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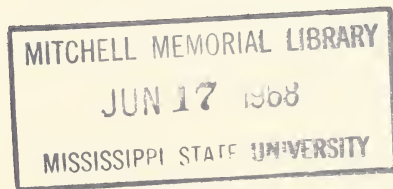
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Mississippi Cotton Variety Tests Delta And Hill Sections, 1968



Mississippi State University
AGRICULTURAL EXPERIMENT STATION

HENRY H. LEVECK, Director

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MISSISSIPPI COTTON VARIETY TESTS FOR 1968 IN THE DELTA

By ROBERT R. BRIDGE, WILLIAM R. MEREDITH, JR.,
and JAMES F. CHISM¹

The cotton variety picture is changing rapidly as shown by the results presented in this report. Since 1962, several new varieties have been placed on the market. Deltapine Smooth Leaf is the only variety in the 1967 tests that was tested prior to 1962. In 1967: Deltapine 45A, Coker 201, Deltapine 15A, and Coker 413 were released as new varieties. Stoneville 508 and Deltapine 16 are new varieties being released for 1968 planting.

The present emphasis is on quality cotton varieties, since the future of cotton depends upon the production of quality varieties. One of the most important decisions facing the cotton grower is the selection of an appropriate variety, since a major factor in the yield and quality of the harvested cotton crop is the variety of cotton planted.

The yield and quality of a variety is fixed by the genotype or inherent potential of the plants that make up any given variety. Under ideal growing conditions and the most careful ginning, the quality of the variety cannot exceed the upper limits imposed by heredity.

Most cotton varieties are bred for specific soil and climatic conditions, therefore it is necessary for the producer to select a variety adapted to his specific area. The medium staple varieties now being grown in the Mississippi Delta are

considered to be widely adapted. While these varieties are not suited for unlimited areas of growth they perform more consistently in different environments than some of the new high quality varieties and the western varieties. Some of these quality varieties appear to be later in maturity, less adaptable, lower in yield, and have a lower lint percent than our standard varieties. Only through continued testing at several locations over a period of years will we be able to predict, with any measure of success, the performance of these varieties.

In 1967 the cotton variety testing program at Stoneville was changed so that information on these quality varieties could be obtained. This report shows the performance of several varieties that have not been tested in the past. These variety tests results are published to act as guides in the selection of varieties possessing the best balance of productivity and fiber quality characteristics.

Four Locations

Cotton variety trials were conducted by the Delta Branch Experiment Station in 1967 at four locations; The Delta Station at Stoneville, Arnold Plantation near Tunica, Schaefer Plantation near Yazoo City, and the Mitchner Plantation near Sumner.

Current strains of 16 varieties were grown at all locations in 1967. Thirteen varieties grown at Stoneville and Tunica are included in a cooperative beltwide variety testing program. Each variety test was planted in a randomized complete block design with six replications.

At Tunica (Table 1) the test was planted on May 11, which is about a week later than normal. Yields ranged from 780 to 1087 pounds of lint per acre. with

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an overall average yield of 934 pounds of lint per acre. The average fiber length and strength at Tunica was higher than that of any other test site. The five highest yielding varieties at Tunica (Deltapine 16, Deltapine 45A, Coker 201, Hancock, and Stoneville 213) also had the highest yield when averaged over all locations.

At Sumner (Table 2) variety trials were conducted for the first time at this location. The test was planted on April 29, but due to delayed maturity caused by cool wet weather, and days of low light intensity, the first harvest was not made until November 6. The average yield of all varieties in this test was 1315 pounds of lint per acre. This lint yield was 300 to 400 pounds higher than that of any other test. The test at Sumner was damaged by the freeze causing some loss in production. The yields ranged from 1087 to 1514 pounds per acre with Deltapine 16, Coker 201, Deltapine 45A, McNair 1032 and Stoneville 213 being the five highest yielding varieties. Fiber length of all varieties was good.

At Yazoo City (Table 3) the planting on May 9 was about two weeks later than usual. The total lint yield ranged from 819 to 1132 pounds of lint per acre, with an overall average of 1001 pounds of lint per acre. The five highest yielding varieties at Yazoo City were Coker 201, Stoneville 213, Deltapine 16, Deltapine 15A and Stoneville 7A. Lint percentages were somewhat higher than usual and the micronaire index showed the fiber to be coarser than that of other tests. The fiber length and strength was also lower than usual.

At Stoneville (Table 4) the test was planted on April 27 which is about the normal time for planting at Stoneville. The high degree of Verticillium wilt is possibly part of the cause for the lower

yields. The average yield of 904 pounds of lint per acre was the lowest of all four tests. The total lint yield ranged from 683 to 1040 pounds of lint per acre. The average fiber length of 1.06 inches as measured on the digital fibrograph was also the lowest of all tests. The highest yielding varieties at Stoneville were Deltapine 16, Deltapine 45A, Hancock, Stoneville 213, Mo61-47OF, and Stoneville 7A.

Averages of All Locations

Table 5 gives the average performance of all varieties at four locations. The average yield at all locations was 1058 pounds of lint per acre. The five highest yielding varieties averaged 1137 pounds compared to 950 pounds of lint per acre for the seven lowest yielding varieties.

The seven lowest yielding varieties, with the exception of Paymaster 54B, usually had longer and stronger fiber than the other varieties. The six highest yielding varieties; Deltapine 16, Deltapine 45A, Coker 201, Hancock, Stoneville 213, and Stoneville 7A ranked in the top six at most locations. The micronaire value for most varieties was lower than usual; however, for some varieties at Yazoo City it was high.

The data presented show that varieties play a very important part in determining the yield and quality of cotton. In choosing a variety, care should be taken to choose one that produces the greatest length and highest strength possible without sacrificing significant amounts of yield and performance consistency.

Classing was done by the Staple Cotton Cooperative Association in Greenwood, Mississippi. Fiber properties data were determined by the fiber laboratory of Crops Research Division, Agricultural Research Service, U. S. Department of Agriculture, at Knoxville, Tennessee.

Table 1: Results 1967 Variety Test - Tunica, Mississippi

Variety	Fiber properties											
	Lint per acre	Per-cent first pick	Per-cent lint	Seed index	Boll size grams	Classer 1/32 in.	Length 2.5%	50%	Strength T_1 gram/tex	Elongation E_1	Micro-naire	
												First pick
Hancock	1087	940	86	38.3	12.8	6.67	35.0	1.10	.51	18.30	7.18	4.05
Deltapine 16	1010	847	84	37.3	11.5	6.26	36.5	1.16	.54	19.15	9.15	4.20
Coker 201	1005	852	85	37.1	12.6	6.81	37.0	1.17	.55	19.24	6.80	4.23
Deltapine 45A	995	841	85	36.9	11.9	6.11	36.5	1.15	.56	19.55	8.89	4.21
Stoneville 213	969	761	79	36.4	11.9	6.02	35.5	1.09	.50	18.81	7.64	4.51
Paymaster 543	947	854	90	35.9	12.2	6.86	32.0	1.00	.51	17.25	9.55	4.11
Deltapine Smooth Leaf	935	724	77	36.0	10.9	5.91	36.0	1.15	.54	19.27	9.66	4.20
Deltapine 15A	931	690	74	37.7	10.6	5.73	36.0	1.12	.52	18.67	9.36	3.97
Mo 61-470F	925	730	79	35.6	14.7	7.12	37.0	1.17	.58	21.03	9.42	4.40
MI 9603	925	785	85	34.6	13.0	6.62	37.0	1.21	.59	22.39	6.63	4.07
Stoneville 7A	914	674	74	36.0	11.6	5.89	35.5	1.14	.55	18.48	6.87	4.31
Acala 1517D	912	766	84	34.2	13.8	6.89	37.5	1.23	.61	24.64	7.14	4.10
Coker 413-68	892	754	85	35.4	12.0	6.18	37.5	1.18	.54	19.74	6.61	3.95
McNair 1032	868	628	72	33.9	13.0	6.28	36.0	1.15	.56	20.53	7.52	4.10
Stoneville 9008	847	614	72	36.5	11.0	5.81	35.0	1.14	.50	19.65	8.72	3.50
Stoneville 508-9117	780	613	79	34.6	12.8	6.69	38.5	1.21	.53	19.07	8.11	3.75
C.V.	10.43	13.80		1.88	3.91	3.05		2.09		1.82	6.15	4.41
L.S.D. .05	111	112		1.44	1.02	0.41		0.051		0.77	1.06	0.39
L.S.D. .01	148	148		1.99	1.42	0.57		0.071		1.06	1.47	0.53

Planted: May 11, 1967

Harvested: October 24 and November 15, 1967

Table 2: Results 1967 Variety Test - Summer, Mississippi

Variety	Per-Acre				Per- cent first pick	Per- cent lint	Seed index	Boll size grams	Fiber properties			Elon- gation E ₁	Micro- naire	
	Lint	Per pick	First pick	Total					Classer	Length				Strength T ₁ gram/tex
										1/32 in.	2.5% 50%			
Deltapine 16.	1514	1347	89	38.6	11.1	6.17	36.5	1.15	.53	17.82	9.73	4.41		
Coker 201	1510	1342	89	40.1	11.7	6.49	36.5	1.13	.52	17.23	7.69	4.76		
Deltapine 45A	1479	1274	86	39.2	10.8	5.73	34.0	1.11	.53	18.14	9.22	4.22		
McNair 1032	1430	1172	82	37.1	11.5	5.82	34.0	1.11	.53	18.40	8.20	4.63		
Stoneville 213	1415	1221	86	38.4	11.5	5.90	35.0	1.12	.52	17.32	8.51	4.59		
Hancock	1397	1242	90	39.5	12.4	6.53	34.0	1.09	.50	17.66	7.55	4.53		
Stoneville 7A	1391	1137	82	38.6	11.4	5.81	35.0	1.12	.52	16.98	8.09	4.43		
Deltapine Smooth Leaf	1350	1153	85	38.3	10.2	5.60	35.0	1.17	.55	17.90	10.06	4.36		
Deltapine 15A	1279	1038	83	39.2	9.9	5.41	35.0	1.12	.51	17.85	9.96	4.01		
Coker 413-68	1276	1131	88	37.4	11.8	5.93	36.5	1.19	.55	18.51	7.63	4.04		
Acala 1517D	1254	1110	88	35.0	13.6	7.01	37.0	1.23	.60	21.82	7.68	4.17		
Paymaster 54B	1190	1087	91	36.4	11.8	6.73	30.5	0.97	.46	16.11	9.75	4.46		
Mo 61-470F	1175	1016	86	36.4	14.5	6.45	36.5	1.16	.55	19.12	10.04	4.56		
Stoneville 508-9117	1164	1007	86	36.0	12.2	6.01	38.0	1.22	.55	18.69	8.45	3.73		
Stoneville 9008	1133	910	80	37.7	10.6	5.49	36.0	1.14	.48	19.04	9.43	3.52		
NM 9608	1087	916	84	35.9	12.8	6.49	36.5	1.21	.57	20.34	6.59	4.36		
C.V.	7.29	9.88		1.72	4.02	2.93		1.84		3.12	4.58	3.57		
L.S.D. .05	110	128		1.39	1.00	0.38		0.045		1.22	0.85	0.33		
L.S.D. .01	146	170		1.92	1.39	0.53		0.062		1.68	1.17	0.45		

Planted: April 29, 1967

Harvested: November 6 and November 16, 1967

Table 3: Results 1967 Variety Test - Yazoo City, Mississippi

Variety	Fiber properties										
	Lint per acre	Per-cent first pick	Per-cent lint	Seed index	Boll size grams	Length			Strength T ₁ gram/tex	Elongation E ₁	Micro-naire
						First pick	Classer 1/32 in.	2.5%			
Coker 201	1132	879	78	41.7	5.86	34.5	1.08	.51	17.47	7.93	5.14
Stoneville 213	1117	881	79	39.4	5.75	34.0	1.06	.50	17.61	8.64	5.15
Deltapine 16	1114	805	72	40.2	5.76	35.5	1.09	.53	17.76	10.39	4.80
Deltapine 15A	1099	794	72	42.2	5.02	34.5	1.04	.50	17.56	10.48	4.67
Stoneville 7A	1094	832	76	39.6	5.70	35.5	1.06	.51	17.86	7.67	5.07
Deltapine 45A	1079	822	76	40.8	5.36	34.0	1.05	.52	17.74	9.30	5.00
Deltapine Smooth Leaf	1067	783	73	40.3	5.35	34.0	1.06	.51	17.71	10.74	5.01
McNair 1032	1063	752	71	40.2	5.51	34.0	1.03	.49	18.39	8.47	5.18
Hancock	1033	822	79	40.8	6.22	34.5	1.06	.52	17.50	8.28	4.96
Coker 413-68	970	750	77	39.9	5.55	35.5	1.10	.54	19.19	7.55	4.70
Acala 1517D	926	708	76	35.7	6.42	37.5	1.16	.59	21.78	7.73	4.61
Mo 61-470F	901	677	75	38.1	5.98	34.5	1.08	.54	18.41	10.07	4.89
Stoneville 9008	901	650	72	39.3	5.02	36.5	1.10	.50	18.06	9.59	3.64
Stoneville 508-9117	889	693	78	37.8	5.74	36.5	1.16	.56	18.18	8.79	4.10
NM 9608	821	602	73	36.8	6.00	36.5	1.15	.59	20.81	7.30	4.77
Paymaster 54B	819	662	81	38.5	6.41	31.5	0.90	.46	16.65	9.68	4.88
C.V.	6.57	5.89		1.43	4.42		1.97		2.74	4.94	3.72
L.S.D. .05	75	51		1.21	0.54		0.045		1.07	0.94	0.38
L.S.D. .01	100	67		1.67	0.75		0.062		1.48	1.29	0.52

Planted: May 9, 1967

Harvested: October 20 and November 9, 1967

Table 4: Results 1967 Variety Test - Stoneville, Mississippi

Variety	Lint per acre				Per- cent lint	Per- cent seed index	Boll size grams	Fiber properties			Micro- naire	
	Total	First pick	First pick	Per- cent pick				Length Classer 1/32 in.	2.5%	50% gram/tex		Elon- gation E ₁
Deltapine 16	1040	881	85	39.1	9.7	5.21	35.5	1.09	.49	19.44	9.46	3.90
Deltapine 45A	1004	829	82	38.9	10.7	5.31	35.0	1.06	.50	18.72	8.55	3.98
Hancock	991	893	90	37.3	10.7	6.18	34.0	1.00	.45	17.27	7.75	3.75
Stoneville 213	984	856	87	38.6	10.4	4.95	35.0	1.04	.47	17.65	7.80	4.06
Mo 61-470F	944	854	90	35.6	12.6	6.29	34.5	1.06	.48	19.89	8.47	3.88
Stoneville 7A	939	759	81	39.1	10.2	4.83	34.0	1.06	.48	17.57	6.78	4.02
McNair 1032	932	804	86	35.9	10.6	5.20	33.5	1.01	.48	18.83	7.56	3.78
Stoneville 9008	920	762	83	39.0	10.1	5.36	35.5	1.09	.47	19.42	9.03	3.55
Deltapine 15A	911	762	83	40.1	9.1	4.96	34.5	1.02	.44	18.75	9.46	3.82
Deltapine Smooth Leaf	894	755	84	37.8	9.0	5.20	35.0	1.09	.50	18.95	9.33	3.68
Coker 201	878	781	89	37.0	10.7	5.72	34.0	1.06	.48	18.56	7.57	3.86
Stoneville 508-9117	873	741	85	36.9	10.6	5.62	36.5	1.12	.50	19.65	8.30	3.48
NM 9608	869	695	80	36.2	12.0	6.16	37.0	1.10	.50	21.32	6.67	3.94
Paymaster 54B	842	760	90	36.7	11.1	6.10	32.0	0.90	.44	16.77	9.20	3.83
Acala 1517D	759	626	82	34.8	12.4	6.08	36.0	1.14	.54	21.72	7.18	3.69
Coker 413-68	683	574	84	35.7	10.8	5.35	35.5	1.11	.49	19.55	6.83	3.55
C.V.	7.01	7.94		1.86	3.42	4.35		1.77		2.45	4.29	3.84
L.S.D. .05	73	70		1.48	0.78	0.51		0.040		0.99	0.74	0.39
L.S.D. .01	96	91		2.05	1.07	0.71		0.055		1.37	1.03	0.54

Planted: April 27, 1967

Harvested: October 3 and October 25, 1967

Table 5: Average performance of 16 varieties at four Delta locations in 1967

Variety	Fiber properties											
	Lint per acre Total	Per- cent first pick	Per- cent lint	Seed index	Boll size grams	Classer 1/32 in.	Length 2.5%	50% gram/tex	Strength E ₁	Elongation E ₁	Micro- naire	
												First pick
Deltapine 16	1169	970	83	38.8	10.7	5.85	36.0	1.12	.52	18.54	9.68	4.32
Deltapine 45A	1139	941	83	38.9	10.9	5.63	34.8	1.09	.53	18.53	8.94	4.35
Coker 201	1131	963	85	38.9	11.6	6.22	35.5	1.11	.51	18.12	7.49	4.49
Hancock	1127	974	36	38.9	12.1	6.40	34.4	1.06	.49	17.68	7.69	4.32
Stoneville 213	1121	929	83	38.2	11.3	5.65	34.8	1.08	.50	17.85	8.14	4.57
Stoneville 7A	1084	850	78	38.3	11.1	5.55	35.0	1.09	.51	17.72	7.35	4.45
McNair 1032	1073	839	78	36.7	11.5	5.70	34.4	1.07	.51	17.72	7.93	4.42
Deltapine Smooth Leaf	1061	854	80	38.1	9.9	5.51	35.0	1.11	.52	18.45	9.94	4.31
Deltapine 15A	1055	826	78	39.8	9.7	5.28	35.0	1.07	.49	18.20	9.81	4.11
Mo 61-470F	986	819	83	36.4	14.0	6.46	35.6	1.11	.53	19.61	9.50	4.43
Acala 1517D	962	802	83	34.9	13.4	6.60	37.0	1.19	.58	22.49	7.43	4.14
Coker 413-68	957	802	83	37.1	11.4	5.75	36.2	1.14	.53	19.24	7.15	4.06
Stoneville 9008	950	734	77	38.1	10.3	5.40	35.7	1.12	.49	19.04	9.19	3.55
Paymaster 54B	949	841	89	36.8	11.7	6.52	31.5	0.94	.46	16.69	9.54	4.32
Stoneville 508-9117	926	763	82	36.3	11.8	6.01	37.4	1.17	.53	18.89	8.41	3.76
NM 9608	925	749	81	35.9	12.7	6.31	36.7	1.16	.56	21.21	6.79	4.28

COTTON TESTS IN HILL SECTION

Fifteen cotton varieties were tested at all Hill Section locations in 1967. Varieties previously tested but omitted this year included Auburn 56, Auburn M, Coker 3903, Deltapine 5481, Empire WR 61, and Pennington Hy-Bee.

Five varieties were tested for the first time. These were: Hancock, recently released by the Tennessee Agricultural Experiment Station; Mo-61-470F, an experimental variety from the Missouri Agricultural Experiment Station; Deltapine 16, recently released by Delta and Pine Land Co.; and Stoneville 508, recently released by Stoneville Pedigreed Seed Company.

Successful tests were grown at the following locations: Central Station, State College; North Mississippi Branch Experiment Station, Holly Springs, one on hill land and one on bottom land on the farm of Mr. C. C. Moore; Pontotoc Branch Experiment Station, Pontotoc, in the flatwoods section; Blackbelt Branch Experiment Station, Brooksville; Brown Loam Branch Experiment Station, Raymond; and Coastal Plain Branch Experiment Station, Newton.

Variety tests at two locations were failures. The test at Northeast Mississippi Branch Experiment Station, Verona, was abandoned because of severe flooding and stand reduction in June. The test on the Pontotoc Ridge at the Pontotoc Branch Experiment Station, Pontotoc, was severely damaged by an early freeze on November 5 and was abandoned.

Weather conditions throughout the Hill section were generally unfavorable for cotton production. Early spring was wet and cool and stands were reduced sufficiently to require some replanting at Raymond and Holly Springs (both tests).

June was dry and hot and the late summer was wet and cool. Harvesting conditions were good throughout the Hill section except that a freeze on November 5 caused serious losses in all tests from State College northward. This freeze caused abandonment of one test at Pontotoc and damaged yields an estimated 10-50% at other locations in the northern part of the Hill section.

Boll weevils reached seriously damaging populations at most locations during the cool, wet weather of July and August. Bollworms also caused serious damage during this period at some locations.

Performance data for the 15 varieties tested in 1967 and 3-year averages for varieties tested during that period are given in the tables. Dollar value per acre has not been included in these tables because of large variations in prices received due to area of production and fiber characteristics other than staple and mike.

Fiber analyses were conducted by a commercial testing company and are given for three locations. Fiber data reported include strength which is given in thousand pounds per square inch tensile strength, upper half mean (UHM) which is the average length in inches
THE AUTHORS

The cotton variety tests were conducted and this report prepared by the following members of the Experiment Station staff:

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of the longest half of the fiber sample tested, mean (M) which is the average length in inches of all fibers in the sample tested, and uniformity ratio (U. R.) which is an indication of fiber length uniformity obtained by dividing M by UHM and multiplying by 100. Staple length in 32nds inches and micronaire index are given for all locations.

These cotton performance data are

intended as an aid to cotton producers in the Hill Section of Mississippi in making decisions concerning which varieties to plant. For this use, the three-year averages are more reliable than any single year's results. For the newer varieties, however, only 1967 data is available and decisions concerning these varieties should be made with caution.

Summary Tables

Lint yield of 15 cotton varieties tested at 7 locations in the Hill Section in 1967.

Variety	Brooksville	Holly Springs Bottom Hill	Newton	Pontotoc Flatwoods	Raymond	State College	Ave.	
Hancock	732	688	630	1085	643	1221	654	808
Coker 201	624	693	627	1117	513	1107	782	780
MO-61-470F	517	573	535	1009	409	1300	789	733
Hybee 200	660	571	549	1089	444	1119	664	728
Deltapine 16	649	597	544	1111	417	1018	655	713
Stoneville 213	656	513	465	1065	408	1083	618	686
Coker 413-68	422	461	438	984	424	1140	695	681
McNair 1032	594	481	510	1150	427	1061	526	678
Dixie King II	741	629	647	924	448	1110	616	667
Stoneville 7A	623	497	457	990	380	976	676	657
Esco Allsmooth	726	419	446	1020	375	781	642	630
Deltapine 45A	590	485	383	1056	523	615	753	629
Deltapine 15A	645	454	493	1013	449	646	679	626
Deltapine Smoothleaf	562	496	456	853	325	912	656	609
Stoneville 508	651	404	412	834	349	894	603	592

Three-year average lint yield of 7 cotton varieties tested at 7 locations in the Hill Section in 1965-1967.

Variety	Brooksville	Holly Springs Bottom Hill	Newton	Pontotoc Flatwoods	Raymond	State College	Ave.	
Coker 201	706	797	617	1071	644	1065	887	827
Stoneville 213	745	678	602	1011	518	1084	868	784
Dixie King II	721	729	646	917	623	965	736	771
McNair 1032	686	705	556	1069	584	995	771	766
Stoneville 7A	702	649	551	898	582	922	849	736
Deltapine Smoothleaf	696	715	549	841	418	938	813	710
Deltapine 45A	661	706	495	939	502	817	808	704

Black Belt

Cotton variety performance at the Black Belt Branch Experiment Station, Brooksville, in 1967.

Variety	Yield per acre			Bolls per pound			Fiber Properties	
	Seed		Lint pct. %	Seed		Pct. first picking %	Staple 1/32 in.	Micro- naire Index
	Cotton Lbs.	Lint Lbs.		Cotton No.	Lint No.			
Dixie King II	1912	741	38.8	66	170	75	34.0	4.8
Hancock	1819	732	40.3	70	173	81	34.3	4.7
Esco Allsmooth	1918	726	37.8	69	181	76	34.3	4.7
Hybee 200	1784	660	37.0	79	214	75	34.0	4.6
Stoneville 213	1682	656	39.0	84	215	82	34.0	4.8
Stoneville 508	1774	651	36.7	82	224	73	36.0	3.7
Deltapine 16	1665	649	39.0	89	229	80	34.3	4.5
Deltapine 15A	1655	645	39.0	94	240	70	34.3	3.7
Coker 201	1541	624	40.5	81	200	76	34.3	4.6
Stoneville 7A	1585	623	39.3	78	198	80	34.0	4.9
Coker 413-68	1644	622	37.8	81	215	75	35.0	4.3
McNair 1032	1560	594	38.1	83	217	71	33.6	5.0
Deltapine 45A	1556	590	37.9	90	238	78	34.3	4.4
Deltapine Smoothleaf	1433	562	39.2	95	241	77	34.3	4.5
MO-61-470F	1369	517	37.8	72	191	82	34.3	4.5
L.S.D. @ 5%		85						
C.V.		13%						

Soil - Houston Clay; Fertilizer - 60-60-60; Planted April 17; Poisoned 23 times.

Three-year averages, Black Belt Branch Station, Brooksville

Variety	Lint per acre	Lint pct.	Bolls per pound	Percent 1st picking	Staple Length	Mike*
	Lbs.	%	No.	%	1/32 in.	Index
Stoneville 213	745	40.2	79	70	33.6	5.0
Dixie King II	721	39.4	65	71	33.4	4.7
Coker 201	706	40.3	76	65	33.9	4.8
Stoneville 7A	702	39.8	77	66	34.0	4.9
Deltapine Smoothleaf	696	40.4	90	65	34.0	4.7
McNair 1032	686	38.8	79	67	33.0	4.8
Deltapine 45A	661	39.3	83	70	33.7	4.6
Esco Allsmooth*	576	37.2	68	76	33.6	4.6
Hybee 200*	550	38.0	78	76	33.8	4.6
Coker 413*	547	37.8	82	77	34.2	4.5

* Two-year averages, 1966 and 1967.

Brown Loam

Cotton variety performance at the Brown Loam Branch Experiment Station, Raymond in 1967

Variety	Yield per acre			Bolls per pound		Pct. first picking %	Fiber Properties	
	Seed Cotton Lbs.	Lint Lbs.	Lint pct. %	Seed Cotton No.	Lint No.		Staple 1/32 in.	Micro-naire Index
MO-61-470F	3268	1300	39.8	63	159	74	33.3	4.9
Hancock	2745	1221	44.5	66	148	68	33.0	4.5
Coker 413-68	2687	1140	42.4	79	185	56	33.7	4.2
Hybee 200	2846	1119	39.3	74	188	62	33.3	4.3
Dixie King II	2715	1110	40.9	59	145	65	35.7	4.8
Coker 201	2712	1107	40.8	70	172	57	33.3	4.9
Stoneville 213	2728	1083	39.7	76	192	59	32.7	5.0
McNair 1032	2731	1061	38.9	78	202	52	33.0	4.7
Deltapine 16	2707	1018	37.6	81	215	54	33.7	4.7
Stoneville 7A	2498	976	39.1	84	215	56	33.0	4.6
Deltapine Smoothleaf	2269	912	40.2	89	222	48	32.7	4.3
Stoneville 508	2447	894	36.6	78	213	54	34.0	3.7
Esco Allsmooth	2117	781	35.9	66	185	60	32.7	4.2
Deltapine 15A	2153	646	30.3	94	313	57	32.3	4.1
Deltapine 45A	1598	615	38.5	93	240	32	32.0	3.9
L.S.D. @ 5%		60						
C.V.		16%						

Soil - Calloway silt loam; Fertilizer - 111-78-78; Planted May 16; Poisoned 7 times.

Three-year averages, Brown Loam Station, Raymond

Variety	Lint per acre	Lint pct.	Bolls per pound	Percent 1st picking	Staple Length	Mike*
	Lbs.	%	No.	%	1/32 in.	Index
Coker 201	1065	40.2	73	74	33.3	5.3
Stoneville 213	1064	39.6	76	73	33.6	5.3
McNair 1032	995	38.8	82	67	32.8	5.2
Dixie King II	956	38.2	62	75	33.8	5.0
Deltapine Smoothleaf	938	39.5	83	67	33.6	5.1
Stoneville 7A	922	39.6	80	69	33.5	5.2
Deltapine 45A	817	38.4	82	62	33.1	4.8
Coker 413*	906	40.5	88	66	33.6	4.6
Hybee 200*	843	40.0	76	72	33.2	4.8
Esco Allsmooth*	776	37.6	72	68	32.8	4.6

* Two-year averages, 1966 and 1967.

Coastal Plain

Cotton variety performance at the Coastal Plain Branch Experiment Station, Newton, in 1967.

Variety	Yield per acre		Lint pct. %	Bolls per pound		pct. first picking %	Fiber properties		Staple 1/32 in.	Micro-Index	Strength M.P.S.I.	UHM In.	M In.	U. R. %
	Seed Cotton Lbs.	Lint Lbs.		Seed Cotton No.	Lint No.		Micro-Index	Strength M.P.S.I.						
McNair	2729	1150	42.1	73	174	90	33.3	81	5.6	81	1.02	.83	84	
Coker 201	2563	1117	43.6	68	156	93	34.3	79	5.0	79	1.12	.93	83	
Deptapine 16	2612	1111	42.5	72	170	88	34.3	74	4.9	74	1.10	.91	81	
Hybee 200	2587	1089	42.1	71	168	93	34.0	80	5.0	80	1.10	.90	82	
Hancock	2496	1085	43.5	64	148	95	33.7	82	5.1	82	1.02	.83	81	
Stoneville 213	2540	1065	41.9	70	167	94	34.0	78	5.2	78	1.09	.90	82	
Deltapine 45A	2488	1058	42.5	75	176	93	34.0	76	5.0	76	1.08	.90	81	
Esco Allsmooth	2519	1020	40.5	63	155	91	33.7	80	4.5	80	1.08	.88	81	
Deltapine 15A	2379	1013	42.6	77	180	88	33.0	75	4.4	75	1.06	.85	80	
MO-61-470F	2429	1009	41.5	64	154	92	34.0	80	5.4	80	1.08	.88	81	
Stoneville 7A	2416	990	41.0	66	160	92	34.3	83	5.0	83	1.11	.91	82	
Coker 413-68	2315	984	42.5	73	172	93	34.7	85	4.5	85	1.14	.94	83	
Dixie King II	2182	924	42.4	55	129	92	33.3	84	5.1	84	1.06	.86	81	
Deltapine Smoothleaf	2041	853	41.8	80	191	90	34.0	77	4.8	77	1.10	.91	82	
Stoneville 508	2093	834	39.8	68	170	92	35.3	76	4.0	76	1.17	.94	81	
L.S.D. @ 5%		43												
C.V.		11%												

Variety	Lint per acre	Lint pct	Bolls per pounds		Percent 1st picking	Staple Length	Mike*
			No.	Index			
Coker 201	1071	42.7	71	33.8	79	1/32 in.	5.1
McNair 1032	1069	41.2	75	33.3	75		5.3
Stoneville 213	1011	41.4	71	34.3	79		5.2
Deltapine 45A	939	41.1	75	34.5	76		5.0
Dixie King II	917	41.2	55	33.5	79		5.0
Stoneville 7A	898	41.1	72	34.3	76		5.0
Deltapine Smoothleaf	841	41.2	82	33.8	74		4.8
Hybee 200*	1040	41.2	72	33.8	78		5.0
Esco Allsmooth*	1018	39.9	62	33.4	78		4.6
Coker 413*	982	41.5	72	34.4	74		4.6

Three-year averages, Coastal Plain Branch Station, Newton

* Two-year averages, 1966 and 1967.

Soil—Prentiss loam; Fertilizer—72-72-72; Planted April 17; Poisoned 21 times.

North Mississippi, Bottom Land
 Cotton variety performance at the North Mississippi Branch Experiment Station, Holly Springs on bottom land in 1967

Variety	Yield per acre		Bolls per pound		pct. first picking %	Staple 1/32 in.	Fiber properties		M In.	U.R. %
	Cotton Lbs.	Lint Lbs.	Seed Cotton No.	Lint No.			Micro-naire Index	Strength M.P.S.I.		
Coker 210	1893	693	67	185	100	35.3	3.6	77	1.14	81
Hancock	1847	688	62	167	100	34.0	3.8	81	1.11	84
Dixie King II	1799	629	57	164	100	34.7	3.6	79	1.10	81
Deltapine 16	1659	597	70	195	100	34.3	3.6	75	1.16	82
MO-61-470F	1650	573	62	177	100	34.7	3.9	76	1.12	81
Hybee 200	1664	571	66	192	100	35.0	3.9	77	1.12	81
NMB	1596	565	70	198	100	34.7	3.8	77	1.15	83
Stoneville 213	1530	513	68	204	100	34.3	3.7	77	1.12	82
Stoneville 7A	1518	497	68	207	100	35.0	3.6	81	1.12	82
Deltapine Smoothleaf	1425	496	71	221	100	35.3	3.8	71	1.12	81
Deltapine 45A	1406	485	71	204	100	35.0	3.5	76	1.18	84
McNair 1032	1352	481	72	202	100	34.0	4.0	77	1.08	83
Coker 413-68	1286	461	77	213	100	35.7	3.5	83	1.16	80
Deltapine 15A	1251	454	82	225	100	35.0	3.3	75	1.08	79
Esco Allsmooth	1288	419	60	184	100	34.7	3.4	75	1.11	81
Stoneville 508	1240	404	71	219	100	36.0	3.0	75	1.17	82

Three-year averages, bottom land, North Mississippi Branch Station, Holly Springs

Variety	Lint per acre		Bolls per pound	Lint pct.	Percent 1st picking %	Staple Length 1/32 in.	Mike* Index
	Lbs.	%					
Coker 201	797	39.7	69	39.7	-	34.7	4.0
Dixie King II	729	38.0	59	38.0	-	34.0	4.5
Deltapine Smoothleaf	715	38.3	75	38.3	-	34.2	4.3
Deltapine 45A	706	38.4	74	38.4	-	34.1	3.8
McNair 1032	705	38.1	73	38.1	-	33.9	4.4
Stoneville 213	678	37.6	72	37.6	-	33.7	4.2
Stoneville 7A	649	37.2	72	37.2	-	34.6	4.2
Hybee 200*	652	35.9	68	35.9	-	35.0	4.4
Esco Allsmooth*	587	34.6	62	34.6	-	34.4	4.2
Coker 413*	582	36.5	80	36.5	-	35.4	4.1

* Two-year averages, 1966 and 1967.

L.S.D. @ 5%
 C.V. 17%

Soil - Collins silt loam; Fertilizer - 72-48-48;

Planted May 5; Poisoned 22 times.

North Mississippi Hill Land

Cotton variety performance at the North Mississippi Branch Experiment Station,
Holly Springs, on hill land in 1967.

Variety	Yield per acre			Lint pct. %	Bolls per pound			Fiber Properties	
	Seed Cotton Lbs.	Lint Lbs.			Seed Cotton No.	Lint No.	Pct. first picking %	Staple 1/32 in.	Micro- naire Index
Dixie King II	1594	647		40.6	66	162	100	34.0	4.1
Hancock	1487	630		42.3	77	182	100	34.0	3.8
Coker 201	1473	627		42.6	82	192	100	34.7	3.7
Hybee 200	1400	549		39.2	76	194	100	34.0	3.7
Deltapine 16	1342	544		40.5	84	207	100	33.7	3.7
MO-61-470F	1396	535		38.3	70	183	100	34.3	3.8
NMB	1322	528		40.0	80	201	100	34.3	3.7
McNair 1032	1291	510		39.5	83	211	100	33.3	3.8
Deltapine 15 A	1162	493		42.4	101	237	100	33.7	3.1
Stoneville 213	1201	465		38.7	85	220	100	34.3	3.5
Stoneville 7A	1202	457		38.1	86	226	100	34.3	3.8
Deltapine Smoothleaf	1155	456		39.5	97	247	100	34.7	3.5
Esco Allsmooth	1144	446		39.0	67	172	100	34.0	3.7
Coker 413-68	1101	438		39.8	85	213	100	35.0	3.4
Stoneville 508	1103	412		37.3	84	226	100	35.3	3.2
Deltapine 45A	968	383		39.6	82	208	100	34.3	3.4
L.S.D. @ 5%		75							
C.V.		13%							

Soil - Grenada silt loam; Fertilizer - 72-48-48; Planted May 4; Poisoned 22 times.

Three-year averages, hill land, North Mississippi Branch Station, Holly Springs

Variety	Lint per acre	Lint pct.	Bolls per pounds	Percent 1st picking	Staple Length	Mike*
	Lbs.	%	No.	%	1/32 in.	Index
Dixie King II	646	41.2	70	-	33.0	4.8
Coker 201	617	42.7	85	-	33.2	4.7
Stoneville 213	602	40.7	82	-	33.5	4.7
McNair 1032	556	40.6	89	-	32.8	4.4
Stoneville 7A	551	40.8	87	-	33.5	4.8
Deltapine Smoothleaf	549	41.2	93	-	33.4	4.6
Deltapine 45A	495	41.2	87	-	32.7	4.7
Hybee 200*	584	40.4	80	-	33.5	4.7
Esco Allsmooth*	484	40.3	71	-	33.2	4.6
Coker 413*	457	40.6	88	-	34.0	4.4

* Two-year averages, 1966 and 1967.

Northeast Mississippi

Three-year averages, Northeast Mississippi Branch Station, Verona*

Variety	Lint per acre	Lint pct.	Bolls per pounds	Percent 1st picking	Staple Length
	Lbs.	%	No.	%	1/32 in.
Dixie King II	853	38.7	57	-	33.9
Stoneville 213	834	38.3	73	-	34.2
Carolina Queen	823	39.1	72	-	34.7
Pennington Hybee	816	38.0	64	-	34.3
Deltapine Smoothleaf	808	40.2	76	-	34.5
Auburn 56	762	37.1	69	-	34.2
Stoneville 7A	762	38.3	74	-	34.7
Empire WR 61	741	36.3	59	-	34.4
Rex Smoothleaf	726	36.4	63	-	34.1
Auburn M	667	37.8	66	-	34.4

* The three-years averaged are 1964-66 because of test failure in 1967.

Pontotoc, Ridge

Three-year averages, Pontotoc Ridge, Pontotoc Branch Station, Pontotoc*

Variety	Lint per acre	Lint pct.	Bolls per pound	Percent 1st picking	Staple Length
	Lbs.	%	No.	%	1/32 in.
Rex Smoothleaf	958	38.9	67	-	33.3
Dixie King II	937	39.7	64	-	33.4
Empire WR 61	881	39.5	60	-	32.9
Auburn M	876	38.4	72	-	32.8
Carolina Queen	870	39.7	78	-	33.5
Stoneville 7A	881	39.8	76	-	33.4
Stoneville 213	859	40.1	78	-	33.0
Auburn 56	834	37.9	74	-	33.0
Pennington Hybee	844	39.0	71	-	33.1
Deltapine Smoothleaf	711	40.1	83	-	33.2

* The three years averaged are 1964-1966 because of test failure in 1967.

Pontotoc, Flatwoods

Cotton variety performance at Pontotoc Branch Experiment Station, Pontotoc,
on flatwoods soil in 1967.

Variety	Yield per acre		Lint pct. %	Bolls per pound		Pct. first picking %	Fiber Properties	
	Seed Cotton Lbs.	Lint Lbs.		Seed Cotton No.	Lint No.		Staple 1/32 in.	Micro- naire Index
Hancock	1644	643	39.1	58	147	100	34	3.9
Deltapine 45A	1414	523	37.0	72	193	100	35	3.6
Coker 201	1385	513	37.0	66	179	100	35	3.6
Deltapine 15A	1172	449	38.3	73	190	100	34	3.5
Dixie King II	1229	448	36.5	58	158	100	34	3.4
Hybee 200	1257	444	35.3	64	180	100	35	3.7
McNair 1032	1156	427	36.9	66	180	100	34	4.0
Coker 413-68	1160	424	36.5	70	192	100	36	3.4
Deltapine 16	1160	417	36.0	64	179	100	36	3.8
MO-61-47OF	1168	409	35.0	60	173	100	35	4.0
Stoneville 213	1181	408	34.6	67	195	100	35	3.8
Stoneville 7A	1107	380	34.3	66	193	100	36	3.8
Esco Allsmooth	1111	375	33.7	60	179	199	35	3.1
Stoneville 508	1026	349	34.0	69	203	100	36	3.0
Deltapine Smoothleaf	1000	325	32.5	67	205	100	36	3.0
L.S.D. @ 5%		82						
C.V.		18%						

Soil - Bude; Fertilizer - 80-60-60 plus boron; Planted May 10; Poisoned 14 times.

Three-year averages, flatwoods, Pontotoc Branch Station, Pontotoc

Variety	Lint per acre	Lint pct.	Bolls per pounds	Percent 1st picking	Staple Length	Mike*
	Lbs.	%	No.	%	1/32 in.	Index
Coker 201	644	39.0	68	-	34.0	4.4
Dixie King II	623	37.5	60	-	34.0	4.0
McNair 1032	584	38.4	72	-	33.7	4.6
Stoneville 7A	582	37.4	70	-	35.0	4.4
Stoneville 213	518	37.1	76	-	34.3	4.4
Deltapine 45A	502	37.9	73	-	34.0	4.4
Deltapine Smoothleaf	418	36.5	72	-	34.9	4.0
Esco Allsmooth*	608	36.6	64	-	34.0	4.0
Hybee 200*	524	36.9	70	-	34.0	4.4
Coker 413*	470	36.9	76	-	35.0	4.0

* Two-year averages, 1966 and 1967.

State College

Cotton variety performance at the Central Station, State College, in 1967.

Variety	Yield per acre		Lint pct. %	Seed Cotton No.	Lint No.	pct. first picking %	Fiber properties			M In.	U.R. %	
	Seed Lbs.	Lint Lbs.					Staple 1/32 in.	Micro- naire Index	Strength .M.P.S.I.			UHM In.
MO-61-470F	1967	789	40.1	64	159	77	34.0	4.4	85	1.12	.94	84
Coker 201	1956	782	40.0	70	176	75	34.7	4.1	82	1.13	.95	84
Deltapine 45A	1986	753	37.9	72	189	64	34.7	4.3	80	1.09	.89	82
Coker 413-68	1857	695	37.4	72	192	69	35.3	3.8	79	1.19	.97	82
Deltapine 15A	1702	679	39.9	86	216	69	34.3	3.7	83	1.07	.88	82
Stoneville 7A	1817	676	37.2	71	191	63	34.7	4.5	86	1.12	.92	82
Hybee 200	1778	664	37.3	67	179	62	34.7	4.4	78	1.11	.89	.80
Deltapine Smoothleaf	1727	656	38.0	85	225	70	34.0	4.1	77	1.12	.89	79
Deltapine 16	1703	655	38.5	76	199	66	35.0	4.1	80	1.11	.89	80
Hancock	1645	654	39.7	63	160	85	34.3	4.0	85	1.06	.85	80
Esco Allsmooth	1782	642	36.0	64	177	74	34.0	3.7	82	1.08	.87	81
Stoneville 213	1922	618	32.2	72	224	67	34.3	4.7	78	1.10	.92	84
Dixie King II	1641	616	37.5	57	152	58	34.3	4.1	82	1.10	.91	83
Stoneville 508	1671	603	36.1	75	208	59	35.3	4.5	79	1.16	.92	79
McNair 1032	1404	526	37.5	78	208	51	33.7	4.4	84	1.07	.88	82
L.S.D. @ 5%		97										
C.V.		13%										

Three-year averages, Central Station, State College

Soil - Verona fine sandy loam; Fertilizer - 52-52-52;

Planted May 10; Poisoned - not available.

Variety

Variety	Lint per acre	Lint pct.	Bolls per pound	Percent 1st picking	Staple Length	Mike*	Index	
							No.	%
Coker 201	887	39.8	66	80	1/32 in.	Index	4.6	
Stoneville 213	868	37.0	70	76	34.3	4.9	4.6	
Stoneville 7A	849	38.3	69	73	34.6	4.9	4.9	
Deltapine Smoothleaf	813	39.2	80	75	34.1	4.5	4.5	
Deltapine 45A	808	38.6	72	73	34.2	4.8	4.8	
Dixie King II	796	38.3	57	76	34.0	4.5	4.5	
McNair 1032	771	37.9	74	67	33.7	4.8	4.8	
Hybee 200*	790	38.1	68	74	34.4	4.8	4.8	
Esco Allsmooth*	786	36.7	63	82	33.8	4.1	4.1	
Coker 413*	768	38.1	74	77	34.9	4.2	4.2	

* Two-year averages, 1966 and 1967.