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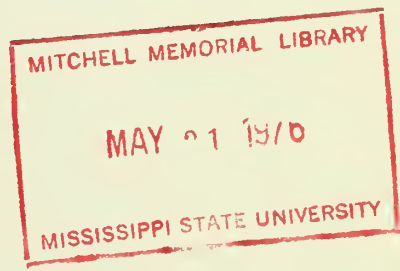
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# Mississippi Cotton Variety Tests — 1975



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# Mississippi Cotton Variety Tests in 1975

Cotton variety tests were planted in 1975 at three Delta locations and at three other locations in Mississippi. The Delta tests were at Stoneville, Tunica and Sumner; however, the test at Sumner was not harvested because the plots were too wet. The test usually conducted on a heavy soil at Stoneville was not planted because of excessive soil moisture at planting time.

Five entries, Coker 304, Coker 30, Deltapine 61, Stoneville 731N and DES 2134-056, were tested for the first time. Varieties grown at Stoneville and Tunica are included in the Cooperative Regional Variety Testing Program.

Each entry was randomized and replicated six times. Yield data were based on the weight of cotton harvested from two-row plots. Lint percentage, boll size, seed index and fiber property determinations were obtained from hand-picked samples. Fiber property data were determined by the U. S. Cotton Fiber Laboratory of the Agricultural Research Service, USDA, Knoxville, Tennessee and the Cotton Fiber Laboratory, Delta Branch Experiment Station, Stoneville, Mississippi.

The wet spring and wet fall resulted in late planting and poor harvesting conditions at most

locations. Late planting and the cool, wet fall resulted in a late-maturing crop with lower than normal lint yields of most varieties--the late-maturing varieties appeared to suffer more than did the earlier-maturing ones at some locations. Insect damage, particularly by plant bugs and bollworms, resulted in a further delay in maturity and in lower yields at some locations.

The test at Stoneville was planted on May 13 (about two weeks later than usual) and yields were below normal, ranging from 228 to 970 pounds of lint per acre (Table 1). This was the only test that was harvested twice and for which a measure of maturity was obtained.

The Tunica test also was planted late (on May 14) and matured very slowly. Lint yields ranged from 304 to 626 pounds per acre (Table 2).

Late planting (on May 20) combined with a 30 degree temperature and frost on October 3 resulted in low yields at Holly Springs.<sup>1</sup> The test was harvested on November 17 and lint yields ranged from 277 to 382 pounds per acre (Table 3).

The Verona test was planted on May 6 and harvested on October 3 ---a measure of earliness was obtained by ratings made on September 25. Growing conditions

were poor and yields were low, ranging from 234 to 311 pounds of lint per acre (Table 4).

Yields of the test at Mississippi State ranged from 711 to 865 pounds of lint per acre (Table 5). This test was planted on May 13 and harvested on December 15. A delay in the modification of a plot picker resulted in the late harvest.

Twelve of the test varieties were grown at each of the five locations in 1975. Average lint yields for the five locations ranged from 461 to 603 pounds (Table 6).

Seven of the varieties that were harvested from the five locations in the 1975 test had been grown at each of these locations in 1974. Average yields for the two years ranged from 668 to 779 pounds. While these data suggest that earliness of maturity significantly influenced yields, the results need to be interpreted in view of the fact that weather in the last two years has been more favorable for the earlier-maturing varieties (Table 7).

Five varieties have been grown in each of the last three years at each of the five locations from which tests were harvested in 1975. The three-year average yields of these varieties ranged from 760 to 819 pounds of lint per acre (Table 8).

<sup>1</sup>This test received 15 applications of insecticide.

Table 1. Results of 1975 Cotton Variety Tests at Stoneville, Miss.

Variety	Lint/acre (pounds)		Lint percent		Seed index	Boll size (grams)	Fiber properties				
	Total	First pick	First pick	Lint percent			Length		Strength g/tex	Elongation	Micro-naire
							2.5%	50%			
DES 06-020-24	970	726	75	40.0	12.2	6.04	1.20	.59	20.15	8.13	4.5
Deltapine 55	940	656	70	41.6	10.6	5.68	1.19	.59	19.47	7.50	4.5
Stoneville 731N	928	683	74	40.4	11.6	5.48	1.17	.58	18.35	6.38	4.8
DES 2134-018	882	677	77	39.2	11.0	5.18	1.16	.57	19.15	7.73	4.4
Deltapine 16	838	577	69	39.0	11.9	6.12	1.19	.58	19.68	9.07	4.5
DES 2134-056	833	643	77	38.6	11.2	5.13	1.18	.59	19.87	7.52	4.5
Delcot 277	764	559	73	37.7	13.2	6.29	1.26	.63	21.32	9.63	3.8
Stoneville 213	721	474	66	38.6	11.8	5.61	1.15	.56	18.97	8.35	4.7
Stoneville 256	713	452	63	38.1	11.9	5.50	1.18	.57	19.16	6.26	4.6
Deltapine 25	702	447	64	39.3	11.5	5.52	1.17	.57	19.80	7.64	4.6
Brycot 4	652	423	65	37.3	11.8	5.32	1.18	.56	19.46	6.52	4.4
Deltapine 61	636	393	62	39.8	11.2	5.85	1.19	.61	19.38	9.19	4.8
Coker 304	634	466	73	41.8	11.1	5.49	1.23	.58	20.39	6.67	4.6
Coker 310	565	405	72	40.0	11.6	5.65	1.24	.61	20.78	7.45	4.4
Coker 530	564	403	71	39.0	12.0	5.56	1.24	.60	19.60	6.80	4.3
Paymaster 909	245	177	72	36.6	14.1	5.80	1.09	.56	20.35	7.52	4.5
Acala 1517-70	228	170	75	35.8	13.0	5.24	1.21	.58	23.64	6.20	3.9
C. V.	12.6										
LSD .05	100										

Planted: May 13, 1975

Harvested: October 20 and November 13, 1975

Soil: Bosket very fine sandy loam

**Table 2. Results of 1975 Cotton Variety Tests at Tunica, Miss.**

Variety	Lint/ acre (pounds)	Lint percent	Seed index	Boll size (grams)	Fiber Properties				
					Length		Strength g/tex	Elonga- tion	Micro- naire
					2.5%	50%			
ES 06-020-24	626	39.7	11.8	6.13	1.18	.56	19.77	8.11	4.6
Soneville 731N	622	39.9	11.8	5.80	1.16	.56	16.64	5.97	5.0
ES 2134-018	605	38.2	11.3	5.39	1.16	.55	18.46	7.15	4.4
Dltapine 55	590	41.0	10.7	5.55	1.18	.55	18.30	6.93	4.3
ES 2134-056	577	38.0	11.4	5.27	1.16	.57	19.05	7.22	4.4
Dltapine 16	541	39.1	11.3	5.90	1.18	.57	18.56	8.63	4.5
Soneville 256	520	38.4	11.6	5.75	1.17	.55	17.87	6.26	4.7
Dltapine 25	518	40.0	11.4	5.70	1.15	.55	18.96	7.22	4.7
Dlcot 277	489	38.5	13.1	6.32	1.20	.60	20.85	9.52	4.2
Soneville 213	484	38.4	11.7	5.59	1.16	.56	18.64	7.75	4.8
Oker 310	477	39.7	11.8	5.98	1.21	.57	20.08	6.93	4.4
Dltapine 61	476	39.0	11.5	5.78	1.19	.58	18.97	8.46	4.6
Oker 304	460	40.8	11.5	5.52	1.25	.58	18.97	6.75	4.6
Oker 530	423	39.4	11.9	5.79	1.20	.58	18.22	6.73	4.5
Eycot 4	377	37.9	11.5	5.44	1.15	.54	17.50	6.29	4.4
Aala 1517-70	348	35.9	13.6	6.12	1.19	.60	21.75	7.15	4.4
Fymaster 909	304	37.2	14.8	6.71	1.02	.53	19.87	7.76	4.8
C.V.	19.4								
LSD .05	110								

Planted: May 14, 1975

Harvested: November 24, 1975

Soil: Sandy loam

**Table 3. Results of 1975 Cotton Variety Tests at the North Mississippi Branch Experiment Station, Holly Springs, Miss.<sup>1</sup>**

Variety	Lint/ acre (pounds)	Lint percent	Seed index	Boll size (grams)	Fiber properties				
					Length		Strength g/tex	Elonga- tion	Micro- naire
					2.5%	50%			
ES 2134-056	382	39.7	11.0	4.92	1.09	.51	19.73	9.4	4.8
Soneville 213	380	41.2	10.8	5.30	1.07	.53	18.72	9.7	5.2
Soneville 731N	374	39.7	11.3	5.52	1.12	.53	19.65	8.4	4.9
ES 06-020-24	367	42.3	11.3	5.83	1.10	.53	21.96	11.0	5.0
Dltapine 16	363	40.3	11.1	5.89	1.13	.54	19.59	10.5	4.9
Dlcot 277	357	41.3	11.9	6.05	1.12	.54	21.02	10.6	4.5
Soneville 256	349	41.3	10.9	5.36	1.07	.50	19.80	8.0	5.1
Dltapine 55	346	42.9	10.3	5.34	1.10	.49	19.87	9.4	5.0
Oker 304	336	43.5	10.0	5.26	1.16	.54	21.38	9.0	5.0
Oker 310	324	42.3	10.5	5.46	1.13	.54	21.24	8.6	4.8
Dltapine 25	299	40.5	11.4	5.58	1.12	.55	20.08	9.9	4.8
Oker 530	277	42.0	11.1	5.57	1.13	.52	20.66	8.4	5.0
C.V.	18.9								
LSD .05	76								

Planted: May 20, 1975

Harvested: November 17, 1975

Soil: Grenada silt loam

<sup>1</sup>This test received 15 applications of insecticides.

**Table 4. Results of 1975 Cotton Variety Tests at the Northeast Branch Experiment Station, Verona, Miss.**

Variety	Lint/ acre (pounds)	Percent open*	Lint percent	Seed index	Boll size (grams)	Fiber Properties				
						Length 2.5%	Length 50%	Strength g/tex	Elonga- tion	Micro nair
Deltapine 16	311	17	40.6	9.9	5.17	1.15	.54	18.79	10.2	5.0
Deltapine 55	302	14	42.5	9.4	5.15	1.11	.53	18.86	8.1	5.0
Delcot 277	283	18	38.4	11.6	5.48	1.18	.58	21.17	10.0	4.3
DES 06-020-24	281	25	39.9	10.5	5.60	1.11	.53	20.81	9.3	4.9
DES 2134-056	263	23	39.3	9.6	4.86	1.12	.54	20.95	8.5	4.7
Coker 304	257	14	41.2	9.6	5.57	1.19	.57	21.24	7.7	4.9
Coker 310	254	15	40.5	9.6	5.01	1.16	.54	20.16	7.5	4.9
Coker 530	253	15	39.4	10.1	5.77	1.17	.54	21.02	7.5	5.0
Deltapine 25	250	17	41.4	9.8	5.99	1.13	.56	21.24	8.8	5.2
Stoneville 213	249	14	40.8	9.8	5.21	1.10	.54	19.51	8.6	5.5
Stoneville 256	249	12	41.2	10.0	4.01	1.10	.53	20.24	7.2	5.4
Stoneville 731N	234	14	41.2	10.0	4.99	1.13	.54	20.16	7.1	5.4
C.V.	14.2									
LSD .05	44									

Planted: May 6, 1975

Harvested: October 23, 1975

Soil: Catalpa silty clay

\*Percent open September 25, 1975

**Table 5. Results of 1975 Cotton Variety Tests at Mississippi State, Miss.**

Variety	Lint/ acre (pounds)	Lint percent	Seed index	Boll size (grams)	Fiber Properties				
					Length 2.5%	Length 50%	Strength g/tex	Elonga- tion	Micro nair
Delcot 277	865	40.3	11.1	5.90	1.16	.56	20.30	9.7	4.2
Deltapine 55	795	42.2	10.3	5.48	1.15	.55	19.94	9.4	4.7
Coker 530	786	40.7	11.5	5.42	1.17	.56	18.86	8.3	4.6
DES 2134-056	785	40.7	10.0	5.04	1.16	.53	19.80	9.0	4.5
Stoneville 213	775	39.5	10.9	5.94	1.15	.54	19.65	10.0	4.4
DES 06-020-24	772	41.3	10.9	5.53	1.17	.57	20.59	10.2	4.8
Coker 304	752	40.7	9.6	5.38	1.16	.53	19.73	8.1	4.6
Deltapine 25	736	41.2	10.4	5.64	1.15	.55	20.09	9.6	4.7
Stoneville 731N	731	40.1	10.9	5.50	1.16	.55	19.22	9.7	4.6
Deltapine 16	729	40.3	10.4	5.63	1.17	.54	19.01	10.6	4.5
Stoneville 256	718	41.2	10.7	5.60	1.15	.56	19.00	8.7	4.7
Coker 310	711	42.1	10.2	5.38	1.20	.58	20.37	8.9	4.5
C.V.	5.6								
LSD .05	50								

Planted: May 13, 1975

Harvested: December 15, 1975

Soil: Leeper fine sandy loam



Table 6. Average Performance at five locations (Stoneville, Tunica, Holly Springs, Verona, Mississippi State) 12 cotton varieties, Mississippi, 1975.

Variety	Lint/		Seed	Boll	Fiber Properties				
	acre	Lint			size	Length		Strength	Elonga-
	(pounds)	percent	index	(grams)	2.5%	50%	g/tex	tion	naire
DES 06-020-24	603	40.6	11.3	5.83	1.15	.56	20.66	9.3	4.8
Ueltapine 55	595	42.0	10.3	5.44	1.14	.54	19.29	8.3	4.7
Stoneville 731N	578	40.3	11.1	5.46	1.15	.55	18.80	7.5	4.9
DES 2134-056	568	39.3	10.6	5.04	1.14	.55	19.88	8.3	4.5
Ueltapine 16	556	39.9	10.9	5.74	1.16	.55	19.13	9.8	4.6
Uelcot 277	552	39.2	12.2	6.01	1.18	.58	20.93	9.9	4.2
Stoneville 213	522	39.7	11.0	5.53	1.13	.55	19.10	8.9	4.9
Stoneville 256	510	40.0	11.0	5.24	1.13	.54	19.21	7.3	4.9
Ueltapine 25	501	40.5	10.9	5.69	1.14	.56	20.03	8.6	4.8
Oker 304	488	41.6	10.4	5.44	1.20	.56	20.34	7.6	4.7
Oker 310	466	40.9	10.7	5.50	1.19	.57	20.53	7.9	4.6
Oker 530	461	40.1	11.3	5.62	1.18	.56	19.67	7.5	4.7

Table 7. Performance at five locations, seven cotton varieties, Mississippi, 1974-1975 average.<sup>1</sup>

Variety	Lint/		Seed	Boll	Fiber Properties				
	acre	Lint			size	Length		Strength	Elonga-
	(pounds)	percent	index	(grams)	2.5%	50%	g/tex	tion	naire
DES 06-020-24	779	40.2	11.3	5.92	1.16	.57	20.50	8.6	4.7
Ueltapine 55	719	41.5	10.1	5.45	1.15	.54	18.82	7.8	4.6
Stoneville 213	715	39.6	10.9	5.63	1.14	.55	18.70	7.9	4.9
Stoneville 256	703	39.9	10.8	5.42	1.15	.55	18.63	6.8	4.8
Ueltapine 16	696	39.4	11.0	5.85	1.17	.56	19.14	9.4	4.7
Ueltapine 25	670	40.2	10.8	5.55	1.15	.56	19.68	8.0	4.8
Oker 310	668	40.4	10.9	5.58	1.20	.57	19.98	7.4	4.6

<sup>1</sup>Ten environments---Stoneville 3, Tunica 2, Sumner 1, Yazoo City 1, Holly Springs 1, Mississippi State 1 and Verona 1.

Table 8. Performance at five locations, five cotton varieties, Mississippi, 1973-1975 average.<sup>1</sup>

Variety	Lint/		Seed	Boll	Fiber Properties				
	acre	Lint			size	Length		Strength	Elonga-
	(pounds)	percent	index	(grams)	2.5%	50%	g/tex	tion	naire
Stoneville 213	819	39.2	11.1	5.61	1.14	.55	18.74	7.6	4.9
Ueltapine 55	809	41.2	10.2	5.44	1.15	.55	19.00	7.6	4.6
Ueltapine 16	785	39.0	11.2	5.86	1.17	.56	19.36	9.2	4.7
Ueltapine 25	769	40.3	10.8	5.58	1.15	.56	19.65	7.7	4.9
Oker 310	760	40.2	11.1	5.53	1.21	.57	20.02	7.1	4.7

<sup>1</sup>Fifteen environments---Stoneville 5, Tunica 3, Sumner 2, Yazoo City 2, Holly Springs 1, Mississippi State 1 and Verona 1.

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