

BREEDING CULTIVARS AND GERMPLASM WITH ENHANCED YIELD AND QUALITY, 2004

Edward Lubbers¹, Stephen Walker¹, Lloyd May², and Peng Chee¹

¹ Crop and Soil Sciences, University of Georgia, Tifton, GA

² Delta and Pine Land Company, Tifton, GA

Introduction

The classical breeding component of the University of Georgia Cotton Improvement Program works to develop germplasm with traits that can be used to meet the requirements of both producers and consumers. Higher and more stable yields combined with the fiber properties requested by the yarn and textile manufacturers are the goals for profitable production and processing to support the Georgia Cotton Industry. The objective of this report is to update progress made by Dr. Lloyd May toward meeting these goals during his last season (2004) leading the program. Dr. Peng Chee has been named the lead researcher of the Cotton Improvement Program with Dr. Ed Lubbers as Associate Cotton Breeder (Research Professional). Stephen Walker was retained as Senior Field Technician from Dr. May's personnel.

Materials and Methods

The general cotton breeding generation advance is as follows. Each year 50-60 F1 crosses are made and the seed sent to the USDA-ARS Cotton Winter Nursery in Mexico for selfing to the F2 generation. The annual crossing effort involves mating elite University of Georgia breeding lines with promising non-transgenic commercial cultivars and germplasm to produce sets of half-sib families. In 2004, 20 F2-bulk populations from such F1 crosses were evaluated for lint yield in 2-replicate, randomized complete block designs, with each set of half-sib F2 families and a check cultivar, DeltaPEARL, constituting a trial. Poor germination of the seed sent to the Cotton Winter Nursery precluded the evaluation of the full number of F2-bulk populations. Of the 50 F2-bulk populations we evaluated in 2003, 15 were advanced to F3 in 2004 for single plant selection. About 1300 single plants were selected in the 2004 F3 populations. F3 plants with lint fractions less than 39% are discarded and then further selected on the basis of HVI fiber properties. Some 1000 F3 plants selected in 2003 were advanced to F4 progeny rows in 2004 for evaluation in an un-replicated grid design, with every 5th row in the trial assigned to DP 491. The trial was machine harvested and the seed-cotton yield of each F4 progeny row was compared with the seed-cotton yield of the nearest row of DP 491. Based on the yield comparisons, about 435 F4 progenies were promoted for testing in the upcoming F5 preliminary yield trials. A separate, late-planted seed increase plot allows selection for plant type and hand harvest of seed-cotton to maintain genetic purity of each F5 generation experimental line. Replicated testing of the F5 breeding material was conducted at the William Gibbs Research Farm, near Tifton, GA (Preliminary Trials 1-6) and Southwest Georgia Branch Experiment Station, near Plains, GA (Preliminary Trials 7-19). The F6 material (Advanced Trials 1 & 2) were

grown in both Tifton and Plains. The F7 material (Elite Trial) was grown in Tifton and Clarkdale, AR. These trials consisted of 20-25 experimental entries and two checks planted in three replicate, randomized complete block designs. The later generation material was also compared to DP 555 BG/RR; but this cannot be considered a check because it has a transgenic advantage that will confound the identification of any genetic improvement. Realistically however, it would be considered encouraging for any GA line that was not be significantly different from it. Prior to machine harvest of all trials except the F2 and F4 generations, 25 unweathered, open bolls from the middle of the fruiting zone was harvested from each plot, and were subsequently ginned on a 10-saw laboratory model gin to determine lint fraction. Fiber samples were submitted to the Cotton Incorporated Textile Services Laboratory for HVI analysis, while Official Variety Trial fiber was subjected to HVI analysis at a commercial testing laboratory.

Some advanced generation (F6 or later) germplasm lines with high potential were also tested in the 2004 University of Georgia Official Variety Trials (Day et al., 2004)

Results and Discussion

The 2004 Preliminary (F5) yield trials revealed a number of lines with lint yields exceeding those of the best check, DeltaPEARL with FiberMax FM 966 or FiberMax FM 958 (Tables 1-10). Of the lines with yields significantly exceeding the checks, several also had desirable fiber lengths, strengths, and micronaire readings: GA2004010 and GA2004020 (Table 1); GA2004055 (Table 3); GA2004089 (Table 4); GA2004108 (Table 5); GA2004142 and GA2004155 (Table 7); GA2004168 (Table 8); GA2004192, GA2004196, GA2004201, and GA2004206 (Table 9); GA2004232 and A2004236 (Table 11); GA2004284 and GA2004290 (Table 13); GA2004303 (Table 14); GA2004331 and GA2004340 (Table 15); GA2004352, GA2004353, GA2004356, and GA2004358 (Table 16); GA2004371 (Table 17); and GA2004416 and GA2004430 (Table 19). These lines will be advanced to the Advanced (F6) yield trials with additional high performers to fill 2 tests.

Results of the 2004 Advanced (F6 generation) yield trials of the 2003 series lines was tested in both Plains and Tifton, revealed genotype by environment interaction thus confounding clear selection of the best lines to be tested in the following year. A Bt transgenic cultivar, DP 555 BG/RR, was grown with the other, conventional lines but cannot be used as a comparison since the Bt character could be a major reason for its top yielding performance. Even with this advantage, six lines were found to be not significantly different in one or the other test location; GA2003006, GA2003018, GA2003071, GA2003117, GA2003123, and GA2003209 (Tables 11 and 12). None of the lines performed in the top echelon at both locations. Additional testing at different field sites will be required to properly select the lines with both performance and stability.

Unlike 2003, we conducted an Elite (F7 generation) yield trial in 2004 in Tifton, GA and Clarkdale, AR. We again saw evidence of genotype by environment interaction effects,

but GA2002199 and GA2002027 were not significantly different in either location from DP 555 BG/RR with the transgenic advantage. These lines will be tested further.

GA2002211 and GA2002212 were the best performers overall of the GA lines in the Dryland and Irrigated Earlier Maturity Variety Trials (Day et al., 2004). The consistent performance over several years and high fiber quality of GA200035 and GA200036 will be further assessed in consideration for release as germplasm.

The up-dated citations for the two germplasm lines released last year, GA96-211 (May and Davis, 2004) and GA98028 (May, 2004), are provided. As expected (May et al, 2004a), GA98033 has also been released as a germplasm line (May et al., 2004b). As described in the Cotton Research and Extension Report 2003, GA98033 has a yield potential and fiber quality as good as or better than certain popular transgenic cultivars combined with an excellent capability of being regenerated from tissue culture. This embryogenic capability was discovered in the Cotton Molecular Breeding Laboratory under the leadership of Dr. Peng Chee.

Acknowledgments

The authors thank the Georgia Commodity Commission for Cotton for funding this research (Project Number 00-860GA CY 2003), Cotton Incorporated for providing HVI fiber analysis and seed production in Arizona under Core Funded Project 03-404, Don Day, Larry Thompson, and staff for conducting the University of Georgia Official Variety Trials, and Stan Jones and Ronnie Pines, at Southwest Georgia Branch Experiment Station, Plains, GA for providing technical support in the conduct of trials at their respective locations.

References

Day, J.L., L. Thompson, L. May, J. Hudgins, B. McNeil, S. Jones, R. Rines, and P. Jost. 2004. 2003 cotton variety trials. p. 242-253. *In* O.L. May et al. (ed.) 2003 Georgia Cotton and Extension Reports. UGA/CPES Research – Extension Publication No. 6, University of Georgia, Athens, GA

May, O.L. 2004. Registration of GA98028 cotton germplasm line. *Crop Sci.* 44: 1882-1883.

May, L., P. Chee, G. Henderson, and S. Walker. 2004a. Breeding cultivars and germplasm with enhanced yield and fiber quality. p. 131-147. *In* O.L. May et al. (ed.) 2003 Georgia Cotton and Extension Reports. UGA/CPES Research – Extension Publication No. 6, University of Georgia, Athens, GA

May, O.L., P.W. Chee, and H. Sakhanokho. 2004b. Registration of GA98033 Upland cotton germplasm line. *Crop Sci.* 44: 2278–2279.

May, O.L., and R.F. Davis. 2004. Registration of GA96-211 root-knot nematode resistant cotton germplasm line. *Crop Sci.* 44: 700-701.

Table 1. Results of 2004 Preliminary (F5) Trials 1 and 2.

2004 PT-1 TIFTON							2004 PT-2 TIFTON						
ENTRY	Lint %	Lint Yield	UHM IN	UI %	STR G/TEX	MIC	ENTRY	Lint %	Lint Yield	UHM IN	UI %	STR G/TEX	MIC
GA2004020	44.0	1507	1.15	85.0	32.6	4.9	GA2004040	43.7	1356	1.14	84.8	35.8	5.1
GA2004010	44.7	1497	1.17	85.1	31.6	4.8	GA2004030	41.0	1337	1.16	84.6	34.3	5.3
GA2004022	42.4	1389	1.16	85.3	33.9	5.3	GA2004046	44.3	1331	1.12	83.5	35.7	5.6
GA2004014	43.0	1366	1.06	83.5	36.2	5.1	FM966	41.7	1322	1.13	83.1	37.6	5.1
GA2004013	42.8	1359	1.16	84.8	32.5	5.0	DeltaPEARL	42.2	1288	1.17	84.8	35.3	5.3
GA2004016	43.9	1337	1.19	84.8	31.5	4.5	GA2004044	44.2	1269	1.13	84.5	34.6	4.9
GA2004023	41.9	1327	1.16	85.2	38.9	5.1	GA2004029	42.4	1268	1.13	85.0	34.1	5.1
GA2004019	43.4	1308	1.11	84.4	35.9	5.4	GA2004024	42.3	1239	1.10	83.7	35.1	5.1
GA2004021	43.8	1308	1.11	84.0	35.1	5.1	GA2004033	41.6	1206	1.15	83.6	35.3	5.2
GA2004018	44.3	1249	1.15	85.1	32.2	5.0	GA2004031	41.4	1170	1.11	84.1	36.5	5.1
GA2004004	43.7	1237	1.17	85.7	33.2	4.6	GA2004028	43.5	1133	1.12	84.3	36.0	5.2
DeltaPEARL	41.3	1210	1.14	83.5	35.7	5.2	GA2004043	44.3	1130	1.12	83.6	34.8	4.9
GA2004006	41.6	1206	1.14	85.0	35.3	5.1	GA2004045	40.1	1128	1.11	84.1	33.1	5.4
GA2004001	40.5	1180	1.19	85.6	33.6	4.7	GA2004038	42.5	1125	1.17	85.3	35.6	5.0
GA2004005	43.4	1168	1.16	84.6	35.9	4.8	GA2004026	40.3	1102	1.15	84.8	32.8	5.0
GA2004017	43.2	1103	1.11	84.0	33.3	5.3	GA2004036	41.6	1099	1.12	84.0	36.4	5.2
FM966	41.1	1102	1.12	84.3	38.8	4.9	GA2004034	41.5	1085	1.07	83.6	36.4	5.3
GA2004011	41.8	1098	1.13	84.5	37.2	5.2	GA2004037	40.2	1052	1.16	84.9	33.8	4.8
GA2004015	43.1	1091	1.12	84.4	37.5	5.2	GA2004025	39.5	1040	1.14	84.6	37.5	4.8
GA2004002	41.5	1076	1.09	83.2	38.2	5.1	GA2004027	40.9	1032	1.13	85.5	34.1	4.8
GA2004009	40.9	1042	1.15	84.7	33.9	5.0	GA2004035	42.1	1030	1.13	84.9	37.3	5.1
GA2004003	44.6	1019	1.15	84.3	36.3	5.1	GA2004039	41.1	1026	1.18	85.9	34.3	5.2
GA2004007	42.9	1010	1.10	84.1	34.3	5.2	GA2004041	42.4	1013	1.15	84.8	34.7	4.9
GA2004012	41.4	973	1.17	84.2	36.1	4.9	GA2004032	42.2	963	1.11	84.4	35.9	5.1
GA2004008	41.1	900	1.12	84.3	36.3	5.1	GA2004042	42.1	929	1.15	84.3	37.1	5.4
LSD0.10	1.7	235	0.05	NS	2.7	0.2	LSD0.10	1.8	188	0.03	0.8	1.6	0.2
TRIAL MEAN		1202					TRIAL MEAN		1147				

DeltaPEARL and FiberMax FM 966 are check varieties for comparison purposes.

Table 2. Results of 2004 Preliminary (F5) Trials 3 and 4.

2004 PT-3 TIFTON							2004 PT-4 TIFTON						
ENTRY	Lint %	Lint Yield	UHM IN	UI %	STR G/TEX	MIC	ENTRY	Lint %	Lint Yield	UHM IN	UI %	STR G/TEX	MIC
GA2004055	43.4	1442	1.14	84.3	38.6	5.2	GA2004089	44.7	1580	1.20	85.4	34.3	4.8
GA2004059	44.3	1415	1.13	84.0	33.2	5.2	GA2004076	45.2	1535	1.14	84.1	33.3	5.3
GA2004054	41.5	1346	1.20	84.7	33.4	4.9	GA2004091	43.2	1512	1.09	83.2	35.5	5.5
DeltaPEARL	41.4	1306	1.15	84.5	36.4	5.2	GA2004079	42.7	1501	1.21	85.1	33.1	4.8
GA2004069	40.7	1279	1.22	85.2	37.3	5.0	GA2004084	42.5	1496	1.14	84.1	32.5	4.8
GA2004064	41.5	1238	1.18	84.6	37.9	4.8	GA2004085	44.9	1494	1.14	84.1	31.8	5.2
GA2004056	44.2	1231	1.14	84.6	35.5	5.1	GA2004083	44.4	1488	1.16	84.8	34.3	5.0
GA2004053	42.8	1227	1.18	84.8	35.6	4.8	GA2004088	44.0	1470	1.19	85.6	33.1	4.7
GA2004050	43.5	1226	1.14	84.0	37.6	5.1	DeltaPEARL	42.3	1454	1.16	84.5	34.0	5.0
GA2004067	42.1	1226	1.15	85.2	32.6	5.3	GA2004077	44.1	1454	1.16	85.5	34.3	5.3
GA2004051	41.6	1218	1.17	84.6	35.4	5.1	GA2004092	43.4	1408	1.13	84.2	36.4	5.1
GA2004052	41.7	1207	1.17	84.9	34.5	4.9	GA2004082	45.3	1396	1.12	84.0	34.0	5.3
GA2004049	41.8	1176	1.17	84.4	33.6	4.7	GA2004074	44.4	1394	1.18	84.7	33.5	4.8
FM966	42.4	1175	1.11	83.4	36.7	5.0	GA2004070	43.6	1393	1.16	84.4	35.5	4.9
GA2004066	42.0	1173	1.14	84.2	32.3	5.2	GA2004081	42.3	1383	1.18	85.4	34.0	4.8
GA2004048	42.4	1170	1.20	85.3	32.3	4.9	GA2004072	42.7	1368	1.16	84.6	34.5	4.9
GA2004057	41.8	1156	1.15	84.2	36.8	5.4	GA2004086	44.7	1355	1.13	83.7	37.8	5.1
GA2004047	42.8	1132	1.21	85.6	32.4	5.2	GA2004075	43.5	1341	1.12	84.4	35.7	4.8
GA2004065	42.3	1130	1.14	84.2	35.1	5.3	GA2004087	43.0	1332	1.16	84.6	33.4	4.8
GA2004058	41.7	1042	1.12	84.0	32.7	5.3	GA2004078	42.3	1324	1.15	84.8	36.5	5.0
GA2004061	41.0	1034	1.17	84.2	35.5	4.8	GA2004080	43.3	1295	1.16	84.6	29.9	4.7
GA2004060	40.5	1020	1.15	84.3	36.0	5.1	GA2004073	43.5	1209	1.16	84.7	33.6	5.1
GA2004068	43.4	995	1.12	83.6	36.0	5.3	GA2004071	41.0	1176	1.14	84.7	35.3	4.9
GA2004062	40.4	947	1.16	84.6	41.5	4.8	FM966	40.4	1023	1.12	84.1	37.5	4.9
GA2004063	39.6	943	1.09	83.4	35.4	5.2	GA2004090	39.7	878	1.21	85.9	35.7	4.9
LSD0.10	1.5	112	0.05	NS	2.1	0.3	LSD0.10	1.1	125	0.04	NS	2.3	0.4
TRIAL MEAN		1178					TRIAL MEAN		1370				

DeltaPEARL and FiberMax FM 966 are check varieties for comparison purposes.

Table 3. Results of 2004 Preliminary (F5) Trials 5 and 6.

2004 PT-5 TIFTON							2004 PT-6 TIFTON						
ENTRY	Lint %	Lint Yield	UHM IN	UI %	STR G/TEX	MIC	ENTRY	Lint %	Lint Yield	UHM IN	UI %	STR G/TEX	MIC
GA2004108	44.8	1630	1.15	84.1	34.1	4.9	GA2004122	45.2	1605	1.18	83.3	30.5	4.8
GA2004109	45.2	1549	1.16	83.4	36.0	5.1	GA2004137	44.8	1519	1.16	83.9	32.8	4.9
GA2004100	43.5	1521	1.14	84.2	31.4	5.0	GA2004131	43.9	1494	1.16	83.7	30.9	4.7
GA2004106	44.4	1511	1.14	83.4	31.2	4.9	DeltaPEARL	42.5	1492	1.16	84.0	32.0	5.0
DeltaPEARL	42.4	1506	1.15	84.2	34.2	5.1	GA2004121	42.2	1463	1.19	85.4	32.8	4.8
GA2004094	42.7	1502	1.12	84.5	32.6	5.2	GA2004128	43.1	1452	1.15	83.9	33.0	5.1
GA2004110	44.8	1492	1.09	82.7	34.1	5.4	GA2004135	40.9	1386	1.21	85.5	33.3	5.1
GA2004113	44.2	1479	1.11	83.8	34.7	5.1	GA2004138	45.6	1382	1.16	84.1	31.2	5.3
GA2004093	44.7	1467	1.15	83.8	34.5	5.0	GA2004117	42.9	1365	1.18	85.5	31.3	4.8
GA2004104	45.3	1465	1.10	83.6	32.7	5.3	GA2004134	40.1	1339	1.19	84.7	29.7	4.8
GA2004111	43.9	1450	1.16	84.3	32.9	4.9	GA2004120	40.6	1339	1.18	84.7	31.5	5.1
GA2004105	43.9	1425	1.11	83.9	35.4	5.2	GA2004127	41.7	1320	1.11	84.1	33.5	5.1
GA2004096	44.7	1410	1.15	84.6	30.4	5.0	GA2004129	39.1	1316	1.17	85.7	31.8	4.9
GA2004103	42.9	1392	1.14	83.4	33.9	4.9	GA2004125	42.7	1297	1.16	84.3	33.7	4.9
GA2004095	44.7	1349	1.13	84.3	34.2	4.9	GA2004136	41.8	1292	1.15	85.2	31.2	5.2
GA2004098	43.1	1301	1.16	84.5	30.8	5.1	GA2004118	44.1	1282	1.20	85.7	33.4	4.8
GA2004114	42.2	1297	1.11	83.7	37.0	5.3	GA2004133	40.8	1242	1.12	83.7	32.9	4.7
FM966	43.5	1295	1.10	83.3	37.2	5.1	GA2004130	40.8	1191	1.15	84.6	32.0	4.9
GA2004115	42.5	1250	1.19	84.3	31.2	4.9	GA2004132	42.2	1188	1.18	84.7	36.6	4.8
GA2004101	42.6	1247	1.13	83.9	31.0	5.2	GA2004123	43.0	1178	1.15	84.7	30.7	5.3
GA2004099	44.0	1235	1.15	84.0	32.7	4.9	GA2004116	41.7	1176	1.16	84.1	31.5	4.7
GA2004102	42.6	1207	1.10	83.6	33.8	5.0	GA2004124	38.6	1101	1.14	85.2	32.0	4.5
GA2004107	44.7	1141	1.12	82.9	32.0	5.1	FM966	39.7	1099	1.16	84.7	35.6	5.0
GA2004097	44.1	1114	1.08	83.0	33.5	4.9	GA2004119	40.0	987	1.19	85.2	33.7	4.7
GA2004112	43.6	1051	1.13	84.1	31.5	5.1	GA2004126	42.5	755	1.16	83.7	31.1	5.1
LSD0.10	1.6	99	0.04	NS	2.9	NS	LSD0.10	1.7	198	0.03	1.1	2.9	0.3
TRIAL MEAN		1371					TRIAL MEAN		1290				

DeltaPEARL and FiberMax FM 966 are check varieties for comparison purposes.

Table 4. Results of 2004 Preliminary (F5) Trials 7 and 8.

2004 PT-7 PLAINS							2004 PT-8 PLAINS						
ENTRY	Lint %	Lint Yield	UHM IN	UI %	STR G/TEX	MIC	NAME	Lint %	Lint Yield	UHM IN	UI %	STR G/TEX	MIC
GA2004142	43.9	1406	1.25	86.5	33.0	4.4	GA2004168	41.4	1320	1.24	85.3	31.8	4.5
GA2004155	44.0	1331	1.17	84.2	31.2	4.5	GA2004174	43.6	1266	1.21	84.9	33.7	4.7
GA2004160	41.0	1300	1.26	86.1	34.0	4.7	GA2004175	44.5	1244	1.20	84.3	31.9	4.6
GA2004143	42.8	1293	1.24	86.6	35.4	4.3	GA2004184	41.5	1228	1.23	85.1	34.1	4.6
GA2004153	42.4	1276	1.22	85.3	32.8	4.4	GA2004181	43.6	1220	1.21	84.6	31.6	4.8
GA2004147	41.5	1258	1.22	84.8	33.0	4.4	GA2004166	42.7	1208	1.20	85.1	34.2	4.6
GA2004152	41.3	1255	1.29	86.9	32.1	3.9	GA2004165	40.6	1186	1.21	85.1	35.1	4.2
GA2004156	44.1	1247	1.20	84.6	33.3	4.7	GA2004177	44.4	1177	1.19	84.6	33.6	4.4
GA2004145	41.4	1242	1.23	84.9	32.3	4.9	GA2004176	42.8	1173	1.24	85.0	33.3	4.3
GA2004139	43.5	1234	1.24	85.7	29.5	4.8	DeltaPEARL	40.7	1172	1.20	84.1	34.6	4.4
GA2004159	42.4	1222	1.22	85.4	34.9	4.6	GA2004162	41.5	1171	1.23	85.4	32.3	4.2
GA2004144	41.8	1221	1.22	84.2	32.6	4.3	FM958	40.9	1162	1.19	84.2	34.7	4.7
GA2004151	41.3	1207	1.18	84.2	31.9	4.4	GA2004180	42.6	1158	1.22	85.2	34.8	4.6
GA2004161	40.7	1202	1.27	86.1	31.3	4.3	GA2004179	42.9	1148	1.20	84.5	34.2	4.4
GA2004148	40.0	1172	1.24	85.4	32.8	4.7	GA2004167	42.6	1144	1.22	85.3	34.3	4.9
GA2004140	42.1	1159	1.26	85.5	32.7	4.2	GA2004163	42.0	1140	1.15	83.6	32.6	4.9
FM958	38.9	1147	1.20	84.9	36.1	4.4	GA2004169	43.3	1120	1.18	84.2	34.2	4.5
GA2004150	43.6	1141	1.21	84.7	30.3	4.2	GA2004178	42.0	1107	1.26	86.5	34.8	4.4
GA2004146	39.6	1120	1.23	84.7	32.8	4.8	GA2004171	42.1	1094	1.25	85.7	32.6	4.8
GA2004154	42.4	1088	1.23	85.6	33.9	4.5	GA2004182	41.5	1083	1.20	84.9	33.2	4.5
GA2004141	41.6	1055	1.22	84.9	31.2	4.9	GA2004164	40.2	1077	1.22	83.4	37.5	4.5
DeltaPEARL	38.3	1034	1.24	85.5	31.7	4.3	GA2004172	41.2	1072	1.23	84.7	32.0	4.5
GA2004157	43.2	1025	1.24	84.5	33.0	4.6	GA2004173	42.2	1048	1.19	84.3	34.2	4.7
GA2004149	41.7	1013	1.25	85.7	32.5	4.1	GA2004170	41.4	971	1.25	85.2	34.2	4.4
GA2004158	40.0	846	1.24	85.6	33.2	4.5	GA2004183	42.3	970	1.24	85.0	35.3	4.6
LSD0.10	1.6	88	0.04	1.3	2.4	0.3	LSD0.10	2.0	115	0.03	NS	2.3	NS
TRIAL MEAN		1180					TRIAL MEAN		1146				

DeltaPEARL and FiberMax FM 958 are check varieties for comparison purposes.

Table 5. Results of 2004 Preliminary (F5) Trials 9 and 10.

2004 PT-9 PLAINS							2004 PT-10 PLAINS						
NAME	Lint %	Lint Yield	UHM IN	UI %	STR G/TEX	MIC	NAME	Lint %	Lint Yield	UHM IN	UI %	STR G/TEX	MIC
GA2004196	41.0	1211	1.24	86	34.2	4.4	GA2004230	40.4	1267	1.28	86.9	34.2	4.3
GA2004201	43.6	1178	1.21	85	36.2	4.7	GA2004217	42.0	1218	1.23	85.4	34.8	4.7
GA2004192	43.0	1172	1.21	85	34.8	4.8	DeltaPEARL	39.6	1125	1.22	85.2	34.3	4.5
GA2004206	42.7	1170	1.24	85	33.1	4.6	GA2004214	41.0	1107	1.27	85.7	32.7	4.5
GA2004207	41.6	1129	1.23	85	32.3	4.3	GA2004216	39.8	1074	1.26	85.4	34.5	4.4
GA2004187	41.8	1106	1.25	85	32.7	4.3	GA2004220	40.9	1058	1.28	86.3	33.9	4.5
GA2004205	40.9	1097	1.24	86	32.9	4.6	GA2004219	40.9	1049	1.26	85.7	31.5	4.3
GA2004204	43.9	1086	1.20	85	33.5	4.6	GA2004218	42.8	1047	1.23	84.8	32.8	4.5
GA2004199	40.5	1085	1.25	86	32.5	4.7	GA2004223	39.7	1036	1.21	84.4	31.9	4.3
GA2004186	42.3	1053	1.26	86	30.9	4.3	GA2004227	40.7	1030	1.24	85.0	32.6	4.2
GA2004190	41.5	1039	1.24	85	30.8	4.2	FM958	39.6	1027	1.20	84.8	37.1	4.7
GA2004202	41.9	1039	1.24	86	32.3	4.0	GA2004208	40.0	1012	1.28	86.9	36.4	4.6
FM958	40.5	1033	1.24	85	36.1	4.3	GA2004225	40.6	1010	1.23	85.3	33.7	4.5
GA2004185	39.9	1013	1.29	86	32.0	4.2	GA2004210	38.7	974	1.26	85.9	34.5	4.4
GA2004193	41.8	1005	1.23	85	32.6	4.8	GA2004211	39.1	970	1.23	85.4	32.2	4.1
GA2004197	40.3	975	1.26	86	30.5	4.1	GA2004226	43.6	965	1.22	85.2	32.3	4.4
GA2004200	43.6	973	1.22	85	32.4	4.3	GA2004228	41.2	963	1.21	84.3	31.8	4.7
GA2004203	40.2	973	1.27	86	34.5	4.3	GA2004209	42.4	952	1.25	85.7	33.9	4.7
GA2004198	42.3	951	1.27	86	32.8	4.1	GA2004221	38.6	939	1.31	87.2	35.0	4.1
DeltaPEARL	38.5	947	1.25	85	32.4	4.2	GA2004213	39.7	938	1.28	85.9	33.9	4.5
GA2004195	39.7	940	1.27	87	34.9	4.5	GA2004224	38.8	930	1.28	86.4	31.5	4.4
GA2004188	40.6	913	1.26	86	34.0	4.3	GA2004229	41.3	906	1.27	86.3	33.2	4.7
GA2004189	40.4	892	1.24	85	32.6	4.0	GA2004215	40.6	888	1.25	85.6	33.0	4.3
GA2004191	41.0	846	1.26	86	30.7	3.9	GA2004212	41.6	814	1.25	85.4	31.4	4.2
GA2004194	39.1	780	1.24	86	30.6	4.1	GA2004222	38.1	767	1.30	87.0	32.6	4.4
LSD0.10	1.6	120	0.03	NS	2.1	NS	LSD0.10	1.6	115	0.04	1.3	2.2	NS
TRIAL MEAN			1024				TRIAL MEAN			1003			

DeltaPEARL and FiberMax FM 958 are check varieties for comparison purposes.

Table 6. Results of 2004 Preliminary (F5) Trials 11 and 12.

2004 PT-11 PLAINS							2004 PT-12 PLAINS						
NAME	Lint %	Lint Yield	UHM IN	UI %	STR G/TEX	MIC	NAME	Lint %	Lint Yield	UHM IN	UI %	STR G/TEX	MIC
GA2004236	44.4	1296	1.19	84.1	31.1	4.6	GA2004263	44.2	1330	1.17	84.9	34.3	4.7
GA2004232	42.3	1229	1.19	84.6	34.6	4.6	GA2004268	42.0	1309	1.26	85.7	36.0	4.8
GA2004234	41.6	1175	1.24	85.8	34.8	4.6	GA2004269	40.5	1277	1.28	86.4	36.0	4.4
GA2004238	39.5	1149	1.22	85.3	32.7	4.7	GA2004256	43.2	1265	1.22	86.2	36.9	4.7
GA2004233	42.1	1126	1.20	85.1	33.8	4.7	FM958	40.8	1242	1.15	84.5	37.4	5.1
GA2004237	42.6	1120	1.14	84.0	34.0	5.2	DeltaPEARL	39.2	1239	1.22	85.0	34.1	4.7
FM958	40.5	1117	1.16	84.0	37.8	4.9	GA2004262	41.5	1223	1.28	86.7	35.9	4.2
GA2004251	41.4	1108	1.24	85.8	35.8	4.8	GA2004276	38.1	1222	1.16	84.6	36.6	5.0
GA2004250	41.2	1099	1.17	84.3	36.4	4.9	GA2004257	43.5	1214	1.21	85.2	34.5	4.8
GA2004231	41.9	1065	1.20	85.2	37.3	4.9	GA2004255	43.9	1214	1.21	85.7	34.0	4.2
PD94042	41.3	1062	1.17	84.6	33.8	4.8	GA2004272	40.8	1213	1.20	84.6	35.1	5.1
GA2004241	40.4	1044	1.26	86.5	34.3	4.6	GA2004254	38.9	1210	1.18	84.8	36.9	4.9
DeltaPEARL	39.5	1043	1.21	84.7	34.2	4.9	GA2004261	40.4	1199	1.19	84.9	35.8	4.7
GA2004244	40.9	1043	1.21	85.6	34.5	4.5	GA2004267	42.0	1192	1.18	84.9	35.8	4.8
GA2004247	41.6	1033	1.22	86.0	35.7	4.8	GA2004266	40.4	1172	1.28	86.7	36.6	4.5
GA2004235	43.0	1006	1.19	83.8	32.9	5.0	GA2004274	37.6	1169	1.18	85.3	35.7	5.5
GA2004242	43.0	1003	1.27	86.8	36.0	4.3	GA2004273	37.3	1161	1.20	85.6	36.0	4.8
GA2004252	39.9	999	1.19	85.4	35.7	4.8	GA2004275	38.9	1147	1.18	85.2	32.8	5.0
GA2004240	42.0	994	1.26	86.1	33.7	4.4	GA2004271	40.8	1144	1.18	84.6	32.5	4.8
GA2004246	38.9	987	1.20	85.4	33.2	5.0	GA2004260	40.3	1140	1.16	84.7	34.3	4.6
GA2004243	39.6	979	1.24	84.9	34.7	4.8	GA2004265	41.6	1134	1.23	85.1	34.9	4.6
GA2004245	41.0	975	1.20	85.4	35.5	4.4	GA2004258	40.7	1119	1.21	85.6	35.4	4.8
GA2004253	41.7	933	1.25	85.5	38.3	4.7	GA2004270	41.7	1095	1.29	86.5	35.8	4.3
GA2004239	40.8	859	1.21	85.3	34.6	4.6	GA2004259	39.7	1077	1.23	85.3	33.1	4.4
GA2004248	41.3	799	1.19	85.2	35.2	4.1	GA2004264	39.5	1071	1.21	85.3	36.0	4.5
LSD0.10	1.2	91	0.04	1.1	1.6	0.4	LSD0.10	1.5	95	0.05	1.2	2.3	0.3
TRIAL MEAN		1050					TRIAL MEAN		1191				

DeltaPEARL and FiberMax FM 958 are check varieties for comparison purposes.

Table 7. Results of 2004 Preliminary (F5) Trials 13 and 14.

2004 PT-13 PLAINS							2004 PT-14 PLAINS						
NAME	Lint %	Lint Yield	UHM IN	UI %	STR G/TEX	MIC	NAME	Lint %	Lint Yield	UHM IN	UI %	STR G/TEX	MIC
GA2004284	41.6	1320	1.20	84.9	32.6	4.7	GA2004303	42.3	1385	1.12	83.4	35.4	5.1
GA2004290	43.1	1235	1.17	84.5	33.9	5.1	GA2004313	40.1	1306	1.17	83.7	34.8	4.9
GA2004288	39.3	1209	1.14	84.7	34.8	5.4	GA2004314	37.7	1244	1.16	84.0	34.9	4.8
GA2004280	39.4	1182	1.19	85.5	36.7	5.4	GA2004317	38.5	1228	1.17	85.4	38.2	5.2
GA2004283	38.0	1176	1.16	85.1	34.0	5.1	GA2004305	38.9	1226	1.16	84.5	35.5	5.0
GA2004279	39.0	1175	1.18	84.8	33.6	4.5	GA2004315	40.3	1191	1.19	84.9	34.4	4.6
GA2004285	38.2	1173	1.18	85.5	34.6	4.8	GA2004316	38.0	1176	1.17	84.3	32.4	4.8
GA2004297	40.1	1157	1.23	85.5	34.8	4.3	DeltaPEARL	39.7	1173	1.21	85.2	33.3	4.7
GA2004298	39.4	1147	1.20	85.4	35.8	4.5	GA2004312	40.7	1155	1.20	85.5	33.9	4.4
GA2004294	38.2	1139	1.19	85.3	33.3	4.5	FM958	39.7	1154	1.18	85.2	36.0	4.9
GA2004292	40.3	1137	1.17	84.8	33.7	4.6	GA2004306	39.5	1138	1.18	83.9	34.5	4.7
GA2004281	37.8	1135	1.21	85.6	32.8	4.7	GA2004310	40.7	1136	1.13	83.2	33.5	5.2
GA2004299	37.7	1130	1.19	85.1	31.8	4.3	GA2004300	38.9	1134	1.16	84.8	33.5	4.7
GA2004296	39.2	1115	1.20	85.6	35.3	4.7	GA2004308	39.2	1123	1.19	83.8	34.2	4.6
GA2004289	37.9	1111	1.21	84.9	32.3	3.9	GA2004318	39.2	1116	1.16	83.8	33.8	4.9
GA2004291	40.3	1107	1.15	84.4	33.0	4.4	GA2004307	40.1	1114	1.14	84.3	33.6	4.7
GA2004295	39.7	1106	1.18	84.7	33.4	4.1	GA2004320	40.2	1097	1.12	83.1	35.7	4.8
GA2004278	38.8	1101	1.18	85.1	32.5	4.7	GA2004309	39.5	1093	1.19	84.3	35.7	4.8
GA2004286	39.2	1096	1.18	85.7	34.6	5.1	GA2004301	37.7	1088	1.21	84.1	33.8	5.0
DeltaPEARL	39.0	1069	1.21	85.5	34.1	4.4	GA2004302	39.6	1088	1.17	84.6	36.1	4.5
FM958	40.4	1057	1.22	85.6	34.3	4.1	GA2004304	38.7	1065	1.23	85.4	33.0	4.3
GA2004293	37.9	1002	1.18	83.6	31.5	4.2	GA2004322	37.9	1036	1.19	84.1	32.6	4.6
GA2004287	36.1	987	1.17	85.3	33.0	4.8	GA2004321	38.4	1027	1.15	84.0	32.5	4.5
GA2004282	39.9	986	1.19	85.5	34.0	5.2	GA2004319	39.5	1012	1.17	84.3	34.0	5.1
GA2004277	38.3	842	1.18	85.0	34.5	4.7	GA2004311	39.2	1003	1.16	84.0	36.5	4.7
LSD0.10	2.0	100	0.03	0.8	1.3	0.4	LSD0.10	1.6	74	0.03	1.0	1.9	NS
TRIAL MEAN		1116					TRIAL MEAN		1140				

DeltaPEARL and FiberMax FM 958 are check varieties for comparison purposes.

Table 8. Results of 2004 Preliminary (F5) Trials 15 and 16.

2004 PT-15 PLAINS							2004 PT-16 PLAINS						
NAME	Lint %	Lint Yield	UHM IN	UI %	STR G/TEX	MIC	NAME	Lint %	Lint Yield	UHM IN	UI %	STR G/TEX	MIC
GA2004331	43.4	1453	1.19	86.3	36.5	5.1	GA2004358	42.6	1366	1.24	85.8	34.1	4.4
GA2004340	43.2	1380	1.18	84.5	33.6	4.7	GA2004352	42.4	1329	1.24	86.1	33.8	4.9
GA2004329	41.1	1338	1.18	85.1	33.0	5.1	GA2004353	42.1	1322	1.21	85.8	33.5	4.7
GA2004339	41.3	1338	1.17	85.0	32.8	5.0	GA2004356	41.9	1298	1.21	86.3	35.0	4.5
GA2004334	41.3	1319	1.17	84.8	35.4	5.2	GA2004349	42.3	1278	1.26	86.6	32.0	4.5
GA2004345	44.0	1311	1.19	84.7	34.0	4.8	GA2004357	41.6	1274	1.21	85.9	33.4	4.6
GA2004338	42.0	1281	1.15	84.4	31.8	4.8	GA2004350	40.0	1264	1.21	85.4	33.7	4.6
GA2004333	39.1	1266	1.18	85.0	35.2	5.2	GA2004366	39.0	1251	1.22	86.3	35.2	4.9
GA2004341	40.7	1264	1.16	84.9	32.9	5.0	GA2004360	41.9	1248	1.15	84.6	33.1	5.0
GA2004337	38.5	1251	1.15	84.8	35.7	5.6	GA2004351	40.9	1236	1.22	85.5	32.9	4.8
DeltaPEARL	39.3	1218	1.22	85.4	34.0	4.5	GA2004347	39.9	1219	1.18	85.0	34.9	4.5
GA2004342	41.2	1211	1.24	85.5	34.6	4.3	GA2004363	41.1	1203	1.16	84.4	34.9	5.2
GA2004328	39.9	1210	1.17	85.3	34.1	5.2	GA2004348	40.8	1202	1.19	85.9	35.3	4.7
GA2004327	42.1	1202	1.18	84.4	35.3	4.8	GA2004355	37.6	1201	1.20	85.0	34.2	4.9
GA2004335	37.1	1201	1.20	86.0	33.9	4.5	GA2004368	41.2	1168	1.21	85.5	34.1	4.7
GA2004326	40.9	1198	1.20	85.0	32.5	4.7	GA2004361	41.6	1159	1.18	84.7	33.5	4.5
FM958	40.1	1194	1.20	84.4	35.8	4.5	GA2004364	38.5	1158	1.20	85.5	32.5	4.8
GA2004324	41.3	1189	1.15	84.2	34.8	4.6	GA2004362	41.1	1155	1.20	85.7	33.8	4.8
GA2004330	38.8	1130	1.17	85.8	35.7	5.2	GA2004365	40.4	1155	1.19	85.4	33.4	5.5
GA2004325	37.9	1127	1.13	83.6	34.5	5.2	GA2004346	39.4	1133	1.17	85.2	35.6	4.9
GA2004332	40.9	1121	1.16	84.2	34.9	4.5	GA2004354	38.6	1105	1.21	85.4	34.5	4.8
GA2004343	38.0	1100	1.19	85.7	36.8	4.6	DeltaPEARL	39.5	1087	1.23	85.1	33.3	4.3
GA2004344	37.3	1092	1.22	85.5	33.7	4.6	FM958	39.7	1059	1.20	84.6	36.9	4.5
GA2004336	39.9	1077	1.17	84.6	38.3	4.9	GA2004367	41.5	1043	1.20	84.4	33.3	4.7
GA2004323	38.6	1042	1.16	85.0	34.6	4.6	GA2004359	37.8	1036	1.23	86.1	34.8	4.5
LSD0.10	1.0	79	0.03	1.0	2.2	0.4	LSD0.10	1.3	80	0.03	0.9	NS	0.4
TRIAL MEAN		1220					TRIAL MEAN		1198				

DeltaPEARL and FiberMax FM 958 are check varieties for comparison purposes.

Table 9. Results of 2004 Preliminary (F5) Trials 17 and 18.

2004 PT-17							2004 PT-18						
NAME	Lint %	Lint Yield	UHM IN	UI %	STR G/TEX	MIC	NAME	Lint %	Lint Yield	UHM IN	UI %	STR G/TEX	MIC
GA2004371	44.8	1527	1.20	85.3	30.3	4.6	GA2004413	40.0	1198	1.20	85.8	34.2	5.1
GA2004374	43.4	1406	1.20	85.9	32.4	4.6	GA2004392	39.0	1180	1.19	85.9	33.2	4.7
GA2004370	41.1	1259	1.23	86.4	32.6	4.3	DeltaPEARL	39.6	1168	1.22	85.7	34.9	4.6
GA2004389	40.6	1245	1.14	84.8	32.4	4.8	FM958	40.5	1084	1.17	85.1	37.7	4.8
GA2004373	42.7	1244	1.20	85.3	33.0	4.7	GA2004401	38.3	1083	1.17	84.8	35.8	5.0
GA2004369	43.4	1229	1.21	85.6	33.3	4.6	GA2004409	38.8	1066	1.18	85.5	37.0	4.6
GA2004376	38.2	1198	1.20	84.9	35.6	4.6	GA2004410	40.1	1043	1.19	85.4	36.6	5.3
GA2004384	38.0	1170	1.19	84.5	33.7	4.6	GA2004412	39.0	1039	1.17	84.3	32.6	5.0
GA2004390	39.7	1142	1.17	85.8	33.3	4.9	GA2004408	38.1	1033	1.23	86.2	35.5	5.0
GA2004391	39.4	1135	1.17	85.0	34.3	4.6	GA2004411	40.6	1032	1.21	86.0	37.7	4.9
FM958	40.3	1132	1.21	85.2	36.2	4.3	GA2004398	39.5	1022	1.19	85.0	35.2	4.2
GA2004386	37.4	1130	1.24	85.0	32.1	4.1	GA2004414	39.8	1016	1.17	84.7	34.7	4.9
GA2004382	37.6	1125	1.20	85.6	34.6	4.8	GA2004395	36.2	990	1.19	85.4	34.9	4.8
GA2004375	38.1	1118	1.19	85.0	32.0	4.5	GA2004396	37.0	988	1.23	85.9	35.4	4.5
GA2004377	39.0	1117	1.22	84.7	31.4	4.5	GA2004394	37.3	979	1.21	85.2	32.9	4.4
GA2004378	37.0	1115	1.21	85.5	34.3	4.6	GA2004402	38.3	978	1.18	84.7	34.7	4.8
GA2004372	42.5	1113	1.19	85.1	34.0	4.4	GA2004405	35.7	950	1.20	85.3	36.7	4.8
GA2004383	38.4	1107	1.22	85.9	32.0	4.6	GA2004400	37.7	949	1.22	86.2	34.2	4.4
GA2004387	39.1	1096	1.22	85.1	33.0	4.4	GA2004393	39.5	945	1.16	85.3	34.1	4.8
GA2004379	37.0	1077	1.21	85.6	36.7	4.9	GA2004397	37.6	935	1.20	85.6	34.6	4.7
GA2004380	38.9	1073	1.23	85.8	33.0	4.6	GA2004399	39.2	934	1.17	84.6	34.3	4.6
GA2004388	38.3	1060	1.18	85.4	37.2	4.8	GA2004403	39.0	923	1.23	86.6	34.8	4.8
GA2004381	38.1	1033	1.24	86.0	33.2	4.5	GA2004407	37.4	879	1.19	85.6	36.3	5.1
DeltaPEARL	39.8	1016	1.23	85.5	31.4	4.3	GA2004406	37.3	869	1.17	85.1	36.0	5.3
GA2004385	38.4	980	1.18	84.2	33.4	4.2	GA2004404	37.6	727	1.19	85.2	35.1	4.7
LSD0.10	1.3	100	0.03	NS	2.3	0.2	LSD0.10	1.5	129	NS	NS	NS	0.4
TRIAL MEAN		1154					TRIAL MEAN		1000				

DeltaPEARL and FiberMax FM 958 are check varieties for comparison purposes.

Table 10. Results of 2004 Preliminary (F5) Trial 19.

2004 PT-19 PLAINS						
NAME	Lint %	Lint Yield	UHM IN	UI %	STR G/TEX	MIC
GA2004416	39.8	1413	1.24	86.9	34.2	4.9
GA2004430	40.2	1364	1.21	86.0	32.9	4.6
GA2004419	39.1	1303	1.27	86.8	33.3	4.8
GA2004426	38.8	1273	1.25	86.9	36.4	4.7
GA2004425	38.8	1196	1.26	85.5	33.7	4.4
GA2004415	38.8	1195	1.28	87.0	36.1	4.6
GA2004421	38.9	1191	1.21	86.3	35.4	4.9
DeltaPEARL	39.0	1178	1.23	85.8	34.6	4.4
GA2004429	40.4	1166	1.23	85.6	34.5	4.5
GA2004420	38.2	1149	1.26	86.9	37.0	4.1
FM958	40.5	1095	1.21	85.3	35.7	4.7
GA2004427	38.2	1085	1.21	85.7	33.6	4.8
GA2004424	39.0	1078	1.26	86.6	33.3	4.4
GA2004423	38.0	1075	1.22	85.7	32.3	4.5
GA2004428	37.8	1057	1.25	87.3	38.1	4.9
GA2004434	42.1	1053	1.21	84.6	32.6	4.7
GA2004431	39.3	982	1.20	85.0	32.9	5.2
GA2004432	40.7	968	1.17	85.4	33.1	4.5
GA2004422	37.3	964	1.25	86.3	31.7	4.1
GA2004437	43.9	955	1.23	86.2	34.3	4.3
GA2004417	38.3	953	1.27	87.1	36.6	4.5
GA2004433	37.0	952	1.24	86.3	33.4	4.1
GA2004435	37.9	923	1.21	85.4	35.2	4.2
GA2004436	38.9	919	1.21	84.8	33.8	4.0
GA2004418	37.4	916	1.22	84.7	35.1	4.2
LSD0.10	1.4	103	0.03	0.9	1.7	0.4

TRIAL MEAN 1096

DeltaPEARL and FiberMax FM 958 are check varieties for comparison purposes.

Table 11. Results of 2004 Advanced (F6) Trial 1.

2004 AT-1 PLAINS							2004 AT-1 TIFTON						
ENTRY	Lint %	Lint Yield	UHM IN	UI %	STR G/TEX	MIC	ENTRY	Lint %	Lint Yield	UHM IN	UI %	STR G/TEX	MIC
DP 555 BG/RR	41.1	1229	1.17	83.0	33.7	4.6	DP 555 BG/RR	45.7	1649	1.11	82.5	30.2	4.8
GA2003006	42.4	1193	1.18	84.9	36.5	5.0	GA2003018	43.6	1599	1.13	83.1	34.9	5.0
GA2003002	41.7	1101	1.21	85.3	35.6	4.7	GA2003071	42.1	1587	1.11	84.1	30.1	5.0
GA2003045	40.6	1100	1.16	84.5	35.3	4.6	GA2003047	42.3	1541	1.15	84.3	31.7	4.8
GA2003047	40.6	1093	1.18	84.2	34.7	4.8	GA2003030	45.0	1538	1.16	83.7	35.0	5.2
GA2003019	40.5	1069	1.22	85.4	35.8	4.6	GA2003064	44.4	1491	1.11	83.1	31.7	5.2
GA2003011	43.2	1064	1.21	85.1	35.6	5.0	GA2003009	43.7	1487	1.12	83.6	34.7	5.3
GA2003034	40.6	1062	1.20	85.7	38.8	4.8	GA2003002	43.2	1482	1.17	84.4	33.4	4.8
GA2003012	42.7	1050	1.19	84.0	33.8	4.5	GA2003006	44.4	1475	1.12	83.5	34.0	5.2
GA2003018	41.9	1044	1.19	84.8	35.7	4.6	DeltaPEARL	43.2	1474	1.15	82.6	31.4	4.9
FM 958	41.1	1039	1.17	84.6	37.4	4.9	GA2003020	42.8	1464	1.20	84.1	32.5	4.5
GA2003009	42.9	1037	1.18	85.2	39.0	4.9	GA2003044	43.3	1462	1.11	83.7	33.1	5.1
GA2003026	41.5	1019	1.20	85.5	38.1	4.5	GA2003053	43.6	1460	1.10	82.3	35.2	5.1
GA2003053	39.9	1004	1.16	83.6	36.8	4.5	GA2003019	42.3	1459	1.18	84.2	33.3	4.9
GA2003020	40.7	1003	1.22	85.7	37.1	4.6	GA2003026	45.2	1459	1.14	83.7	34.0	5.0
GA2003069	39.7	1003	1.18	85.1	34.7	4.7	GA2003011	45.4	1456	1.12	83.2	33.2	5.2
GA2003021	41.0	1001	1.20	84.4	35.1	4.6	GA2003034	42.9	1439	1.13	83.2	37.2	5.2
GA2003030	40.1	983	1.19	84.6	35.2	4.6	GA2003045	43.3	1436	1.10	83.2	32.3	4.9
GA2003005	40.4	980	1.25	86.0	35.1	4.7	GA2003004	44.1	1371	1.17	84.2	34.1	5.0
GA2003004	40.8	976	1.21	85.1	36.3	4.7	GA2003021	43.8	1366	1.13	83.5	32.7	4.9
GA2003044	40.4	974	1.17	84.8	36.9	4.8	GA2003012	44.2	1354	1.13	82.4	32.2	4.9
GA2003064	41.7	964	1.15	83.6	34.5	5.0	GA2003027	45.1	1344	1.15	84.0	35.3	4.8
DeltaPEARL	39.3	952	1.24	85.2	34.3	4.1	GA2003069	42.4	1339	1.12	83.3	31.9	4.9
GA2003036	38.8	947	1.16	84.4	33.1	4.6	GA2003036	41.9	1286	1.16	84.3	29.9	4.8
GA2003071	38.1	920	1.18	84.2	32.8	4.6	GA2003005	42.7	1256	1.18	83.9	31.7	4.8
GA2003027	42.0	892	1.18	84.7	37.7	4.6	FM 958	42.8	1185	1.14	84.0	36.5	5.0
LSD0.10	1.4	122	0.04	1.2	2.4	NS	LSD0.10	1.6	101	0.04	0.7	1.4	0.2
TRIAL MEAN	1027						TRIAL MEAN	1440					

DeltaPEARL and FiberMax FM 958 are check varieties for comparison purposes.

Table 12. Results of 2004 Advanced (F6) Trial 2.

2004 AT-2 PLAINS							2004 AT-2 TIFTON						
ENTRY	Lint %	Lint Yield	UHM IN	UI %	STR G/TEX	MIC	ENTRY	Lint %	Lint Yield	UHM IN	UI %	STR G/TEX	MIC
DP 555 BG/RR	40.7	1301	1.17	84.2	32.6	4.3	DP 555 BG/RR	44.4	1588	1.16	83.9	31.7	4.9
GA2003084	43.4	1140	1.19	85.2	36.7	5.2	GA2003123	45.0	1501	1.18	84.7	36.4	4.9
GA2003112	40.1	1133	1.27	87.1	38.0	5.0	GA2003209	43.6	1491	1.12	83.9	34.6	4.9
GA2003081	41.5	1110	1.20	85.5	33.7	4.8	GA2003117	43.7	1479	1.19	84.8	32.6	4.9
GA2003087	41.4	1105	1.15	84.6	32.1	4.8	GA2003126	42.4	1453	1.15	84.1	34.5	5.4
GA2003117	42.1	1084	1.24	86.1	35.3	4.7	GA2003105	42.6	1436	1.15	83.5	30.8	4.6
GA2003188	39.1	1082	1.14	83.7	37.5	4.5	GA2003087	45.0	1433	1.10	83.9	29.4	5.1
GA2003190	40.2	1080	1.18	85.4	39.1	4.9	GA2003100	42.3	1431	1.18	83.9	33.2	4.9
GA2003124	40.6	1067	1.24	85.8	35.3	4.6	GA2003112	42.5	1427	1.21	85.9	34.4	4.9
GA2003229	40.4	1044	1.19	85.2	39.6	4.3	GA2003084	45.5	1404	1.11	83.0	32.3	5.1
FM 958	40.4	1042	1.19	85.3	36.7	4.8	GA2003221	41.2	1389	1.22	85.5	37.2	4.8
NX2429	38.1	1042	1.17	85.3	35.8	4.9	GA2003127	44.3	1337	1.18	84.3	34.7	4.7
GA2003209	39.3	1035	1.18	84.4	36.1	4.4	GA2003135	42.6	1318	1.12	83.4	33.2	4.9
GA2003127	39.8	1033	1.23	85.7	38.0	4.6	GA2003081	41.9	1309	1.16	84.6	32.1	4.8
GA2003125	42.6	1023	1.20	84.8	35.9	4.6	GA2003211	41.7	1308	1.17	84.6	35.6	4.8
GA2003123	41.1	1019	1.24	86.0	35.2	4.8	GA2003227	41.6	1307	1.12	83.6	35.4	5.0
GA2003211	38.6	1011	1.20	85.0	40.5	4.6	NX2429	41.9	1300	1.13	84.0	32.1	5.0
GA2003100	39.8	986	1.23	86.4	37.0	4.8	GA2003219	41.6	1284	1.16	83.7	37.7	5.2
GA2003105	40.3	978	1.15	83.2	35.2	4.5	GA2003188	41.4	1282	1.14	84.2	35.7	4.9
GA2003219	40.8	976	1.22	85.2	39.4	4.4	GA2003190	42.1	1268	1.14	84.1	35.8	5.0
GA2003126	40.5	954	1.20	84.6	34.4	5.4	GA2003124	41.8	1265	1.22	85.2	33.0	4.6
GA2003176	38.7	935	1.26	86.1	34.8	4.3	GA2003229	43.2	1262	1.12	83.4	36.1	4.8
GA2003135	38.9	927	1.14	84.4	38.6	4.7	GA2003125	44.6	1248	1.16	84.5	34.6	5.0
DeltaPEARL	39.0	914	1.22	84.9	32.9	4.6	GA2003226	41.4	1233	1.16	83.9	34.8	4.8
GA2003226	39.0	907	1.21	84.8	38.9	4.7	GA2003176	41.2	1207	1.18	84.9	33.5	4.7
GA2003227	38.4	893	1.21	85.7	37.4	4.4	DeltaPEARL	41.9	1155	1.19	84.5	33.5	4.8
GA2003221	37.2	847	1.24	85.3	38.6	4.5	FM 958	42.3	1153	1.14	83.4	34.1	4.8
LSD0.10	1.9	124	0.03	1.1	2.4	0.3	LSD0.10	2.0	117	0.04	1.1	2.8	0.3
TRIAL MEAN	1024						TRIAL MEAN	1343					

DeltaPEARL and FiberMax FM 958 are check varieties for comparison purposes.

Table 13. Results of 2004 Elite (F7) Trial.

2004 ELITE TRIAL - TIFTON						
ENTRY	Lint %	Lint Yield	UHM IN	UI %	STR G/TEX	MIC
DP 555 BG/RR	40	966	1.18	84.2	32.6	4.2
FM 966	37	915	1.23	85.7	37.1	4.5
GA2002207	42	865	1.22	85.5	32.6	4.5
GA2002199	41	858	1.18	84.7	35.4	4.9
GA2002125	40.0	854	1.23	85.3	34.8	4.5
GA2002118	39.0	852	1.22	84.9	35.5	4.5
DeltaPEARL	37.1	848	1.23	85.9	34.0	4.4
GA2002168	39.3	843	1.17	83.3	33.1	4.7
GA2002113	40.0	830	1.24	85.4	34.8	4.3
GA2002230	40	765	1.21	85.3	32.3	4.6
GA2002193	38	718	1.19	84.2	34.6	4.4
GA2002223	39	714	1.21	84.3	33.6	4.4
GA2002224	38	711	1.19	84.0	33.7	4.4
GA2002209	39	709	1.17	84.8	32.9	4.5
GA2002081	36	693	1.15	83.4	31.5	4.4
GA2002052	36	687	1.16	84.4	34.4	4.7
GA2002232	38	687	1.20	85.1	33.2	4.5
GA2002105	35	679	1.19	84.5	32.2	4.4
GA2002170	37	679	1.20	84.4	35.1	4.5
GA2002219	41	649	1.15	84.5	33.2	4.7
GA2002221	38	636	1.18	83.9	31.4	4.4
GA2002208	36	635	1.20	84.3	33.6	4.5
GA2002004	34	613	1.13	83.7	35.5	4.3
GA2002215	38	604	1.21	85.0	32.4	4.4
LSD0.10	2.2	108	0.03	1.1	1.6	NS
TRIAL MEAN		750				

DeltaPEARL and FiberMax FM 958 are check varieties for comparison purposes.

Table 14. Results of 2004 Elite (F7) Trial.

2004 ELITE TRIAL - CLARKDALE, ARKANSAS														
ENTRY	Lint Yield	r [†]	Lint %	r [†]	Ht cm	r [†]	Vert. %	r [†]	Open Bolls %	r [†]	UHM IN	UI %	STR G/TEX	MIC
GA2002199	1571	1	44	5	98	9	42	13	63	5	1.15	86.2	33.8	4.7
GA2002209	1568	2	44	3	98	9	42	13	70	1	1.16	85.2	33.8	4.5
DP 555 BG/RR	1557	3	44	8	96	16	33	24	45	23	1.18	85.1	31.1	4.3
GA2002224	1532	4	42	17	103	3	45	7	60	9	1.16	84.5	31.9	4.6
GA2002207	1526	5	44	2	98	12	40	18	50	19	1.20	86.1	33.3	4.3
GA2002219	1520	6	44	4	105	2	52	3	67	4	1.13	84.6	33.7	4.5
GA2002223	1518	7	43	10	97	13	52	3	70	1	1.18	85.4	32.4	4.7
GA2002215	1505	8	43	12	102	6	47	5	58	11	1.16	85.0	32.0	4.5
GA2002125	1480	9	43	13	97	14	42	13	63	5	1.20	85.6	32.5	4.4
GA2002208	1462	10	44	6	94	19	45	7	60	9	1.22	86.3	33.2	4.9
GA2002193	1441	11	43	14	101	8	43	10	53	16	1.17	84.5	34.2	4.7
GA2002230	1414	12	43	11	94	18	40	18	58	11	1.20	85.5	31.0	4.8
GA2002232	1390	13	44	7	102	5	38	22	62	8	1.16	85.4	34.1	4.6
DeltaPEARL	1389	14	42	19	94	19	53	2	57	15	1.19	84.3	31.5	4.6
GA2002004	1371	15	39	24	109	1	47	5	53	16	1.19	85.5	33.7	4.4
GA2002118	1356	16	43	16	98	9	43	10	50	19	1.20	85.9	34.8	4.6
GA2002113	1323	17	43	15	96	15	40	18	58	11	1.23	86.1	33.9	4.3
GA2002052	1311	18	41	20	103	4	40	18	58	11	1.18	85.3	32.9	4.1
GA2002081	1292	19	40	22	89	24	42	13	53	16	1.22	86.3	34.5	4.4
GA2002168	1280	20	42	18	101	7	45	7	63	5	1.20	85.8	34.1	4.4
GA2002105	1252	21	41	21	93	22	43	10	50	19	1.22	86.2	35.0	4.3
GA2002170	1240	22	44	9	92	23	42	13	50	19	1.19	86.2	34.7	4.4
GA2002221	1179	23	44	1	96	16	60	1	68	3	1.19	85.9	31.7	4.3
FM 966	863	24	40	23	93	21	35	23	40	24	1.20	85.9	37.1	4.4
LSD0.10	165		1.9		ns		ns		11		0.03	ns	2.2	ns
TRIAL MEAN	1389		42.6		98		44		58		1.18	85.5	33.3	4.5
CV (%)	8.7		2.6		10.7		25.9		14.0		1.6	0.9	3.9	4.9

r[†] - ranking of trait in the column to the immediate left.

DeltaPEARL and FiberMax FM 958 are check varieties for comparison purposes.