

BREEDING CULTIVARS AND GERMLASM WITH ENHANCED YIELD AND QUALITY

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Introduction

The University of Georgia Cotton Breeding Program develops cultivars and germplasm with traits to meet requirements of growers and manufacturers. Higher and more stable yields combined with fiber properties required by 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 toward meeting these goals.

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 2003, 50 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. Of the 50 F2-bulk populations we evaluated in 2002, 15 were advanced to F3 in 2003 for single plant selection. About 1500 single plants were selected in the 2003 F3 populations. F3 plants with lint fractions less than 39% are discarded and then further selected on the basis of HVI fiber properties. Some 1100 F3 plants selected in 2002 were advanced to F4 progeny rows in 2003 for evaluation in an un-replicated grid design, with every 4th row in the trial assigned to Deltapearl. The trial was machine harvested and the seed-cotton yield of each F4 progeny row compared with seed-cotton yield of the nearest row of Deltapearl. About 225 F4 progeny significantly out-yielded the nearest check Deltapearl plot in 2002 and were promoted for testing in F5 preliminary yield trials in 2003. A separate, late-planted seed increase plot allowed selection for plant type and hand harvest of seed-cotton to maintain genetic purity of each F5 generation experimental line. Replicated testing of F5 (Preliminary Trials 1-10) and F6 (Advanced Trials 1 & 2) was conducted at the William Gibbs Research Farm, near Tifton, GA. These trials consisted of 20-25 experimental entries and two checks planted in three replicate, randomized complete block designs. Advanced generation (F7 or later) germplasm lines were tested in the 2003 University of Georgia Official Variety Trials. 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.

Results and Discussion

The 2003 Preliminary (F5) yield trials revealed a number of lines with lint yields exceeding those of the checks Deltapearl or FiberMax 966 (Tables 1-5). Of the lines with yield exceeding the checks, several also had desirable fiber lengths, strengths, and micronaire readings. Some of the best performers were GA2003093, GA2003131, and GA2003138 (Table 3), plus GA2003156, GA2003165, and GA2003178 (Table 4). Because high yield can be accompanied by undesirably high micronaire readings exceeding 5.0, breeding cotton with high yield potential and reasonably fine fiber is a challenge. Therefore, the six F5 lines with promising yield potential and fiber quality will be advanced to the 2004 Official Variety Trials for more rigorous testing over environments and comparisons with a broad range of non-transgenic and transgenic varieties. Seed increases of the most promising lines will be produced in Arizona in 2004 for larger scale trials in 2005.

Results of the 2003 Advanced Trials (F6 generation) testing the 2002 series lines revealed many with good yield potential compared with Deltapearl, but often high micronaire (Tables 6 and 7). GA2002113 (Table 6) and GA2002207 (Table 7) merit further testing in the 2004 Official Variety Trials with their combination of yield potential and fiber quality, while most of the remaining lines will be discarded.

We did not conduct an Elite Trial in 2003 in order to accelerate testing advanced lines in the Official Strains Trials conducted by the Statewide Variety Test Program (Day et al., 2003). GA2001078 was the best performer in the Earlier Maturity Strains Trials (Table 8), with the second highest yield averaged over locations and micronaire less than 5.0 combined with one of the longer staple lengths of all entries in the trial. Among lines tested in the Later Maturity Strains Trials (Table 9), GA2002212, GA2002217, and GA2002167 among others expressed desirable yield potential and fiber quality. Several of the best lines will be tested in the 2004 UGA Official Variety Trials and Georgia county agent trials if seed supplies permit.

GA200035, GA200036, and GA200042 were the most consistent performers in the Dryland and Irrigated Earlier Maturity Variety Trials (Tables 10 and 11), with GA200035 and GA200036 having the best fiber lengths of the three. Lesser yield performance was observed among advanced GA lines entered into the Dryland and Irrigated Later Maturity trials (Tables 12 and 13). GA98033, GA98084, among others will be considered for release as germplasm in the next year.

Two germplasm lines GA96-211 (May et al., 2004) and GA98028 (May, 2004) were released in 2003 for use by public and private breeders in an effort to promote germplasm exchange. GA98033 was found by the Peng Chee laboratory (see report in this volume) to be capable of regenerating plants from tissue culture (embryogenic). Two years of testing in the UGA Official Variety Trials (Table 14) shows GA98033 has equal or better yield potential and fiber quality compared with certain popular transgenic varieties. Since

most transformation occurs with agronomically obsolete Coker 312 derivatives, the combination of embryogenic capability and agronomic performance of GA98033 merits consideration for release as a germplasm line for research purposes. We will apply to the UGA Plant Variety and Germplasm Release Committee at their next meeting in February of 2004 to release GA98033 as a germplasm line.

Finally, The University of Georgia Research Foundation has negotiated a contract with Monsanto's Cotton States to access the Bollgard II® and Roundup Ready Flex® pest management traits. GA98028, GA99090, GA200009, GA200062, GA200066, and GA2001078 were submitted to Cotton States in 2003 for trait introgression, with the transgenic derivatives due to begin evaluation and selection in the 2005 crop season. Application to Cotton States has been made to initiate trait introgression in a second slate of lines and every year thereafter, to result in a pipeline of candidate varieties containing these popular pest management traits. The University of Georgia Research Foundation and Cotton States will jointly own any varieties bred with Bollgard II and Roundup Ready Flex, with seed to be sold under the Cotton States brand. Cotton States will offer growers an alternate outlet for improved planting seed with an expanded portfolio of transgenic varieties containing the most popular herbicide tolerance and insect management capabilities.

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References

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Table 1. Results of 2003 Preliminary (F5) Trials 1 and 2.

2003 PT-1							2003 PT-2						
ENTRY	LINT	LINT	UHM	UI	STR	MIC	ENTRY	LINT	LINT	UHM	UI	STR	MIC
	%	YIELD	IN	%	G/TEX			%	YIELD	IN	%	G/TEX	
GA2003011	46.3	1186	1.15	84.5	32.7	4.5	GA2003045	45.1	1255	1.10	85.5	31.9	5.1
GA2003020	45.6	1135	1.15	84.1	31.6	4.2	GA2003044	43.6	1191	1.13	85.4	33.7	4.7
GA2003018	43.2	1126	1.11	85.2	32.9	4.9	GA2003027	44.2	1189	1.12	84.4	34.9	4.4
GA2003012	44.6	1113	1.18	85.0	32.9	4.5	GA2003030	44.8	1170	1.08	83.0	30.6	4.8
GA2003004	44.8	1106	1.16	85.3	32.9	4.7	GA2003029	45.1	1161	1.10	84.3	31.9	4.8
GA2003005	44.9	1100	1.18	86.3	31.7	4.8	GA2003036	43.5	1138	1.11	84.4	28.2	4.8
GA2003009	44.6	1097	1.13	85.3	33.5	4.8	GA2003026	45.1	1130	1.16	84.4	35.0	4.7
GA2003006	45.1	1089	1.15	85.3	33.5	4.8	GA2003034	43.5	1129	1.12	84.5	33.8	4.7
GA2003019	42.9	1071	1.15	84.4	32.2	4.9	FM966	42.5	1094	1.16	85.1	36.2	4.4
GA2003021	44.3	1067	1.18	84.9	31.5	4.3	GA2003033	42.6	1081	1.19	85.1	36.0	4.9
GA2003002	43.7	1038	1.16	85.4	32.8	4.6	GA2003038	44.8	1071	1.18	85.5	34.1	4.4
GA2003023	43.1	1033	1.15	84.5	32.2	4.8	GA2003025	43.8	1067	1.16	84.5	32.8	4.6
GA2003001	43.2	1029	1.15	83.9	33.4	4.6	GA2003041	41.5	1049	1.11	84.0	32.1	4.6
GA2003003	44.0	1026	1.07	85.4	35.0	4.7	GA2003043	47.1	1046	1.06	84.2	31.2	4.7
GA2003022	44.8	1016	1.09	85.6	35.8	5.0	GA2003046	47.9	1039	1.08	85.1	29.2	5.4
GA2003016	45.0	1009	1.12	84.6	29.4	4.8	GA2003035	40.6	1035	1.15	85.5	34.4	4.7
GA2003007	45.0	990	1.08	85.0	33.4	4.6	GA2003024	43.5	1021	1.11	85.0	30.7	4.7
FM966	42.0	983	1.15	85.4	37.7	4.5	GA2003039	44.4	1014	1.08	85.0	32.8	5.1
GA2003017	43.9	967	1.21	84.6	34.5	4.5	GA2003037	40.3	1009	1.19	84.3	34.4	4.6
GA2003008	45.4	964	1.13	84.6	33.0	5.0	GA2003042	42.9	1003	1.16	85.7	35.5	4.9
DELTAPEARL	43.6	949	1.14	83.8	32.1	4.8	GA2003040	43.1	992	1.14	84.5	32.5	4.5
GA2003013	42.9	908	1.09	85.2	31.9	4.9	GA2003032	43.2	984	1.14	84.9	34.2	4.7
GA2003014	43.7	901	1.14	85.2	30.9	4.8	GA2003031	41.0	935	1.18	85.7	34.9	4.6
GA2003015	45.1	880	1.10	85.8	33.2	5.1	GA2003028	44.4	848	1.15	85.0	33.7	4.8
GA2003010	43.7	878	1.17	84.4	32.7	4.4	DELTAPEARL	42.8	764	1.13	83.8	32.2	5.0
LSD0.01	1.8	159	0.04	NS	1.7	0.3	LSD0.01	1.9	168	0.06	NS	2.5	0.3

Deltapearl and FiberMax 966 are check varieties for comparison purposes.

Table 2. Results of 2003 Preliminary (F5) Trials 3 and 4.

2003 PT-3							2003 PT-4						
ENTRY	LINT	LINT	UHM	UI	STR	MIC	ENTRY	LINT	LINT	UHM	UI	STR	MIC
	%	YIELD	IN	%	G/TEX			%	YIELD	IN	%	G/TEX	
GA2003064	46.8	1298	1.06	83.8	28.3	5.1	GA2003087	44.5	1207	1.09	84.7	27.8	4.8
GA2003053	44.8	1194	1.11	84.6	32.6	4.7	GA2003079	43.1	1173	1.06	84.9	27.9	4.9
GA2003047	43.9	1181	1.12	85.3	30.3	5.1	GA2003084	46.6	1167	1.12	84.5	32.5	4.8
GA2003048	46.3	1174	1.12	84.9	29.8	5.0	GA2003074	44.8	1156	1.06	84.4	29.8	5.5
GA2003069	42.0	1167	1.14	84.9	30.0	4.9	GA2003072	44.4	1140	1.11	85.7	29.9	5.2
GA2003067	43.9	1151	1.10	85.6	29.9	5.0	GA2003090	44.3	1127	1.02	83.0	27.8	5.1
GA2003068	44.2	1141	1.11	85.3	31.3	5.2	GA2003082	44.9	1115	1.11	84.9	27.6	5.3
GA2003054	44.8	1129	1.13	85.1	30.3	4.8	GA2003085	44.5	1113	1.13	84.5	28.5	5.1
GA2003058	43.7	1128	1.11	85.0	32.1	4.8	GA2003081	44.3	1108	1.11	84.7	28.9	5.0
GA2003052	44.1	1109	1.08	84.4	29.9	5.0	GA2003071	42.2	1095	1.11	84.8	28.6	4.7
GA2003060	43.7	1099	1.09	85.1	28.9	4.9	FM966	42.8	1073	1.16	84.8	35.4	4.6
GA2003059	43.1	1090	1.10	84.5	28.7	4.7	GA2003086	42.6	1050	1.08	84.8	28.7	4.7
GA2003050	44.3	1067	1.16	84.8	29.8	4.9	GA2003078	44.1	1049	1.08	83.9	30.7	5.0
GA2003057	44.0	1056	1.10	85.1	27.4	5.2	GA2003073	43.8	1046	1.05	85.3	30.5	4.8
GA2003065	42.9	1050	1.13	85.2	28.8	5.2	GA2003076	42.3	1044	1.08	85.5	29.1	5.1
GA2003055	43.8	1044	1.13	85.4	28.6	5.0	GA2003089	43.1	1038	1.11	84.2	28.3	5.1
GA2003049	42.5	1041	1.11	84.9	30.1	5.0	GA2003070	45.0	1035	1.09	85.4	30.0	5.3
DELTAPEARL	43.7	1040	1.15	84.9	32.6	4.9	GA2003091	44.6	1027	1.13	84.7	29.3	4.7
GA2003051	42.5	1035	1.14	85.5	34.2	4.6	GA2003080	43.5	1015	1.12	84.6	29.5	4.6
FM966	41.3	981	1.15	84.2	33.8	4.3	GA2003083	43.5	990	1.09	84.8	29.9	5.1
GA2003066	44.1	977	1.08	84.0	26.1	4.8	DELTAPEARL	43.7	960	1.12	84.9	31.6	4.9
GA2003056	43.6	960	1.10	86.4	30.1	5.3	GA2003092	43.1	926	1.16	84.9	29.8	4.3
GA2003063	43.6	925	1.15	85.5	30.9	5.2	GA2003077	43.9	922	1.19	85.4	29.7	4.5
GA2003061	43.5	924	1.10	85.0	29.9	4.7	GA2003088	44.2	889	1.09	84.3	31.2	5.0
GA2003062	42.7	904	1.06	84.4	29.3	4.8	GA2003075	41.5	721	1.07	85.5	30.3	5.0
LSD0.01	1.6	153	0.04	NS	2.7	0.3	LSD0.01	1.6	130	0.03	NS	1.9	0.3

Deltapearl and FiberMax 966 are check varieties for comparison purposes.

Table 3. Results of 2003 Preliminary (F5) Trials 5 and 6.

2003 PT-5							2003 PT-6						
ENTRY	LINT	LINT	UHM	UI	STR	MIC	ENTRY	LINT	LINT	UHM	UI	STR	MIC
	%	YIELD	IN	%	G/TEX			%	YIELD	IN	%	G/TEX	
GA2003093	43.8	1421	1.13	84.2	29.6	4.6	GA2003137	44.0	1379	1.14	85.2	32.5	4.7
GA2003105	42.9	1285	1.06	84.7	31.7	4.9	GA2003118	42.8	1379	1.20	85.4	33.8	4.7
GA2003100	43.5	1255	1.13	84.3	29.8	5.0	GA2003125	45.2	1363	1.17	84.2	30.9	4.8
GA2003112	44.3	1154	1.20	85.9	33.9	4.7	GA2003131	42.5	1327	1.18	84.5	32.5	4.5
GA2003098	45.4	1154	1.14	85.3	30.4	4.7	GA2003138	42.5	1315	1.15	84.7	32.2	4.5
GA2003094	44.5	1128	1.15	84.6	30.2	4.7	GA2003135	42.8	1300	1.10	85.2	31.7	4.8
GA2003108	44.0	1098	1.16	84.4	30.1	4.3	GA2003117	44.2	1281	1.18	85.5	32.0	4.6
GA2003115	44.7	1076	1.19	85.3	30.4	4.6	GA2003127	44.5	1244	1.15	84.5	33.3	4.7
GA2003113	44.8	1073	1.15	84.4	31.5	4.7	GA2003123	44.8	1236	1.18	86.4	33.3	4.8
GA2003096	43.3	1057	1.18	84.1	31.5	5.1	GA2003126	43.2	1231	1.17	85.0	31.5	5.1
GA2003103	43.8	1043	1.18	85.7	32.1	5.2	GA2003124	41.1	1216	1.21	85.7	33.3	4.5
GA2003110	45.2	1024	1.15	84.8	32.7	4.5	FM966	42.2	1214	1.18	85.2	34.7	4.4
GA2003097	43.2	1009	1.15	84.6	32.5	4.8	GA2003134	44.0	1212	1.16	84.4	33.4	5.0
GA2003099	44.3	993	1.12	83.8	30.0	4.7	GA2003132	42.8	1196	1.20	84.6	30.1	4.8
GA2003102	43.9	987	1.14	85.1	30.3	4.7	GA2003119	42.1	1191	1.19	85.9	32.2	4.8
GA2003111	46.8	973	1.12	84.3	30.4	4.6	GA2003129	44.0	1190	1.14	84.8	33.2	4.6
FM966	43.3	958	1.13	85.3	34.4	4.3	GA2003136	42.1	1189	1.11	85.3	34.0	4.7
GA2003095	43.7	953	1.09	84.5	30.7	4.8	DELTAPEARL	42.2	1176	1.15	84.4	32.0	4.8
GA2003104	45.1	952	1.17	85.3	30.3	5.1	GA2003116	43.4	1164	1.14	84.2	30.9	5.0
GA2003114	42.2	949	1.18	84.7	33.2	4.4	GA2003130	44.8	1141	1.16	85.0	32.4	4.2
GA2003109	43.9	935	1.11	84.8	31.8	4.9	GA2003121	43.2	1126	1.16	84.1	29.9	4.9
GA2003107	46.1	931	1.12	85.3	31.4	5.1	GA2003133	44.7	1118	1.21	84.7	32.0	4.5
DELTAPEARL	43.7	909	1.13	83.7	30.9	4.7	GA2003122	42.7	1006	1.16	85.0	32.8	4.7
GA2003106	43.1	904	1.09	84.3	31.3	4.7	GA2003128	42.0	995	1.17	85.2	32.0	4.8
GA2003101	45.2	747	1.11	85.0	30.6	5.0	GA2003120	41.5	981	1.15	85.6	32.9	4.8
LSD0.01	1.7	210	0.04	1.0	1.7	0.2	LSD0.01	2.0	138	0.04	NS	2.0	0.3

Deltapearl and FiberMax 966 are check varieties for comparison purposes.

Table 4. Results of 2003 Preliminary (F5) Trials 7 and 8.

2003 PT-7							2003 PT-8						
ENTRY	LINT	LINT	UHM	UI	STR	MIC	ENTRY	LINT	LINT	UHM	UI	STR	MIC
	%	YIELD	IN	%	G/TEX			%	YIELD	IN	%	G/TEX	
GA2003156	45.5	1445	1.12	84.8	31.8	4.7	GA2003165	42.1	1406	1.14	84.1	33.7	4.4
GA2003160	44.0	1266	1.11	84.0	30.0	4.8	GA2003178	41.4	1401	1.14	85.5	32.8	4.7
GA2003152	44.1	1225	1.08	84.7	31.6	5.0	GA2003176	40.6	1310	1.19	84.9	32.4	4.9
GA2003145	45.8	1186	1.16	83.8	30.7	4.9	GA2003164	42.6	1283	1.08	84.2	32.6	4.8
GA2003151	44.0	1182	1.10	85.2	32.1	4.4	GA2003166	42.4	1257	1.10	83.9	29.9	4.5
GA2003146	45.9	1164	1.11	85.7	32.1	5.0	GA2003183	41.6	1226	1.15	85.0	31.6	5.0
GA2003148	41.7	1154	1.04	84.5	34.0	5.3	GA2003167	41.1	1182	1.07	83.6	31.5	4.8
FM966	41.4	1153	1.13	85.3	34.1	4.5	FM966	42.4	1177	1.15	84.9	35.1	4.4
GA2003141	45.0	1123	1.12	85.2	30.5	4.6	GA2003182	40.6	1162	1.09	84.5	30.7	5.0
GA2003142	42.0	1108	1.17	83.6	32.5	4.4	GA2003171	43.5	1105	1.07	84.5	31.0	4.9
GA2003139	43.4	1087	1.15	85.3	31.7	4.7	GA2003168	41.2	1104	1.14	84.0	33.2	4.9
GA2003154	41.9	1080	1.09	84.3	30.4	5.1	GA2003177	40.7	1099	1.15	84.8	31.5	4.8
GA2003153	43.5	1074	1.08	83.7	31.2	4.7	GA2003162	41.8	1094	1.14	85.4	33.3	4.6
GA2003150	41.6	1071	1.18	85.6	35.1	4.7	GA2003184	42.5	1090	1.14	84.4	34.5	4.6
GA2003140	45.9	1064	1.07	84.3	29.6	4.7	GA2003163	41.4	1075	1.11	84.6	32.1	4.8
GA2003157	42.5	1046	1.13	84.7	32.5	4.3	DELTAPEARL	41.7	1073	1.18	83.8	32.6	4.7
GA2003143	43.8	1040	1.10	85.0	32.2	4.7	GA2003170	44.1	1063	1.13	84.5	30.3	5.0
GA2003149	42.7	1002	1.13	85.3	30.9	5.1	GA2003169	42.2	1060	1.12	85.8	34.2	4.9
GA2003161	40.8	954	1.13	84.9	29.9	4.6	GA2003173	40.5	1059	1.12	84.6	30.4	5.2
GA2003158	41.4	942	1.10	85.0	31.8	5.2	GA2003180	40.1	1053	1.09	85.3	31.8	5.0
GA2003144	44.9	940	1.13	85.5	31.5	4.9	GA2003179	41.7	1037	1.10	83.7	29.8	5.1
DELTAPEARL	43.7	924	1.12	83.4	30.5	4.9	GA2003174	42.0	1014	1.16	85.1	33.1	4.5
GA2003155	45.9	922	1.17	83.7	30.7	4.6	GA2003172	40.4	921	1.15	84.8	31.2	5.0
GA2003159	42.3	884	1.18	83.9	30.2	4.3	GA2003181	38.6	908	1.13	85.0	33.4	4.6
GA2003147	42.7	835	1.16	84.4	31.1	4.8	GA2003175	39.1	899	1.10	84.9	31.7	5.1
LSD0.01	2.9	174	0.03	NS	2.4	0.3	LSD0.01	1.8	163	0.04	0.7	2.2	0.2

Deltapearl and FiberMax 966 are check varieties for comparison purposes.

Table 5. Results of 2003 Preliminary (F5) Trials 9 and 10.

2003 PT-9							2003 PT-10						
ENTRY	LINT	LINT	UHM	UI	STR	MIC	ENTRY	LINT	LINT	UHM	UI	STR	MIC
	%	YIELD	IN	%	G/TEX			%	YIELD	IN	%	G/TEX	
GA2003188	42.3	1313	1.09	84.6	34.5	4.7	DELTAPEARL	44.0	1062	1.13	83.6	30.6	4.5
GA2003190	44.1	1287	1.15	85.4	34.3	4.8	GA2003226	43.2	1016	1.14	85.2	35.1	4.8
GA2003185	43.1	1181	1.13	85.4	31.1	5.0	GA2003208	41.4	1012	1.06	84.3	31.8	5.2
GA2003203	41.6	1175	1.13	84.7	31.2	4.8	GA2003209	43.4	982	1.13	84.4	33.3	4.7
GA2003198	41.8	1158	1.12	85.0	34.8	4.8	GA2003212	43.7	967	1.14	83.9	32.2	4.7
GA2003199	43.1	1080	1.11	84.8	32.7	4.9	GA2003214	42.2	966	1.10	84.0	34.6	5.0
GA2003194	43.5	1073	1.08	85.1	32.5	5.1	GA2003219	43.1	961	1.14	85.2	35.5	4.7
GA2003196	41.5	1048	1.11	84.9	32.6	5.0	FM966	41.6	946	1.14	85.9	35.2	4.5
GA2003206	44.1	1046	1.13	83.9	31.0	4.6	GA2003229	44.2	927	1.11	85.4	34.5	4.8
FM966	42.1	1032	1.14	85.1	34.5	4.3	GA2003216	43.9	913	1.08	83.8	30.8	4.8
GA2003192	43.7	1015	1.10	84.4	33.8	4.6	GA2003210	42.0	907	1.13	84.4	31.7	4.8
DELTAPEARL	40.3	986	1.17	84.0	32.0	4.7	GA2003221	41.4	907	1.20	83.9	35.4	4.7
GA2003200	42.2	961	1.13	84.7	30.9	4.7	GA2003227	41.5	900	1.15	85.4	33.4	4.5
GA2003197	41.0	957	1.15	85.2	33.1	5.0	GA2003211	43.7	898	1.16	84.4	33.1	4.5
GA2003204	40.8	954	1.14	84.6	29.1	4.8	GA2003217	42.6	840	1.11	84.5	35.4	4.7
GA2003205	43.3	951	1.12	84.8	32.0	4.9	GA2003220	44.0	830	1.16	83.6	33.0	4.5
GA2003202	40.5	950	1.12	85.0	30.1	4.4	GA2003224	40.6	801	1.15	84.7	33.7	5.0
GA2003193	43.9	923	1.08	84.6	29.1	5.2	GA2003213	42.8	798	1.13	84.3	35.0	4.8
GA2003207	41.6	913	1.11	84.2	31.7	4.6	GA2003225	42.2	796	1.11	84.2	32.0	4.5
GA2003186	40.4	912	1.11	84.3	31.7	4.7	GA2003228	43.3	793	1.09	84.5	30.8	5.0
GA2003187	41.8	870	1.13	84.7	31.7	4.9	GA2003223	41.9	763	1.13	84.1	34.3	4.6
GA2003201	42.0	839	1.14	84.9	28.1	4.9	GA2003215	42.9	747	1.10	85.1	33.3	4.9
GA2003191	41.7	811	1.08	86.0	31.0	4.8	GA2003222	41.6	740	1.10	84.5	33.2	4.8
GA2003189	42.6	706	1.07	84.4	31.3	5.0	GA2003218	41.7	663	1.14	84.6	33.1	4.8
GA2003195	41.2	620	1.09	84.7	35.0	5.1	LSD0.01	1.7	168	0.05	NS	2.5	0.3
LSD0.01	1.6	155	0.04	NS	2.3	0.3							

Deltapearl and FiberMax 966 are check varieties for comparison purposes.

Table 6. Results of 2003 Advanced Trials (AT- F6 generation) 1 and 3.

2003 AT1 TIFTON							2003 AT3 TIFTON						
ENTRY	LINT	LINT	UHM	UI	STR	MIC	ENTRY	LINT	LINT	UHM	UI	STR	MIC
	%	YIELD	IN	%	G/TEX	%		YIELD	IN	%	G/TEX		
GA2002168	45.3	1106	1.14	84.8	30.7	4.9	GA2002113	45.5	1163	1.19	83.8	31.7	4.7
GA2002148	45.7	1091	1.09	84.2	29.5	5.0	GA2002221	43.1	1102	1.19	84.6	32.0	4.8
GA2002138	44.6	1089	1.09	84.2	29.8	5.1	GA2002231	45.4	1085	1.14	83.9	30.2	5.0
GA2002087	42.9	1059	1.11	84.0	30.8	4.9	GA2002220	46.0	1070	1.11	83.8	28.5	4.8
GA2002140	44.2	1054	1.10	84.2	29.9	5.2	GA2002125	45.6	1055	1.16	83.5	30.8	4.8
GA2002084	41.7	1043	1.11	84.2	30.2	4.9	GA2002105	43.9	1051	1.15	83.5	30.2	4.6
GA2002081	41.5	1001	1.16	84.2	30.5	4.8	DELTAPEARL	42.2	1046	1.14	83.1	31.8	4.8
GA2002131	43.9	967	1.17	83.9	31.6	4.7	GA2002092	42.6	1028	1.12	83.8	30.3	4.7
GA2002011	42.7	960	1.10	83.9	30.0	4.8	GA2002085	44.2	1020	1.10	83.4	30.4	4.9
GA2002172	45.4	917	1.14	83.9	31.9	5.2	GA2002100	44.1	1019	1.12	84.2	30.6	4.9
DELTAPEARL	43.4	906	1.15	83.2	29.9	4.7	GA2002171	45.0	994	1.11	83.4	31.5	5.0
GA2002064	42.2	898	1.12	84.3	30.0	4.6	GA2002089	42.2	968	1.15	83.7	31.3	4.6
GA2002001	42.6	880	1.14	84.7	31.5	4.6	GA2002214	44.6	965	1.12	83.9	30.7	4.6
GA2002074	42.5	854	1.12	84.1	29.7	5.0	GA2002002	42.2	955	1.11	83.2	30.4	4.6
GA2002135	44.2	848	1.15	83.2	33.5	4.6	GA2002048	42.3	928	1.08	82.4	28.3	3.9
GA2002165	43.0	819	1.19	85.0	32.6	4.7	GA2002153	44.8	915	1.17	83.5	30.9	4.5
GA2002157	43.9	728	1.16	84.7	31.6	4.8	GA2002018	41.7	915	1.12	83.8	31.1	4.7
GA2002189	42.4	664	1.16	83.9	31.8	4.9	GA2002090	41.6	909	1.10	82.6	29.6	4.4
LSD0.01	1.7	139	0.03	NS	NS	0.3	GA2002134	44.0	907	1.14	83.9	32.8	4.5
Trial Mean		938					GA2002103	42.4	897	1.16	83.6	31.5	4.8
							GA2002227	46.0	896	1.13	83.2	27.7	5.1
							GA2002006	43.0	873	1.13	83.8	32.0	4.8
							GA2002096	42.6	870	1.14	85.2	30.6	4.9
							LSD0.01	1.5	132	0.05	NS	2.0	0.3
							Trial Mean		957				
							AT-3 planted at Tifton only						

Deltapearl is the check variety in these breeding trials.

Table 7. Results of 2003 Advanced Trial (AT- F6 generation) 2 at Tifton and Plains.

2003 AT2 TIFTON							2003 AT-2 PLAINS						
ENTRY	LINT	LINT	UHM	UI	STR	MIC	ENTRY	LINT	LINT	UHM	UI	STR	MIC
	%	YIELD	IN	%	G/TEX	%		YIELD	IN	%	G/TEX		
GA2002209	43.0	1035	1.10	83.8	30.3	4.8	GA2002208	41.9	1246	1.19	84.7	30.7	4.5
GA2002207	43.9	1031	1.15	83.5	30.5	4.8	GA2002207	43.5	1162	1.21	84.5	33.3	4.5
GA2002199	45.7	1023	1.12	84.1	30.0	4.9	GA2002224	41.4	1156	1.17	85.7	31.3	4.7
GA2002225	43.3	1011	1.11	84.1	27.9	4.9	GA2002219	43.4	1155	1.14	85.6	31.9	4.8
GA2002208	43.1	993	1.13	83.7	29.9	5.0	GA2002223	43.1	1142	1.17	85.4	29.1	4.5
GA2002222	44.6	993	1.12	84.7	30.2	5.0	GA2002232	41.3	1133	1.18	85.6	31.5	4.7
GA2002232	43.8	978	1.13	85.2	30.9	4.7	GA2002230	42.4	1132	1.22	85.2	31.7	4.6
GA2002193	44.1	966	1.15	84.5	32.8	4.7	GA2002193	41.8	1123	1.21	85.5	35.1	4.7
GA2002190	44.9	953	1.15	84.6	31.3	4.7	GA2002205	40.9	1105	1.24	84.6	33.4	4.4
GA2002230	45.2	948	1.15	84.2	29.3	4.9	GA2002199	42.1	1067	1.15	84.9	31.6	4.9
GA2002219	45.4	920	1.10	84.5	29.7	5.2	DELTAPEARL	40.0	1032	1.20	83.7	31.5	4.3
GA2002223	44.3	898	1.13	84.1	29.8	4.6	GA2002209	42.4	1024	1.15	85.2	30.5	4.6
GA2002224	42.8	879	1.15	84.9	30.5	4.8	GA2002190	42.6	990	1.21	84.9	33.5	4.5
DELTAPEARL	43.0	830	1.14	83.9	31.5	4.8	GA2002225	42.0	981	1.18	84.6	31.4	4.7
GA2002196	42.9	801	1.13	84.1	30.4	5.0	GA2002222	42.2	950	1.15	85.5	31.3	4.8
GA2002205	42.1	753	1.15	84.4	31.2	4.6	LSD0.01	1.0	148	0.04	NS	2.1	0.2
GA2002226	40.5	465	1.17	84.5	29.6	5.1	Trial Mean		1093				
LSD0.01	NS	117	0.03	NS	NS	0.3							
Trial Mean		910					GA2002196	Missing at Plains - no stand					
							GA2002226						

Deltapearl is the check variety in these breeding trials.

Table 8. 2003 University of Georgia Earlier Maturity Strains Trial.

Earlier Maturity Cotton Strains, 2003, Irrigated													
Variety	Lint Yield								Lint %	UI %	UHM in	STR g/tex	MIC
	Midville	Plains	Tifton	3 loc X									
DPLX00W12	1288	15 1474	3 1349	1 1370	1			41.2	85.5	1.19	30.5	4.6	
GA2001078	1432	5 1511	2 1057	12 1333	2			42.3	85.0	1.19	30.6	4.6	
FM989BR	1343	9 1310	10 1285	2 1313	3			39.4	83.9	1.16	30.6	4.1	
GA200061	1434	4 1305	12 1180	5 1307	4			43.2	84.4	1.16	30.7	4.5	
DPLX01W99R 07	1269	17 1386	5 1242	3 1299	5			41.7	84.7	1.19	26.9	4.0	
DP 424 BII/R	1316	12 1346	6 1129	7 1264	6			37.9	83.9	1.13	28.5	4.2	
SYNX24101	1301	14 1434	4 1014	15 1249	7			37.9	84.9	1.16	31.3	4.6	
GA200060	1359	8 1176	19 1201	4 1245	8			42.4	84.6	1.17	29.5	4.3	
GA2001021	1339	10 1328	9 1040	13 1235	9			38.3	84.7	1.16	30.4	4.8	
DELTAPEARL	1464	3 1243	16 937	19 1215	10			40.3	84.2	1.19	31.5	4.6	
GA2001008	1319	11 1239	17 1080	11 1213	11T			39.6	84.5	1.16	32.4	4.4	
SYNX24722	1397	6 1296	13 944	18 1213	11T			41.1	84.4	1.15	31.0	4.6	
GA2001029	1255	18 1340	7 1026	14 1207	12			40.3	85.0	1.21	31.5	4.7	
SYNX25105N	1029	24 1684	1 902	22 1205	13			42.0	84.4	1.16	28.1	4.8	
GA2001019	1270	16 1256	15 1081	10 1202	14			39.9	84.6	1.15	31.4	4.5	
SYNX24519	1306	13 1307	11 989	16 1201	15			39.7	84.1	1.13	26.8	4.8	
SYNX25123	1500	1 1149	21 917	21 1189	16			41.7	83.1	1.16	25.7	4.3	
GA2001022	1234	20 1200	18 1119	8 1184	17			38.1	84.5	1.18	32.5	4.6	
96WD22	1363	7 1332	8T 825	24 1173	18			40.9	83.7	1.17	26.6	4.4	
DP 432 RR	1233	21 1158	20 1093	9 1161	19T			40.2	84.6	1.14	30.3	4.5	
DPLX01Z34	1468	2 1045	22 970	17 1161	19T			41.8	84.2	1.17	31.0	4.3	
SYNX99358	1177	23 1332	8T 924	20 1144	20			38.9	84.6	1.20	32.1	4.1	
SYNX24104	1253	19 1270	14 880	23 1134	21			38.8	85.1	1.21	29.9	4.2	
DPLX02X71R	1225	22 984	23 1168	6 1126	22			40.2	84.5	1.15	29.8	4.6	
LSD 0.10	138		144		107		NS	1.1	0.8	0.02	1.7	0.3	

Trials conducted by University of Georgia Statewide Variety Test Program. Day et al., 2004.

Table 9. 2003 University of Georgia Later Maturity Strains Trial.

Later Maturity Cotton Strains, 2003, Irrigated													
Variety	Lint Yield								Lint %	UI %	UHM in	STR g/tex	MIC
	Midville	Plains	Tifton	3 loc X									
GA2002212	.	.	1279	1	1048	10	1163	1	44.8	85.0	1.19	32.7	4.8
FM 989 BR	.	.	1155	5	1157	2	1156	2	40.5	83.7	1.16	31.5	4.2
DPLX03X176BR	.	.	951	15	1346	1	1149	3	41.0	84.9	1.21	30.0	4.6
GA2002217	.	.	1154	6	1138	3	1146	4	42.4	83.8	1.15	32.3	4.7
GA2002167	.	.	1236	3	1050	9	1143	5	44.2	84.0	1.19	32.0	4.6
GA2002170	.	.	1203	4	1076	8	1140	6	44.2	84.6	1.14	33.2	5.0
GA2002211	.	.	1238	2	1005	13	1122	7	42.3	84.6	1.18	32.8	4.6
GA2000009	.	.	1112	7	1110	5	1111	8	40.8	84.8	1.18	31.4	4.6
GA2001167	.	.	1057	11	1091	7	1074	9	40.2	84.4	1.19	33.0	4.5
GA2002052	.	.	1017	13	1099	6	1058	10	39.7	84.1	1.15	30.9	5.0
GA2002233	.	.	1085	9	1006	12	1046	11	43.6	84.0	1.16	30.8	4.4
GA2002215	.	.	1089	8	990	16	1039	12	42.2	84.0	1.15	30.5	4.7
GA2002004	.	.	1073	10	1000	14	1036	13	39.1	84.1	1.16	34.0	4.5
GA2002118	.	.	1028	12	995	15	1012	14	42.4	85.0	1.18	34.6	4.9
DPLX02X38R	.	.	815	20	1135	4	975	15	40.5	83.7	1.13	28.3	4.6
DP 468 BII/R	.	.	915	17	977	17	946	16	36.7	83.9	1.18	29.6	4.5
GA2001191	.	.	983	14	906	20	944	17	38.8	83.4	1.15	33.5	4.7
DELTAPEARL	.	.	907	18	941	18	924	18T	38.8	85.1	1.21	32.6	4.5
DP 494 RR	.	.	933	16	914	19	924	18T	40.9	84.7	1.20	31.5	4.5
DPLX02X25R	.	.	738	22	1022	11	880	19	40.8	84.9	1.16	32.7	4.9
CS32	.	.	836	19	898	21	867	20	38.0	83.3	1.14	29.4	4.6
CS36	.	.	681	24	737	22	709	21	38.2	83.8	1.20	30.4	4.3
CS35	.	.	760	21	623	23	691	22	38.6	83.1	1.16	30.4	3.9
CS31	.	.	705	23	619	24	662	23	38.9	82.4	1.12	28.2	4.0
CS34	.	.	654	25	567	26	611	24	38.4	83.1	1.16	30.9	4.0
CS33	.	.	634	26	572	25	603	25	36.8	84.4	1.19	32.4	4.1
LSD 0.10			124		112		184		1.5	1.0	0.03	2.9	0.3

Trials conducted by University of Georgia Statewide Variety Test Program. Day et al., 2004.

Table 10. 2003 University of Georgia Dryland Earlier Maturity Variety Trial.

2003 Dryland Earlier Maturity Trial															
Entry	Lint Yield										Lint %	UI %	UHM in	STR g/tex	MIC
	Athens	Midville	Plains	Tifton	LOC										
OAX300BR	1329	1	1254	14T	1724	4T	1446	1	1438	1	42.1	82.8	1.04	27.0	4.5
OAX303	1210	2	1423	3	1835	1	1231	9	1425	2	44.6	84.3	1.11	29.1	4.9
GA200042	1081	6	1582	1	1641	7	1288	5	1398	3	42.1	83.9	1.12	30.9	4.6
DP444BR	1169	3	1270	10	1713	5	1248	8	1350	4	43.0	83.7	1.13	28.9	4.1
FM960BR	1123	5T	1260	13	1775	2	1210	10	1342	5	40.7	84.0	1.14	33.3	4.4
GA200035	942	21	1415	4	1703	6	1294	4	1338	6	42.7	84.2	1.17	32.3	4.6
FM958LL	1036	14	1576	2	1600	9	1058	25	1317	7	40.7	84.0	1.17	32.1	4.7
N2429	1123	5T	1265	12	1724	4T	1122	21	1308	8	40.2	84.9	1.14	31.1	5.0
ST 4892BR	993	18	1157	22	1731	3	1316	3	1299	9	41.9	84.0	1.10	30.3	4.8
DP451BR	1055	10	1307	8	1591	11	1130	19	1271	10	37.6	84.6	1.14	29.0	4.6
GA200041	1051	12	1130	24	1619	8	1269	6	1267	11	43.2	84.3	1.16	32.2	4.7
OAX304BR	1145	4	1240	16	1516	14	1138	18	1260	12	39.2	83.2	1.09	30.1	4.7
GA200036	883	24	1381	5	1592	10	1181	14	1259	13	42.7	84.5	1.16	32.7	4.7
FM989BR	1075	7	1266	11	1488	16	1199	11	1257	14	39.7	83.6	1.15	31.5	4.2
OAX301R	1016	16	1203	17	1469	18	1323	2	1253	15	39.5	84.1	1.10	28.2	4.5
SG215BR	1046	13	1158	21	1572	12T	1195	12	1243	16	40.4	83.5	1.08	27.4	4.5
GA200013	918	22	1247	15	1559	13	1189	13	1228	17	39.7	83.7	1.14	32.1	4.6
OAX302BR	1003	17	1170	20	1572	12T	1112	22	1214	18	36.2	83.4	1.13	27.4	4.5
DELTAPEARL	1031	15	1310	7	1399	22	1111	23	1213	19	39.9	84.9	1.20	31.7	4.5
FM966LL	1057	9	1254	14T	1478	17	983	28	1193	20	40.0	84.4	1.14	34.5	4.6
DP449BR	1054	11	1133	23	1419	20	1163	15	1192	21	40.4	83.9	1.14	32.5	4.5
SG521R	855	26	1351	6	1395	23	1144	17	1186	22	40.6	83.6	1.11	28.4	4.4
ST 4793R	837	27	1284	9	1381	25	1156	16	1164	23	42.6	83.5	1.09	29.5	4.9
ST 4646B2R	958	20	1101	26	1413	21	1123	20	1149	24T	39.1	83.1	1.12	30.2	4.6
FM989RR	1070	8	1027	27	1510	15	991	26	1149	24T	40.8	83.8	1.14	33.1	4.2
SG105	863	25	1109	25	1297	26	1262	7	1133	25	39.6	85.1	1.15	30.7	4.6
FM966	973	19	1174	18	1454	19	901	29	1125	26	41.5	84.8	1.16	35.2	4.5
PHY410RR	798	28	1172	19	1382	24	1070	24	1105	27	39.6	84.5	1.14	30.4	4.5
DP436RR	888	23	972	28	1295	27	990	27	1036	28	36.7	84.4	1.15	28.1	4.4
FM981LL	766	29	951	29	1161	28	851	30	932	29	38.2	83.5	1.18	32.0	4.2
LSD 0.10	146		216		144		126		119		1.2	0.7	0.02	1.0	0.2

Trials conducted by University of Georgia Statewide Variety Test Program. Day et al., 2004.

Table 11. 2003 University of Georgia Irrigated Earlier Maturity Variety Trial.

2003 Irrigated Earlier Maturity Trial															
Entry	Lint Yield										Lint	UI	UHM	STR	MIC
	Bainbridge		Midville		Plains		Tifton		LOC		%	%	in	g/tex	
OAX300BR	1542	4	857	15	1498	1	1355	2	1313	1	41.4	83.1	1.05	26.9	4.4
FM960BR	1767	2	826	20	1375	3	1246	8	1304	2	40.3	83.7	1.12	33.4	4.4
OAX303	1799	1	951	7	1168	16	1195	11	1278	3	44.2	84.2	1.14	27.5	4.8
GA200036	1401	14	1088	2	1185	13	1368	1	1261	4	42.7	84.5	1.15	33.2	4.6
GA200035	1416	11T	1164	1	1278	8	1131	16	1247	5	43.0	84.2	1.15	32.3	4.5
SG 215 BR	1466	7	1010	4	1115	23	1345	3	1234	6	40.0	83.5	1.09	27.4	4.4
FM989BR	1453	10	803	25	1292	6	1317	4	1216	7	39.7	83.7	1.16	31.4	4.3
GA200013	1488	5	931	8	1299	5	1139	15	1214	8	40.0	84.2	1.15	31.6	4.5
DP 444 BR	1617	3	920	11	1170	15	1095	18	1200	9	43.0	84.6	1.15	28.7	3.9
ST 4892BR	1186	24	804	24	1449	2	1309	5	1187	10	41.7	83.8	1.12	29.5	4.5
FM958LL	1482	6	1043	3	1198	11	982	24	1177	11	40.9	84.5	1.15	33.6	4.7
DP 451 BR	1409	13	873	14	1226	9	1186	12	1173	12	37.2	84.5	1.16	27.3	4.3
OAX304BR	1339	17	821	22	1283	7	1245	9	1172	13	39.4	83.2	1.11	29.5	4.7
GA200042	1370	16	830	18	1187	12	1256	6	1161	14	40.8	83.7	1.12	30.7	4.7
GA200041	1460	8	930	9T	1167	17	1082	19	1160	15	42.8	83.8	1.16	31.4	4.5
OAX301R	1377	15	837	16	1156	19	1212	10	1146	16	38.2	84.3	1.12	28.1	4.3
ST 4793R	1051	29	930	9T	1335	4	1119	17	1109	17	41.9	83.2	1.08	30.8	4.6
SG 521 R	1338	18	822	21	1019	27	1249	7	1107	18	39.8	83.8	1.12	27.6	4.3
DELTAPEARL	1414	12	982	5	1114	24	902	26	1103	19	39.7	84.3	1.19	30.8	4.6
OAX302BR	1137	27	882	13	1225	10	1157	14	1100	20	35.9	83.9	1.15	25.2	4.3
DP 449 BR	1286	19	964	6	926	30	1162	13	1084	21	39.5	83.9	1.14	31.6	4.3
N2429	1416	11T	777	26	1139	20	987	23	1080	22	40.0	84.6	1.14	31.5	4.9
FM960R	1457	9	836	17	1013	28	850	29	1039	23	41.1	84.7	1.16	34.3	4.4
DP 436 RR	1212	23	811	23	1128	21	967	25	1029	24	36.5	84.4	1.16	27.5	4.3
PHY410RR	1164	26	901	12	1034	26	1013	21	1028	25	40.0	84.2	1.14	30.1	4.5
FM966LL	1266	21	828	19	1125	22	889	28	1027	26	40.2	84.0	1.14	34.5	4.4
ST 4646B2R	1272	20	610	28	1173	14	1017	20	1018	27	39.4	83.4	1.13	28.9	4.5
FM981LL	1083	28	922	10	1163	18	892	27	1015	28	38.3	83.5	1.17	31.8	4.1
SG 105	1248	22	753	27T	1043	25	993	22	1009	29	39.5	84.8	1.16	31.1	4.4
FM989RR	1167	25	753	27T	1007	29	831	30	939	30	40.3	83.5	1.13	32.3	4.1
LSD 0.10	151		201		151		114		149		0.8	0.5	0.02	1.4	0.2

Trials conducted by University of Georgia Statewide Variety Test Program. Day et al., 2004.

Table 12. 2003 University of Georgia Dryland Later Maturity Variety Trial.

2003 Dryland Later Maturity Trial															
Entry	Lint Yield										Lint %	UI %	UHM in	STR g/tex	MIC
	Athens	Midville	Plains	Tifton	LOC										
OAX303	1082	9	1495	2	1866	3	1384	1	1457	1	43.9	84.3	1.12	28.2	5.0
DP555BR	1203	3	1388	4	1913	1	1032	22	1384	2	42.8	83.5	1.14	29.7	4.7
OAX300BR	1308	1	1119	19	1744	8	1270	4	1360	3	41.8	83.0	1.04	26.5	4.6
ST 5242BR	1111	4	1254	9	1883	2	1179	7	1357	4	43.0	84.0	1.08	28.1	4.8
ST 5599BR	1220	2	1285	7	1789	7	1096	15	1348	5	41.4	83.1	1.12	30.5	4.7
FM989BR	1074	10	1114	20	1804	5	1207	5	1300	6	40.6	83.2	1.13	30.5	4.3
ST 4892BR	1044	13	1008	24	1796	6	1321	3	1292	7	42.1	83.5	1.10	30.7	4.9
GA98033	1088	6	1135	18	1550	17	1377	2	1288	8	40.7	84.1	1.13	31.4	4.6
GA200062	939	26	1417	3	1583	13	1157	8	1274	9	43.3	84.7	1.16	31.6	4.5
DP449BR	1090	5	1217	12	1624	10	1147	9	1269	10	40.0	83.7	1.13	32.1	4.5
GA98084	1017	15T	1146	16	1698	9	1107	11T	1242	11	40.0	84.7	1.16	31.2	4.6
OAX304BR	1022	14	1353	6	1468	25	1111	10	1239	12	39.8	83.7	1.08	28.6	4.8
DP493	978	20	971	27	1837	4	1098	14	1221	13	43.1	83.6	1.14	29.8	4.9
OAX301R	1087	7	1245	10	1433	27	1107	11T	1218	14	39.4	84.2	1.10	27.7	4.6
GA200066	1009	16	1101	21	1577	14	1182	6	1217	15	41.4	84.0	1.14	31.8	4.7
FM991BR	1086	8	1159	15	1568	16	1043	20	1214	16	39.1	83.9	1.14	35.3	4.6
DP491	799	35	1600	1	1545	18	850	33	1199	17	41.2	84.5	1.20	31.6	4.5
DELTAPEARL	998	17	1144	17	1575	15	1072	16	1197	18	40.3	84.1	1.19	30.9	4.7
GA98066	880	30	1266	8	1537	20	1053	18	1184	19T	39.8	84.8	1.17	31.8	4.4
GA200003	873	31	1370	5	1509	22	985	26	1184	19T	41.1	83.9	1.15	31.7	4.4
GA200024	861	33	1219	11	1543	19	1101	12	1181	20	42.4	84.2	1.14	31.6	4.6
ST 4646B2R	987	19	991	26	1616	11	1049	19	1161	21	39.9	82.9	1.11	30.1	4.8
GA200007	862	32	1034	23	1614	12	1035	21	1136	22	39.7	83.7	1.14	32.3	4.6
ST 5303R	1047	12	927	30	1425	28	1100	13	1125	23	39.6	83.9	1.10	32.4	4.5
DP458BR	971	21	1086	22	1408	30	1006	25T	1118	24	39.6	83.4	1.14	30.9	4.6
GA99090	995	18	944	29	1487	24	1031	23	1114	25	39.9	84.3	1.15	31.9	4.7
OAX302BR	962	23	891	32T	1504	23	1065	17	1106	26	36.8	83.8	1.13	26.3	4.7
DP448B	1017	15T	965	28	1412	29	1006	25T	1100	27	38.9	84.0	1.15	29.2	4.4
FM991R	927	28	1209	14	1294	31	894	30	1081	28	38.7	83.7	1.17	31.7	4.4
PHY510RR	959	24	1215	13	1247	32	865	32	1072	29	39.1	84.0	1.17	32.2	4.4
FM989RR	912	29	998	25	1440	26	923	29	1068	30	40.6	84.0	1.15	31.7	4.1
GA99029	936	27	865	33	1526	21	938	27	1066	31	40.2	83.9	1.15	30.9	4.7
DP5690RR	1057	11	891	32T	1240	33	937	28	1031	32	39.0	83.5	1.14	33.0	4.6
DP5415RR	963	22	803	35	1231	34	1023	24	1005	33	39.1	84.0	1.14	30.3	4.7
PHYX8936RR	958	25	906	31	1095	36	876	31	959	34	39.5	83.7	1.12	29.5	4.7
FM981LL	810	34	860	34	1218	35	848	34	934	35	38.7	83.5	1.17	32.0	4.4
LSD 0.10	136		228		127		141		149		0.9	0.6	0.02	1.4	0.2

Trials conducted by University of Georgia Statewide Variety Test Program. Day et al., 2004.

Table 13. 2003 University of Georgia Irrigated Later Maturity Variety Trial.

2003 Irrigated Later Maturity Trial															
Entry	Lint Yield										Lint %	UI %	UHM in	STR g/tex	MIC
	Bainbridge	2	Midville	1	Plains	3	Tifton	2	LOC	1					
OAX 300 BR	1543	2	1512	1	1320	3	1412	2	1447	1	42.5	83.7	1.06	27.1	4.6
ST 5599BR	1323	13	1468	2	1234	11	1414	1	1360	2	39.7	83.7	1.14	31.3	4.5
ST 5242BR	1544	1	1338	8	1411	2	1073	16	1341	3	42.6	83.5	1.09	27.5	4.5
OAX 301 R	1290	16	1378	6	1242	9	1294	3	1301	4	38.5	84.1	1.10	28.2	4.4
OAX 303	1365	9T	1446	4	1258	7	1124	10	1298	5	44.8	84.2	1.13	29.2	5.0
GA98084	1336	10	1399	5	1269	6	1177	8	1295	6	39.6	84.8	1.17	31.3	4.3
ST 4892BR	1195	22	1302	9	1433	1	1121	11	1263	7	42.0	83.9	1.11	31.1	4.6
GA99090	1515	3	1231	12T	1155	16	1145	9	1262	8	40.4	84.3	1.16	31.4	4.6
DP 555 BR	1488	5	1201	17	1094	19	1190	7	1243	9	42.2	83.4	1.16	30.5	4.5
OAX 304 BR	1333	11	1248	10	1173	13	1196	6	1238	10	39.7	83.5	1.12	29.8	4.6
GA98033	1437	6	1049	33	1281	5	1120	12	1222	11	39.8	83.4	1.14	31.8	4.4
FM 991 BR	1403	8	1462	3	930	28	1086	15	1220	12	39.9	84.1	1.15	35.4	4.6
DP 493	1505	4	1362	7	1067	21	931	31	1216	13	43.2	83.1	1.14	32.2	4.7
GA200066	1418	7	1053	32	1288	4	1071	18T	1207	14	41.5	84.0	1.15	33.3	4.7
GA98066	1365	9T	1211	16	1240	10	956	28	1193	15	39.4	84.3	1.18	32.0	4.3
GA200062	1095	29	1224	14	1129	17T	1219	4	1167	16	43.5	84.0	1.14	32.3	4.5
FM 989 BR	1261	18	1168	23	1000	25	1207	5	1159	17	40.3	83.5	1.15	32.5	4.2
DP 449 BR	1295	15	1143	25	1101	18	1072	17	1153	18	40.2	83.7	1.13	33.1	4.4
GA200007	1081	30	1187	20	1210	12	1099	13	1144	19	39.4	84.8	1.18	33.1	4.4
DELTAPEARL	1332	12	1064	31	1167	14	998	25	1141	20	39.8	84.5	1.19	32.2	4.5
FM 989 RR	1224	20	1162	24	1129	17T	1030	22	1136	21	41.0	83.9	1.14	32.9	4.2
GA200003	1251	19	956	35	1248	8	1064	19	1130	22	40.0	84.3	1.16	32.3	4.4
GA99029	1187	23	1173	22	1071	20T	1071	18T	1126	23	40.5	84.1	1.16	31.9	4.6
GA200024	1300	14	1195	18	1041	22	961	27	1124	24	41.5	84.4	1.14	32.4	4.6
ST 4646B2R	1160	25	1190	19	1156	15	985	26	1123	25	39.5	83.2	1.13	30.2	4.5
DP 491	1124	27	1220	15	1071	20T	1000	24	1104	26	41.7	84.7	1.21	31.9	4.5
OAX 302 BR	1275	17	1065	30	946	27	1092	14	1095	27	36.2	83.7	1.15	27.2	4.2
ST 5303R	1100	28	1184	21	993	26	1062	20	1085	28	39.5	84.1	1.11	33.6	4.3
DP 458 BR	1062	31	1231	12T	1010	24	1016	23	1080	29	39.5	84.0	1.15	31.7	4.4
DP 448 B	1216	21	1226	13	876	30	952	29T	1067	30	39.3	83.8	1.14	29.7	4.4
DP 5690 RR	1146	26	1124	27	894	29	1048	21	1053	31	38.1	83.6	1.15	34.1	4.3
FM 991 R	1173	24	1095	28	869	31	874	32	1003	32	38.9	83.7	1.16	32.5	4.3
DP 5415 RR	1057	32	1237	11	700	34	938	30	983	33	39.3	84.0	1.13	29.5	4.7
PHYX8936RR	1019	33	1139	26	755	33	952	29T	966	34	40.1	84.3	1.14	29.8	4.7
FM 981 LL	899	34	1046	34	1017	23	850	33	953	35	38.3	83.8	1.17	33.2	4.1
PHY510RR	892	35	1091	29	764	32	787	34	883	36	39.2	83.7	1.14	33.1	4.5
LSD 0.10	180		221		147		133		133		1.0	0.7	0.02	1.4	0.2

Trials conducted by University of Georgia Statewide Variety Test Program. Day et al., 2004.

Table 14. 2002-2003 University of Georgia Irrigated Later Maturity Variety Trial.

Dryland Later Maturity Cultivar Trial 2002-2003							Irrigated Later Maturity Cultivar Trial 2002-2003								
Entry	Lint Yield	Lint	UI	UHM	Str	MIC	Entry	Lint Yield	Lint	UI	UHM	Str	MIC		
	lb/acre	%	%	in	g/tex			lb/acre	%	%	in	g/tex			
DP555BR	1209	1	43.0	83.3	1.12	30.8	4.8	DP 555 BR	1704	1	43.2	83.7	1.16	31.0	4.6
DELTAPEARL	1086	2	40.6	83.8	1.17	31.6	4.9	ST 5599BR	1629	2	41.1	83.6	1.14	31.7	4.8
GA98033	1076	3	40.0	83.5	1.11	32.1	4.7	ST 4892BR	1585	3	42.3	84.2	1.10	30.9	5.0
ST 5599BR	1064	4	41.8	82.6	1.09	31.1	4.9	GA98084	1579	4	39.7	84.4	1.15	31.3	4.7
DP491	1061	5	42.1	84.1	1.19	33.0	4.7	DP 491	1561	5	42.4	84.6	1.21	31.9	4.6
ST 4892BR	1059	6	41.8	83.0	1.07	31.2	5.1	DELTAPEARL	1532	6	40.8	84.9	1.20	31.3	4.7
GA98084	1032	7	39.1	84.2	1.14	32.2	4.7	GA98033	1524	7	40.0	83.6	1.12	31.6	4.6
FM989BR	1022	8	39.9	82.7	1.10	31.1	4.4	GA98066	1471	8	39.6	84.4	1.17	32.1	4.6
GA98066	999	9	39.6	84.0	1.15	33.0	4.6	FM 989 BR	1415	9	39.9	83.6	1.13	31.7	4.4
DP458BR	940	10	39.3	83.3	1.12	31.3	4.8	DP 458 BR	1402	10	39.9	83.8	1.12	30.5	4.8
ST 5303R	930	11	40.0	83.7	1.08	33.4	4.9	FM 989 RR	1375	11	41.4	83.7	1.12	32.6	4.3
DP448B	916	12	38.8	83.4	1.12	29.2	4.6	DP 448 B	1319	12	39.4	83.7	1.13	29.3	4.7
FM991R	906	13	38.8	83.5	1.14	32.9	4.6	DP 5690 RR	1309	13	38.4	83.5	1.12	33.5	4.7
DP5690RR	891	14	38.7	83.1	1.11	33.3	4.8	FM 991 R	1296	14	38.8	83.7	1.14	32.0	4.5
FM989RR	869	15	40.7	83.0	1.11	32.6	4.4	DP 5415 RR	1291	15	40.1	84.1	1.12	29.7	4.9
DP5415RR	851	16	38.6	83.5	1.12	31.3	4.8	LSD 0.10	68		0.4	0.2	0.01	0.5	0.1
LSD 0.10	57		0.3	0.2	0.01	0.5	0.1								

University of Georgia Official Variety Trials conducted by Statewide Variety Test Program

Trials conducted by University of Georgia Statewide Variety Test Program. Day et al., 2004.