



Variety Performance

2014 Extension On-Farm Variety Testing

Extension large-plot on-farm replicated cotton variety trials are an important component in modern germplasm evaluation. Producer-cooperator and industry support for these trials is substantial. These trials enable growers to observe the newest genetics and transgenic traits on their operations, under their management conditions and are planted and harvested with their equipment. Multiple sites have provided excellent information on which growers can base important variety selection decisions. The objective of this project was to evaluate multiple cotton varieties in producer-cooperator fields under irrigated and dryland management systems.



Eight large-plot trials were planted and harvested using grower equipment. The testing locations were Custer, Harmon, Tillman, Jackson, Beckham and Washita Counties. Most trials were established under no-till or strip-till conditions. For the Replicated Agronomic Cotton Evaluation (RACE) trials, typically 6-8 entries (one entry per brand name, plus a grower choice option) were planted at each site, with 3 replicates used. The Cotton Incorporated Core program provided direct support for two trials, the Enhanced Variety Trials, which contained up to 10 entries and 3 replicates (Custer and Harmon Counties). A West Texas Lee weigh wagon (for boll buggies) or Western Forage Systems platform scale (for round modules) was utilized to capture plot weights. At harvest, grab samples were taken from each plot and ginned at the Texas A&M AgriLife Research and Extension Center at Lubbock. Fiber samples were submitted to the Texas Tech University Fiber and Biopolymer Research Institute for high volume instrument (HVI) analysis. Color and leaf grades were set to 21 and 2, respectively, for each sample. HVI data were used to compute the Commodity Credit Corporation (CCC) Loan value for each sample. Final plant heights and visual estimates of storm resistance were taken prior to harvest.

Replicated trials are used in order to obtain multiple independent observations of each variety's performance in comparison with other entries. Statistical analyses of each characteristic reported are represented by "protected" LSD (least significant difference) values given at the bottom of each column in the table. If the difference between the characteristic of concern (i.e. yield, lint turnout, staple, etc) of any two varieties exceeds the LSD (0.05) value provided, then the chances are approximately 95 out of 100 that the difference is real and not a result of other factors such as random error.

The data indicated that in spite of the continuing severe drought situation in far southwestern counties, irrigated cotton performed very well in most locations in 2014. This can be attributed to some timely precipitation and cooler temperatures in July, and September and October cotton heat unit accumulation that was about 30% above normal.

Cultural practices and other information for each site are provided in Table 1. Data summaries for each location are provided in Tables 2-17. Summaries across irrigated locations for several important characteristics are provided in Tables 18-26. Summaries across dryland locations are provided in Tables 27-35.

Mean lint yields at all irrigated sites exceeded 2 bales/acre, and some sites had entries producing above 4 bales/acre. Lint yields from on-farm irrigated trials were generally a function of available water and delivery efficiency in these fields, but timely rainfall in June and July assisted in producing exceptional yields at some sites. Test average yields ranged from a low of 1249 lb/acre in a center-pivot irrigated trial to just under 1900 lb/acre in a sub-surface drip irrigated trial.

Net value/acre in this report is defined as lint loan value on a per acre basis plus seed value, which equals total potential income/acre. Total potential income/acre minus ginning cost/acre and seed and technology fees/acre then defines net value/acre. Net value/acre averaged \$847/acre across all irrigated sites and ranged from a low of \$623 to a high of \$1083. Within-site differences were most expressed at the Harmon County location. When comparing the top and bottom entries, a difference of about \$294/acre could be attributed to variety selection in this field in 2014. When the four common entries across locations in Beckham, Jackson, and Tillman Counties were compared, it is evident that the PhytoGen 333WRF entry was very competitive with NexGen 1511B2RF and Deltapine 1291B2RF. Across the 3 sites, the Croplan Genetics was about \$95/acre less competitive than the PhytoGen 333WRF.

The three dryland no-till locations averaged about 541 lb/acre, and ranged from a low of 467 lb/acre to a high of 619 lb/acre. Moisture stress in August affected both yield and fiber quality at all dryland sites. Net value/acre averaged \$242/acre across the three dryland sites and ranged from a low of \$201 to a high of \$276. Within-site differences were most expressed at the Jackson County location. When comparing the top and bottom entries, a difference of about \$124/acre could be attributed to variety selection in this field in 2014. When the three common entries across locations in Washita, Jackson, and Tillman Counties were compared, the Deltapine 1044B2RF, NexGen 1511B2RF and Stoneville 4946GLB2 performed similarly.

Another important attribute producers should consider include storm resistance. Storm resistance ratings were visually scored just prior to harvest. These ratings range from 1 (bolls loose, with considerable seedcotton loss) to 9 (bolls very tight, with no seedcotton loss). The degree of storm tolerance that a grower can accept can vary from one operation to another. The most important consideration is to be aware of the storm tolerance of varieties planted. This is a major component of risk management.

Plant height is another varietal characteristic that producers should investigate. The plant heights provided were measured near the end of the growing season, prior to harvest aid applications. Excessive rainfall and/or irrigation coupled with high nitrogen fertility can result in varieties producing large plants in spite of high doses of mepiquat based plant growth regulators.

Fiber quality among entries was generally good to excellent unless maturity or late season stress (on dryland) was encountered. The HVI data include several important fiber property measurements. Fiber length (staple when expressed as 32nds), micronaire, strength, and uniformity are the fiber properties reported which partially determine the price per pound for lint. Fiber length was measured as the upper half mean (in inches). Those measurements were also converted into 32nds to determine staple. Uniformity was obtained by dividing mean length (also measured in inches) by the upper half mean length and expressing the result as a percentage. Micronaire is actually a confounded measurement of both fiber fineness and maturity. Micronaire was measured in standard micronaire units. Fiber strength was measured in grams-force per tex on a “beard of fibers” during HVI analysis.

Higher values for lint yield, lint turnout, staple, strength, and uniformity are generally more desirable than lower ones. Micronaire is acceptable anywhere within the micronaire “base” range of 3.5 to 4.9 inclusive. The “premium” range is between 3.7 and 4.2 inclusive. If micronaire falls in the “discount” range (below 3.5 or above 4.9), the price per pound of lint is reduced. Penalties tend to be more severe for micronaire values below 3.5 (especially below 3.0) than for those above 4.9. Therefore, producers should probably select varieties with micronaire values toward the upper half of the range, rather than the lower.

The results from these trials indicate that variety selection in 2014 was very important at some sites. Differences in yields (lb/acre) between highest and lowest lint producers were 468, 285, 225, 354, and 425 among irrigated sites. This difference was 151, 232 and 144 lb/acre for the dryland sites.

ACKNOWLEDGEMENTS

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Table 1. 2014 Cultural information for Extension large plot trial sites.								
	Irrigated Cotton Inc Enhanced Variety		Irrigated RACE			Dryland RACE		
County-location	Custer - Hydro	Harmon - Hollis	Tillman - Tipton	Jackson - Duke	Beckham - Delhi	Washita - Elk City	Tillman - Hollister	Jackson - Altus
Cooperator	Merlin Schantz	Tony Cox	John McCullough	Drew Darby	Jack Damron	Danny Davis	Roger Fischer	Clint Abernathy
Tillage system	strip till	conventional till	conventional till	conventional till	strip till	no-till	no-till	no-till
Planting date	20-May	21-May	15-May	21-May	20-May	4-Jun	5-Jun	13-Jun
Seeding rate (seeds/acre)	48,000	58,000	45,000	52,000	35,000	28,000	26,000	28,000
Row spacing (inches)	36	40	40	40	40	40	40	38
Replicates	3	3	3	3	3	3	3	3
Harvested plot width (rows)	8	6	4	4	6	6	4	6
Harvested plot length (ft)	670	1,300	1,050	725	600	1,100	2490	1320
Harvest date	10-Nov	9-Dec	19-Nov	1-Nov	13-Nov	14-Nov	21-Nov	11-Nov
Comments	pivot irrigation	drip irrigation	furrow irrigation	furrow irrigation	pivot irrigation	good early	good early	good early
Harvester type	stripper	moduling picker	picker	stripper	stripper	season, late stress stripper	season, late stress stripper	season, late stress stripper
Entries	NG 1511 B2RF FM 1830 GLT ST 4747 GLB2 PHY 339 WRF	NG 1511 B2RF FM 2334 GLT ST 4946 GLB2 PHY 333 WRF	NG 1511 B2RF FM 2334 GLT ST 4946 GLB2 PHY 333 WRF	NG 1511 B2RF FM 2334 GLT ST 4946 GLB2 PHY 333 WRF	NG 1511 B2RF FM 1830 GLT ST 4747 GLB2 PHY 333 WRF	NG 1511 B2RF FM 1830 GLT ST 4946 GLB2 PHY 339 WRF	NG 1511 B2RF FM 2334 GLT ST 4946 GLB2 PHY 499 WRF	NG 1511 B2RF FM 2334 GLT ST 4946 GLB2 PHY 499 WRF
	CG 3787 B2RF DP 1044 B2RF DP 0912 B2RF PHY 499 WRF FM 1740 B2F	DP 1321 B2RF CG 3787 B2RF DP 1044 B2RF DP 1219 B2RF PHY 499 WRF FM 1740 B2F	DP 1219 B2RF CG 3787 B2RF	DP 1219 B2RF CG 3787 B2RF	DP 1219 B2RF CG 3787 B2RF	DP 1044 B2RF	DP 1044 B2RF	DP 1044 B2RF
Grower's choice	DP 1321 B2RF	none	PHY 499 WRF	DP 1359 B2RF	PHY 499 WRF	DP 1410 B2RF	DP 1321 B2RF	DP 104 B2RF

Table 2. Harvest results from the Custer County irrigated Cotton Incorporated Enhanced Variety trial, Merlin Schantz Farm, Hydro, OK, 2014.

Entry	Lint turnout	Seed turnout	Bur cotton yield	Lint yield	Seed yield	Lint loan value	Lint value	Seed value	Total value	Ginning cost	Seed/tech cost	Net value
	----- % -----		----- lb/acre -----			--\$/lb--			----- \$/acre -----			
FM1830GLT	34.2	47.0	4200	1436	1974	0.5615	807	168	974	126	76	772 a
NG1511B2RF	38.1	50.7	3663	1396	1857	0.4933	691	158	849	110	69	670 ab
PHY339WRF	34.6	48.4	3679	1273	1781	0.5440	694	151	845	110	71	664 ab
GCDP1321B2RF	35.6	49.2	3642	1297	1796	0.5320	689	153	842	109	74	659 ab
FM1740B2F	35.1	50.1	3708	1305	1858	0.5027	656	158	814	111	66	637 abc
DP0912B2RF	33.2	49.7	3636	1207	1803	0.5275	637	153	790	109	74	607 bc
ST4747GLB2	32.4	48.9	3739	1211	1828	0.5220	633	155	789	112	76	601 bc
CG3787B2RF	34.3	48.0	3344	1147	1605	0.5218	599	136	735	100	70	565 bc
DP1044B2RF	31.8	51.0	3558	1135	1815	0.4993	567	154	722	107	68	547 bc
PHY499WRF	34.0	46.0	3181	1082	1463	0.5067	549	124	674	96	71	507 c
Test average	34.3	48.9	3635	1249	1778	0.5211	652	151	803	109	72	623
CV, %	4.2	3.0	10.2	10.6	10.4	3.9	12.4	10.4	11.9	10.1	--	13.6
OSL	0.0035	0.0116	0.2087	0.0712	0.1357	0.0133	0.0432	0.1375	0.0638	0.2050	--	0.0585
LSD	2.5	2.6	NS	187†	NS	0.0345	138	NS	136 †	NS	--	120†

For net value/acre, means within a column with the same letter are not significantly different.

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, † indicates significance at the 0.10 level, NS - not significant.

Note: some columns may not add up due to rounding error.

Assumes:

\$3.00/cwt ginning cost.

\$170/ton for seed.

Value for lint based on CCC loan value from grab samples and FBRI HVI results.

Color grades set to 21, leaf grades set to 2 for entire trial.

Table 3. Harvest results from the Custer County irrigated Cotton Incorporated Enhanced Variety trial, Merlin Schantz Farm, Hydro, OK, 2014.

Entry	Final population	Final plant height	Storm resistance	Micronaire	Staple	Strength	Uniformity
	plants/acre	inches	1-9 visual scale*	units	32nds inch	g/tex	%
CG3787B2RF	31,460	36.5	6.0	4.6	33.1	28.6	80.3
DP0912B2RF	42,108	35.6	4.7	4.7	33.6	28.6	80.7
DP1044B2RF	37,752	34.6	5.7	4.4	32.2	28.3	80.1
FM1740B2F	45,012	34.0	4.7	4.2	32.5	28.3	79.4
FM1830GLT	43,560	30.7	4.7	4.2	35.3	29.9	80.7
GCDP1321B2RF	45,012	35.9	5.7	4.7	33.6	30.1	80.8
NG1511B2RF	34,364	31.8	5.7	4.6	32.0	29.4	79.0
PHY339WRF	41,624	38.5	3.7	3.6	34.8	30.4	80.2
PHY499WRF	40,656	39.9	4.7	4.2	32.7	30.5	79.0
ST4747GLB2	45,012	36.8	4.3	3.8	34.3	25.7	78.2
Test average	40,656	35.4	5.0	4.3	33.4	29.0	79.8
CV, %	13.0	7.9	11.6	5.4	2.3	3.4	1.0
OSL	0.0537	0.0220	0.0017	0.0002	0.0005	0.0005	0.014
LSD	7,466 †	4.8	1.0	0.4	1.3	1.7	1.4

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, † indicates significance at the 0.10 level, NS - not significant.

*Visual storm resistance scale: 1=loose, 9=tight.

Assumes:

Color grades set to 21, leaf grades set to 2 for entire trial.

Table 4. Harvest results from the Harmon County irrigated Cotton Incorporated Enhanced Variety trial, Tony Cox Farm, Hollis, OK, 2014.

Entry	Lint turnout	Seed turnout	Bur cotton yield	Lint yield	Seed yield	Lint loan value	Lint value	Seed value	Total value	Ginning cost	Seed/tech cost	Net value
	----- % -----		----- lb/acre -----			--\$/lb--			----- \$/acre -----			
PHY 333WRF	39.4	56.1	5311	2093	2979	0.5785	1210	253	1463	159	86	1218 a
ST 4946GLB2	36.4	58.9	5523	2010	3259	0.5753	1157	277	1434	165	92	1176 a
NG 1511B2RF	35.6	48.8	5495	1956	2682	0.5798	1134	228	1362	165	83	1114 b
DP 1321B2RF	34.7	53.0	5518	1915	2924	0.5798	1110	249	1359	165	89	1105 b
FM 2334GLT	36.3	51.4	5294	1922	2721	0.5810	1117	231	1348	159	92	1097 b
PHY 499WRF	38.6	53.6	4937	1901	2646	0.5803	1103	225	1328	148	86	1094 b
CG 3787B2RF	35.0	50.3	5467	1914	2750	0.5763	1103	234	1337	164	84	1088 b
FM1740B2F	32.8	46.1	5579	1830	2572	0.5747	1052	219	1270	167	80	1023 c
DP 1044B2RF	33.7	59.2	5087	1715	3012	0.5618	963	256	1219	153	81	986 c
DP 1219B2RF	32.5	54.7	5134	1668	2808	0.5518	921	238	1160	154	81	924 d
Test average	35.5	53.2	5335	1892	2835	0.5739	1087	241	1328	160	85	1083
CV, %	6.7	6.3	2.7	2.9	2.7	1.7	3.1	2.7	3.0	2.7	--	3.3
OSL	0.0313	0.0024	0.0002	<0.0001	<0.0001	0.0289	<0.0001	<0.0001	<0.0001	0.0003	--	<0.0001
LSD	4.1	5.8	246	94	133	0.1690	57	11	67	7	--	61

For net value/acre, means within a column with the same letter are not significantly different.

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, † indicates significance at the 0.10 level, NS - not significant.

Note: some columns may not add up due to rounding error.

Assumes:

\$3.00/cwt ginning cost.

\$170/ton for seed.

Value for lint based on CCC loan value from grab samples and FBRI HVI results.

Color grades set to 21, leaf grades set to 2 for entire trial.

Table 5. Harvest results from the Harmon County irrigated Cotton Incorporated Enhanced Variety trial, Tony Cox Farm, Hollis, OK, 2014.

Entry	Final population	Final plant height	Storm resistance	Micronaire	Staple	Strength	Uniformity
	plants/acre	inches	1-9 visual scale*	units	32nds inch	g/tex	%
CG 3787B2RF	26,136	42.6	3.3	3.8	36.6	28.3	82.2
DP 1044B2RF	19,602	39.8	5.3	3.4	36.0	28.9	80.9
DP 1219B2RF	35,719	48.2	2.7	3.2	37.4	30.3	80.0
DP 1321B2RF	27,879	40.1	2.3	3.9	36.8	30.1	82.1
FM 1740B2F	29,621	36.0	4.3	3.8	35.7	28.9	81.4
FM 2334GLT	25,700	33.3	4.0	3.8	38.1	30.7	82.1
NG 1511B2RF	24,829	40.2	3.0	4.0	36.6	30.7	82.6
PHY 333WRF	35,284	41.6	5.3	3.8	37.8	29.6	82.0
PHY 499WRF	34,848	45.4	3.3	3.6	36.8	31.0	82.5
ST 4946GLB2	27,443	42.6	5.7	3.8	36.2	29.3	81.4
Test average	28,706	41.0	3.9	3.7	36.8	29.8	81.7
CV, %	14.6	5.9	13.7	4.5	1.2	2.4	0.9
OSL	0.0026	<0.0001	<0.0001	0.0013	<0.0001	0.0023	0.0066
LSD	7,192	4.2	0.9	0.3	0.8	1.3	1.2

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, † indicates significance at the 0.10 level, NS - not significant.

*Visual storm resistance scale: 1=loose, 9=tight.

Assumes:

Color grades set to 21, leaf grades set to 2 for entire trial.

Table 6. Harvest results from the Tillman County irrigated RACE trial, John McCullough Farm, Tipton, OK, 2014.

Entry	Lint turnout	Seed turnout	Bur cotton yield	Lint yield	Seed yield	Lint loan value	Lint value	Seed value	Total value	Ginning cost	Seed/tech cost	Net value
	----- % -----		----- lb/acre -----			--\$/lb--			----- \$/acre -----			
FM 2334GLT	37.2	55.4	4259	1589	2359	0.5815	924	201	1124	128	71	925 a
DP 1219B2RF	35.8	57.6	4310	1547	2483	0.5758	892	211	1103	129	63	911 a
ST 4946GLB2	36.2	56.7	4080	1477	2309	0.5785	854	196	1051	122	71	857 a
GC PHY 499WRF	37.3	55.0	3888	1450	2139	0.5747	834	182	1015	117	67	832 a
CG 3787B2RF	36.7	54.7	3807	1397	2086	0.5777	807	177	984	114	67	804 a
PHY 333WRF	37.4	54.3	3646	1364	1980	0.5752	784	168	953	109	67	777 a
NG 1511B2RF	38.1	54.6	3584	1366	1957	0.5623	770	167	936	108	64	764 a
Test average	37.0	55.5	3939	1456	2188	0.5751	838	186	1024	118	67	839
CV, %	1.8	2.3	8.6	8.5	8.8	1.5	9.0	8.8	9.0	8.6	--	9.7
OSL	0.0151	0.0764	0.1260	0.2510	0.0403	0.2431	0.2105	0.0393	0.1683	0.1243	--	0.1866
LSD	1.2	1.9†	NS	NS	344	NS	NS	29	NS	NS	--	NS

For net value/acre, means within a column with the same letter are not significantly different.

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, † indicates significance at the 0.10 level, NS - not significant.

Note: some columns may not add up due to rounding error.

Assumes:

\$3.00/cwt ginning cost.

\$170/ton for seed.

Value for lint based on CCC loan value from grab samples and FBRI HVI results.

Color grades set to 21, leaf grades set to 2 for entire trial.

Table 7. Harvest results from the Tillman County irrigated RACE trial, John McCullough Farm, Tipton, OK, 2014.

Entry	Final population	Final plant height	Storm resistance	Micronaire	Staple	Strength	Uniformity
	plants/acre	inches	1-9 visual scale*	units	32nds inch	g/tex	%
CG 3787B2RF	37,026	33.9	5.3	4.5	36.2	30.7	82.2
DP 1219B2RF	41,382	33.2	4.3	4.3	36.2	33.2	81.2
FM 2334GLT	37,897	29.7	5.7	4.5	38.5	32.4	82.7
GC PHY 499WRF	37,462	34.0	5.0	4.5	35.5	31.9	82.3
NG 1511B2RF	37,897	31.5	4.7	4.5	35.0	31.3	81.9
PHY 333WRF	38,333	34.7	5.3	4.3	36.5	31.2	81.8
ST 4946GLB2	38,333	30.4	7.7	4.5	36.1	32.8	82.5
Test average	38,333	32.5	5.4	4.4	36.3	31.9	82.1
CV, %	7.9	4.1	9.4	5.0	2.3	3.2	0.9
OSL	0.6771	0.0029	0.0001	0.6250	0.0066	0.0875	0.2986
LSD	NS	2.4	0.9	NS	1.5	1.5†	NS

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, † indicates significance at the 0.10 level, NS - not significant.

*Visual storm resistance scale: 1=loose, 9=tight.

Assumes:

Color grades set to 21, leaf grades set to 2 for entire trial.

Table 8. Harvest results from the Jackson County irrigated RACE trial, Drew Darby Farm, Duke, OK, 2014.

Entry	Lint turnout	Seed turnout	Bur cotton yield	Lint yield	Seed yield	Lint loan value	Lint value	Seed value	Total value	Ginning cost	Seed/tech cost	Net value
	----- % -----		----- lb/acre -----			--\$/lb--			----- \$/acre -----			
ST 4946GLB2	36.6	49.1	3939	1442	1934	0.5453	786	164	951	118	83	750 a
PHY 333WRF	36.0	46.3	3841	1383	1779	0.5600	774	151	925	115	77	733 a
FM 2334GLT	38.7	47.6	3478	1346	1656	0.5758	775	141	916	104	83	729 a
GC DP 1359B2RF	36.6	47.5	3713	1359	1764	0.5582	759	150	909	111	80	717 a
DP 1219B2RF	34.9	49.4	3752	1309	1854	0.5495	719	157	877	113	73	691 ab
NG 1511B2RF	36.3	44.6	3563	1297	1589	0.5048	655	135	790	107	75	609 bc
CG 3787B2RF	35.5	45.9	3261	1157	1497	0.5443	632	127	759	98	76	585 c
Test average	36.4	47.2	3650	1328	1725	0.5483	729	147	875	109	78	688
CV, %	3.7	3.5	5.0	5.0	5.0	3.3	7.2	4.9	6.8	5.1	--	7.9
OSL	0.0971	0.0402	0.0100	0.0065	0.0005	0.0149	0.0161	0.0006	0.0133	0.0107	--	0.0152
LSD	2.0†	3.0	326	118	152	0.0326	94	13	106	10	--	96

For net value/acre, means within a column with the same letter are not significantly different.

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, † indicates significance at the 0.10 level, NS - not significant.

Note: some columns may not add up due to rounding error.

Assumes:

\$3.00/cwt ginning cost.

\$170/ton for seed.

Value for lint based on CCC loan value from grab samples and FBRI HVI results.

Color grades set to 21, leaf grades set to 2 for entire trial.

Table 9. Harvest results from the Jackson County irrigated RACE trial, Drew Darby Farm, Duke, OK, 2014.

Entry	Final population	Final plant height	Storm resistance	Micronaire	Staple	Strength	Uniformity
	plants/acre	inches	1-9 visual scale*	units	32nds inch	g/tex	%
ST 4946GLB2	36,155	29.1	5.3	4.7	34.4	27.0	80.9
PHY 333WRF	46,609	31.3	4.7	4.5	34.8	30.4	80.2
FM 2334GLT	37,897	30.6	5.3	4.8	36.5	29.6	82.0
GC DP 1359B2RF	41,818	30.9	6.0	4.7	35.1	31.1	80.8
DP 1219B2RF	45,738	30.1	4.7	4.9	33.0	29.4	81.0
NG 1511B2RF	43,125	30.2	5.0	4.5	34.9	28.2	80.5
CG 3787B2RF	46,609	28.4	6.3	4.8	34.3	30.2	80.5
Test average	42,564	30.1	5.3	4.7	34.7	29.4	80.8
CV, %	8.8	8.5	9.3	2.7	2.1	3.6	1.2
OSL	0.0242	0.8162	0.0089	0.0141	0.0037	0.0065	0.4019
LSD	6,692	NS	0.9	0.2	1.3	1.9	NS

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, † indicates significance at the 0.10 level, NS - not significant.

*Visual storm resistance scale: 1=loose, 9=tight.

Assumes:

Color grades set to 21, leaf grades set to 2 for entire trial.

Table 10. Harvest results from the Beckham County irrigated RACE trial, Jack Damron Farm, Delhi, OK, 2014.

Entry	Lint turnout	Seed turnout	Bur cotton yield	Lint yield	Seed yield	Lint loan value	Lint value	Seed value	Total value	Ginning cost	Seed/tech cost	Net value
	----- % -----		----- lb/acre -----			--\$/lb--			----- \$/acre -----			
PHY 333WRF	33.3	47.8	5677	1891	2720	0.5798	1096	231	1327	170	52	1105 a
NG 1511B2RF	35.1	46.6	5597	1965	2608	0.5578	1096	222	1317	168	50	1099 a
GC PHY 499WRF	34.4	47.6	5467	1881	2602	0.5630	1060	221	1281	164	52	1065 ab
FM 1830GLT	34.9	45.8	4983	1739	2282	0.5792	1007	194	1201	149	56	996 bc
CG 3787B2RF	32.8	47.3	5169	1696	2440	0.5720	970	207	1178	155	51	972 c
DP 1219B2RF	31.6	46.5	5321	1682	2474	0.5720	962	211	1172	160	49	963 c
ST 4747GLB2	28.8	43.9	5198	1497	2282	0.5660	847	194	1042	156	56	830 d
Test average	33.0	46.5	5345	1764	2487	0.5700	1005	212	1217	160	52	1004
CV, %	5.8	5.1	3.8	3.9	3.9	1.8	4.5	4.0	4.3	3.9	--	4.7
OSL	0.019	0.4762	0.0139	<0.0001	0.0007	0.1720	0.0002	0.0008	0.0003	0.0145	--	0.0001
LSD	3.4	NS	366	121	173	NS	80	15	94	11	--	83

For net value/acre, means within a column with the same letter are not significantly different.

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, † indicates significance at the 0.10 level, NS - not significant.

Note: some columns may not add up due to rounding error.

Assumes:

\$3.00/cwt ginning cost.

\$170/ton for seed.

Value for lint based on CCC loan value from grab samples and FBRI HVI results.

Color grades set to 21, leaf grades set to 2 for entire trial.

Table 11. Harvest results from the Beckham County irrigated RACE trial, Jack Damron Farm, Delhi, OK, 2014.

Entry	Final population	Final plant height	Storm resistance	Micronaire	Staple	Strength	Uniformity
	plants/acre	inches	1-9 visual scale*	units	32nds inch	g/tex	%
CG 3787B2RF	28,750	35.1	4.7	4.1	35.8	29.4	81.4
DP 1219B2RF	30,492	36.7	4.0	4.0	35.4	31.5	80.1
FM 1830GLT	34,412	30.6	4.3	4.1	36.5	32.0	81.0
GC PHY 499WRF	31,799	38.6	4.7	4.1	35.0	31.3	81.5
NG 1511B2RF	31,799	34.2	4.3	4.5	34.5	31.0	81.4
PHY 333WRF	33,105	34.3	3.3	4.0	36.5	30.7	81.6
ST 4747GLB2	34,412	29.8	5.3	3.8	35.8	27.9	79.9
Test average	32,110	34.2	4.4	4.1	35.6	30.5	81.0
CV, %	14.0	9.8	13.0	4.6	1.5	3.1	0.8
OSL	0.6994	0.0718	0.0291	0.0388	0.0038	0.0028	0.0274
LSD	NS	4.9†	1.0	0.3	0.9	1.7	1.1

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, † indicates significance at the 0.10 level, NS - not significant.

*Visual storm resistance scale: 1=loose, 9=tight.

Assumes:

Color grades set to 21, leaf grades set to 2 for entire trial.

Table 12. Harvest results from the Washita County dryland RACE trial, Danny Davis Farm, Elk City, OK, 2014.

Entry	Lint turnout	Seed turnout	Bur cotton yield	Lint yield	Seed yield	Lint loan value	Lint value	Seed value	Total value	Ginning cost	Seed/tech cost	Net value
	----- % -----		----- lb/acre -----			--\$/lb--			----- \$/acre -----			
ST 4946GLB2	38.0	50.0	1460	555	730	0.4875	271	62	333	44	44	244 a
GC DP 1410B2RF	35.0	47.4	1321	461	627	0.4960	229	53	282	40	42	201 b
PHY 339WRF	35.1	45.8	1298	455	594	0.5045	230	51	280	39	42	200 b
NG 1511B2RF	37.8	47.1	1237	467	582	0.4842	226	50	276	37	40	198 bc
DP 1044B2RF	36.3	50.6	1266	459	641	0.4640	213	54	267	38	39	190 bc
FM 1830GLT	36.8	47.7	1098	404	524	0.5080	205	45	250	33	44	172 c
Test average	36.5	48.1	1280	467	616	0.4907	229	52	281	38	42	201
CV, %	3.3	2.1	5.5	5.4	5.6	2.8	6.2	5.3	5.8	5.8	--	7.4
OSL	0.0434	0.0012	0.0022	0.0008	0.0004	0.0286	0.0033	0.0004	0.0022	0.0026	--	0.0033
LSD	2.2	1.8	127	46	60	0.0251	26	5	30	4	--	27

For net value/acre, means within a column with the same letter are not significantly different.

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, † indicates significance at the 0.10 level, NS - not significant.

Note: some columns may not add up due to rounding error.

Assumes:

\$3.00/cwt ginning cost.

\$170/ton for seed.

Value for lint based on CCC loan value from grab samples and FBRI HVI results.

Color grades set to 21, leaf grades set to 2 for entire trial.

Table 13. Harvest results from the Washita County dryland RACE trial, Danny Davis Farm, Elk City, OK, 2014.

Entry	Final population	Final plant height	Storm resistance	Micronaire	Staple	Strength	Uniformity
	plants/acre	inches	1-9 visual scale*	units	32nds inch	g/tex	%
DP 1044B2RF	16,988	29.9	5.0	5.0	31.0	29.3	78.7
FM 1830GLT	20,909	28.6	4.3	4.2	33.0	28.8	78.8
GC DP 1410B2RF	20,909	29.5	5.0	4.2	32.5	28.2	77.6
NG 1511B2RF	20,473	32.1	5.3	4.5	31.6	29.6	78.7
PHY 339WRF	21,780	34.3	4.7	3.7	32.5	30.6	78.6
ST 4946GLB2	20,473	29.7	6.0	4.2	30.8	29.3	79.2
Test average	20,255	30.7	5.1	4.3	31.9	29.3	78.6
CV, %	7.0	4.5	9.3	5.3	1.9	2.8	1.4
OSL	0.0256	0.0044	0.0215	0.0009	0.0061	0.0819	0.6133
LSD	2,568	2.5	0.9	0.4	1.1	1.2 †	NS

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, † indicates significance at the 0.10 level, NS - not significant.

*Visual storm resistance scale: 1=loose, 9=tight.

Assumes:

Color grades set to 21, leaf grades set to 2 for entire trial.

Table 14. Harvest results from the Tillman County dryland RACE trial, Roger Fischer Farm, Hollister, OK, 2014.

Entry	Lint turnout	Seed turnout	Bur cotton yield	Lint yield	Seed yield	Lint loan value	Lint value	Seed value	Total value	Ginning cost	Seed/tech cost	Net value
	----- % -----		----- lb/acre -----			--\$/lb--			----- \$/acre -----			
NG 1511B2RF	37.0	49.3	1809	669	892	0.4678	313	76	389	54	37	297 a
GC DP 1321B2RF	37.0	48.8	1686	624	823	0.4983	311	70	381	50	40	290 a
DP 1044B2RF	34.0	48.3	1907	648	921	0.4662	302	78	380	57	37	286 a
PHY 499WRF	37.2	48.3	1688	628	816	0.4840	303	69	373	51	39	284 a
ST 4946GLB2	34.4	50.0	1807	622	904	0.4613	287	77	364	54	41	269 a
FM 2334GLT	34.8	45.9	1508	525	691	0.4843	255	59	313	45	41	227 b
Test average	35.7	48.4	1734	619	841	0.4770	295	71	367	52	39	276
CV, %	3.2	3.0	4.4	4.4	4.4	5.1	6.3	4.2	5.7	4.1	--	7.0
OSL	0.0143	0.0724	0.0012	0.0012	0.0002	0.4518	0.0266	0.0001	0.0128	0.0008	--	0.0118
LSD	2.1	2.2†	139	50	68	NS	34	5	38	4	--	35

For net value/acre, means within a column with the same letter are not significantly different.

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, † indicates significance at the 0.10 level, NS - not significant.

Note: some columns may not add up due to rounding error.

Assumes:

\$3.00/cwt ginning cost.

\$170/ton for seed.

Value for lint based on CCC loan value from grab samples and FBRI HVI results.

Color grades set to 21, leaf grades set to 2 for entire trial.

Table 15. Harvest results from the Tillman County dryland RACE trial, Roger Fischer Farm, Hollister, OK, 2014.

Entry	Final population	Final plant height	Storm resistance	Micronaire	Staple	Strength	Uniformity
	plants/acre	inches	1-9 visual scale*	units	32nds inch	g/tex	%
DP 1044B2RF	17,859	28.1	5.3	5.4	32.5	29.2	80.4
FM 2334GLT	16,988	26.3	4.3	5.3	34.3	28.5	80.8
GC DP 1321B2RF	16,988	30.6	5.0	5.3	32.1	29.3	79.5
NG 1511B2RF	17,424	29.4	5.0	5.3	32.4	29.2	79.3
PHY 499WRF	16,553	31.7	4.7	5.3	32.9	31.4	81.1
ST 4946GLB2	16,553	29.9	5.7	5.4	33.5	31.1	81.2
Test average	17,061	29.3	5.0	5.3	32.9	29.8	80.4
CV, %	5.9	6.3	9.7	1.4	2.9	4.4	1.4
OSL	0.5899	0.0560	0.0741	0.2269	0.1287	0.1215	0.2848
LSD	NS	2.7†	0.7†	NS	NS	NS	NS

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, † indicates significance at the 0.10 level, NS - not significant.

*Visual storm resistance scale: 1=loose, 9=tight.

Assumes:

Color grades set to 21, leaf grades set to 2 for entire trial.

Table 16. Harvest results from the Jackson County dryland RACE trial, Clint Abernathy Farm, Altus, OK, 2014.

Entry	Lint turnout	Seed turnout	Bur cotton yield	Lint yield	Seed yield	Lint loan value	Lint value	Seed value	Total value	Ginning cost	Seed/tech cost	Net value
	----- % -----		----- lb/acre -----			--\$/lb--			----- \$/acre -----			
DP 1044B2RF	34.3	52.5	1861	638	977	0.5117	327	83	410	56	40	314 a
NG 1511B2RF	37.5	49.7	1519	570	755	0.4812	273	64	338	45	40	252 b
PHY 499WRF	36.0	48.6	1540	554	748	0.4945	275	64	338	46	42	250 b
FM 2334GLT	38.6	51.1	1347	520	688	0.5323	277	59	335	40	45	250 b
ST 4946GLB2	36.2	52.4	1497	542	784	0.4972	269	67	336	45	45	247 b
GC DP 104B2RF	31.1	54.0	1305	406	703	0.5133	208	60	268	39	40	190 c
Test average	35.6	51.4	1511	538	776	0.5050	272	66	338	45	42	250
CV, %	4.2	4.9	4.1	4.2	4.1	2.8	4.6	4.1	4.4	4.3	--	5.3
OSL	0.0012	0.1857	<0.0001	<0.0001	<0.0001	0.0172	<0.0001	<0.0001	<0.0001	<0.0001	--	<0.0001
LSD	2.7	NS	113	41	58	0.0258	23	5	27	4	--	24

For net value/acre, means within a column with the same letter are not significantly different.

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, † indicates significance at the 0.10 level, NS - not significant.

Note: some columns may not add up due to rounding error.

Assumes:

\$3.00/cwt ginning cost.

\$170/ton for seed.

Value for lint based on CCC loan value from grab samples and FBRI HVI results.

Color grades set to 21, leaf grades set to 2 for entire trial.

Table 17. Harvest results from the Jackson County dryland RACE trial, Clint Abernathy Farm, Altus, OK, 2014.

Entry	Final population	Final plant height	Storm resistance	Micronaire	Staple	Strength	Uniformity
	plants/acre	inches	1-9 visual scale*	units	32nds inch	g/tex	%
DP 1044B2RF	22,468	27.7	8.0	5.0	33.9	30.7	81.4
FM 2334GLT	23,844	23.1	6.7	5.2	34.8	30.5	81.4
GC DP 104B2RF	24,761	24.2	7.0	4.7	32.6	31.5	81.7
NG 1511B2RF	23,385	29.8	6.0	5.1	32.7	31.2	80.1
PHY 499WRF	26,481	27.9	7.0	5.2	33.3	31.8	81.2
ST 4946GLB2	23,385	26.4	7.3	5.2	33.8	31.4	81.6
Test average	24,054	26.5	7.0	5.1	33.5	31.2	81.2
CV, %	6.2	6.8	10.1	2.7	1.2	2.5	0.5
OSL	0.0908	0.0090	0.0877	0.0066	0.0006	0.3783	0.0093
LSD	2219†	3.3	1.0†	0.3	0.7	NS	0.8

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, † indicates significance at the 0.10 level, NS - not significant.

*Visual storm resistance scale: 1=loose, 9=tight.

Assumes:

Color grades set to 21, leaf grades set to 2 for entire trial.

Table 18. Lint yield results from the Extension irrigated RACE trials, 2014.

County ==>	Beckham	Jackson	Tillman	Custer	Harmon	3-Site
Irrigation Type ==>	Pivot	Furrow	Furrow	Pivot	Drip	Mean
Location ==>	Delhi	Duke	Tipton	Hydro	Hollis	for Common
Cooperator ==>	Damron	Darby	McCullough	Schantz	Cox	Entries
Entry	----- Lint yield (lb/acre) -----					
CG 3787 B2RF	1696	1157	1397	1147	1914	1417
DP 0912 B2RF	--	--	--	1207	--	
DP 1044 B2RF	--	--	--	1135	1715	
DP 1219 B2RF	1682	1309	1547	--	1668	1513
DP 1321 B2RF	--	--	--	1297	1915	
DP 1359 B2RF	--	1359	--	--	--	
FM 1740 B2F	--	--	--	1305	1830	
FM 1830 GLT	1739	--	--	1436	--	
FM 2334 GLT	--	1346	1589	--	1922	
NG 1511 B2RF	1965	1297	1366	1396	1956	1543
PHY 333 WRF	1891	1383	1364	--	2093	1546
PHY 339 WRF	--	--	--	1273	--	
PHY 499 WRF	1881	--	1450	1082	1901	
ST 4747 GLB2	1497	--	--	1211	--	
ST 4946 GLB2	--	1442	1477	--	2010	
Test average	1764	1328	1456	1249	1892	1505
CV, %	3.9	5.0	8.5	10.6	2.9	
OSL	<0.0001	0.0065	0.2510	0.0712	<0.0001	
LSD	121	118	NS	187†	94	

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, † indicates significance at the 0.10 level, NS - not significant.

Table 19. Storm resistance results from the Extension irrigated RACE trials, 2014.

County ==>	Beckham	Jackson	Tillman	Custer	Harmon	3-Site
Irrigation Type ==>	Pivot	Furrow	Furrow	Pivot	Drip	Mean
Location ==>	Delhi	Duke	Tipton	Hydro	Hollis	for Common
Cooperator ==>	Damron	Darby	McCullough	Schantz	Cox	Entries
Entry	----- Storm resistance (visual rating: 1 loose, 9 tight) -----					
CG 3787 B2RF	4.7	5.3	5.3	6.0	3.3	5.1
DP 0912 B2RF	--	--	--	4.7	--	
DP 1044 B2RF	--	--	--	5.7	5.3	
DP 1219 B2RF	4.0	4.7	4.3	--	2.7	4.3
DP 1321 B2RF	--	--	--	5.7	2.3	
DP 1359 B2RF	--	6.0	--	--	--	
FM 1740 B2F	--	--	--	4.7	4.3	
FM 1830 GLT	4.3	--	--	4.7	--	
FM 2334 GLT	--	5.3	5.7	--	4.0	
NG 1511 B2RF	4.3	4.7	4.7	5.7	3.0	4.6
PHY 333 WRF	3.3	5.0	5.3	--	5.3	4.5
PHY 339 WRF	--	--	--	3.7	--	
PHY 499 WRF	4.7	--	5.0	4.7	3.3	
ST 4747 GLB2	5.3	--	--	4.3	--	
ST 4946 GLB2	--	6.3	7.7	--	5.7	
Test average	4.4	5.3	5.4	5.0	3.9	4.6
CV, %	13.0	9.3	9.4	11.6	13.7	
OSL	0.0291	0.0089	0.0001	0.0017	<0.0001	
LSD	1.0	0.9	0.9	1.0	0.9	

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level.

Table 20. Plant height results from the Extension irrigated RACE trials, 2014.

County ==>	Beckham	Jackson	Tillman	Custer	Harmon	3-Site
Irrigation Type ==>	Pivot	Furrow	Furrow	Pivot	Drip	Mean
Location ==>	Delhi	Duke	Tipton	Hydro	Hollis	for Common
Cooperator ==>	Damron	Darby	McCullough	Schantz	Cox	Entries
Entry	----- Plant height (inches) -----					
CG 3787 B2RF	35.1	29.1	33.9	36.5	42.6	32.7
DP 0912 B2RF	--	--	--	35.6	--	
DP 1044 B2RF	--	--	--	34.6	39.8	
DP 1219 B2RF	36.7	31.3	33.2	--	48.2	33.7
DP 1321 B2RF	--	--	--	35.9	40.1	
DP 1359 B2RF	--	30.9	--	--	--	
FM 1740 B2F	--	--	--	34.0	36.0	
FM 1830 GLT	30.6	--	--	30.7	--	
FM 2334 GLT	--	30.6	29.7	--	33.3	
NG 1511 B2RF	34.2	30.1	31.5	31.8	40.2	31.9
PHY 333 WRF	34.3	30.2	34.7	--	41.6	33.1
PHY 339 WRF	--	--	--	38.5	--	
PHY 499 WRF	38.6	--	34.0	39.9	45.4	
ST 4747 GLB2	29.8	--	--	36.8	--	
ST 4946 GLB2	--	28.4	30.4	--	42.6	
Test average	34.2	30.1	32.5	35.4	41.0	32.9
CV, %	9.8	8.5	4.1	7.9	5.9	
OSL	0.0718	0.8162	0.0029	0.0220	<0.0001	
LSD	4.9†	NS	2.4	4.8	4.2	

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, † indicates significance at the 0.10 level, NS - not significant.

Table 21. Loan value results from the Extension irrigated RACE trials, 2014.

County ==>	Beckham	Jackson	Tillman	Custer	Harmon	3-Site
Irrigation Type ==>	Pivot	Furrow	Furrow	Pivot	Drip	Mean
Location ==>	Delhi	Duke	Tipton	Hydro	Hollis	for Common
Cooperator ==>	Damron	Darby	McCullough	Schantz	Cox	Entries
Entry	----- Loan value (\$/lb) -----					
CG 3787 B2RF	0.5720	0.5443	0.5777	0.5218	0.5763	0.5647
DP 0912 B2RF	--	--	--	0.5275	--	
DP 1044 B2RF	--	--	--	0.4993	0.5618	
DP 1219 B2RF	0.5720	0.5495	0.5758	--	0.5518	0.5658
DP 1321 B2RF	--	--	--	0.5320	0.5798	
DP 1359 B2RF	--	0.5582	--	--	--	
FM 1740 B2F	--	--	--	0.5027	0.5747	
FM 1830 GLT	0.5792	--	--	0.5615	--	
FM 2334 GLT	--	0.5758	0.5815	--	0.5810	
NG 1511 B2RF	0.5578	0.5048	0.5623	0.4933	0.5798	0.5416
PHY 333 WRF	0.5798	0.5600	0.5752	--	0.5785	0.5717
PHY 339 WRF	--	--	--	0.5440	--	
PHY 499 WRF	0.5630	--	0.5747	0.5067	0.5803	
ST 4747 GLB2	0.5660	--	--	0.5220	--	
ST 4946 GLB2	--	0.5453	0.5785	--	0.5753	
Test average	0.5700	0.5483	0.5751	0.5211	0.5739	0.5609
CV, %	1.8	3.3	1.5	3.9	1.7	
OSL	0.1720	0.0149	0.2431	0.0133	0.0289	
LSD	NS	0.0326	NS	0.0345	0.1690	

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, NS - not significant.

Note: Color grades set to 21, leaf grades set to 2 for entire trial.

Table 22. Net value results from the Extension irrigated RACE trials, 2014.

County ==>	Beckham	Jackson	Tillman	Custer	Harmon	3-Site
Irrigation Type ==>	Pivot	Furrow	Furrow	Pivot	Drip	Mean
Location ==>	Delhi	Duke	Tipton	Hydro	Hollis	for Common
Cooperator ==>	Damron	Darby	McCullough	Schantz	Cox	Entries
Entry	----- Net value (\$/acre) -----					
CG 3787 B2RF	972	585	804	565	1088	787
DP 0912 B2RF	--	--	--	607	--	
DP 1044 B2RF	--	--	--	547	986	
DP 1219 B2RF	963	691	911	--	924	855
DP 1321 B2RF	--	--	--	659	1105	
DP 1359 B2RF	--	717	--	--	--	
FM 1740 B2F	--	--	--	637	1023	
FM 1830 GLT	996	--	--	772	--	
FM 2334 GLT	--	729	925	--	1097	
NG 1511 B2RF	1099	609	764	670	1114	824
PHY 333 WRF	1105	733	777	--	1218	872
PHY 339 WRF	--	--	--	664	--	
PHY 499 WRF	1065	--	832	507	1094	
ST 4747 GLB2	830	--	--	601	--	
ST 4946 GLB2	--	750	857	--	1176	
Test average	1004	688	839	623	1083	834
CV, %	4.7	7.9	9.7	13.6	3.3	
OSL	0.0001	0.0152	0.1866	0.0585	<0.0001	
LSD	83	96	NS	120 †	61	

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, † indicates significance at the 0.10 level, NS - not significant.

Table 23. Micronaire results from the Extension irrigated RACE trials, 2014.

County ==>	Beckham	Jackson	Tillman	Custer	Harmon	3-Site
Irrigation Type ==>	Pivot	Furrow	Furrow	Pivot	Drip	Mean
Location ==>	Delhi	Duke	Tipton	Hydro	Hollis	for Common
Cooperator ==>	Damron	Darby	McCullough	Schantz	Cox	Entries
Entry	----- Micronaire (units) -----					
CG 3787 B2RF	4.1	4.7	4.5	4.6	3.8	4.4
DP 0912 B2RF	--	--	--	4.7	--	
DP 1044 B2RF	--	--	--	4.4	3.4	
DP 1219 B2RF	4.0	4.5	4.3	--	3.2	4.3
DP 1321 B2RF	--	--	--	4.7	3.9	
DP 1359 B2RF	--	4.7	--	--	--	
FM 1740 B2F	--	--	--	4.2	3.8	
FM 1830 GLT	4.1	--	--	4.2	--	
FM 2334 GLT	--	4.8	4.5	--	3.8	
NG 1511 B2RF	4.5	4.9	4.5	4.6	4.0	4.6
PHY 333 WRF	4.0	4.5	4.3	--	3.8	4.3
PHY 339 WRF	--	--	--	3.6	--	
PHY 499 WRF	4.1	--	4.5	4.2	3.6	
ST 4747 GLB2	3.8	--	--	3.8	--	
ST 4946 GLB2	--	4.8	4.5	--	3.8	
Test average	4.1	4.7	4.4	4.3	3.7	4.4
CV, %	4.6	2.7	5.0	5.4	4.5	
OSL	0.0388	0.0141	0.6250	0.0002	0.0013	
LSD	0.3	0.2	NS	0.4	0.3	

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, NS - not significant.

Table 24. Staple results from the Extension irrigated RACE trials, 2014.

County ==>	Beckham	Jackson	Tillman	Custer	Harmon	3-Site
Irrigation Type ==>	Pivot	Furrow	Furrow	Pivot	Drip	Mean
Location ==>	Delhi	Duke	Tipton	Hydro	Hollis	for Common
Cooperator ==>	Damron	Darby	McCullough	Schantz	Cox	Entries
Entry	----- Staple (32nds inch) -----					
CG 3787 B2RF	35.8	34.4	36.2	33.1	36.6	35.5
DP 0912 B2RF	--	--	--	33.6	--	
DP 1044 B2RF	--	--	--	32.2	36.0	
DP 1219 B2RF	35.4	34.8	36.2	--	37.4	35.5
DP 1321 B2RF	--	--	--	33.6	36.8	
DP 1359 B2RF	--	35.1	--	--	--	
FM 1740 B2F	--	--	--	32.5	35.7	
FM 1830 GLT	36.5	--	--	35.3	--	
FM 2334 GLT	--	36.5	38.5	--	38.1	
NG 1511 B2RF	34.5	33.0	35.0	32.0	36.6	34.2
PHY 333 WRF	36.5	34.9	36.5	--	37.8	36.0
PHY 339 WRF	--	--	--	34.8	--	
PHY 499 WRF	35.0	--	35.5	32.7	36.8	
ST 4747 GLB2	35.8	--	--	34.3	--	
ST 4946 GLB2	--	34.3	36.1	--	36.2	
Test average	35.6	34.7	36.3	33.4	36.8	35.3
CV, %	1.5	2.1	2.3	2.3	1.2	
OSL	0.0038	0.0037	0.0066	0.0005	<0.0001	
LSD	0.9	1.3	1.5	1.3	0.8	

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level.

Table 25. Strength results from the Extension irrigated RACE trials, 2014.

County ==>	Beckham	Jackson	Tillman	Custer	Harmon	3-Site
Irrigation Type ==>	Pivot	Furrow	Furrow	Pivot	Drip	Mean
Location ==>	Delhi	Duke	Tipton	Hydro	Hollis	for Common
Cooperator ==>	Damron	Darby	McCullough	Schantz	Cox	Entries
Entry	----- Strength (g/tex) -----					
CG 3787 B2RF	29.4	27.0	30.7	28.6	28.3	29.0
DP 0912 B2RF	--	--	--	28.6	--	
DP 1044 B2RF	--	--	--	28.3	28.9	
DP 1219 B2RF	31.5	30.4	33.2	--	30.3	31.7
DP 1321 B2RF	--	--	--	30.1	30.1	
DP 1359 B2RF	--	31.1	--	--	--	
FM 1740 B2F	--	--	--	28.3	28.9	
FM 1830 GLT	32.0	--	--	29.9	--	
FM 2334 GLT	--	29.6	32.4	--	30.7	
NG 1511 B2RF	31.0	29.4	31.3	29.4	30.7	30.6
PHY 333 WRF	30.7	28.2	31.2	--	29.6	30.0
PHY 339 WRF	--	--	--	30.4	--	
PHY 499 WRF	31.3	--	31.9	30.5	31.0	
ST 4747 GLB2	27.9	--	--	25.7	--	
ST 4946 GLB2	--	30.2	32.8	--	29.3	
Test average	30.5	29.4	31.9	29.0	29.8	30.3
CV, %	3.1	3.6	3.2	3.4	2.4	
OSL	0.0028	0.0065	0.0875	0.0005	0.0023	
LSD	1.7	1.9	1.5†	1.7	1.3	

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, NS - not significant.

Table 26. Uniformity results from the Extension irrigated RACE trials, 201.

County ==>	Beckham	Jackson	Tillman	Custer	Harmon	3-Site
Irrigation Type ==>	Pivot	Furrow	Furrow	Pivot	Drip	Mean
Location ==>	Delhi	Duke	Tipton	Hydro	Hollis	for Common
Cooperator ==>	Damron	Darby	McCullough	Schantz	Cox	Entries
Entry	----- Uniformity (%) -----					
CG 3787 B2RF	81.4	80.9	82.2	80.3	82.2	81.5
DP 0912 B2RF	--	--	--	80.7	--	
DP 1044 B2RF	--	--	--	80.1	80.9	
DP 1219 B2RF	80.1	80.2	81.2	--	80.0	80.5
DP 1321 B2RF	--	--	--	80.8	82.1	
DP 1359 B2RF	--	80.8	--	--	--	
FM 1740 B2F	--	--	--	79.4	81.4	
FM 1830 GLT	81.0	--	--	80.7	--	
FM 2334 GLT	--	82.0	82.7	--	82.1	
NG 1511 B2RF	81.4	81.0	81.9	79.0	82.6	81.4
PHY 333 WRF	81.6	80.5	81.8	--	82.0	81.3
PHY 339 WRF	--	--	--	80.2	--	
PHY 499 WRF	81.5	--	82.3	79.0	82.5	
ST 4747 GLB2	79.9	--	--	78.2	--	
ST 4946 GLB2	--	80.5	82.5	--	81.4	
Test average	81.0	80.8	82.1	79.8	81.7	81.2
CV, %	0.8	1.2	0.9	1.0	0.9	
OSL	0.0274	0.4019	0.2986	0.014	0.0066	
LSD	1.1	NS	NS	1.4	1.2	

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, NS - not significant.

Table 27. Lint yield results from the Extension dryland RACE trials, 2014.

County ==>	Washita	Jackson	Tillman	3-Site Mean
Location ==>	Elk City	Altus	Hollister	for Common
Cooperator ==>	Davis	Abernathy	Fischer	Entries
Entry	----- Lint yield (lb/acre) -----			
DP 104 B2RF	--	406	--	
DP 1044 B2RF	459	638	648	582
DP 1321 B2RF	--	--	624	
DP 1410 B2RF	461	--	--	
FM 1830 GLT	404	--	--	
FM 2334 GLT	--	520	525	
NG 1511 B2RF	467	570	669	569
PHY 339 WRF	455	--	--	
PHY 499 WRF	--	554	628	
ST 4946 GLB2	555	542	622	573
Test average	467	538	619	574
CV, %	5.4	4.2	4.4	
OSL	0.0008	<0.0001	0.0012	
LSD	46	41	50	

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level.

Table 28. Storm resistance results from the Extension dryland RACE trials, 2014.

County ==>	Washita	Jackson	Tillman	3-Site Mean
Location ==>	Elk City	Altus	Hollister	for Common
Cooperator ==>	Davis	Abernathy	Fischer	Entries
Entry	----- Storm resistance (visual rating: 1 loose, 9 tight) -----			
DP 104 B2RF	--	7.0	--	
DP 1044 B2RF	5.0	8.0	5.3	6.1
DP 1321 B2RF	--	--	5.0	
DP 1410 B2RF	5.0	--	--	
FM 1830 GLT	4.3	--	--	
FM 2334 GLT	--	6.7	4.3	
NG 1511 B2RF	5.3	6.0	5.0	5.4
PHY 339 WRF	4.7	--	--	
PHY 499 WRF	--	7.0	4.7	
ST 4946 GLB2	6.0	7.3	5.7	6.3
Test average	5.1	7.0	5.0	6.0
CV, %	9.3	10.1	9.7	
OSL	0.0215	0.0877	0.0741	
LSD	0.9	1.0†	0.7†	

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, † indicates significance at the 0.10 level.

Table 29. Plant height results from the Extension dryland RACE trials, 2014.

County ==>	Washita	Jackson	Tillman	3-Site Mean
Location ==>	Davis	Altus	Hollister	for Common
Cooperator ==>	Elk City	Abernathy	Fischer	Entries
Entry	----- Plant height (inches) -----			
DP 104 B2RF	--	24.2	--	
DP 1044 B2RF	29.9	27.7	28.1	28.6
DP 1321 B2RF	--	--	30.6	
DP 1410 B2RF	29.5	--	--	
FM 1830 GLT	28.6	--	--	
FM 2334 GLT	--	23.1	26.3	
NG 1511 B2RF	32.1	29.8	29.4	30.4
PHY 339 WRF	34.3	--	--	
PHY 499 WRF	--	27.9	31.7	
ST 4946 GLB2	29.7	26.4	29.9	28.7
Test average	30.7	26.5	29.3	29.2
CV, %	4.5	6.8	6.3	
OSL	0.0044	0.0090	0.0560	
LSD	2.5	3.3	2.7†	

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, † indicates significance at the 0.10 level.

Table 30. Loan value results from the Extension dryland RACE trials, 2014.

County ==>	Washita	Jackson	Tillman	3-Site Mean
Location ==>	Elk City	Altus	Hollister	for Common
Cooperator ==>	Davis	Abernathy	Fischer	Entries
Entry	----- Loan value (\$/lb) -----			
DP 104 B2RF	--	0.5133	--	
DP 1044 B2RF	0.4640	0.5117	0.4662	0.4806
DP 1321 B2RF	--	--	0.4983	
DP 1410 B2RF	0.4960	--	--	
FM 1830 GLT	0.5080	--	--	
FM 2334 GLT	--	0.5323	0.4843	
NG 1511 B2RF	0.4842	0.4812	0.4678	0.4777
PHY 339 WRF	0.5045	--	--	
PHY 499 WRF	--	0.4945	0.4840	
ST 4946 GLB2	0.4875	0.4972	0.4613	0.4820
Test average	0.4907	0.5050	0.4770	0.4801
CV, %	2.8	2.8	5.1	
OSL	0.0286	0.0172	0.4518	
LSD	0.0251	0.0258	NS	

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, NS - not significant.

Note: Color grades set to 21, leaf grades set to 2 for entire trial.

Table 31. Net value results from the Extension dryland RACE trials, 2014.

County ==>	Washita	Jackson	Tillman	3-Site Mean
Location ==>	Elk City	Altus	Hollister	for Common
Cooperator ==>	Davis	Abernathy	Fischer	Entries
Entry	----- Net value (\$/acre) -----			
DP 104 B2RF	--	190	--	
DP 1044 B2RF	190	314	286	263
DP 1321 B2RF	--	--	290	
DP 1410 B2RF	201	--	--	
FM 1830 GLT	172	--	--	
FM 2334 GLT	--	250	227	
NG 1511 B2RF	198	252	297	249
PHY 339 WRF	200	--	--	
PHY 499 WRF	--	250	284	
ST 4946 GLB2	244	247	269	253
Test average	201	251	276	255
CV, %	7.4	5.3	7.0	
OSL	0.0033	<0.0001	0.0118	
LSD	27	24	35	

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level.

Table 32. Micronaire results from the Extension dryland RACE trials, 2014.

County ==>	Washita	Jackson	Tillman	3-Site Mean
Location ==>	Elk City	Altus	Hollister	for Common
Cooperator ==>	Davis	Abernathy	Fischer	Entries
Entry	----- Micronaire (units) -----			
DP 104 B2RF	--	4.7	--	
DP 1044 B2RF	5.0	5.0	5.4	5.1
DP 1321 B2RF	--	--	5.3	
DP 1410 B2RF	4.2	--	--	
FM 1830 GLT	4.2	--	--	
FM 2334 GLT	--	5.2	5.3	
NG 1511 B2RF	4.5	5.1	5.3	5.0
PHY 339 WRF	3.7	--	--	
PHY 499 WRF	--	5.2	5.3	
ST 4946 GLB2	4.2	5.2	5.4	4.9
Test average	4.3	5.1	5.3	5.0
CV, %	5.3	2.7	1.4	
OSL	0.0009	0.0066	0.2269	
LSD	0.4	0.3	NS	

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, NS - not significant.

Table 33. Staple results from the Extension dryland RACE trials, 2014.

County ==>	Washita	Jackson	Tillman	3-Site Mean
Location ==>	Elk City	Altus	Hollister	for Common
Cooperator ==>	Davis	Abernathy	Fischer	Entries
Entry	----- Staple (32nds inch) -----			
DP 104 B2RF	--	32.6	--	
DP 1044 B2RF	31.0	33.9	32.5	32.5
DP 1321 B2RF	--	--	32.1	
DP 1410 B2RF	32.5	--	--	
FM 1830 GLT	33.0	--	--	
FM 2334 GLT	--	34.8	34.3	
NG 1511 B2RF	31.6	32.7	32.4	32.2
PHY 339 WRF	32.5	--	--	
PHY 499 WRF	--	33.3	32.9	
ST 4946 GLB2	30.8	33.8	33.5	32.7
Test average	31.9	33.5	33.0	32.5
CV, %	1.9	1.2	2.9	
OSL	0.0061	0.0006	0.1287	
LSD	1.1	0.7	NS	

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, NS - not significant.

Table 34. Strength results from the Extension dryland RACE trials, 2014.

County ==>	Washita	Jackson	Tillman	3-Site Mean
Location ==>	Elk City	Altus	Hollister	for Common
Cooperator ==>	Davis	Abernathy	Fischer	Entries
Entry	----- Strength (g/tex) -----			
DP 104 B2RF	--	31.5	--	
DP 1044 B2RF	29.3	30.7	29.2	29.7
DP 1321 B2RF	--	--	29.3	
DP 1410 B2RF	28.2	--	--	
FM 1830 GLT	28.8	--	--	
FM 2334 GLT	--	30.5	28.5	
NG 1511 B2RF	29.6	31.2	29.2	30.0
PHY 339 WRF	30.6	--	--	
PHY 499 WRF	--	31.8	31.4	
ST 4946 GLB2	29.3	31.4	31.1	30.6
Test average	29.3	31.2	29.8	30.1
CV, %	2.8	2.5	4.4	
OSL	0.0819	0.3783	0.1215	
LSD	1.2 †	NS	NS	

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, † indicates significance at the 0.10 level, NS - not significant.

Table 35. Uniformity results from the Extension dryland RACE trials, 201.

County ==>	Washita	Jackson	Tillman	3-Site Mean
Location ==>	Elk City	Altus	Hollister	for Common
Cooperator ==>	Davis	Abernathy	Fischer	Entries
Entry	----- Uniformity (%) -----			
DP 104 B2RF	--	81.7	--	
DP 1044 B2RF	78.7	81.4	80.4	80.2
DP 1321 B2RF	--	--	79.5	
DP 1410 B2RF	77.6	--	--	
FM 1830 GLT	78.8	--	--	
FM 2334 GLT	--	81.4	80.8	
NG 1511 B2RF	78.7	80.1	79.3	79.4
PHY 339 WRF	78.6	--	--	
PHY 499 WRF	--	81.2	81.1	
ST 4946 GLB2	79.2	81.6	81.2	80.7
Test average	78.6	81.2	80.4	80.1
CV, %	1.4	0.5	1.4	
OSL	0.6133	0.0093	0.2848	
LSD	NS	0.8	NS	

CV - coefficient of variation.

OSL - observed significance level, or probability of a greater F value.

LSD - least significant difference at the 0.05 level, NS - not significant.