Cotton Cultivar Tests for 2007 in Central and South Texas

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Cotton cultivar tests (CVT) are conducted each year by the Texas Agricultural Experiment Station to determine the relative performance of cultivars (varieties) available to producers in Texas. These tests are conducted statewide to evaluate commercial cultivars in every cotton growing region. Since Texas is a large state with diverse climates and growing seasons, the CVT results are reported separately for Central and South Texas, the Rolling and High Plains, and Far West Texas. This report concentrates on the cotton production regions of Central and South Texas.

Most locations had adequate and timely rainfall during 2007 as indicated by excellent yields except at Prosper in the northern Blacklands region. Two sites were abandoned because of herbicide drift from adjoining fields, Jackson County in the Upper Coast region and Chillicothe in the Rolling Plains.

Test locations, soil types, planting dates, and harvest dates are given in Table 1, with yield and fiber characteristics presented in Tables 2 - 8.

Yield and other characteristics were analyzed as randomized complete blocks. Least significant differences (LSD) are used to determine if two cultivars are different at k=100, which approximates the 5% probability level. Values reported for any two cultivars that differ by more than the LSD value are expected to be different in 95 of every 100 comparisons. The test average (mean) and the coefficient of variation (CV) also are reported for each characteristic measured at each location. The coefficient of variation is a measure of the uniformity of the test site (e.g. soil uniformity, drainage, disease, etc.). Lower coefficients of variation are desirable.

Agronomic Determinations

Lint yield: Lint yield per acre is determined as follows: (lbs. seedcotton/plot) x (appropriate gin turnout) x (area conversion factor).

Gin turnout: Amount of lint in a random sample of machine harvested seedcotton expressed as a percent of seed cotton in the sample.

Fiber Quality Determinations

Fiber quality parameters were determined by high volume instrument (HVI) testing at the Texas Tech University International Textile Research Center at Lubbock, TX.

Fiber Fineness: Fiber fineness, micronaire, is a measure of the maturity and/or the fineness of cotton fibers and is reported in micronaire units. Micronaire is a relative measure of the development, or maturity, of the secondary wall of the cotton fiber throughout its entire length. Processing rates, fabric dyeing, and yarn and fabric appearance are adversely affected by immature fibers. Fine fibers, although mature,

weigh less per unit length and may require reduced processing speeds compared to thicker fibers, yet these finer fibers may produce stronger yarns. Thick or coarse fibers result in fewer fibers in a cross section of yarn, and therefore, may produce weaker yarns.

Fiber fineness is determined by forcing air through a specified weight of lint. The rate of air flow is related to fiber thickness. Finer fibers result in more fibers per specified weight and, therefore, have greater resistance to air flow. Micronaire values of 3.4 or below indicate fine and perhaps immature fibers, and values of 5.0 or higher indicate coarse fibers. Values of 3.5 to 4.9 are desirable and indicate mature, well-developed fibers.

Fiber Length: Fiber length is reported in hundredths of an inch as measured by High Volumn instrument and is the average of the longest 50 percent of the fibers in the sample, usually referred to as the upper half mean (UHM). Long fibers are desirable because they produce greater yarn strength, aid in spinning finer yarns, and can be processed at higher speeds.

HVI fiber lengths (in.)
and descriptive designation

Below 0.97	Short
0.97 - 1.10	Medium
1.11 -1.28	Long
Above 1.28	Extra long

Fiber Uniformity: Fiber uniformity index (UI) provides a relative measure of the length uniformity of cotton fibers. Uniformity is calculated as the ratio of the average length of all fibers to the average length of the longest 50 percent of the fibers in the sample. High uniformity values indicate uniform fiber length distribution and are associated with a high-quality product and with low manufacturing waste.

Uniformity ratios
and descriptive designation

Below 77	Very low
77-79	Low
80-82	Average
83-85	High
Above 85	Very high

Fiber Strength: Yarn strength and ease of processing are positively correlated with strong fibers. Strength values are reported in grams of force required to break a bundle of cotton fibers with the holding jaws separated by 1/8 inch. The size of the bundle of fibers is described in tex units. Fiber strength is described from very low to very high within UHM classifications.

HVI 1/8-inch gauge strength (grams/tex)	Fiber length group and descriptive designation
Short	
(0.96 inch or less)	
18-19	Very low
20-21	Low
22-23	Average
24-25	High
26-27	Very high
Medium	
(0.97-1.10 inch)	
17-19	Very low
20-22	Low
23-25	Average
26-28	High
29-31	Very high
Long	
(1.11-1.28 inch)	
18-20	Very low
21-23	Low
24-26	Average
27-29	High
30-32	Very high

Fiber Elongation: Elongation is the degree of extension of the fibers before break occurs when measuring strength. Fiber bundle elongation is correlated with yarn elongation but has an insignificant effect on yarn strength. Its value and importance in yarn manufacture has not been fully established.

Fiber elongation and descriptive designation	
4.9 and below	Very low
5.0-5.8	Low
5.9-6.7	Average
6.8-7.6	High
7.7 and above	Very high

Table 1. 2007 Cotton Cultiar Test: locations, soil type, planting date, harvest date and irrigation data.

Location	Soil Type	Planting Date	Harvest Date	Irrigated
Weslaco	Hildago s.c.l.[1]	3/14/2007	8/16/2007	yes
Corpus Christi	Victoria clay	3/21/2007	9/7/2007	no
San Patricio Co.	Victoria clay	3/28/2007	9/9/2007	yes
San Patricio Co.	Victoria clay	3/29/2007	9/25/2007	no
Jackson County[4]	Lake Charles clay	4/18/2007	No Harvest	no
College Station	Westwood s.l.[2]	5/8/2007	10/22/2007	yes
Thrall	Burleson clay	4/19/2007	10/9/2007	no
Dallas (Prosper)	Houston c.l.[3]	5/16/2007	11/30/2007	no
Chillicothe[4]	Abilene c.l.[3]	5/22/2007	No Harvest	yes

1. s.c.l.=sandy clay loam
2. s.l.=silt loam
3. c.l.=clay loam
4. Jackson County and Chillicothe locations lost to herbicide damage.

Table 2. Agronomic performance and fiber quality of cotton cultivars evaluated at Weslaco in 2007 with irrigation.

Cultivar	Lint yield (lb/ac)	Lint % (%)	Micro-naire (units)	Length (in)	Strength (g/tex)	UI (ratio)	Elong-ation (%)
DP 555 BG/RR	1360	42.7	5.3	1.07	27.1	81	3.8
DP 455 BG/RR	1351	43.7	5.2	1.13	28.7	82	4.0
PHY 375 WRF	1300	41.6	5.1	1.12	27.9	83	4.5
ST 4427B2RF	1283	39.6	5.0	1.16	28.4	84	3.8

DP 161 B2RF	1248	41.9	5.4	1.20	31.2	83	4.1
TAM 02 WK-11	1216	40.6	4.9	1.20	31.6	84	5.2
DP 515 BG/RR	1206	41.0	5.3	1.13	29.5	83	4.1
ST 4357B2RF	1204	39.0	4.7	1.18	29.1	84	4.8
DG 2570 B2RF	1192	41.1	4.9	1.15	28.9	84	5.8
DP 434 RR	1182	40.4	5.1	1.19	28.1	83	5.2
DG 2490 B2RF	1176	38.9	4.6	1.07	27.4	83	6.0
ST 4892 BR	1169	39.4	5.5	1.12	28.3	84	4.9
ST 5599 BR	1157	40.6	5.2	1.13	29.0	83	4.0
PHY 370 WR	1155	41.2	5.4	1.10	29.7	83	5.1
CG 3020B2RF	1144	37.8	5.0	1.12	28.3	84	5.2
FM 835LLB2	1121	38.7	4.8	1.18	32.2	84	4.3
PHY 440 W	1118	39.3	5.1	1.14	28.8	85	6.3
AM 1532 B2RF	1118	39.3	4.6	1.19	28.1	85	4.9
PHY 310 R	1111	41.5	5.4	1.10	28.2	83	5.3
FM 840B2F	1110	35.6	4.6	1.25	31.1	86	4.7
DP 445 BG/RR	1097	40.3	5.3	1.15	30.3	85	6.2
AM 1622 B2RF	1086	35.7	4.6	1.19	29.6	85	5.1
ST 4554B2RF	1076	40.4	5.4	1.15	30.1	84	6.7
MCS XD01 B2RF	1063	40.7	5.3	1.17	27.1	84	5.8
DG 2520 B2RF	1061	38.9	4.9	1.17	27.9	84	5.1
DG 2100 B2RF	1055	37.6	5.0	1.12	29.7	85	5.6
CG 3520B2RF	1052	37.8	5.1	1.18	27.7	83	5.8
PHY 485 WRF	1048	39.2	4.7	1.15	29.9	86	5.9
DG 2383 RF	1038	37.8	4.6	1.12	28.8	83	4.2
MCS XE01 B2RF	1031	42.8	5.0	1.12	29.4	84	6.0
PHY 480 WR	1030	36.5	5.0	1.15	29.9	84	6.1
CG 4020B2RF	1028	38.2	4.9	1.20	27.6	83	5.2
ST 5327B2RF	1013	40.2	4.8	1.11	29.0	83	4.9
FM 820F	1003	37.1	4.4	1.21	32.3	84	4.0
DP 141 B2RF	995	40.1	4.9	1.23	30.6	83	4.4
FM 1835LLB2	995	37.0	5.3	1.18	31.2	85	3.8
FM 832 LL	979	37.6	4.7	1.21	32.3	84	3.8
DG 2242 B2RF	978	37.9	5.1	1.17	29.1	84	5.3
DP 432 RR	970	34.9	4.8	1.20	32.5	83	4.6
DP 164 B2RF	969	38.3	4.9	1.17	29.1	83	4.6
AM 1550 B2RF	965	41.3	5.1	1.12	26.0	82	4.8
FM 960 B2R	958	37.5	5.1	1.19	32.0	83	3.5
MCS XAD04 RF	949	44.1	5.1	1.16	29.0	84	6.2
PHY 315 RF	945	40.5	5.0	1.11	27.5	83	4.6
FM 1880B2F	944	38.6	5.2	1.13	30.2	83	4.8

DP 143 B2RF	943	37.1	4.9	1.24	29.9	83	4.0
DP 147 RF	941	41.0	5.1	1.21	29.9	84	3.8
DP 491	936	41.6	5.3	1.20	30.1	84	3.9
TAM 02 Z-72	915	36.0	4.9	1.20	30.5	83	4.4
TAM 02 Z-63	905	35.7	5.1	1.19	29.4	83	4.1
DP 174 RF	902	43.4	4.9	1.19	28.3	84	5.1
AM 821 R	894	38.1	5.2	1.11	25.6	83	5.8
Tamcot 22	891	38.2	4.9	1.15	27.3	82	4.7
AM 1664 B2RF	883	34.2	5.1	1.18	29.3	84	4.6
DP 121 RF	872	40.5	5.1	1.12	28.5	84	5.7
TAM 02 X-132	869	34.5	4.8	1.26	31.8	84	3.2
FM 9063B2F	861	36.8	4.8	1.20	31.6	83	4.1
CG 3220 B2RF	849	41.0	5.4	1.13	28.1	85	5.1
DP 167 RF	847	38.3	4.5	1.22	29.8	83	4.0
PHY 745 WRF	774	40.2	4.8	1.18	31.6	84	6.0
FM 9060F	739	40.2	4.7	1.22	30.7	84	3.7
PSC PHY 72 Acala	660	37.5	4.9	1.22	34.1	84	4.8
PM 2167 RR	633	37.5	5.3	1.01	26.2	83	5.2
DG OA265 BR	617	39.0	4.1	1.19	32.2	84	4.7
LSD (k=100)[1]	168	3.8	0.5	0.05	2.1	2.2	0.6
%CV	11.6	4.4	4.5	2.10	3.6	1.0	7.0
Mean	1020	39.1	5.0	1.16	29.4	84	4.8

1. Values within columns are different at k-100 if they differ by more than the LSD at the base of the column.

Table 3. Agronomic performance and fiber quality of cotton cultivars evaluated at Corpus Christi in 2007 without irrigation.

Cultivar	Lint yield (lb/ac)	Lint % (%)	Micro-naire (units)	Length (in)	Strength (g/tex)	UI (ratio)	Elong-ation (%)
ST 4678 B12RF	1399	37.5	4.5	1.17	28.5	84	5.5
DP 434 RR	1357	36.6	4.0	1.21	29.9	83	5.2
DP 455 BG/RR	1319	41.4	4.2	1.13	30.1	83	4.3
DP 491	1301	41.8	4.2	1.19	29.1	82	4.9
ST 4892 BR	1261	38.1	4.4	1.14	28.8	84	5.1
FM 835LLB2	1254	35.7	4.1	1.24	31.0	86	4.8
PHY 370 WR	1251	39.5	4.3	1.15	29.6	84	5.3
AM 1550 B2RF	1238	39.3	4.1	1.14	26.0	84	5.6
ST 5599 BR	1234	36.7	4.1	1.14	27.4	82	4.4
PHY 375 WRF	1230	40.0	4.1	1.16	28.3	83	4.9
DG 2570 B2RF	1226	38.5	4.3	1.17	28.8	85	6.1
PHY 310 R	1218	39.6	4.4	1.12	28.9	84	5.2
DP 174 RF	1216	40.9	4.1	1.20	27.5	82	5.4

PHY 315 RF	1210	40.6	4.0	1.14	29.7	83	5.1
DP 515 BG/RR	1185	39.3	4.0	1.17	30.5	83	4.8
DP 445 BG/RR	1175	38.6	4.2	1.19	30.6	84	6.3
FM 1880B2F	1168	43.1	3.8	1.24	31.2	83	4.9
FM 832 LL	1164	35.5	4.3	1.24	30.8	85	4.4
AM 1532 B2RF	1162	37.4	3.9	1.19	27.3	83	5.7
ST 4357B2RF	1162	36.4	3.7	1.23	28.0	84	5.6
MCS XD01 B2RF	1161	37.3	4.1	1.21	30.2	84	6.0
ST 4498 B2RF	1152	38.3	4.1	1.16	31.1	84	6.1
PHY 480 WR	1152	36.0	4.2	1.19	30.2	84	6.3
ST 4554B2RF	1151	39.8	4.4	1.20	29.4	84	6.5
FM 820F	1150	36.1	4.3	1.27	32.5	86	4.2
CG 3220 B2RF	1148	37.1	4.2	1.16	27.7	85	5.3
MCS XAD04 RF	1143	40.7	4.2	1.19	29.2	84	6.2
PHY 440 W	1139	36.8	4.2	1.19	29.4	85	6.6
PHY 485 WRF	1128	36.3	4.3	1.16	29.5	84	6.5
TAM 02 WK-11	1119	36.3	4.1	1.20	29.2	85	5.8
DP 121 RF	1105	38.4	4.1	1.16	28.8	85	6.4
DG 2383 RF	1105	35.7	3.8	1.18	30.6	85	4.4
ST 5327B2RF	1092	38.8	4.4	1.19	29.8	86	5.8
DP 161 B2RF	1085	37.5	3.7	1.22	32.9	84	4.6
Tamcot 22	1080	38.2	4.1	1.15	26.3	82	5.5
DP 141 B2RF	1079	36.4	3.7	1.23	29.3	82	5.0
FM 840B2F	1079	35.7	4.4	1.27	29.5	85	5.0
MCS XE01 B2RF	1075	40.4	3.9	1.18	30.7	83	5.9
CG 3520B2RF	1065	37.4	4.0	1.20	28.1	84	6.2
DG 2520 B2RF	1058	36.9	3.7	1.22	28.7	84	5.8
ST 5458 B2RF	1052	39.3	4.7	1.16	27.6	82	4.8
CT 210	1051	37.5	4.1	1.15	30.7	83	4.7
CG 4020B2RF	1046	36.9	3.8	1.21	28.1	84	5.6
DG 2100 B2RF	1039	34.5	3.6	1.18	27.0	84	6.1
DP 167 RF	1038	36.5	3.7	1.23	31.6	83	4.3
AM 1664 B2RF	1037	35.5	4.1	1.22	27.9	83	6.2
ST 4427B2RF	1035	37.3	4.1	1.16	28.1	84	4.3
FM 1835LLB2	1021	35.5	4.1	1.19	32.5	85	4.2
CG 3020B2RF	1005	32.8	3.9	1.14	27.3	83	6.0
TAM 02 Z-63	1005	35.5	4.3	1.18	28.4	83	4.6
DP 147 RF	1005	36.0	3.8	1.24	28.3	83	4.2
ST 4596 B2RF	1004	37.9	4.4	1.20	28.3	85	7.1
DG 2242 B2RF	1001	36.8	4.0	1.17	28.2	84	5.8
FM 1735LLB2	978	36.9	4.4	1.13	28.8	83	3.8
FM 955LLB2	961	34.7	4.2	1.22	29.9	84	4.2

DG 2490 B2RF	961	34.8	3.7	1.13	27.4	83	6.8
FM 960 B2R	957	38.1	3.7	1.24	30.1	84	4.0
TAM 02 Z-72	953	35.3	4.1	1.21	29.8	83	4.5
AM 821 R	949	37.1	4.1	1.16	27.6	84	5.8
DP 555 BG/RR	942	39.5	3.8	1.14	29.9	81	4.2
AM 1622 B2RF	930	33.9	4.0	1.23	28.6	85	6.0
TAM 02 X-132	897	37.3	4.2	1.25	29.9	83	4.1
DP 143 B2RF	894	37.8	3.8	1.25	29.4	82	4.9
ST 6351 B2RF	868	33.8	4.1	1.18	27.4	82	5.7
FM 9060F	846	36.2	3.7	1.22	29.9	83	4.3
FM 9063B2F	814	34.7	4.1	1.22	29.8	83	4.4
PSC PHY 72 Acala	807	38.7	4.2	1.25	33.3	84	4.9
DP 164 B2RF	776	35.2	3.5	1.22	31.5	83	4.6
PM 2167 RR	700	36.7	4.5	1.03	25.4	82	5.6
DG OA265 BR	314	38.0	3.8	1.25	32.8	84	4.4
LSD (k=100)[1]	167	5.7	0.4	0.04	3.0	1.8	0.7
%CV	11.7	5.6	4.3	1.70	4.6	1.0	6.8
Mean	1071	37.4	4.1	1.19	29.3	84	5.2

1. Values within columns are different at k-100 if they differ by more than the LSD at the base of the column.

Table 4. Agronomic performance and fiber quality of cotton cultivars evaluated in San Patricio County in 2007 with irrigation.

Cultivar	Lint yield (lb/ac)	Lint %	Micro-naire (units)	Length (in)	Strength (g/tex)	UI (ratio)	Elong-ation (%)
ST 4892 BR	1588	39.7	4.9	1.17	28.4	84	5.4
DG 2570 B2RF	1482	38.3	4.6	1.21	28.8	84	5.9
CG 3520B2RF	1481	39.3	4.3	1.21	27.5	85	6.2
PHY 375 WRF	1464	39.2	4.3	1.17	28.7	84	5.1
DP 555 BG/RR	1461	41.2	4.3	1.16	29.6	83	3.8
ST 5599 BR	1443	37.9	4.3	1.19	30.2	83	4.3
DP 434 RR	1434	38.2	4.2	1.21	29.5	84	5.7
DP 515 BG/RR	1428	39.1	4.4	1.16	29.6	83	4.1
ST 5458 B2RF	1421	38.7	4.7	1.19	28.3	85	4.8
DP 174 RF	1415	39.4	4.5	1.18	28.2	83	4.9
DP 445 BG/RR	1403	39.4	4.6	1.17	28.7	86	6.1
ST 4678 B12RF	1399	36.4	4.6	1.21	29.0	86	5.4
MCS XD01 B2RF	1386	37.0	4.3	1.22	29.2	85	6.0
ST 4498 B2RF	1382	38.1	4.4	1.19	29.9	85	6.6
DG 2100 B2RF	1372	37.9	4.0	1.18	29.2	85	6.1
DG 2490 B2RF	1333	36.9	4.0	1.13	27.2	85	6.9

ST 4427B2RF	1327	37.6	4.5	1.17	28.4	84	4.2
DP 121 RF	1323	38.7	4.2	1.18	29.4	84	6.0
FM 960 B2R	1319	36.3	4.4	1.22	31.6	84	3.3
DG 2242 B2RF	1309	36.5	4.3	1.22	26.9	85	6.1
PHY 440 W	1301	37.5	4.2	1.17	28.8	85	6.5
DG 2520 B2RF	1298	37.2	4.1	1.25	29.4	83	5.1
CG 3220 B2RF	1290	38.4	4.4	1.16	26.9	85	5.3
AM 1550 B2RF	1286	39.9	4.4	1.15	25.7	84	5.2
ST 4596 B2RF	1286	37.6	4.5	1.22	29.0	85	6.8
MCS XE01 B2RF	1283	39.3	4.5	1.16	28.4	85	6.1
DG 2383 RF	1272	37.2	4.3	1.19	29.6	85	4.2
PHY 315 RF	1267	40.0	4.2	1.18	28.9	84	4.9
CG 3020B2RF	1254	35.6	4.1	1.18	27.3	85	5.5
AM 1532 B2RF	1254	36.9	4.3	1.26	28.2	86	5.2
DP 455 BG/RR	1250	37.6	4.1	1.21	28.0	83	4.7
ST 4357B2RF	1249	37.9	4.4	1.23	28.1	84	5.2
FM 989B2R	1243	34.3	4.3	1.19	31.2	86	4.1
PHY 310 R	1241	37.9	4.5	1.18	28.8	85	5.6
FM 840B2F	1240	36.4	4.4	1.26	30.2	86	5.1
PHY 480 WR	1239	36.1	4.4	1.22	31.2	86	6.0
PHY 370 WR	1238	39.2	4.5	1.16	29.6	84	5.3
ST 4554B2RF	1238	38.4	4.7	1.18	29.1	85	6.5
FM 955LLB2	1237	35.9	4.6	1.22	29.2	85	3.7
FM 820F	1232	36.4	4.0	1.27	32.8	86	4.1
CG 4020B2RF	1221	36.9	4.4	1.20	28.4	84	4.8
FM 832 LL	1218	36.5	4.1	1.26	33.2	86	4.2
MCS XAD04 RF	1207	39.4	4.4	1.18	28.6	84	6.6
PHY 485 WRF	1204	35.4	4.2	1.19	30.5	86	6.1
ST 5327B2RF	1204	38.4	4.4	1.17	28.6	85	5.8
DP 143 B2RF	1201	37.8	4.0	1.23	29.5	83	4.3
AM 1622 B2RF	1190	34.4	4.0	1.23	29.2	84	5.1
AM 1664 B2RF	1173	36.9	4.2	1.21	28.6	84	5.4
DP 147 RF	1170	37.4	4.0	1.24	29.1	84	4.7
DP 164 B2RF	1152	36.9	4.1	1.26	30.6	85	4.4
CT 210	1149	36.8	4.7	1.18	29.3	84	5.1
DP 161 B2RF	1142	39.1	4.4	1.23	30.8	86	4.2
TAM 02 Z-72	1116	35.9	4.4	1.22	28.2	84	4.5
TAM 02 WK-11	1112	37.1	4.4	1.25	30.7	85	5.8
ST 6351 B2RF	1105	35.5	4.4	1.19	28.0	84	5.5
FM 9063B2F	1092	35.8	4.1	1.25	30.5	84	4.2
FM 1880B2F	1077	34.8	4.0	1.27	32.1	85	4.0
DP 167 RF	1057	36.9	4.2	1.23	31.3	85	4.4

FM 9060F	1003	38.1	3.9	1.24	30.6	85	3.9
FM 835LLB2	995	36.1	4.3	1.22	31.1	86	4.6
DP 141 B2RF	978	37.7	4.2	1.23	30.1	83	4.4
DP 491	969	39.1	4.2	1.25	32.8	83	4.1
AM 821 R	942	35.9	4.5	1.15	27.3	84	5.7
TAM 02 Z-63	897	35.3	4.4	1.20	30.1	85	4.2
Tamcot 22	897	38.2	4.4	1.19	28.0	83	4.9
TAM 02 X-132	876	35.2	4.2	1.29	31.8	86	3.3
PM 2167 RR	869	36.2	4.5	1.06	27.1	83	5.0
PHY 745 WRF	860	39.2	4.3	1.18	32.6	84	6.3
PSC PHY 72 Acala	820	37.5	4.1	1.27	33.7	85	4.6
DG OA265 BR	325	37.3	3.4	1.18	33.0	84	4.4
LSD (k=100)[1]	179	2.4	0.3	0.04	2.6	2.9	0.7
%CV	11.1	3.0	3.8	1.70	4.2	1.2	7.1
Mean	1208	37.5	4.3	1.20	29.5	84	5.1

1. Values within columns are different at k-100 if they differ by more than the LSD at the base of the column.

Table 5. Agronomic performance and fiber quality of cotton cultivars evaluated in San Patricio County in 2007 without irrigation.

Cultivar	Lint Yield (lb/ac)	Lint % (%)	Micro-naire (units)	Length (in)	Strength (g/tex)	UI (ratio)	Elong-ation (%)
DP 455 BG/RR	1279	43.1	4.0	1.16	29.1	83	4.3
DG 2570 B2RF	1213	40.0	4.3	1.14	27.8	83	6.5
AM 1550 B2RF	1170	40.9	4.2	1.14	25.9	82	5.7
ST 5458 B2RF	1124	38.4	4.4	1.15	29.0	83	5.3
CG 4020B2RF	1118	36.8	3.9	1.19	28.1	84	5.9
DG 2490 B2RF	1102	35.1	3.7	1.08	26.7	83	7.7
AM 1532 B2RF	1072	36.7	4.3	1.16	28.4	83	6.7
DG 2100 B2RF	1070	34.8	4.1	1.12	26.6	82	6.4
DP 445 BG/RR	1064	38.1	4.2	1.17	29.8	84	6.3
CG 3020B2RF	1055	35.2	3.9	1.14	25.8	84	6.3
ST 5327B2RF	1040	39.4	4.4	1.15	28.8	83	6.5
MCS XAD04 RF	1020	40.8	4.5	1.16	28.2	83	6.3
DP 515 BG/RR	1020	37.6	4.1	1.13	28.9	83	5.1
ST 4357B2RF	1016	35.1	4.0	1.17	26.2	83	5.9
MCS XE01 B2RF	999	38.0	3.9	1.11	27.6	83	6.8
ST 4892 BR	992	37.2	4.4	1.13	28.1	84	5.7
FM 832 LL	990	35.0	4.0	1.21	32.2	85	4.3
PHY 370 WR	988	39.3	4.2	1.12	27.6	83	6.0
CG 3220 B2RF	961	38.2	4.5	1.12	27.0	83	6.3
FM 960 B2R	958	35.9	4.1	1.16	30.3	83	4.2

DP 164 B2RF	947	37.6	4.1	1.17	29.3	82	5.0
DG 2383 RF	942	36.7	3.9	1.16	28.0	83	5.1
CG 3520B2RF	941	36.2	4.0	1.18	27.5	83	6.6
ST 5599 BR	940	37.6	4.2	1.12	27.8	82	4.5
MCS XD01 B2RF	936	37.6	3.9	1.15	29.3	84	6.4
DG 2242 B2RF	933	37.5	4.2	1.19	26.6	84	6.9
PHY 440 W	927	37.5	3.8	1.15	28.3	84	6.4
ST 6351 B2RF	920	35.1	4.1	1.17	27.9	83	5.6
DG 2520 B2RF	886	35.3	3.9	1.21	27.9	85	5.8
DP 143 B2RF	882	37.1	4.0	1.18	27.9	81	5.1
AM 1664 B2RF	881	35.3	4.1	1.19	26.6	83	6.7
ST 4498 B2RF	881	35.7	4.3	1.11	27.6	83	7.7
TAM 02 WK-11	881	35.7	4.1	1.20	30.1	84	5.9
FM 840B2F	875	37.5	4.3	1.22	29.9	85	5.2
ST 4427B2RF	873	36.9	4.6	1.15	28.6	82	5.3
PHY 485 WRF	870	36.9	4.3	1.16	27.0	84	6.5
ST 4596 B2RF	863	38.1	4.3	1.18	29.4	84	7.4
ST 4554B2RF	858	38.9	4.6	1.13	28.9	83	7.9
AM 1622 B2RF	857	32.6	3.9	1.23	28.9	85	6.0
DP 161 B2RF	854	39.4	4.8	1.18	28.1	83	5.1
FM 1880B2F	849	36.1	4.1	1.22	30.2	83	5.4
PHY 375 WRF	846	36.1	4.0	1.14	27.0	83	5.9
DP 121 RF	845	40.2	4.4	1.15	29.2	84	6.3
TAM 02 Z-72	844	34.4	3.9	1.19	29.9	84	5.0
CT 210	838	36.9	4.6	1.12	30.6	83	5.4
DP 432 RR	835	39.2	4.4	1.09	27.8	84	6.3
DP 555 BG/RR	829	41.9	3.7	1.13	28.3	81	4.3
ST 4678 B12RF	816	36.8	4.2	1.13	27.3	84	6.4
PM 2167 RR	816	35.2	4.4	1.00	26.4	81	6.3
PHY 480 WR	805	36.2	4.5	1.13	28.3	83	7.1
FM 820F	804	37.5	3.9	1.21	32.6	84	4.3
AM 821 R	793	36.4	4.1	1.09	29.8	83	6.5
TAM 02 X-132	779	34.1	4.1	1.25	31.1	83	4.0
DP 174 RF	778	43.2	4.2	1.13	26.7	82	6.1
DP 167 RF	762	37.7	3.9	1.18	31.8	84	5.0
Tamcot 22	728	37.6	4.0	1.17	25.5	83	6.1
FM 955LLB2	725	33.8	4.3	1.16	27.1	83	5.1
FM 9063B2F	702	34.1	3.9	1.21	30.0	84	4.8
DP 147 RF	665	38.3	4.2	1.19	27.5	83	4.5
PHY 310 R	649	40.0	4.3	1.10	29.6	83	5.8

FM 835LLB2	649	34.8	4.1	1.18	30.3	83	4.9
FM 9060F	621	37.1	3.8	1.20	30.0	83	4.5
PSC PHY 72 Acala	589	36.7	4.1	1.20	33.5	84	5.1
DP 141 B2RF	584	38.1	4.2	1.21	30.2	83	5.4
PHY 315 RF	582	37.8	4.0	1.14	28.9	82	5.6
TAM 02 Z-63	572	34.8	4.2	1.14	27.6	82	4.8
TAM 01 E-22	532	34.2	4.0	1.28	31.8	84	4.1
PHY 745 WRF	449	37.8	4.1	1.19	30.8	83	6.3
DP 491	432	39.0	4.0	1.21	31.3	84	4.8
DG OA265 BR	233	35.5	3.8	1.17	30.9	82	5.4
LSD (k=100)[1]	298	3.3	0.5	0.05	3.1	ns	0.9
%CV	23.5	4.1	5.1	2.00	4.8	1.0	7.8
Mean	858	37.6	4.1	1.16	28.6	83	5.7

1. Values within columns are different at k-100 if they differ by more than the LSD at the base of the column.

Table 6. Agronomic performance and fiber quality of cotton cultivars evaluated at College Station in 2007 with irrigation.

Cultivar	Lint Yield (lb/ac)	Lint % (%)	Micro-naire (units)	Length (in)	Strength (g/tex)	UI (ratio)	Elong-ation (%)
DP 174 RF	1744	46.8	4.4	1.17	27.7	83	4.4
DP 161 B2RF	1713	44.4	4.8	1.20	30.2	84	4.3
ST 4678 B12RF	1707	44.1	4.7	1.15	26.8	83	4.6
TAM 02 WK-11	1639	44.8	4.3	1.17	28.3	83	4.7
PHY 370 WR	1619	44.2	4.6	1.10	29.5	83	5.0
DP 121 RF	1614	45.1	4.9	1.12	28.9	84	5.4
PHY 440 W	1600	42.8	4.6	1.14	28.6	84	5.7
DP 455 BG/RR	1592	46.0	4.3	1.12	29.4	82	3.5
DG 2570 B2RF	1584	44.2	4.7	1.12	28.6	83	5.5
DG 2383 RF	1584	44.8	4.5	1.11	27.6	83	3.7
ST 5458 B2RF	1578	43.4	5.0	1.14	27.3	81	4.5
ST 4554B2RF	1570	45.2	4.7	1.16	28.4	83	6.3
PHY 485 WRF	1562	39.2	4.3	1.17	29.8	84	5.7
CTO7550 B2RF	1557	44.2	4.6	1.16	27.2	83	5.4
DP 515 BG/RR	1554	45.8	4.8	1.14	27.5	84	3.8
PHY 480 WR	1552	41.3	5.1	1.16	30.6	85	5.5
DP 445 BG/RR	1548	45.4	4.6	1.16	29.5	84	5.5
DP 555 BG/RR	1540	44.4	4.6	1.08	27.9	81	3.3
DP 141 B2RF	1538	43.6	4.4	1.19	28.6	82	4.7
DP 491	1530	44.8	4.5	1.15	30.4	82	3.9
DP 117 B2RF	1528	42.4	4.6	1.15	28.8	83	4.2
ST 5599 BR	1525	41.2	4.7	1.11	28.9	83	3.6

PHY 375 WRF	1519	42.4	4.7	1.13	26.4	83	4.2
DP 147 RF	1513	43.8	4.1	1.22	28.7	82	3.3
DP 143 B2RF	1512	42.7	4.4	1.17	27.7	81	4.3
Tamcot 22	1504	44.0	4.4	1.12	26.5	82	5.0
CG 3220 B2RF	1502	45.1	4.4	1.06	25.7	81	4.7
DP 167 RF	1499	40.4	4.5	1.19	29.3	84	3.8
FM 1735LLB2	1489	40.0	4.6	1.12	29.0	82	3.0
ST 4892 BR	1485	40.1	4.4	1.13	29.7	83	4.3
AM 1550 B2RF	1485	43.9	4.5	1.10	26.2	82	5.0
CTO7343 RF	1480	46.3	4.6	1.12	28.1	84	5.5
TAM 02 Z-72	1463	39.8	4.5	1.17	28.5	83	4.1
FM 832 LL	1456	41.7	4.2	1.20	32.2	84	3.5
FM 1880B2F	1445	42.1	4.6	1.17	28.6	81	4.0
DP 164 B2RF	1444	42.4	4.5	1.15	28.4	82	4.0
CG 3520B2RF	1443	40.9	4.5	1.14	25.0	82	5.4
DG 2520 B2RF	1438	42.6	4.6	1.16	26.9	83	4.4
ST 4498 B2RF	1437	44.3	4.5	1.15	28.6	84	5.9
ST 6351 B2RF	1412	40.8	4.6	1.14	26.5	83	4.8
CG 3020B2RF	1395	38.2	4.0	1.13	27.4	83	5.7
PHY 310 R	1384	43.9	4.7	1.09	28.5	83	5.2
MCS XAD04 RF	1384	43.0	4.7	1.11	27.3	84	5.4
ST 4427B2RF	1380	41.7	4.5	1.11	27.0	82	4.2
PHY 315 RF	1368	41.6	4.3	1.13	26.6	81	4.4
MCS XE01 B2RF	1365	44.1	4.6	1.08	27.0	82	5.5
AM 1532 B2RF	1364	41.3	4.3	1.19	28.0	84	4.9
ST 5327B2RF	1355	45.2	4.9	1.13	27.8	83	5.1
FM 840B2F	1339	40.0	4.0	1.21	30.8	84	4.3
TAM 02 Z-63	1326	38.8	4.4	1.16	30.9	82	3.9
ST 4357B2RF	1313	41.3	4.4	1.16	26.6	82	4.8
DG 2490 B2RF	1311	41.0	3.8	1.11	26.8	83	5.7
AM 1622 B2RF	1301	38.9	3.9	1.19	28.2	84	4.9
FM 955LLB2	1296	40.2	4.8	1.17	28.7	83	3.7
ST 4596 B2RF	1287	39.9	4.6	1.15	28.8	82	6.1
DG 2242 B2RF	1278	40.8	4.3	1.16	26.8	82	5.4
FM 960 B2R	1276	37.9	4.3	1.16	30.1	83	3.0
AM 821 R	1275	41.4	4.7	1.09	27.0	82	5.2
FM 9063B2F	1269	38.9	4.3	1.17	29.8	82	3.6
CG 4020B2RF	1260	42.0	4.4	1.14	26.5	83	4.8
DG 2100 B2RF	1220	40.7	4.1	1.10	25.4	82	5.6
MCS XD01 B2RF	1209	41.2	4.6	1.18	27.9	83	5.4
PM 2167 RR	1198	42.1	4.9	1.02	25.9	83	4.4
AM 1664 B2RF	1196	40.7	4.3	1.14	26.3	81	5.5

FM 835LLB2	1170	42.5	4.1	1.17	31.3	83	4.0
TAM 02 X-132	1160	40.2	4.2	1.21	30.6	82	3.0
PHY 72 Acala	993	42.4	4.8	1.20	31.7	83	4.7
DG OA265 BR	958	43.7	3.8	1.18	34.2	84	3.8
LSD (k=100)[1]	261	4.0	0.7	0.05	2.7	1.9	0.6
%CV	12.3	4.2	5.9	2.10	4.6	0.7	7.0
Mean	1428	42.4	4.5	1.14	28.3	83	4.6

1. Values within columns are different at k-100 if they differ by more than the LSD at the base of the column.

Table 7. Agronomic performance and fiber quality of cotton cultivars evaluated at Thrall in 2007 without irrigation.

Cultivar	Lint Yield (lb/ac)	Lint % (%)	Micro-naire (units)	Length (in)	Strength (g/tex)	UI (ratio)	Elong-ation (%)
ST 5599 BR	1811	41.0	4.1	1.12	29.2	82	4.4
MCS XE01 B2RF	1747	42.9	4.0	1.14	27.9	83	6.1
CT 210	1712	41.1	4.0	1.09	29.5	81	5.0
DG 2570 B2RF	1707	42.9	4.3	1.14	29.3	83	5.9
DP 445 BG/RR	1707	44.0	4.3	1.14	28.2	84	6.8
ST 5458 B2RF	1705	41.2	4.4	1.14	28.2	81	4.8
PHY 370 WR	1670	41.4	4.3	1.11	27.9	83	5.2
DP 444 BG/RR	1655	41.9	4.0	1.15	28.7	83	4.9
PHY 440 W	1623	41.3	4.0	1.14	29.0	84	6.0
SG 215 BG/RR	1606	40.7	4.4	1.10	25.4	82	6.3
AM 1550 B2RF	1598	42.8	4.3	1.11	25.2	82	5.3
PHY 310 R	1594	41.9	4.4	1.07	27.6	83	5.7
CG 3520B2RF	1591	39.4	4.0	1.16	26.7	83	6.0
ST 5327B2RF	1590	42.6	4.2	1.14	29.4	82	5.2
CTO7550 B2RF	1589	41.1	4.4	1.14	27.7	83	6.0
ST 4554B2RF	1573	40.9	4.2	1.13	28.4	82	7.1
MCS XD01 B2RF	1569	40.5	4.5	1.17	27.5	82	5.7
ST 4498 B2RF	1558	39.5	4.0	1.14	29.3	84	6.6
DP 455 BG/RR	1556	42.7	3.9	1.17	30.2	83	4.3
DG 2383 RF	1553	39.2	3.7	1.12	30.7	83	4.9
ST 4892 BR	1551	41.5	4.4	1.12	28.1	84	5.3
DP 143 B2RF	1549	39.0	3.7	1.21	29.0	81	4.8
DP 147 RF	1545	40.2	3.6	1.24	29.6	82	4.4
MCS XAD04 RF	1541	42.7	4.1	1.17	28.3	83	6.1
ST 4678 B12RF	1534	39.7	4.2	1.14	28.4	84	5.8
DP 491	1531	41.7	4.1	1.20	31.4	83	4.1
PHY 480 WR	1526	39.8	4.4	1.15	29.3	84	6.3

FM 832 LL	1524	41.3	3.6	1.21	31.3	83	4.0
DP 555 BG/RR	1516	44.5	4.1	1.11	27.4	81	4.0
FM 1735LLB2	1513	38.3	4.1	1.11	28.7	82	3.7
DG 2490 B2RF	1508	38.4	3.7	1.10	27.1	83	6.3
ST 4596 B2RF	1503	39.8	4.5	1.17	28.3	84	7.3
DP 515 BG/RR	1496	42.7	4.5	1.13	28.2	83	4.5
PHY 485 WRF	1495	40.0	4.3	1.14	27.9	84	6.2
CG 4020B2RF	1493	40.8	3.9	1.18	25.5	82	5.7
FM 960 B2R	1480	39.6	4.2	1.15	29.7	82	3.6
CG 3020B2RF	1460	38.9	3.9	1.13	25.9	83	5.7
TAM 02 WK-11	1456	39.1	4.2	1.18	31.4	84	5.3
PHY 315 RF	1450	42.1	4.0	1.14	27.4	82	4.8
CG 3220 B2RF	1450	41.2	4.4	1.12	25.6	83	5.3
DG 2242 B2RF	1436	39.1	3.9	1.17	27.3	83	6.1
FM 9063B2F	1430	37.8	4.0	1.17	29.4	82	4.7
PHY 375 WRF	1421	40.7	4.0	1.11	26.9	83	4.9
ST 4357B2RF	1421	40.4	4.1	1.17	26.9	83	5.4
FM 840B2F	1419	40.3	3.7	1.24	29.2	83	4.8
DP 164 B2RF	1414	40.8	4.2	1.15	29.3	82	4.2
DP 141 B2RF	1412	38.9	4.0	1.18	29.3	81	4.8
AM 1664 B2RF	1411	40.1	4.2	1.17	26.6	83	5.9
DP 121 RF	1404	42.2	4.3	1.14	28.4	83	5.9
DG 2520 B2RF	1398	39.6	3.9	1.20	27.4	81	5.5
TAM 02 Z-72	1394	38.7	3.8	1.17	30.1	83	5.1
Tamcot 22	1375	40.0	4.0	1.13	26.5	81	5.3
PM 2167 RR	1366	38.0	4.3	1.02	27.7	82	5.0
FM 835LLB2	1353	37.9	3.5	1.20	31.6	83	4.9
DG 2100 B2RF	1348	38.5	3.8	1.15	27.5	84	5.9
AM 1532 B2RF	1338	39.8	4.0	1.19	27.5	82	5.3
DP 174 RF	1336	43.4	4.1	1.18	28.8	83	5.3
ST 6351 B2RF	1304	37.3	4.1	1.16	27.7	82	5.6
PSC 410 R	1304	39.9	4.1	1.17	30.0	84	5.8
FM 1880B2F	1284	37.8	3.8	1.20	30.1	82	4.6
TAM 02 Z-63	1282	38.4	4.1	1.16	30.7	82	4.5
FM 955LLB2	1280	36.9	4.4	1.18	28.2	84	4.4
AM 821 R	1279	39.7	4.4	1.12	27.0	83	6.0
ST 4427B2RF	1269	39.0	4.4	1.15	27.4	83	4.7
AM 1622 B2RF	1253	37.6	3.9	1.21	28.1	84	5.2
PSC PHY 72 Acala	1233	39.6	4.2	1.21	32.8	85	4.9
DP 167 RF	1214	39.9	4.1	1.18	30.2	83	4.2
DP 161 B2RF	1196	39.9	4.2	1.21	30.4	85	4.4
TAM 02 X-132	1116	37.1	3.9	1.25	32.4	83	3.2

DG OA265 BR	1077	39.1	3.4	1.16	36.2	82	4.5
LSD (k=100)[1]	322	1.7	0.3	0.04	2.3	2.2	0.5
%CV	13.1	2.2	3.6	1.80	4.1	1.1	5.3
Mean	1468	40.3	4.1	1.15	28.6	83	5.2

1. Values within columns are different at k-100 if they differ by more than the LSD at the base of the column.

Table 8. Agronomic performance and fiber quality of cotton cultivars evaluated at Prosper in 2007 without irrigation.

Cultivar	Lint Yield (lb/ac)	Lint % (%)	Micro-naire (units)	Length (in)	Strength (g/tex)	UI (ratio)	Elong-ation (%)
AM 1550 B2RF	824	43.0	4.8	1.05	25.8	82	4.5
CTO7550 B2RF	801	42.6	4.7	1.07	29.4	83	5.7
DP 491	782	44.7	5.1	1.14	29.2	82	3.6
PHY 315 RF	747	45.4	4.7	1.07	28.1	82	4.5
CTO7343 RF	746	44.1	4.8	1.06	28.3	83	6.0
PHY 375 WRF	740	45.7	4.7	1.07	28.8	82	4.7
DG 2570 B2RF	738	41.9	4.8	1.09	31.4	83	5.5
MCS XD01 B2RF	737	41.8	4.8	1.07	26.4	82	5.3
CG 4020B2RF	730	42.4	4.8	1.10	27.5	81	5.1
CG 3220 B2RF	730	41.5	4.5	1.06	30.2	81	4.5
Tamcot 22	727	43.4	4.6	1.08	28.3	81	5.1
FM 960 B2R	722	40.0	4.6	1.09	31.2	82	3.0
SG 215 BG/RR	715	41.7	4.8	1.02	26.7	83	5.5
DG 2490 B2RF	710	41.0	4.3	1.05	27.2	83	5.9
TAM 02 WK-11	704	41.2	4.7	1.12	29.5	82	4.7
MCS XAD04 RF	700	44.3	4.9	1.08	29.5	83	5.7
TAM 02 X-132	692	38.6	4.7	1.18	29.5	82	2.6
CT 210	686	39.8	4.9	1.04	28.8	81	5.0
PHY 370 WR	680	44.4	5.0	1.05	28.1	82	4.9
DG 2383 RF	675	42.1	4.6	1.05	26.1	80	4.7
AM 1622 B2RF	673	40.5	4.7	1.13	28.3	83	4.9
FM 955LLB2	672	38.3	4.8	1.09	27.8	82	3.8
TAM 02 Z-63	670	38.6	5.1	1.12	29.6	83	3.7
DG 2242 B2RF	667	41.2	4.7	1.10	27.1	82	5.5
PHY 485 WRF	666	41.9	4.7	1.04	30.2	83	6.1
FM 9058F	658	44.1	4.7	1.09	26.9	80	3.5
PHY 440 W	655	42.9	4.5	1.11	29.1	83	5.9
FM 9063B2F	646	40.6	4.6	1.12	31.3	82	3.9
CG 3020B2RF	644	40.8	4.4	1.06	28.0	84	6.1
TAM 02 Z-72	643	38.9	4.5	1.14	31.1	82	4.0

MCS XE01 B2RF	631	43.9	4.5	1.06	28.1	82	5.3
DG 2520 B2RF	630	42.3	4.7	1.11	27.7	83	4.8
DG 2100 B2RF	629	39.0	4.4	1.05	26.8	82	5.2
ST 5599 BR	622	43.4	4.6	1.02	28.6	81	4.4
PHY 310 R	616	45.5	5.1	1.03	28.9	82	5.2
DG OA265 BR	610	41.0	4.1	1.15	35.6	83	4.0
AM 1664 B2RF	599	42.1	4.8	1.11	26.6	82	5.2
FM 9180B2F	594	41.0	4.4	1.07	30.9	81	4.0
PHY 480 WR	581	40.1	4.7	1.09	32.1	83	5.8
FM 832 LL	575	40.7	4.3	1.15	31.5	82	3.3
CG 3520B2RF	569	40.7	4.5	1.08	25.4	81	5.4
PM 2167 RR	565	38.6	4.7	1.00	29.5	81	5.0
AM 821 R	565	41.2	5.0	1.06	27.1	82	4.9
AM 1532 B2RF	562	41.1	4.6	1.13	26.9	83	5.1
DP 555 BG/RR	542	44.0	4.6	1.04	29.8	80	3.4
FM 9150F	527	42.3	4.6	1.12	30.4	83	3.2
ST 4892 BR	513	41.9	5.1	1.04	28.2	81	5.1
PSC PHY 72 Acala	392	40.2	4.2	1.17	35.3	83	4.5
LSD (k=100)[1]	208	2.1	0.7	0.03	3.0	1.6	0.6
%CV	17.0	2.5	5.0	1.50	4.7	0.8	6.7
Mean	658	41.8	4.7	1.08	28.9	82	4.7

1. Values within columns are different at k-100 if they differ by more than the LSD at the base of the column.