

2003
Alabama
Cotton
Variety
Report

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2003 ALABAMA COTTON VARIETY REPORT

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INTRODUCTION

The Alabama Cotton Variety Test is a continuing evaluation of available cotton varieties from private companies and state agricultural experiment stations. Breeding lines that are likely to be released as varieties are also tested. Tests are conducted on units of the Alabama Agricultural Experiment Station by Experiment Station personnel. Cultural practices are those generally recommended by the Alabama Cooperative Extension System to producers. Data are reported on irrigated tests at Belle Mina and Headland. No other tests received scheduled supplemental irrigation. Every effort is made to test the varieties and present the results in an unbiased manner.

EXPERIMENTAL CONDITIONS

Tests were split into early season and full season varieties. The maturity category for each variety was chosen by the company or cooperator. Deltapine NuCotn 33B and Sure-Grow 747 were included in both early and full season tests for comparison. Plot size was two rows at Prattville, Headland, Belle Mina, Shorter, and Fairhope. Row length varied at different locations from 20 to 120 feet. A randomized complete block design with four replications was used in all tests. The trial at Fairhope is not reported due to unfavorable weather conditions at harvest.

Cotton varieties were evaluated in a producer's field on a sandy loam soil in south Alabama naturally infested with reniform nematode (*Rotylenchulus reniform*), continuously cropped in cotton by Dr. Kathy McLean of the Dept. of Entomology and Plant Pathology at Auburn University. All varieties were evaluated with and without the use of a chemical nematicide to give an indication of possible tolerance to reniform nematodes. Results are listed in tables 25 and 26 beginning on page 32.

EXPLANATION OF DATA

HARVEST OF SEED COTTON

A 50-boll sample was taken by hand for ginning, then test plots were harvested by a mechanical spindle picker at all locations. Average seed cotton yield was determined for each variety at each location.

LINT PERCENTAGE

Seed cotton samples from each variety were ginned on a 10-saw gin. Lint percentage was calculated by dividing weight of lint by seed cotton weight.

YIELD OF LINT

Lint yield was determined by multiplying the lint percentage by seed cotton yield.

FIBER PROPERTIES

Fiber qualities of all varieties were measured by the USDA-AMS Classing Office in Birmingham, Alabama using High Volume Instrumentation (HVI). Data are reported on a single composite sample of each variety from each location including the regional tests at Shorter and Belle Mina.

Micronaire: This measures the fineness of the cotton fibers. The smaller the micronaire reading, the finer and/or more immature the fibers.

Length: This is the fiber length measured with the HVI instrument. This measurement of length is similar to the classer's staple.

Strength: This is a measure of breaking strength of a standard fiber bundle with the holding jaws separated by 1/8 inch. "Tex" is a size measurement of the fiber bundle and the data given are the force in grams needed to break this bundle.

Uniformity: This is the ratio between the mean length and the upper half mean length of the fibers and is expressed as a percentage. Cotton with a low length uniformity may be difficult to process.

Earliness: Earliness is reported as the percentage of the total yield harvested at the first picking where more than one harvest was made.

Fusarium Wilt: Reaction of varieties to *Fusarium oxysporum* f. *vasinfectum* (Fusarium wilt) was evaluated at the Plant Breeding Unit, Tallahassee. Breeder lines and selected released varieties were grown in a field with a high natural incidence of the fusarium wilt disease. In 2003, incidence of Fusarium wilt was moderate. The incidence ratings can be found in the 2003 National Fusarium Wilt Cotton Report, Departmental Series No. 255.

STATISTICAL ANALYSIS

Appropriate analyses of the yield data were made. For each location, the variability in the test was measured and expressed as a percentage of the test mean, i.e., the coefficient of variation (C.V.). An indication of the magnitude of difference between variety averages necessary to be considered a real difference is given for each location. It is designated as the Least Significance Difference (L.S.D._{.10}). Appropriate care should be taken when using multi-location or multi-year averages. The genotype x environment interaction is often a significant source of variation, indicating that the varietal rankings are not consistent from one location to another or from one year to the next. Using multi-environment means in these instances can be grossly misleading.

ACKNOWLEDGMENTS

Appreciation is also expressed to the following supervisory personnel of the outlying units whose quality work makes this a reliable source of information for farmers in their areas:

Chet Norris and Ellis Burgess, Tennessee Valley Research and Extension Center; Don Moore, Prattville Research Field; Bobby Durbin, E.V. Smith Research Center; Randy Akridge, Brewton Research Field & Huxford; Larry Wells and Brian Gamble, Wiregrass Research and Extension Center; Ronnie McDaniel and Malcomb Pegues, Gulf Coast Research and Extension Center.

TABLE 1. PERFORMANCE OF EARLY SEASON COTTON VARIETIES AT BELLE MINA, ALABAMA, 2003

Variety	2003 lint		Average lint yld	
	yield <i>lbs/acre</i>	percentage %	2-yr ----- <i>lbs/acre</i>	3-yr
Sure-Grow 215B/R	1247	39	1047	1147
Stoneville ST 4892BR	1153	41	1003	1093
Sure-Grow 105	1026	38	924	1077
Sure-Grow 747	1000	40	928	1041
Paymaster PM 1218BG/RR	1133	40	964	1039
Stoneville ST 4793R	1094	41	972	1026
Deltapine DP 451B/RR	1099	37	933	1024
Sure-Grow 521R	1151	40	954	1017
Fiber Max FM 966	984	40	876	994
Deltapine NuCotn 33B	1005	39	861	977
Fiber Max 958	1039	40	877	969
Deltapine DP 436RR	1007	36	838	962
PM 1199 RR	1016	39	915	961
AllTex Atlas	614	35	619	712
BCG 28R	1083	40	937	.
BCG 295	948	38	829	.
Deltapine DP 444BG/RR	1298	42	.	.
Deltapine DP 449 BG/RR	1069	40	.	.
Fiber Max FM 989 BR	1067	38	.	.
Fiber Max FM 960BR	1015	38	.	.
Fiber Max FM 958 BT	997	39	.	.
Fibermax FM832B	974	39	.	.
Stoneville ST4646B2R	942	38	.	.
Trial mean	1042	39	905	1003
LSD(0.10)	141	2	108	83
%CV	8	3	7	5

TABLE 2. PERFORMANCE OF FULL SEASON COTTON VARIETIES AT BELLE MINA, ALABAMA, 2003

Variety	2003 lint		Average lint yld	
	yield <i>lbs/acre</i>	percentage %	2-yr ----- <i>lbs/acre</i>	3-yr
Deltapine DP 491	934	43	839	953
Stoneville ST 4892BR	982	39	892	946
Sure-Grow 747	857	40	787	929
Stoneville ST 5599BR	1023	38	904	917
Deltapine DP 5415 RR	938	40	769	908
Deltapine DP 448B	882	38	761	894
Deltapine NuCotn 33B	869	37	770	876
Fiber Max FM 989	890	39	702	850
Deltapine DP 5690RR	916	38	735	836
Deltapine DP 458BRR	904	39	732	834
DP Delta Pearl	779	38	703	824
Fiber Max FM 989 BR	944	38	827	.
Deltapine DP 555 BG/RR	1012	42	806	.
Stoneville ST 5303R	972	40	800	.
Fiber Max FM 989 RR	923	39	760	.
BCG 24R	912	39	754	.
Fiber Max 991R	895	38	751	.
Acala 1517-99	698	38	620	.
Stoneville ST5242BR	1057	40	.	.
Deltapine DP 449 BG/RR	952	39	.	.
Deltapine DP 493	931	42	.	.
Fiber Max FM 991BR	881	38	.	.
PhytoGen PHY 510RR	881	38	.	.
Stoneville ST4646B2R	800	36	.	.
Trial mean	910	39	773	888
LSD(0.10)	163	2	123	133
%CV	11	2	10	9

TABLE 3. PERFORMANCE OF EARLY SEASON COTTON VARIETIES AT PRATTVILLE, ALABAMA, 2003

Variety	2003 lint		Average lint yld	
	yield <i>lbs/acre</i>	percentage %	2-yr <i>lbs/acre</i>	3-yr
Stoneville ST 4793R	1643	41	1294	1279
Fiber Max FM 966	1303	40	1096	1277
Stoneville ST 4892BR	1441	39	1232	1257
Sure-Grow 215B/R	1515	39	1218	1255
Deltapine DP 451B/RR	1498	38	1219	1237
Sure-Grow 747	1072	40	1040	1147
Deltapine NuCotn 33B	1289	40	1072	1141
Sure-Grow 105	1238	39	1021	1133
Deltapine DP 436RR	1281	37	1097	1122
Sure-Grow 521R	1330	39	1127	1113
Paymaster PM 1218BG/RR	1194	41	929	1087
PM 1199 RR	1275	42	1026	1084
BCG 28R	1310	40	1094	.
Fiber Max 958	1368	41	1027	.
BCG 295	1102	37	954	.
Fiber Max FM 989 BR	1619	40	.	.
Fiber Max FM 958 BT	1520	41	.	.
Deltapine DP 449 BG/RR	1519	40	.	.
Deltapine DP 444BG/RR	1511	43	.	.
Stoneville ST4646B2R	1465	39	.	.
Fiber Max FM 960BR	1461	39	.	.
Fibermax FM832B	1190	39	.	.
Trial mean	1370	40	1096	1178
LSD(0.10)	236	2	136	98
%CV	10	3	7	5

TABLE 4. PERFORMANCE OF FULL SEASON COTTON VARIETIES AT PRATTVILLE, ALABAMA, 2003

Variety	2003 lint		Average lint yld	
	yield <i>lbs/acre</i>	percentage %	2-yr ----- <i>lbs/acre</i> -----	3-yr
Stoneville ST 4892BR	1789	40	1394	1435
Stoneville ST 5599BR	2067	41	1450	1424
Deltapine DP 491	1620	42	1340	1338
DP Delta Pearl	1600	40	1234	1303
Sure-Grow 747	1495	40	1203	1246
Deltapine DP 5690RR	1535	38	1172	1201
Deltapine DP 5415 RR	1552	40	1189	1191
Deltapine DP 458BRR	1577	40	1219	1174
Deltapine NuCotn 33B	1464	39	1154	1162
Deltapine DP 448B	1411	40	1140	1161
Fiber Max FM 989	1534	39	992	1121
Deltapine DP 555 BG/RR	1868	42	1396	.
Fiber Max FM 989 BR	1809	40	1301	.
Stoneville ST 5303R	1571	40	1202	.
Fiber Max FM 989 RR	1632	40	1188	.
Fiber Max 991R	1551	39	1163	.
BCG 24R	1449	40	1092	.
Stoneville ST5242BR	1872	41	.	.
Deltapine DP 449 BG/RR	1767	39	.	.
Deltapine DP 493	1729	42	.	.
Stoneville ST4646B2R	1673	40	.	.
Fiber Max FM 991BR	1672	38	.	.
PhytoGen PHY 510RR	1667	40	.	.
Trial mean	1648	40	1225	1251
LSD(0.10)	234	2	135	94
%CV	9	3	7	5

TABLE 5. PERFORMANCE OF EARLY SEASON COTTON VARIETIES AT SHORTER, ALABAMA, 2003

Variety	2003 lint		Average lint yld	
	yield <i>lbs/acre</i>	percentage %	2-yr ----- <i>lbs/acre</i>	3-yr
Sure-Grow 747	1765	41	1517	1631
Stoneville ST 4892BR	1908	42	1567	1618
Fiber Max FM 966	1746	41	1508	1611
Sure-Grow 215B/R	1905	41	1542	1606
Sure-Grow 521R	1900	41	1603	1597
Paymaster PM 1218BG/RR	1808	41	1439	1571
Stoneville ST 4793R	1711	43	1431	1509
Deltapine DP 451B/RR	1796	38	1421	1480
Sure-Grow 105	1570	40	1318	1470
PM 1199 RR	1801	42	1534	1460
Deltapine DP 436RR	1736	37	1426	1454
Fiber Max 958	1585	41	1346	1415
Deltapine NuCotn 33B	1620	40	1365	1408
AllTex Atlas	1122	37	1007	1073
BCG 28R	1766	41	1431	.
BCG 295	1630	39	1395	.
Fiber Max FM 958 BT	2050	42	.	.
Deltapine DP 449 BG/RR	1871	39	.	.
Deltapine DP 444BG/RR	1812	43	.	.
Fiber Max FM 989 BR	1786	39	.	.
Fibermax FM832B	1763	40	.	.
Stoneville ST4646B2R	1762	40	.	.
Fiber Max FM 960BR	1730	40	.	.
Trial mean	1745	40	1428	1493
LSD(0.10)	482	1	259	190
%CV	17	2	11	8

TABLE 6. PERFORMANCE OF FULL SEASON COTTON VARIETIES AT SHORTER, ALABAMA, 2003

Variety	2003 lint		Average lint yld	
	yield <i>lbs/acre</i>	percentage %	2-yr ----- <i>lbs/acre</i>	3-yr ----
Stoneville ST 5599BR	1702	41	1381	1446
Sure-Grow 747	1496	41	1380	1412
Deltapine DP 491	1342	41	1332	1398
Stoneville ST 4892BR	1399	42	1310	1331
DP Delta Pearl	1365	40	1272	1311
Deltapine DP 5415 RR	1449	40	1292	1303
Deltapine DP 448B	1349	39	1279	1293
Deltapine NuCotn 33B	1412	39	1297	1271
Fiber Max FM 989	1306	39	1079	1159
Deltapine DP 458BRR	1174	39	1148	1155
Deltapine DP 5690RR	1234	38	1105	1133
Deltapine DP 555 BG/RR	1576	42	1394	.
Stoneville ST 5303R	1448	40	1335	.
BCG 24R	1399	39	1298	.
Fiber Max 991R	1297	38	1192	.
Fiber Max FM 989 RR	1257	39	1191	.
Fiber Max FM 989 BR	1221	39	1168	.
Acala 1517-99	1008	38	1024	.
Stoneville ST5242BR	1765	41	.	.
Deltapine DP 493	1557	43	.	.
Stoneville ST4646B2R	1438	38	.	.
Fiber Max FM 991BR	1388	39	.	.
PhytoGen PHY 510RR	1335	40	.	.
Deltapine DP 449 BG/RR	1269	39	.	.
Trial mean	1383	40	1249	1292
LSD(0.10)	221	2	150	118
%CV	10	3	7	5

TABLE 7. PERFORMANCE OF EARLY SEASON COTTON VARIETIES AT HEADLAND, ALABAMA, 2003

Variety	2003 lint		Average lint yld	
	yield <i>lbs/acre</i>	percentage %	2-yr ----- <i>lbs/acre</i>	3-yr ----
Stoneville ST 4892BR	1746	1746	1219	1090
Sure-Grow 747	1598	1598	1151	1044
Fiber Max FM 966	1581	1581	1116	1043
Stoneville ST 4793R	1506	1506	1105	1023
Sure-Grow 215B/R	1615	1615	1116	1020
Deltapine NuCotn 33B	1608	1608	1154	1000
Sure-Grow 105	1501	1501	1102	992
Sure-Grow 521R	1466	1466	1104	992
Paymaster PM 1218BG/RR	1506	1506	925	921
Deltapine DP 451B/RR	1388	1388	979	918
Deltapine DP 436RR	1257	1257	953	874
PM 1199 RR	1206	1206	898	839
BCG 295	1748	1748	1188	.
Fiber Max 958	1647	1647	1092	.
BCG 28R	1386	1386	931	.
Fiber Max FM 958 BT	1743	1743	.	.
Fibermax FM832B	1616	1616	.	.
Deltapine DP 444BG/RR	1612	1612	.	.
Fiber Max FM 960BR	1533	1533	.	.
Deltapine DP 449 BG/RR	1496	1496	.	.
Fiber Max FM 989 BR	1482	1482	.	.
Stoneville ST4646B2R	1327	1327	.	.
Trial mean	1526	1526	1069	980
LSD(0.10)	658		326	245
%CV	26		18	15

TABLE 8. PERFORMANCE OF FULL SEASON COTTON VARIETIES AT HEADLAND, ALABAMA, 2003

Variety	2003 lint		Average lint yld	
	yield <i>lbs/acre</i>	percentage %	2-yr <i>----- lbs/acre ----</i>	3-yr
Deltapine DP 491	1491	45	1122	1151
Deltapine DP 5690RR	1636	38	1088	1131
Stoneville ST 5599BR	1758	41	1027	1053
Stoneville ST 4892BR	1367	41	1013	1040
DP Delta Pearl	1432	43	1009	1037
Sure-Grow 747	1327	43	973	1018
Fiber Max FM 989	1507	42	973	983
Deltapine DP 5415 RR	1384	41	960	972
Deltapine NuCotn 33B	1376	40	978	961
Deltapine DP 448B	1357	40	949	924
Deltapine DP 458BRR	1164	39	865	923
Deltapine DP 555 BG/RR	2001	46	1324	.
Fiber Max 991R	1788	40	1161	.
Stoneville ST 5303R	1654	42	1154	.
Fiber Max FM 989 BR	1478	43	994	.
Fiber Max FM 989 RR	1496	41	968	.
BCG 24R	1355	42	933	.
Deltapine DP 493	1843	45	.	.
Stoneville ST5242BR	1616	42	.	.
Fiber Max FM 991BR	1575	40	.	.
Deltapine DP 449 BG/RR	1570	40	.	.
PhytoGen PHY 510RR	1251	39	.	.
Stoneville ST4646B2R	1141	42	.	.
Trial mean	1503	41	1029	1018
LSD(0.10)	617		307	249
%CV	25		18	15

TABLE 9. PERFORMANCE OF EARLY SEASON COTTON VARIETIES AT FAIRHOPE, ALABAMA, 2003

Variety	2003 lint		Average lint yld	
	yield <i>lbs/acre</i>	percentage %	2-yr† <i>lbs/acre</i>	3-yr <i>lbs/acre</i>
Deltapine NuCotn 33B	1346	39	1174	‡
Stoneville ST 4892BR	1199	41	1129	
Sure-Grow 105	1371	40	1111	
Paymaster PM 1218BG/RR	1212	39	1084	
Sure-Grow 215B/R	1102	38	1066	
Fiber Max FM 966	1146	40	1065	
Sure-Grow 521R	1163	39	1041	
Deltapine DP 451B/RR	1195	35	1040	
Stoneville ST 4793R	1052	40	981	
Deltapine DP 436RR	1001	36	919	
PM 1199 RR	1046	40	891	
Sure-Grow 747	871	40	851	
Fiber Max FM 958 BT	1306	39	.	
Fiber Max 958	1300	39	.	
Deltapine DP 449 BG/RR	1206	39	.	
Stoneville ST4646B2R	1133	37	.	
Fiber Max FM 960BR	1127	38	.	
PhytoGen PHY 410RR	1104	37	.	
Deltapine DP 444BG/RR	1093	40	.	
Fiber Max FM 989 BR	1049	38	.	
Fibermax FM832B	1019	38	.	
BCG 28R	951	40	.	
BCG 295	826	37	.	
Trial mean	1123	39	1029	
LSD(0.10)	419	2	233	
%CV	22	4	14	

† The two-yr average is based on 2003 and 2001 data because the 2002 test was lost due to excessive rains

‡ Three-yr averages were not calculated because the 2000 and 2002 test were lost due to the weather

TABLE 10. PERFORMANCE OF FULL SEASON COTTON VARIETIES AT FAIRHOPE, ALABAMA, 2003

Variety	2003 lint		Average lint yld	
	yield <i>lbs/acre</i>	percentage %	2-yr† ----- <i>lbs/acre</i> -----	3-yr ‡
DP Delta Pearl	1541	40	1306	‡
Deltapine DP 491	1582	41	1301	
Stoneville ST 4892BR	1530	39	1282	
Deltapine NuCotn 33B	1532	39	1242	
Deltapine DP 5415 RR	1508	40	1229	
Deltapine DP 448B	1573	38	1218	
Deltapine DP 458BRR	1557	40	1216	
Stoneville ST 5599BR	1347	38	1182	
Deltapine DP 5690RR	1430	37	1148	
Sure-Grow 747	1341	40	1137	
Fiber Max FM 989	1261	39	1060	
Deltapine DP 449 BG/RR	1684	40	.	
Deltapine DP 555 BG/RR	1676	42	.	
Fiber Max FM 991BR	1589	37	.	
Deltapine DP 493	1482	43	.	
PhytoGen PHY 510RR	1450	39	.	
Fiber Max 991R	1435	36	.	
Fiber Max FM 989 BR	1326	38	.	
BCG 24R	1313	38	.	
Fiber Max FM 989 RR	1296	37	.	
Stoneville ST 5303R	1276	37	.	
Stoneville ST4646B2R	1242	38	.	
Stoneville ST5242BR	1225	39	.	
Trial mean	1443	39	1211	
LSD(0.10)	211	2	135	
%CV	9	3	7	

† The two-yr average is based on 2003 and 2001 data because the 2002 test was lost due to excessive rains

‡ Three-yr averages were not calculated because the 2000 and 2002 test were lost due to the weather

TABLE 11. PERFORMANCE OF EARLY SEASON COTTON VARIETIES IN ALABAMA,
AVERAGE OF ALL LOCATIONS, 2003

Variety	Lint yield			Lint percentage		
	2003	2-yr†	3-yr†	2003	2-yr†	3-yr†
	----- lbs/acre-----			----- %-----		
Stoneville ST 4892BR	1489	1255	1265	41	41	41
Sure-Grow 215B/R	1477	1231	1257	40	40	40
Fiber Max FM 966	1352	1149	1231	41	40	41
Sure-Grow 747	1261	1159	1216	41	41	41
Stoneville ST 4793R	1401	1200	1209	41	41	42
Sure-Grow 521R	1402	1197	1180	40	40	40
Sure-Grow 105	1322	1077	1158	40	40	40
Deltapine DP 451B/RR	1380	1127	1156	37	37	37
Paymaster PM 1218BG/RR	1342	1045	1140	41	41	41
Deltapine NuCotn 33B	1373	1113	1131	40	38	39
Deltapine DP 436RR	1257	1079	1103	37	36	37
PM 1199 RR	1269	1094	1086	41	41	41
BCG 28R	1299	1098	.	41	40	.
BCG 295	1251	1091	.	38	38	.
Fiber Max 958	1388	1086	.	41	41	.
Fiber Max FM 958 BT	1523	.	.	41	.	.
Deltapine DP 444BG/RR	1466	.	.	42	.	.
Deltapine DP 449 BG/RR	1433	.	.	40	.	.
Fiber Max FM 989 BR	1401	.	.	39	.	.
Fiber Max FM 960BR	1351	.	.	39	.	.
Stoneville ST4646B2R	1326	.	.	38	.	.
Fibermax FM832B	1312	.	.	39	.	.
Trial mean	1367	1133	1178			
LSD(0.10)	190	112	155			
%CV	8	6	8			

† Fairhope data not included in multi-year averages. See Tables 9 and 10 for explanation

TABLE 12. PERFORMANCE OF FULL SEASON COTTON VARIETIES IN ALABAMA,
AVERAGE OF ALL LOCATIONS, 2003

Variety	Lint yield			Lint percentage		
	2003	2-yr†	3-yr†	2003	2-yr†	3-yr†
	----- lbs/acre -----			----- % -----		
Stoneville ST 5599BR	1579	1191	1210	40	40	41
Deltapine DP 491	1394	1158	1210	42	42	42
Stoneville ST 4892BR	1413	1152	1188	40	41	41
Sure-Grow 747	1303	1086	1151	41	41	41
DP Delta Pearl	1343	1055	1119	40	40	41
Deltapine DP 5415 RR	1366	1053	1094	40	40	40
Deltapine DP 5690RR	1350	1025	1075	38	37	38
Deltapine DP 448B	1314	1032	1068	39	38	39
Deltapine NuCotn 33B	1331	1050	1068	39	38	38
Fiber Max FM 989	1300	937	1028	40	39	40
Deltapine DP 458BRR	1275	991	1021	39	39	40
Deltapine DP 555 BG/RR	1627	1230	.	43	43	.
Stoneville ST 5303R	1384	1123	.	40	40	.
Fiber Max FM 989 BR	1356	1073	.	40	39	.
Fiber Max 991R	1393	1067	.	38	38	.
Fiber Max FM 989 RR	1321	1027	.	39	40	.
BCG 24R	1286	1019	.	40	40	.
Deltapine DP 493	1508	.	.	43	.	.
Stoneville ST5242BR	1507	.	.	41	.	.
Deltapine DP 449 BG/RR	1448	.	.	39	.	.
Fiber Max FM 991BR	1421	.	.	39	.	.
PhytoGen PHY 510RR	1317	.	.	39	.	.
Stoneville ST4646B2R	1259	.	.	39	.	.
Trial mean	1382	1075	1112			
LSD(0.10)	147	96	132			
%CV	6	5	7			

† Fairhope data not included in multi-year averages. See Tables 9 and 10 for explanation

**TABLE 13. PERFORMANCE OF EARLY SEASON IRRIGATED COTTON VARIETIES
AT BELLE MINA, ALABAMA, 2003**

Variety	2003 lint		Average lint yld	
	yield <i>lbs/acre</i>	percentage %	2-yr <i>----- lbs/acre ----</i>	3-yr
Stoneville ST 4892BR	1477	42	1532	1540
Stoneville ST 4793R	1550	42	1512	1510
Sure-Grow 747	1450	42	1544	1493
Sure-Grow 215B/R	1406	39	1475	1483
Sure-Grow 521R	1451	41	1501	1462
Fiber Max FM 966	1582	41	1533	1429
Paymaster PM 1218BG/RR	1339	41	1413	1395
Deltapine NuCotn 33B	1302	38	1264	1301
Sure-Grow 105	1364	39	1416	.
Deltapine DP 444BG/RR	1658	42	.	.
Fiber Max FM 960BR	1534	40	.	.
Fiber Max FM 989 BR	1460	41	.	.
PhytoGen PHY 410RR	1378	41	.	.
Deltapine DP 449 BG/RR	1355	38	.	.
FM 832B	1300	40	.	.
Trial mean	1440	40	1466	1452
LSD(0.10)	213	3	157	133
%CV	9	4	6	6

TABLE 14. PERFORMANCE OF FULL SEASON IRRIGATED COTTON VARIETIES
AT BELLE MINA, ALABAMA, 2003

Variety	2003 lint		Average lint yld	
	yield <i>lbs/acre</i>	percentage %	2-yr <i>----- lbs/acre ----</i>	3-yr
Stoneville ST 4892BR	1544	43	1554	1556
Sure-Grow 747	1414	42	1449	1490
Deltapine DP 491	1509	44	1473	1443
Deltapine NuCotn 33B	1468	40	1370	1354
Deltapine DP 458BRR	1397	40	1295	1277
Deltapine DP 5415 RR	1435	41	1261	1226
Stoneville ST 5599BR	1586	41	1622	.
Fiber Max FM 989 BR	1494	40	1491	.
Fiber Max FM 989 RR	1459	41	1421	.
Stoneville ST 5303R	1307	40	1332	.
Deltapine DP 555 BG/RR	1467	44	.	.
Deltapine DP 449 BG/RR	1364	40	.	.
PhytoGen PHY 510RR	1329	40	.	.
Trial mean	1444	41	1427	1391
LSD(0.10)	186	2	156	148
%CV	8	2	7	6

TABLE 15. PERFORMANCE OF IRRIGATED COTTON VARIETIES AT HEADLAND, ALABAMA, 2003

Variety	2003 lint		Average lint yld	
	yield <i>lbs/acre</i>	percentage %	2-yr <i>----- lbs/acre ----</i>	3-yr
Deltapine DP 491	1520	1520	1718	1734
Stoneville ST 4892BR	1506	1506	1653	1706
DP Delta Pearl	1287	1287	1535	1661
Stoneville ST 4793R	1188	1188	1510	1616
Sure-Grow 521R	1311	1311	1534	1596
Deltapine DP 458BRR	1215	1215	1374	1546
Deltapine NuCotn 33B	1294	1294	1447	1511
Deltapine DP 5415 RR	1352	1352	1390	1467
Sure-Grow 747	1290	1290	1377	1465
Deltapine DP 555 BG/RR	1610	1610	1689	.
Fiber Max FM 989 BR	1541	1541	1552	.
Stoneville ST 5599BR	1316	1316	1550	.
Fiber Max FM 989 RR	1550	1550	1526	.
Deltapine DP 5690RR	1421	1421	1445	.
Deltapine DP 449 BG/RR	1619	1619	.	.
Fiber Max FM 966	1486	1486	.	.
Deltapine DP 444BG/RR	1432	1432	.	.
PhytoGen PHY 510RR	1312	1312	.	.
Trial mean	1403	1403	1521	1589
LSD(0.10)	543	543	343	283
%CV	23	23	14	11

TABLE 16. RELATIVE YIELD RANKINGS BY LOCATION OF EARLY SEASON COTTON VARIETIES, 2003

Variety	Belle Mina		Prattville		Shorter		Fairhope		Headland	
	lbs/acre	Rank	lbs/acre	Rank	lbs/acre	Rank	lbs/acre	Rank	lbs/acre	Rank
AllTex Atlas	614	23	.	.	1122	23
BCG 28R	1083	8	1310	13	1766	11	951	20	1386	17
BCG 295	948	21	1102	21	1630	19	826	22	1748	1
Deltapine DP 436RR	1007	15	1281	16	1736	16	1001	19	1257	21
Deltapine DP 444BG/RR	1298	1	1511	6	1812	6	1093	14	1612	7
Deltapine DP 449 BG/RR	1069	9	1519	4	1871	5	1206	6	1496	12
Deltapine DP 451B/RR	1099	6	1498	7	1796	9	1195	8	1313	20
Deltapine NuCotn 33B	1005	16	1289	15	1620	20	1346	2	1608	8
Fiber Max 958	1039	11	1368	11	1585	21	1300	4	1647	4
Fiber Max FM 958 BT	997	18	1520	3	2050	1	1306	3	1743	3
Fiber Max FM 960BR	1015	14	1461	9	1730	17	1127	12	1423	15
Fiber Max FM 966	984	19	1303	14	1746	15	1146	10	1581	10
Fiber Max FM 989 BR	1067	10	1619	2	1786	10	1049	16	1482	13
Fibermax FM832B	974	20	1190	20	1763	13	1019	18	1616	5
Paymaster PM 1218BG/RR	1133	5	1194	19	1808	7	1212	5	1365	18
PM 1199 RR	1016	13	1275	17	1801	8	1046	17	1206	22
Stoneville ST 4793R	1094	7	1643	1	1711	18	1052	15	1506	11
Stoneville ST 4892BR	1153	3	1441	10	1908	2	1199	7	1746	2
Stoneville ST4646B2R	942	22	1465	8	1762	14	1133	11	1327	19
Sure-Grow 105	1026	12	1238	18	1570	22	1371	1	1403	16
Sure-Grow 215B/R	1247	2	1515	5	1905	3	1102	13	1615	6
Sure-Grow 521R	1151	4	1330	12	1900	4	1163	9	1466	14
Sure-Grow 747	1000	17	1072	22	1765	12	871	21	1598	9
Trial mean	1042		1370		1745		1123		1507	
LSD(0.10)	141		236		482		419		658	
%CV	8		10		17		22		26	

TABLE 17. RELATIVE YIELD RANKINGS BY LOCATION OF FULL SEASON COTTON VARIETIES, 2003

Variety	Belle Mina		Prattville		Shorter		Fairhope		Headland	
	lbs/acre	Rank	lbs/acre	Rank	lbs/acre	Rank	lbs/acre	Rank	lbs/acre	Rank
Acala 1517-99	698	24	.	.	1008	24
BCG 24R	912	13	1449	22	1399	11	1313	18	1355	19
Deltapine DP 448B	882	17	1411	23	1349	14	1573	5	1357	18
Deltapine DP 449 BG/RR	952	6	1767	6	1269	19	1684	1	1570	9
Deltapine DP 458BRR	904	14	1577	14	1174	23	1557	6	1164	22
Deltapine DP 491	934	9	1620	12	1342	15	1582	4	1491	12
Deltapine DP 493	931	10	1729	7	1557	4	1482	11	1843	2
Deltapine DP 5415 RR	938	8	1552	16	1449	6	1508	10	1384	15
Deltapine DP 555 BG/RR	1012	3	1868	3	1576	3	1676	2	2001	1
Deltapine DP 5690RR	916	12	1535	18	1234	21	1430	14	1636	6
Deltapine NuCotn 33B	869	20	1464	21	1412	9	1532	8	1376	16
DP Delta Pearl	779	23	1600	13	1365	13	1541	7	1432	14
Fiber Max 991R	895	15	1551	17	1297	18	1435	13	1788	3
Fiber Max FM 989	890	16	1534	19	1306	17	1261	21	1507	10
Fiber Max FM 989 BR	944	7	1809	4	1221	22	1326	17	1478	13
Fiber Max FM 989 RR	923	11	1632	11	1257	20	1296	19	1496	11
Fiber Max FM 991BR	881	18	1672	9	1388	12	1589	3	1575	8
PhytoGen PHY 510RR	881	19	1667	10	1335	16	1450	12	1251	21
Stoneville ST 4892BR	982	4	1789	5	1399	10	1530	9	1367	17
Stoneville ST 5303R	972	5	1571	15	1448	7	1276	20	1654	5
Stoneville ST 5599BR	1023	2	2067	1	1702	2	1347	15	1758	4
Stoneville ST4646B2R	800	22	1673	8	1438	8	1242	22	1141	23
Stoneville ST5242BR	1057	1	1872	2	1765	1	1225	23	1616	7
Sure-Grow 747	857	21	1495	20	1496	5	1341	16	1327	20
Trial mean	910		1648		1383		1443		1503	
LSD(0.10)	163		234		221		211		617	
%CV	11		9		10		9		25	

**TABLE 18.A. COTTON FIBER ANALYSIS, HVI, OF EARLY SEASON COTTON VARIETIES
AT BELLE MINA, 2003**

Variety	Micronaire <i>units</i>	Length <i>in.</i>	Strength <i>g/tex</i>	Uniformity <i>pct.</i>
Early season				
AllTex Atlas	3.5	1.07	32.2	83
BCG 28R	3.9	1.12	29.9	82
BCG 295	3.3	1.16	31.6	84
Deltapine DP 436RR	3.2	1.14	30.6	83
Deltapine DP 444BG/RR	3.4	1.15	30.5	84
Deltapine DP 449 BG/RR	3.3	1.14	34.1	83
Deltapine DP 451B/RR	3.6	1.13	29.4	84
Deltapine NuCotn 33B	4.1	1.15	32.5	83
Fiber Max 958	3.8	1.10	32.9	81
Fiber Max FM 832B	3.2	1.16	33.1	83
Fiber Max FM 958 BT	3.3	1.12	34.6	84
Fiber Max FM 960BR	2.8	1.09	33.5	82
Fiber Max FM 966	3.5	1.15	35.3	85
Fiber Max FM 989 BR	3.7	1.17	32.6	84
Paymaster PM 1218BG/RR	3.5	1.11	31.5	82
PM 1199 RR	3.1	1.16	30.1	85
Stoneville ST 4646B2R	3.3	1.08	28.4	82
Stoneville ST 4793R	3.6	1.08	31.5	83
Stoneville ST 4892BR	4.0	1.14	30.6	85
Sure-Grow 105	3.9	1.19	31.9	85
Sure-Grow 215B/R	4.2	1.10	29.1	85
Sure-Grow 521R	3.5	1.13	29.9	83
Sure-Grow 747	3.4	1.12	29.7	83

**TABLE 18.B. COTTON FIBER ANALYSIS, HVI, OF FULL SEASON COTTON VARIETIES
AT BELLE MINA, 2003**

Variety	Micronaire <i>units</i>	Length <i>in.</i>	Strength <i>g/tex</i>	Uniformity <i>pct.</i>
Full season				
Acala 1517-99	3.5	1.18	37.1	83
BCG 24R	3.0	1.10	31.8	84
Deltapine DP 448B	3.9	1.13	30.0	83
Deltapine DP 449 BG/RR	3.4	1.13	32.3	84
Deltapine DP 458BRR	4.2	1.14	31.7	84
Deltapine DP 491	4.0	1.16	33.1	82
Deltapine DP 493	3.8	1.14	31.0	83
Deltapine DP 5415 RR	3.6	1.12	30.7	83
Deltapine DP 555 BG/RR	3.7	1.11	31.1	82
Deltapine DP 5690RR	3.7	1.14	34.6	83
Deltapine NuCotn 33B	3.1	1.15	30.1	83
DP Delta Pearl	3.7	1.16	33.3	84
Fiber Max 991R	3.5	1.12	35.3	82
Fiber Max FM 989	3.5	1.15	36.1	84
Fiber Max FM 989 BR	3.1	1.14	32.0	84
Fiber Max FM 989 RR	3.3	1.14	32.9	83
Fiber Max FM 991BR	3.7	1.12	36.6	83
PhytoGen PHY 510RR	3.8	1.12	32.9	83
Stoneville ST 4646B2R	3.2	1.11	30.1	82
Stoneville ST 4892BR	3.3	1.08	29.2	83
Stoneville ST 5242BR	3.3	1.07	27.2	83
Stoneville ST 5303R	3.7	1.08	34.1	82
Stoneville ST 5599BR	3.2	1.12	30.9	83
Sure-Grow 747	3.0	1.13	27.4	84

**TABLE 19.A. COTTON FIBER ANALYSIS, HVI, OF EARLY SEASON COTTON VARIETIES
AT PRATTVILLE, 2003**

Variety	Micronaire <i>units</i>	Length <i>in.</i>	Strength <i>g/tex</i>	Uniformity <i>pct.</i>
Early season				
BCG 28R	4.5	1.17	30.3	84
BCG 295	3.7	1.16	31.3	85
Deltapine DP 436RR	4.6	1.17	25.7	86
Deltapine DP 444BG/RR	4.0	1.16	30.1	85
Deltapine DP 449 BG/RR	4.0	1.18	32.0	84
Deltapine DP 451B/RR	4.2	1.17	30.2	85
Deltapine NuCotn 33B	4.2	1.15	60.4	84
Fiber Max 958	4.0	1.15	31.9	83
Fiber Max FM 832 B	3.5	1.20	32.7	86
Fiber Max FM 958 BT	3.7	1.14	31.7	85
Fiber Max FM 960BR	3.9	1.13	31.6	84
Fiber Max FM 966	4.3	1.15	34.6	85
Fiber Max FM 989 BR	3.9	1.17	32.4	84
Paymaster PM 1218BG/RR	4.4	1.10	28.2	84
PM 1199 RR	4.5	1.13	32.4	86
Stoneville ST 4646B2R	4.1	1.13	31.3	85
Stoneville ST 4793R	4.2	1.12	30.0	84
Stoneville ST 4892BR	4.1	1.11	30.0	84
Sure-Grow 105	4.0	1.18	31.1	85
Sure-Grow 215B/R	4.4	1.12	28.6	85
Sure-Grow 521R	4.2	1.10	29.3	85
Sure-Grow 747	4.0	1.18	29.6	85

**TABLE 19.B. COTTON FIBER ANALYSIS, HVI, OF FULL SEASON COTTON VARIETIES
AT PRATTVILLE, 2003**

Variety	Micronaire <i>units</i>	Length <i>in.</i>	Strength <i>g/tex</i>	Uniformity <i>pct.</i>
Full season				
BCG 24R	4.0	1.11	29.2	86
Deltapine DP 448B	4.2	1.18	29.6	85
Deltapine DP 449 BG/RR	3.9	1.16	32.1	85
Deltapine DP 458BRR	4.3	1.13	30.2	85
Deltapine DP 491	4.1	1.25	33.1	87
Deltapine DP 493	4.2	1.17	31.3	84
Deltapine DP 5415 RR	4.5	1.15	30.4	85
Deltapine DP 555 BG/RR	4.2	1.16	31.3	84
Deltapine DP 5690RR	3.6	1.16	33.4	84
Deltapine NuCotn 33B	4.0	1.17	29.6	85
DP Delta Pearl	4.0	1.20	31.6	85
Fiber Max 991R	4.2	1.18	32.4	85
Fiber Max FM 989	3.8	1.20	33.8	86
Fiber Max FM 989 BR	4.1	1.16	30.7	85
Fiber Max FM 989 RR	3.7	1.17	33.1	85
Fiber Max FM 991BR	4.2	1.18	32.4	85
PhytoGen PHY 510RR	4.3	1.17	31.3	84
Stoneville ST 4646B2R	4.4	1.12	28.6	85
Stoneville ST 4892BR	4.4	1.15	28.9	86
Stoneville ST 5242BR	4.4	1.11	27.1	85
Stoneville ST 5303R	3.7	1.10	30.7	85
Stoneville ST 5599BR	4.3	1.14	30.7	84
Sure-Grow 747	4.7	1.17	28.1	85

**TABLE 20.A. COTTON FIBER ANALYSIS, HVI, OF EARLY SEASON COTTON VARIETIES
AT SHORTER, 2003**

Variety	Micronaire <i>units</i>	Length <i>in.</i>	Strength <i>g/tex</i>	Uniformity <i>pct.</i>
Early season				
AllTex Atlas	4.6	1.08	30.7	84
BCG 28R	4.5	1.12	30.1	84
BCG 295	3.9	1.16	34.5	83
Deltapine DP 436RR	3.8	1.13	28.6	84
Deltapine DP 444BG/RR	3.6	1.12	30.0	83
Deltapine DP 449 BG/RR	4.5	1.12	31.5	83
Deltapine DP 451B/RR	4.0	1.16	29.7	85
Deltapine NuCotn 33B	4.2	1.15	30.6	86
Fiber Max 958	4.2	1.17	33.5	84
Fiber Max FM 832 B	3.8	1.12	32.4	83
Fiber Max FM 958 BT	3.7	1.13	32.9	84
Fiber Max FM 960BR	4.4	1.08	34.8	83
Fiber Max FM 966	4.0	1.12	34.8	84
Fiber Max FM 989 BR	3.9	1.14	33.1	84
Paymaster PM 1218BG/RR	4.3	1.07	29.3	84
PM 1199 RR	4.1	1.11	31.4	85
Stoneville ST 4646B2R	4.4	1.11	29.0	83
Stoneville ST 4793R	4.4	1.06	30.2	83
Stoneville ST 4892BR	4.3	1.09	29.6	84
Sure-Grow 105	4.6	1.15	32.5	84
Sure-Grow 215B/R	4.2	1.07	28.7	84
Sure-Grow 521R	4.4	1.09	28.3	84
Sure-Grow 747	4.3	1.14	28.9	85

TABLE 20.B. COTTON FIBER ANALYSIS, HVI, OF FULL SEASON COTTON VARIETIES
AT SHORTER, 2003

Variety	Micronaire <i>units</i>	Length <i>in.</i>	Strength <i>g/tex</i>	Uniformity <i>pct.</i>
Full season				
Acala 1517-99	3.4	1.17	34.3	84
BCG 24R	3.6	1.14	32.6	83
Deltapine DP 448B	2.9	1.18	29.8	84
Deltapine DP 449 BG/RR	3.2	1.12	33.7	84
Deltapine DP 458BRR	3.4	1.14	33.3	83
Deltapine DP 491	3.1	1.22	32.9	83
Deltapine DP 493	3.4	1.11	31.2	82
Deltapine DP 5415 RR	3.9	1.13	30.6	85
Deltapine DP 555 BG/RR	3.0	1.15	30.9	83
Deltapine DP 5690RR	3.4	1.16	33.2	84
Deltapine NuCotn 33B	3.3	1.17	31.5	85
DP Delta Pearl	3.8	1.20	32.5	84
Fiber Max 991R	3.3	1.17	34.0	83
Fiber Max FM 989	2.9	1.17	33.0	83
Fiber Max FM 989 BR	3.4	1.18	29.7	84
Fiber Max FM 989 RR	3.0	1.15	33.0	84
Fiber Max FM 991BR	3.3	1.14	36.9	83
PhytoGen PHY 510RR	3.5	1.15	32.2	83
Stoneville ST 4646B2R	3.1	1.12	29.8	84
Stoneville ST 4892BR	3.1	1.12	31.9	85
Stoneville ST 5242BR	3.5	1.12	28.5	84
Stoneville ST 5303R	3.1	1.11	34.7	84
Stoneville ST 5599BR	3.2	1.14	32.2	82
Sure-Grow 747	3.6	1.18	29.7	84

**TABLE 21.A. COTTON FIBER ANALYSIS, HVI, OF EARLY SEASON COTTON VARIETIES
AT HEADLAND, 2003**

Variety	Micronaire <i>units</i>	Length <i>in.</i>	Strength <i>g/tex</i>	Uniformity <i>pct.</i>
Early season				
BCG 295	4.5	1.17	32.5	84
BCG 28R	4.8	1.11	27.7	83
Deltapine DP 436RR	4.4	1.14	27.9	84
Deltapine DP 444BG/RR	3.9	1.15	28.4	85
Deltapine DP 449 BG/RR	4.3	1.13	33.6	82
Deltapine DP 451B/RR	4.7	1.11	26.7	83
Deltapine NuCotn 33B	4.0	1.10	29.2	84
Fiber Max 958	4.9	1.19	34.1	84
Fiber Max FM 832 B	3.9	1.19	32.8	86
Fiber Max FM 958 BT	4.0	1.10	34.4	85
Fiber Max FM 960BR	4.8	1.13	32.2	84
Fiber Max FM 966	4.5	1.11	34.9	84
Fiber Max FM 989 BR	4.7	1.12	29.4	83
Paymaster PM 1218BG/RR	4.8	1.06	28.3	84
PM 1199 RR	5.3	1.07	29.3	84
Stoneville ST 4646B2R	4.7	1.15	28.2	83
Stoneville ST 4793R	4.9	1.08	30.8	85
Stoneville ST 4892BR	4.9	1.13	29.4	84
Sure-Grow 105	4.2	1.11	28.8	82
Sure-Grow 215B/R	4.3	1.08	27.4	84
Sure-Grow 521R	4.3	1.12	28.5	84
Sure-Grow 747	4.5	1.16	29.7	84

TABLE 21.B. COTTON FIBER ANALYSIS, HVI, OF FULL SEASON COTTON VARIETIES
AT HEADLAND, 2003

Variety	Micronaire <i>units</i>	Length <i>in.</i>	Strength <i>g/tex</i>	Uniformity <i>pct.</i>
Full season				
BCG 24R	4.3	1.06	28.8	82
Deltapine DP 448B	4.3	1.13	28.5	84
Deltapine DP 449 BG/RR	4.5	1.08	30.2	83
Deltapine DP 458BRR	4.4	1.11	30.4	82
Deltapine DP 491	4.5	1.20	34.7	84
Deltapine DP 493	4.9	1.11	31.1	82
Deltapine DP 5415 RR	4.6	1.09	28.9	83
Deltapine DP 555 BG/RR	4.7	1.10	29.5	80
Deltapine DP 5690RR	4.5	1.14	29.8	84
Deltapine NuCotn 33B	4.3	1.06	31.2	82
DP Delta Pearl	4.9	1.14	29.4	82
Fiber Max 991R	4.5	1.13	33.4	83
Fiber Max FM 989	4.1	1.17	31.2	85
Fiber Max FM 989 BR	4.5	1.15	29.5	83
Fiber Max FM 989 RR	4.2	1.12	34.5	84
Fiber Max FM 991BR	4.7	1.11	32.0	82
PhytoGen PHY 510RR	4.7	1.12	32.3	85
Stoneville ST 4646B2R	4.2	1.08	28.3	82
Stoneville ST 4892BR	4.6	1.08	30.5	84
Stoneville ST 5242BR	4.6	1.09	27.4	84
Stoneville ST 5303R	4.8	1.10	31.8	84
Stoneville ST 5599BR	4.8	1.14	31.1	84
Sure-Grow 747	4.5	1.12	28.2	83

TABLE 22A. COTTON FIBER ANALYSIS, HVI, OF EARLY SEASON
COTTON VARIETIES AT FAIRHOPE, ALABAMA, 2003

Variety	Micronaire <i>units</i>	Length <i>in.</i>	Strength <i>g/tex</i>	Uniformity <i>pct.</i>
Early season				
BCG 28R	4.5	1.17	29.3	85
BCG 295	3.6	1.21	31.6	85
Deltapine DP 436RR	4.3	1.19	28.1	85
Deltapine DP 444BG/RR	3.7	1.17	29.5	84
Deltapine DP 449 BG/RR	4.0	1.14	32.5	84
Deltapine DP 451B/RR	4.1	1.16	28.1	84
Deltapine NuCotn 33B	4.1	1.16	30.3	84
Fiber Max 958	4.4	1.21	34.6	85
Fiber Max FM 832 B	3.6	1.19	32.9	85
Fiber Max FM 958 BT	4.0	1.15	32.7	84
Fiber Max FM 960BR	3.6	1.13	34.0	84
Fiber Max FM 966	4.0	1.16	34.1	85
Fiber Max FM 989 BR	4.1	1.15	33.6	84
Paymaster PM 1218BG/RR	4.4	1.12	28.3	84
PM 1199 RR	4.0	1.16	31.5	85
Stoneville ST 4646B2R	4.3	1.12	30.5	84
Stoneville ST 4793R	4.3	1.09	30.0	84
Stoneville ST 4892BR	3.9	1.13	29.8	85
Sure-Grow 105	4.4	1.13	31.4	86
Sure-Grow 215B/R	3.9	1.10	28.9	84
Sure-Grow 521R	4.6	1.13	29.5	85
Sure-Grow 747	4.3	1.17	29.0	85

TABLE 22B. COTTON FIBER ANALYSIS, HVI, OF FULL SEASON
COTTON VARIETIES AT FAIRHOPE, ALABAMA, 2003

Variety	Micronaire <i>units</i>	Length <i>in.</i>	Strength <i>g/tex</i>	Uniformity <i>pct.</i>
Full season				
Deltapine DP 449 BG/RR	4.4	1.13	32.0	84
BCG 24R	4.1	1.11	28.6	83
Deltapine DP 448B	4.1	1.15	29.7	84
Deltapine DP 458BRR	4.7	1.11	30.4	84
Deltapine DP 491	4.2	1.25	32.1	86
Deltapine DP 493	4.7	1.14	30.4	84
Deltapine DP 5415 RR	4.7	1.13	30.7	85
Deltapine DP 555 BG/RR	4.2	1.12	30.9	83
Deltapine DP 5690RR	4.1	1.14	32.2	84
Deltapine NuCotn 33B	4.4	1.13	29.6	83
DP Delta Pearl	4.4	1.16	31.7	84
Fiber Max 991R	4.2	1.13	30.1	84
Fiber Max FM 989	3.9	1.15	34.7	84
Fiber Max FM 989 BR	3.9	1.16	31.3	85
Fiber Max FM 989 RR	4.0	1.12	33.3	83
Fiber Max FM 991BR	4.3	1.15	34.1	84
PhytoGen PHY 510RR	4.5	1.14	33.1	84
Stoneville ST 4646B2R	4.4	1.13	31.3	85
Stoneville ST 4892BR	4.3	1.12	29.9	85
Stoneville ST 5242BR	3.8	1.11	27.7	83
Stoneville ST 5303R	4.1	1.08	32.1	84
Stoneville ST 5599BR	4.2	1.14	30.9	83
Sure-Grow 747	4.7	1.17	27.8	85

TABLE 23. COTTON FIBER ANALYSIS, HVI, OF EARLY AND FULL SEASON IRRIGATED COTTON VARIETIES AT BELLE MINA, ALABAMA, 2003

Variety	Micronaire <i>units</i>	Length <i>in.</i>	Strength <i>g/tex</i>	Uniformity <i>pct.</i>
Early season				
Deltapine DP 444BG/RR	3.8	1.15	29.1	85
Deltapine DP 449 BG/RR	3.7	1.14	32.3	84
Deltapine NuCotn 33B	3.9	1.16	32.2	85
Fiber Max FM 832B	3.6	1.17	30.6	85
Fiber Max FM 960BR	4.2	1.12	33.2	85
Fiber Max FM 966	4.1	1.18	32.4	86
Fiber Max FM 989 BR	3.9	1.17	32.3	84
Paymaster PM 1218BG/RR	4.6	1.08	28.4	84
Stoneville ST 4793R	4.3	1.10	30.0	84
Stoneville ST 4892BR	4.1	1.14	30.8	84
Sure-Grow 105	3.9	1.18	30.3	85
Sure-Grow 215B/R	4.1	1.11	27.2	84
Sure-Grow 521R	4.5	1.13	29.0	85
Sure-Grow 747	4.2	1.13	28.6	84
Full season				
Deltapine DP 449 BG/RR	4.3	1.15	33.3	85
Deltapine DP 458BRR	4.2	1.15	33.4	85
Deltapine DP 491	4.3	1.24	33.3	83
Deltapine DP 5415 RR	4.3	1.14	32.6	85
Deltapine DP 555 BG/RR	4.4	1.13	31.5	83
Deltapine NuCotn 33B	4.3	1.17	32.2	84
Fiber Max FM 989 BR	3.8	1.15	33.4	84
Fiber Max FM 989 RR	3.9	1.14	33.6	85
PhytoGen PHY 510RR	4.4	1.18	33.3	85
Stoneville ST 4892BR	4.1	1.11	32.9	84
Stoneville ST 5303R	4.3	1.12	33.4	86
Stoneville ST 5599BR	4.5	1.16	31.2	84
Sure-Grow 747	4.5	1.18	28.7	85

**TABLE 24. COTTON FIBER ANALYSIS, HVI, OF IRRIGATED COTTON VARIETIES
AT HEADLAND, ALABAMA, 2003**

Variety	Micronaire <i>units</i>	Length <i>in.</i>	Strength <i>g/tex</i>	Uniformity <i>pct.</i>
Deltapine DP 444BG/RR	4.0	1.11	27.2	84
Deltapine DP 449 BG/RR	4.3	1.15	30.1	85
Deltapine DP 458BRR	4.5	1.15	31.1	84
Deltapine DP 491	4.4	1.21	33.6	85
Deltapine DP 5415 RR	4.9	1.13	29.7	84
Deltapine DP 555 BG/RR	5.1	1.12	27.9	82
Deltapine DP 5690RR	4.4	1.10	31.5	83
Deltapine NuCotn 33B	4.3	1.07	27.4	82
DP Delta Pearl	4.9	1.12	30.4	84
Fiber Max FM 966	4.6	1.11	33.9	84
Fiber Max FM 989 BR	4.4	1.13	31.4	85
Fiber Max FM 989 RR	4.1	1.15	33.6	83
PhytoGen PHY 510RR	4.8	1.13	32.2	83
Stoneville ST 4793R	4.3	1.05	28.1	83
Stoneville ST 4892BR	4.8	1.11	30.0	84
Stoneville ST 5599BR	4.8	1.12	29.6	83
Sure-Grow 521R	4.6	1.05	27.4	82
Sure-Grow 747	4.6	1.16	26.5	85

EFFECT OF TELONE II ON YIELD AND QUALITY OF COTTON VARIETIES AT HUXFORD, AL 2003.

Thirty-two commercially available cotton varieties were examined with and without a nematicide in a field naturally infested with the reniform nematode in Huxford, AL. The test was planted April 30, 2003. Plots consisted of 1 row, 25 ft long with a 38 in. row spacing and replicated six times. Because of the potential for lateral movement of Telone II in the soil, treated and untreated plots were arranged as blocks within the field. Telone II was injected at 3 gal/A into plots 8 to 12 inches deep with a ripper / bedder. The plots were harvested on October 25, 2003. Reniform nematode counts, expressed as numbers per 150 cc of soil, were evaluated on three replicates within each block.

Because of the arrangements of plots mentioned above, this experiment was analyzed like an experiment replicated across environments. Thus there is no valid test for the main effect of treatment but treatment x variety interaction means are not affected. Because of the spatial structure of reniform nematode distribution in the soil we employed nearest neighbor analysis based on all four neighboring plots to account for some of the residual variability and obtain more precise estimate of differences.

All varieties tested were susceptible to the reniform nematode. Average yields for varieties evaluated with Telone II ranged from 601 (Deltapine DP 444BG/RR) to 1299 lbs/acre (Deltapine DP 555BG/RR). Yields for untreated check plots ranged from 336 (Deltapine DP 436RR) to 1072 lbs/acre (Deltapine DP 555BG/RR). On the average, Telone II treated plots yielded 325 lbs/acre more lint than the check plots. Of particular interest are varieties that did not suffer yield reductions in the untreated check area compared to the Telone II treated experiment. These varieties, marked with a “‡” in the space between treated and untreated variety means in Table 25, warrant further investigations, particularly in cases where this phenomenon is associated with higher reniform counts in untreated plots.

TABLE 25. PERFORMANCE OF COTTON VARIETIES AND RENIFORM NEMATODE COUNTS AT HUXFORD, ALABAMA, 2003

2003 Huxford Test						
Variety †	Treated			Non-treated		
	Lint yld <i>lbs/acre</i>	% Lint %	Reniform count/150 cc	Lint <i>lbs/acre</i>	% Lint %	Reniform count/150 cc
Deltapine DP 555 BG/RR	1299	44	937	1072	42	1773
Fiber Max FM 991BR	1145	38	1271	‡ 1052	38	1214
Fiber Max 991R	1084	39	1064	941	36	694
Deltapine DP 5690RR	1025	40	2534	694	37	1655
Deltapine DP 448B	980	40	1283	475	36	3528
Deltapine NuCotn 33B	978	39	512	572	35	2171
DP Delta Pearl	964	41	1111	788	39	640
Deltapine DP 458BRR	951	38	1043	517	37	849
Deltapine DP 491	932	42	284	398	40	1176
Deltapine DP 493	924	43	643	713	41	1863
PhytoGen PHY 510RR	920	40	949	582	36	1430
Fiber Max FM 958 BT	915	40	709	515	39	1343
Stoneville ST 5303R	912	41	615	482	38	2327
Deltapine DP 5415 RR	883	39	1833	565	38	1501
Fiber Max FM 960BR	866	39	807	589	37	1929
Fiber Max FM 989 BR	857	38	528	470	38	2333
Sure-Grow 215B/R	849	39	271	‡ 756	37	1626
Stoneville ST 4793R	840	42	1345	‡ 906	40	1361
Deltapine DP 449 BG/RR	836	39	2184	689	37	1646
Sure-Grow 747	835	40	1001	531	37	1834
Sure-Grow 521R	816	41	1453	641	36	815
Stoneville ST 4892BR	804	42	1032	595	38	1089
PhytoGen PHY 410RR	798	39	808	362	37	1090
Fiber Max FM 989	772	40	1043	504	38	1169
Deltapine DP 451B/RR	746	37	961	385	35	1181
ST5242BR	745	42	435	498	40	965
Paymaster PM 1218BG/RR	730	40	672	588	38	1260
BCG 28R	726	41	1148	549	39	1057
Fiber Max FM 966	720	40	1151	494	38	1370
Stoneville ST 5599BR	706	40	640	523	39	1490
Deltapine DP 436RR	689	34	646	336	35	794
Deltapine DP 444BG/RR	601	40	595	‡ 583	38	960
Treatment mean	870	40	985	605	38	1442
LSD(0.10)	127		1200	127		1200

† Variety means are sorted in descending order for lint yield from Telone II treated plots.

‡ Difference for lint yield between Telone II treatment and untreated check is not significant at $P = 0.10$.

TABLE 26. COTTON FIBER ANALYSIS, HVI, OF COTTON VARIETIES AT HUXFORD, ALABAMA, 2003

Variety	Treated with Telone II				Non-treated check			
	Micro. <i>units</i>	Length <i>in.</i>	Strength <i>g/tex</i>	Uniform. <i>pct.</i>	Micro. <i>units</i>	Length <i>in.</i>	Strength <i>g/tex</i>	Uniform. <i>pct.</i>
BCG 28R	5.0	1.15	29.6	85	4.7	1.14	28.6	84
Deltapine DP 436RR	3.8	1.10	25.3	83	4.2	1.13	28.0	84
Deltapine DP 444BG/RR	3.9	1.12	28.3	84	3.8	1.13	28.8	84
Deltapine DP 448B	4.4	1.12	27.6	83	4.3	1.13	29.4	83
Deltapine DP 449 BG/RR	4.5	1.14	32.4	83	4.2	1.13	30.2	83
Deltapine DP 451B/RR	4.1	1.11	25.8	83	4.2	1.14	27.3	84
Deltapine DP 458BRR	4.6	1.10	29.6	82	4.7	1.15	31.4	84
Deltapine DP 491	4.5	1.20	30.1	84	4.4	1.16	29.8	83
Deltapine DP 493	4.6	1.11	29.3	82	4.4	1.17	30.2	84
Deltapine DP 5415 RR	4.4	1.10	28.5	83	4.0	1.15	30.4	83
Deltapine DP 555 BG/RR	4.7	1.13	29.0	84	4.5	1.08	28.4	82
Deltapine DP 5690RR	4.6	1.14	30.1	83	4.3	1.11	31.4	82
Deltapine NuCotn 33B	4.2	1.13	28.9	83	3.7	1.13	27.4	81
DP Delta Pearl	4.5	1.17	29.6	82	4.6	1.19	29.0	83
Fiber Max 991R	4.4	1.17	31.1	84	4.0	1.15	31.0	84
Fiber Max FM 958 BT	3.9	1.14	29.8	84	4.2	1.15	30.3	84
Fiber Max FM 960BR	4.2	1.12	30.7	83	4.1	1.14	33.7	85
Fiber Max FM 966	4.6	1.15	32.3	83	4.3	1.14	32.8	84
Fiber Max FM 989	4.0	1.16	31.6	82	3.8	1.16	31.3	84
Fiber Max FM 989 BR	4.1	1.16	30.3	84	3.9	1.13	30.4	83
Fiber Max FM 991BR	4.4	1.13	31.6	84	4.8	1.16	32.3	84
Paymaster PM 1218BG/RR	4.6	1.05	26.7	83	4.7	1.09	27.5	83
PhytoGen PHY 510RR	4.5	1.14	30.9	84	4.1	1.17	31.0	84
Stoneville ST 4793R	4.6	1.09	27.8	84	4.7	1.10	28.9	84
Stoneville ST 4892BR	4.9	1.09	29.1	83	4.3	1.11	29.9	83
Stoneville ST 5242BR	4.1	1.10	27.7	84	4.5	1.13	28.4	85
Stoneville ST 5303R	4.5	1.11	29.9	85	4.5	1.09	30.9	84
Stoneville ST 5599BR	4.4	1.14	28.7	84	4.5	1.10	29.8	82
Sure-Grow 215B/R	4.4	1.08	26.8	83	4.1	1.02	27.7	81
Sure-Grow 521R	4.6	1.10	27.5	84	4.0	1.07	27.4	83
Sure-Grow 747	4.7	1.14	27.8	84	4.3	1.14	27.0	83

TABLE 27. GROWING SEASON RAINFALL, 2001-2003

Test location	Year	Monthly rainfall (inches)							7-month total
		Mar.	Apr.	May	June	July	Aug.	Sept.	
Belle Mina	2003	2.2	4.3	9.8	5.0	4.6	3.0	8.6	37.5
	2002	5.5	1.5	10.3	0.9	4.5	1.7	5.3	29.7
	2001	5.8	3.9	6.4	8.8	4.3	3.5	5.6	38.3
Shorter	2003	6.7	9.1	6.0	6.6	7.8	6.9	4.5	47.6
	2002	6.5	3.6	2.5	5.6	2.3	1.9	5.9	28.3
	2001	13.8	6.0	3.6	7.1	3.1	2.4	1.6	37.6
Prattville	2003	5.2	8.8	4.8	7.4	6.6	8.0	2.2	43.0
	2002	5.8	1.4	2.6	1.9	4.2	2.2	6.2	24.3
	2001	13.1	3.8	2.9	5.1	4.0	9.6	2.4	40.9
Headland	2003	6.0	9.2	3.4	8.8	7.5	6.1	4.7	45.7
	2002	5.2	3.4	2.9	3.9	4.1	3.1	2.9	25.5
	2001	12.6	2.5	2.1	11.6	3.4	4.7	3.7	40.6
Fairhope	2003	5.2	3.1	5.8	9.5	18.4	5.2	3.7	50.9
	2002	4.2	3.1	2.3	3.4	10.8	5.8	14.8	44.4
	2001	8.7	0.3	0.6	13.8	15.7	9.1	4.7	52.9

TABLE 28. SOIL TYPES FOR 2003 COTTON TRIALS

Test location	Soil type
Belle Mina	Decatur silt loam
E.V. Smith Research Center	
Field Crops Unit, Shorter	Compass sandy loam
Prattville	Lucedale fine sandy loam
Huxford	Malbis fine sandy loam
Headland	Dothan sandy loam
Fairhope	Malbis fine sandy loam

TABLE 29. SOURCES OF SEED FOR THE 2003 COTTON VARIETY TRIALS

Delta and Pine Land Co., Scott, Mississippi

Deltapine Delta Pearl	Paymaster PM 1199RR
Deltapine DP 491	Paymaster PM 1218BG/RR
Deltapine DP 493	Sure-Grow 105
Deltapine DP 448B	Sure-Grow 747
Deltapine NuCotn 33B	Sure-Grow 215BR
Deltapine DP 436RR	Sure-Grow 521R
Deltapine DP 5415RR	
Deltapine DP 5690RR	
Deltapine DP 444BRR	
Deltapine DP 449BRR	
Deltapine DP 451BRR	
Deltapine DP 458BRR	
Deltapine DP 555BRR	

Aventis Crop Sciences, Collierville, Tennessee

FiberMax FM 832B	FiberMax FM 960BR
FiberMax FM 958	FiberMax FM 989BR
FiberMax FM 958BT	FiberMax FM 989RR
FiberMax FM 966	FiberMax FM 991BR
FiberMax FM 989	FiberMax FM 991R

PhytoGen Seed Company, Leland, Mississippi

PhytoGen Phy 510 RR

Stoneville Pedigreed Seed Co., Stoneville, Mississippi

Stoneville ST 5303R	Stoneville ST 5242BR
Stoneville ST 4892BR	Stoneville ST 5599BR
Stoneville ST 4646B2R	

Beltwide Cotton Genetics, McCrory, Arkansas

BCG 295	BCG 28R
BCG 24R	

CPCS Distributor, Shafter, California

Acala 1517-99
AllTex Atlas
