52	18.67	7.26	4.98	121
McNair 210	1.14	.53	18.47	7.02	4.88	120
Average	1.156	.553	18.46	7.58	4.79	116.2

Table 29. Fiber data from first picking of 17 cotton varieties mechanically harvested at Milan on Memphis silt loam in 1970

Variety	Length		Strength		Micro- naire	Yarn strength
	2.5 SL	.50 SL	T ₁	E ₁		
Dixie King II	1.03	.46	16.71	7.12	4.88	94
Stoneville 213	1.07	.48	16.70	8.28	4.93	98
Auburn M	1.05	.47	16.30	7.92	4.54	91
Hancock	1.04	.47	16.55	7.14	4.75	101
Hy-Bee 200A	1.07	.49	17.30	7.69	4.96	99
Deltapine 45A	1.07	.50	17.99	8.48	4.94	100
Coker 201	1.09	.50	17.51	7.14	4.95	97
Mo-Del	1.08	.48	18.55	9.89	4.63	104
Deltapine 16	1.10	.49	18.92	9.68	4.86	107
Acala SJ-1	1.14	.54	20.79	7.52	4.93	126
Acala 1517-70	1.17	.55	23.13	6.71	4.60	140
Coker 711	1.08	.50	17.88	7.48	5.07	109
Stoneville 603	1.10	.49	16.84	8.39	4.61	108
Coker 310	1.15	.52	17.64	7.72	4.93	106
Coker 417	1.13	.51	18.44	7.29	4.53	112
McNair 210	1.09	.51	17.18	6.65	4.85	114
McNair 9511	1.09	.50	18.25	7.90	5.10	111
Average	1.091	.498	18.04	7.82	4.83	106.9

Table 30. Fiber data from first picking of 17 cotton varieties mechanically harvested at Milan on Collins silt loam in 1970

Variety	Length		Strength		Micro- naire	Yarn strength
	2.5 SL	.50 SL	T ₁	E ₁		
Dixie King II	1.10	.49	17.19	7.24	4.18	97
Stoneville 213	1.09	.49	16.57	7.90	4.45	96
Auburn M	1.06	.47	16.21	7.97	4.09	86
Hancock	1.06	.48	15.64	7.75	4.03	99
Hy-Bee 200A	1.09	.50	16.03	7.77	4.48	98
Deltapine 45A	1.10	.50	17.44	8.67	4.25	105
Coker 201	1.14	.52	17.04	7.48	4.38	108
Mo-Del	1.10	.49	17.06	8.26	4.29	107
Deltapine 16	1.14	.50	18.22	9.48	4.23	107
Acala SJ-1	1.16	.54	19.25	8.03	4.21	125
Acala 1517-70	1.14	.51	20.24	6.32	3.96	128
Coker 711	1.12	.50	18.35	7.34	4.33	100
Stoneville 603	1.10	.50	18.29	8.83	4.13	107
Coker 310	1.17	.50	17.89	7.77	4.44	107
Coker 417	1.16	.52	18.46	7.29	4.15	117
McNair 210	1.10	.49	18.02	6.87	4.36	115
McNair 9511	1.10	.50	17.28	7.26	4.58	113
Average	1.102	.500	17.60	7.78	4.27	106.8

Table 31. Fiber data from hand-picked samples obtained prior to first harvest of 25 cotton varieties tested at Fort Pillow in 1970

Variety	Length		Strength		Micro- naire	Yarn strength
	2.5 SL	.50 SL	T ₁	E ₁		
Dixie King II	1.10	.52	15.54	6.84	4.38	100
Stoneville 7A	1.16	.55	16.40	6.69	4.59	112
Stoneville 213	1.15	.55	16.46	7.92	4.69	108
Auburn M	1.14	.56	16.29	7.82	4.21	112
Hancock	1.13	.54	16.76	7.64	4.38	107
Hy-Bee 200A	1.15	.56	15.44	7.79	4.68	104
Deltapine 45A	1.13	.55	16.78	7.98	4.53	102
Coker 201	1.16	.57	16.68	7.24	4.43	105
Mo-Del	1.17	.57	17.46	7.98	4.50	111
Deltapine 16	1.20	.55	16.89	8.54	3.99	106
T59-538	1.17	.54	17.60	7.44	3.70	122
Atlas 67	1.14	.57	20.02	6.24	4.70	136
Acala SJ-1	1.15	.56	18.36	6.84	4.25	116
Hy-Bee 401	1.19	.56	17.70	9.04	4.26	107
TH-149	1.16	.57	19.54	6.22	4.31	122
Delcot 277	1.20	.57	18.50	9.07	3.84	120
Stoneville 603	1.15	.54	18.03	8.06	4.34	103
Coker 310	1.21	.56	17.44	7.35	4.32	103
Coker 417	1.22	.59	17.52	6.78	4.15	122
Paymaster III	1.11	.54	17.64	7.18	4.29	108
McNair 1032B	1.10	.53	17.81	7.26	4.65	106
Acala 1517-70	1.17	.55	20.40	5.64	3.86	124
Coker 711	1.16	.56	17.49	6.80	4.59	100
McNair 9511	1.16	.57	18.76	7.26	4.59	116
McNair 210	1.15	.57	17.68	6.41	4.54	120
Average	1.157	.556	17.57	7.36	4.35	111.7

Table 32. Fiber data from first picking of 25 cotton varieties harvested mechanically at Fort Pillow in 1970

Variety	Length		Strength		Micro- naire	Yarn strength
	2.5 SL	.50 SL	T ₁	E ₁		
Dixie King II	1.09	.47	15.93	7.08	4.20	87
Stoneville 7A	1.12	.50	15.38	8.03	4.33	90
Stoneville 213	1.11	.48	15.29	8.21	4.51	86
Auburn M	1.12	.50	14.83	7.63	3.95	88
Hancock	1.08	.47	16.49	6.66	4.03	89
Hy-Bee 200A	1.11	.47	15.47	7.92	4.46	86
Deltapine 45A	1.11	.49	16.49	8.03	4.33	99
Coker 201	1.16	.51	15.09	8.26	4.20	88
Mo-Del	1.12	.49	17.57	8.43	4.23	90
Deltapine 16	1.16	.51	17.27	8.92	4.09	95
T59-538	1.15	.49	15.93	9.05	3.45	98
Atlas 67	1.11	.52	18.66	6.44	4.48	115
Acala SJ-1	1.13	.51	18.80	6.50	4.28	106
Hy-Bee 401	1.14	.51	18.08	8.33	4.28	104
TH-149	1.12	.51	18.82	6.59	4.09	113
Delcot 277	1.16	.51	16.85	7.52	3.71	102
Stoneville 603	1.11	.48	17.45	8.65	4.08	99
Coker 310	1.21	.50	16.31	7.85	3.95	95
Coker 417	1.17	.52	16.75	6.17	3.88	106
Paymaster III	1.05	.46	16.68	6.90	4.23	92
McNair 1032B	1.07	.49	16.71	7.01	4.28	103
Acala 1517-70	1.16	.51	20.33	5.49	3.60	114
Coker 711	1.12	.49	17.64	7.05	4.28	95
McNair 9511	1.12	.49	17.17	6.81	4.39	112
McNair 210	1.11	.49	16.63	6.56	4.21	105
Average	1.124	.495	16.90	7.44	4.14	98.3

Regional High Quality Strains Test

This experiment was conducted cooperatively with USDA and other states. A number of experimental strains, each possessing superior fiber properties, and two commercial checks are tested at 11 locations in 10 states. The commercial checks include one standard southeastern variety (Coker 201) for yield comparison and one variety with high quality lint (Acala SJ-1)

Sampling procedure and kind of data obtained were identical to those in the Tennessee testing program. Yields were fairly high and six experimentals yielded more than Coker 201. Fiber data for 1971 are not available. Fiber data for 1970 are not given since several 1970 experimental strains were not included in the 1971 experiment.

A number of currently available varieties were evaluated in the Regional High Quality Strains Test before their release. Data are presented in Tables 33-35.

Table 33. Lint yields and other characteristics of 18 cotton varieties and experimental strains grown in the Regional High Quality Strains Test at Jackson in 1971

Variety	Lint yield per acre		First harvest	Plant height
	Total	At 1st harvest		
	Pounds		%	Inches
Coker 8215	1200	1034	86	45
Stoneville 804	1179	1054	89	51
Coker 310-1901	1175	986	84	48
CP 820589	1142	966	85	47
Pee Dee 4381-54	1142	973	85	49
Coker 8103	1140	979	86	49
Coker 201	1126	900	80	50
Coker 423-70911	1124	898	80	51
Pee Dee 4381-567	1110	903	81	48
CP 828	1110	1004	90	46
PD 8619	1057	834	79	48
Deltapine 607	1050	768	73	51
Mo. 63-079A	1022	863	84	48
Acala SJ-1	1018	895	88	51
McNair 9416	989	726	73	52
LA DASS 5175	987	703	71	61
T60-30	961	831	87	48
Bayou 7769	925	565	61	63
Average	1081.0	882.3	81.6	50.3
L.S.D. .05	71.0	93.8		4.8
C. V. %	5.7	9.3		8.2

Table 34. Gin data for 18 cotton varieties and experimental strains grown in the Regional High Quality Strains Test at Jackson in 1971¹

Variety	Lint	Bolls per lb.	Seed index	Percent ² gin turnout harvest	
				1st	2nd
Acala SJ-1	38.7	57	13.3	33.2	29.0
Coker 201	42.2	65	10.8	37.0	34.6
Coker 310-1901	44.1	66	10.6	37.9	33.6
Coker 8103	40.8	67	11.0	35.7	31.8
Coker 423-70911	40.6	65	11.0	34.7	33.1
Coker 8215	43.4	78	9.5	37.9	33.9
CP 828	40.3	70	12.1	33.9	30.0
CP 820589	39.3	61	12.3	34.2	30.8
Deltapine 607	40.0	72	10.6	34.9	33.2
McNair 9416	38.5	62	11.0	33.1	33.0
Mo. 63-079A	39.1	59	12.5	33.6	30.9
PD 8619	41.1	67	10.8	35.7	33.6
Pee Dee 4381-54	40.6	68	12.2	35.6	32.2
Pee Dee 4381-567	39.5	67	11.6	34.8	32.2
Stoneville 804	41.6	74	10.4	37.5	32.0
LA DASS 5175	41.7	72	11.3	34.8	34.7
Bayou 7769	39.1	71	11.3	32.2	34.0
T 60-30	39.3	66	11.9	34.6	30.2
Average	40.55	67.1	11.34	35.07	32.38

¹Memphis silt loam

²Mechanically harvested cotton; other data from hand-picked samples.

Table 35. Classer's grade and staple for 18 mechanically harvested cotton varieties and experimental strains in the Regional High Quality Strains Test at Jackson in 1971

Variety	Harvest			
	First		Second	
	Grade	Staple in 32's	Grade	Staple in 32's
Acala SJ-1	SLM Lt. Sp.	35	SGO	34
Coker 201	SLM	35	LM	34
Coker 310-1901	LM+	35	SGO Bark/51 ¹	35
Coker 8103	SLM Lt. Sp.	35	SGO Bark/51 ¹	34
Coker 423-70911	SLM	35	LM Bark/41 ¹	34
Coker 8215	SLM	35	SGO Bark/51 ¹	34
CP 828	LM+	34	SGO Bark/51 ¹	34
CP 820589	SLM	35	SGO Bark/51 ¹	34
Deltapine 607	SLM	35	LM	35
McNair 9416	LM	34	LM	34
Mo. 63-079A	SLM Lt. Sp.	35	LM Lt. Sp.	33
PD 8619	SLM	35	LM Lt. Sp.	34
Pee Dee 4381-54	M Lt. Sp.	34	SLM Lt. Sp.	34
Pee Dee 4381-567	M Lt. Sp.	35	LM	35
Stoneville 804	SLM	35	LM	34
LA DASS 5175	LM+	34	LM	34
Bayou 7769	LM	33	LM	34
T 60-30	LM+	34	SGO Bark/51 ¹	34

¹One full grade reduction due to bark.

ADVANCED STRAINS TEST

An advanced strains test consisting of 16 experimental strains and 2 commercial checks was conducted at Milan in 1971. Advanced strains from breeding programs of Tennessee, surrounding states, and southeastern commercial companies are included in the test. Numerous varieties that are currently available were evaluated in the Advanced Strains Test before they were released. Strains that did not perform well were discarded. The variety, Quapaw, was released by Arkansas during 1971.

The Advanced Strains Test showed considerable chemical herbicide damage during the seedling stage and was lightly damaged by hail in midseason. Relative varietal earliness was influenced by the chemical and hail damage. Total yield apparently was not.

Fiber data for 1971 are not available at this time. Fiber data for 1970 are not given, since many experimentals are replaced each year. Data are presented in Tables 36 and 37.

Table 36. Lint yield and other characteristics of 18 cotton varieties and experimental strains grown in the Advanced Strains Test at Milan in 1971

Variety	Lint yield per acre		First harvest	Gin turnout	
	Total	At 1st harvest		1st harvest	2nd harvest
		Pounds		%	Percent
T59-538	1158	841	73	36.2	37.2
Coker 5110	1131	505	45	35.3	38.4
Quapaw	1063	732	69	34.2	34.6
Stoneville 256	1045	454	43	36.5	38.7
Coker 310-70903	1036	546	53	36.6	40.5
T57-480	998	552	55	37.3	38.1
Deltapine 652	995	352	35	35.8	39.7
Coker 8313	980	440	45	37.4	40.5
Hancock	957	400	42	36.1	38.7
Dixie King 375	956	315	33	33.8	37.7
Coker 8103	953	363	38	35.0	37.8
Deltapine 16	948	354	37	34.8	37.8
Rex 69 gls.	939	418	45	35.3	37.4
T66-1	902	462	51	35.2	36.8
Stoneville 279	881	334	38	35.0	37.4
T60-83	878	424	48	34.6	37.2
T60-30	746	352	47	33.9	36.6
T70-1	640	260	41	33.5	35.4
Average	955.9	450.2	47.1	35.36	37.81
L.S.D. .05	87.8	92.5			
C.V. %	8.0	17.9			

Table 37. Classer's grade and staple of cotton varieties and experimental strains harvested by machine in the Advanced Strains Test at Milan in 1971¹

Variety	First Harvest		Second Harvest	
	Grade	Staple in 32's	Grade	Staple in 32's
Stoneville 256	SLM Lt. Sp.	34	SLM	34
Stoneville 279	LM	34	SLM	34
Dixie King 375	LM	34	SLM	35
Deltapine 652	SLM	34	M	34
Deltapine 16	SLM	34	SLM	35
T57-480	SLM Lt. Sp.	34	SLM	35
T59-538	LM	35	LM	35
T60-30	LM	34	SLM	34
T60-83	SLM	35	SLM	35
T66-1	LM	35	SLM	35
T70-1	LM Lt. Sp.	34	LM	34
Hancock	LM	35	LM Bark/41 ²	34
Rex 69 gls.	SLM	34	SLM	34
Quapaw	SLM	34	SLM	34
Coker 310-70903	SLM Lt. Sp.	33	SLM	35
Coker 5110	LM	35	LM Bark/41 ²	35
Coker 8313	SLM Lt. Sp.	35	SLM	35
Coker 8103	LM	35	SLM	35

¹Memphis silt loam.

²One full grade reduction due to bark.

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