

2015 Texas Panhandle Cotton Variety Trials



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2015 Texas Panhandle Cotton Variety Trials

While variety selection is one of the most important decisions a producer makes in all cotton producing regions, cotton varietal selection in the northern Texas Panhandle counties can be especially challenging as a result of a narrow production window between planting and harvest. The Northern Texas Panhandle cotton production is generally limited by sufficient growing degree days (GDD) to drive the maturation of long-season cotton varieties. Uniform germination and timely establishment are essential for adequate GDD accumulation and yield optimization; however, the combined effect of cool spring temperatures and a short growing season often results in reductions in early season vigor and seasonal GDD accumulation. Commonly, early and medium maturity varieties that are better adapted to the region's short growing season are planted, but these varieties are also susceptible to non-ideal conditions at planting resulting in poor germination and vigor. Consequently, knowledge of varietal performance under Texas Panhandle environmental conditions is critical to maximize net return. Early to mid-season varieties are well positioned for this cotton region. Early and medium maturing varieties have a shorter bloom period and are generally more determinant than full season varieties. As a result, early maturing varieties are less able to recover from in-season stress; specifically severe weather that results in the need for average storm tolerance. The objective of this project was to evaluate the profitability of newer early- and medium- maturing cotton varieties grown in large-plot, on-farm trials under Texas Panhandle environmental conditions and production practices.

Materials and Methods

Varieties were planted in a randomized complete block design with three replications at three locations. Varieties and characteristics are outlined in Table 1. The 2015 trials were located in Gray County (Pampa) with Ryan Davis, Hartley County (Middle Water) with Middlewater Farms, and Sherman County (Sunray) with Tommy Carrite. The Hartley and Sherman County locations were under center pivot irrigation. The Pampa location did not receive supplemental irrigation. Agronomic practices including planting date and planting populations are outlined in Table 2. Weed and insect control measures, if needed, and harvest aid applications were performed by cooperating producers (Table 2). Plots were harvested using producer/cooperator equipment, and grab samples were taken by plot and were be ginned at the Texas A&M AgriLife Research and Extension Center at Lubbock. Resulting lint samples were submitted to the Texas Tech University – Fiber and Biopolymer Research Institute for HVI fiber analysis and CCC loan values were calculated for all locations. Yield and quality were evaluated for significant statistical differences. Statistical analyses represent the significance of the difference between varieties. A CV (coefficient of variation) describes the variability of the data with a target CV value of 15% or less. The LSD (least significant difference) describes the statistical difference between varieties with 95% confidence.

2015 Highlights

In the Texas Panhandle, cotton is typically planted in early- to mid- May as soil temperatures approach 65°F; however, the 2015 cotton planting was delayed as a result of above average spring precipitation and below average temperatures, which resulted in saturated field conditions and delayed the warming of soils. As planting became delayed, many producers evaluated crop alternatives resulting in a decline in 2015 northern Texas Panhandle cotton acreage. Cool, wet conditions coupled with low nighttime temperatures resulted in slow early season GDDs accumulated (Fig. 1-4) resulting in delays in both emergence and early-season development. Final stands are presented in Table 4. Final stand counts were greatest for all varieties at the Hartley County trial. The sandier soil at the Hartley location likely resulted warmer soil temperatures and more uniform emergence.

Above average in-season precipitation and sufficient heat unit accumulation significantly enhanced yields at all locations; however, severe weather that accompanied precipitation also affected production. In the month of November, the Pampa field site received 2.42 inches of precipitation of which was received in the form of severe weather. On November 16, several tornadoes passed through Gray County, and peak wind gusts in excess of 80 mph were recorded by the weather station located adjacent to the plots. A second precipitation event on November 26 was in the form of ice. As a result of late season, pre-harvest weather, all evaluated varieties were “strung out” to varying degrees, which may have resulted in pre-harvest lint loss. Plots were rated for storm tolerance using the standard rating of 1 to 9 with 1 being very loose, strung out of the bur and 9 being tight in the bur (Table 3).

Varieties ranked by lint yield (lb/ac) and net value (return/ac) are listed in Tables 5 and 6, respectively. While lint yield was greatest for Stoneville 4747GLB2 at the Sherman and Gray County trials, lint yield was not significantly different from other entries outlined in Tables 7 and 11 for Gray and Sherman Counties, respectively. At the Hartley County trial, lint yield was greatest for Deltapine 1212 B2RF although not significantly greater than all other entries except NexGen 3306B2RF. Detailed yield and quality results are presented for all locations in Tables 7-12.

Table 1. Variety Characteristics

Variety	Maturity	Herbicide Package	Leaf Type	Storm Resistance*	Plant Height	Mic
Deltapine 1212B2RF	Early	Roundup and Liberty	Light Hair	6	Med short - Med	4.5
Deltapine 1518B2XF	Early	Roundup and Liberty Glyphosateand Liberty	Light Hair	4	Med	4.1
FiberMax 1320GL	Very Early	Link	Semi-Smooth	7	Short	4.2
FiberMax 1830GLT	Early-Med	Glyphosate+ Liberty Link	Smooth	4.5	Med	4.2
FiberMax 1900GLT	Early-Med	Glyphosate+ Liberty Link	Semi-Smooth	7	Med	4.3
FiberMax 2011GT	Early	Glyphosate	Semi-Smooth	7	Short	4.2
NexGen 3306B2RF	Early-Med	Roundup ready Flex	Semi-Smooth	8	Med-Tall	4.0-4.7
PhytoGen 222WRF	Very Early	Roundup Ready Flex	Semi-Smooth	Excellent	Short	4.8
PhytoGen 333WRF	Early	Roundup Ready Flex	Hairy	Very Good	Med-Tall	4.5
PhytoGen 339WRF	Early	Roundup Ready Flex	Semi-Smooth	Fair	Tall	4.5
Stoneville 4747GLB2	Early-Med	Glyphosate	Semi-Smooth	7	Short	4.2

*Storm Resistance (1-9): 1=Loose Boll, 9=Tight Boll

Table 2. 2015 Agronomic information by location

County	Gray	Hartley	Sherman
Location	South of Pampa	NW of Middle Water	NE of Sunray
Latitude, Longitude	35.455964, -100.970357	35.869884, -102.833946	36.116158, -101.762699
Cooperator	Ryan Davis	Middlewater Farms	Tommy Cartrite
Soil Type	Pullman Clay Loam	Dallam Loamy Fine Sand	Sunray Loam
Irrigation (ac inches)	0	12	5.3
Precipitation (inches)	18.2	12.2	17.4
Heat Units	2140.3	2093	2031.2
Previous Crop	Grain Sorghum	Terminated Wheat	Corn
Planting Population	58000	55000	56000
Replications	3	3	3
Planting Date	6/2/2015	5/15/2015	5/18/2015
Varieties	-----	Deltapine 1212B2RF	Deltapine 1212B2RF
	-----	Deltapine 1518B2XF	Deltapine 1518B2XF
	FiberMax 1320GL	FiberMax 1320GL	FiberMax 1320GL
	FiberMax 1830GLT	FiberMax 1830GLT	FiberMax 1830GLT
	FiberMax 1900GLT	FiberMax 1900GLT	FiberMax 1900GLT
	FiberMax 2011GT	FiberMax 2011GT	FiberMax 2011GT
	NexGen 3306B2RF	NexGen 3306B2RF	NexGen 3306B2RF
	PhytoGen 222WRF	PhytoGen 222WRF	PhytoGen 222WRF
	PhytoGen 333WRF	PhytoGen 333WRF	PhytoGen 333WRF
	-----	PhytoGen 339WRF	PhytoGen 339WRF
Stoneville 4747GLB2	Stoneville 4747GLB2	Stoneville 4747GLB2	
Harvest Date	12/10/2015	11/13/2015	11/24/2015

Table 2 cont. Agronomic information by location.

County	Gray	Hartley	Sherman
Fertilizer	15 gal 10-28-0-4 at planting		-----
Pesticides & Application Date	4/4/15 Brash (1.5 pt/ac) + Afforia (2.5 oz/ac) + Destiny (2.66 oz/ac)		4/2/2015 Valor (2 oz/ac)+WeedMaster (1 pt/ac) + (AMS (18 lbs/100gal) + High Load* (1/2 pt/ac)
	-----		5/28/2015 Warrant (1.5 qt/ac) + RT3 (32 oz/ac) + AMS 21.9 lbs/100 gal) + High Load (1 gal/100gal)
	6/28/2015 Acephate (4 oz/ac) + Shadow (8 oz/ac) + Roundup (32 oz/ac) + Destiny (4 oz/ac) + Crosshair (2 oz/ac)		6/18/2015 Acephate (4.6 oz/ac) + AMS (18.2 lbs/ac) + PowerMax (32 oz/ac) + CrossHair (4 oz/ac)
	-----		6/25/2015 Acephate (4.6 oz/ac)
PGR & Application Date	8/6/15 Combust†(1.6 pt/ac) + Roundup (22 oz/ac) + Pentia (8 oz/ac)		8/6/2017 Stance (4 oz/ac)
	-----		8/27/2015 Mep-Star (32 oz/ac)
Date of Harvest Aid Application	10/15/2015		10/23/2015
Harvest Aid	Ethephon (32 oz/ac) + Folex (16 oz/ac) + MSO (4 oz/ac)	Prep 6EC (32 oz) + Def-6 (8 oz)	Setup-65L (3 pts/ac) + R-11 (0.9 oz/ac) + Super Boll (6 oz/ac)

* High Load is a high surfactant, nonionic emulsifiable crop oil concentrate.

† Combust is an AMS replacement product.

Table 3. Storm tolerance ratings at Gray County, Pampa, Texas on 12/10/2015.

Variety	Storm Tolerance Score*
FiberMax 1320GL	6.8
FiberMax 1830GLT	3.0
FiberMax 1900GLT	5.5
FiberMax 2011GT	8.0
NexGen 3306B2RF	2.2
PhytoGen 222WRF	3.7
PhytoGen 333WRF	4.0
Stoneville 4747GLB2	4.8

*Storm Resistance (1-9): 1=Loose
Boll, 9=Tight Boll

Table 4. 2015 Stand counts for all locations.

Variety	Gray County, Pampa, TX		Hartley County, Middlewater, TX		Sherman County, Sunray, TX		% of Planted Population (56,000 seeds/ac)		
	Stand Count (plants/ac)	% of Planted Population (58,000 seeds/ac)	Stand Count (plants/ac)	% of Planted Population (55,000 seeds/ac)	Stand Count (plants/ac)				
Deltapine 1212B2RF	---		41818	a	0.76	35429	b	0.63	
Deltapine 1518B2XF	---		43270	a	0.79	41237	ab	0.74	
FiberMax 1320GL	30492	b	0.53	42689	a	0.78	35429	b	0.63
FiberMax 1830GLT	29911	b	0.52	39785	a	0.72	36590	ab	0.65
FiberMax 1900 GLT	37171	ab	0.64	39494	a	0.72	37752	ab	0.67
FiberMax 2011GT	31073	b	0.54	40075	a	0.73	38623	ab	0.69
NexGen 3306B2RF	36010	ab	0.62	42108	a	0.77	35719	ab	0.64
PhytoGen 222WRF	31654	b	0.55	36300	a	0.66	35138	b	0.63
PhytoGen 333WRF	31650	b	0.55	43270	a	0.79	36010	ab	0.64
PhytoGen 339WRF	---			41818	a	0.76	35429	b	0.63
Stoneville 4747GLB2	40075	a	0.69	42400	a	0.77	42398	a	0.76
Test Average	33505		0.58	41184		0.75	37250		0.67
CV, %	0.13			0.09			0.08		
OSL	0.10			0.83			0.35		
LSD	7708			8194			6746		

Table 5. 2015 Varieties ranked by lint yield (lb/ac).

Variety	Gray County, Pampa, TX		Hartley County, Middlewater, TX		Sherman County, Sunray, TX	
	Rank	Lint Yield (lb/ac)	Rank	Lint Yield (lb/ac)	Rank	Lint Yield (lb/ac)
Deltapine 1212B2RF		-----	1	1798	7	1319
Deltapine 1518B2XF		-----	3	1730	3	1417
FiberMax 1320GL	4	1073	5	1707	8	1237
FiberMax 1830GLT	6	1029	9	1650	11	1087
FiberMax 1900 GLT	8	915	8	1671	4	1392
FiberMax 2011GT	2	1106	4	1724	5	1358
NexGen 3306B2RF	7	990	11	1568	10	1160
PhytoGen 222WRF	5	1031	10	1634	2	1443
PhytoGen 333WRF	3	1090	2	1774	6	1347
PhytoGen 339WRF		-----	6	1707	9	1236
Stoneville 4747GLB2	1	1118	7	1684	1	1509

Table 6. 2015 Varieties ranked by net return (\$/ac).

Variety	Gray County, Pampa, TX		Hartley County, Middlewater, TX		Sherman County, Sunray, TX	
	Rank	Net Value (\$/ac)	Rank	Net Value (\$/ac)	Rank	Net Value (\$/ac)
Deltapine 1212B2RF		-----	2	1100.50	7	775.27
Deltapine 1518B2XF		-----	5	1045.82	4	810.06
FiberMax 1320GL	1	610.18	4	1049.90	9	689.80
FiberMax 1830GLT	6	578.50	10	980.00	11	586.82
FiberMax 1900 GLT	8	470.77	9	1010.96	6	787.00
FiberMax 2011GT	3	584.74	3	1060.69	3	825.53
NexGen 3306B2RF	5	583.42	11	976.71	10	652.62
PhytoGen 222WRF	7	569.24	8	1013.57	2	848.89
PhytoGen 333WRF	2	597.38	1	1116.54	5	807.88
PhytoGen 339WRF		-----	6	1044.66	8	706.34
Stoneville 4747GLB2	4	584.10	7	1016.05	1	883.07

Table 7. 2015 Harvest results from the Dryland Cotton Variety Trial, Ryan Davis Farm, Gray County, Pampa, Texas.

Variety	Lint turnout ----- % -----	Seed turnout	Bur cotton yield	Lint yield ----- lb/acre -----		Seed yield	Lint loan value ----- \$/lb -----	Lint value	Seed value	Total value	Ginning cost ----- \$/acre -----	Seed/Tech cost	Net value
FiberMax 1320GL	33.9	49.2	3161	1073	ab	1556	0.55	590.68	194.47	785.16	94.84	80.15	610.18 a
FiberMax 1830GLT	37.4	48.6	2756	1029	ab	1339	0.57	585.53	167.39	752.92	82.67	91.75	578.50 a
FiberMax 1900 GLT	30.0	45.4	3047	915	c	1383	0.53	483.16	172.88	656.04	91.41	93.85	470.77 b
FiberMax 2011GT	34.9	44.5	3170	1106	a	1410	0.52	578.70	176.26	754.97	95.10	75.14	584.74 a
NexGen 3306B2RF	33.7	55.8	2932	990	cb	1636	0.56	549.84	204.46	754.30	87.97	82.91	583.42 a
PhytoGen 222WRF	32.5	51.1	3175	1031	ab	1623	0.53	547.28	202.90	750.19	95.26	85.69	569.24 a
PhytoGen 333WRF	33.9	49.2	3213	1090	a	1581	0.53	581.84	197.61	779.45	96.38	85.69	597.38 a
Stoneville 4747GLB2	35.4	50.8	3156	1118	a	1602	0.51	570.13	200.31	770.44	94.67	91.67	584.10 a
Trial average	34.0	49.3	3076	1044		1516	0.54	560.90	189.53	750.43	92.29	85.86	572.29
CV, %	7.1	8.4	5.0	5.0		5.0	2.9	5.0	5.0	5.0	5.0	--	5.7
OSL	0.0834†	0.1021	0.0323	0.0050		0.0009	0.0082	0.0063	0.0009	0.0223	0.0323	--	0.0047
LSD	3.5	NS	270	92		134	0.0276	48.92	16.70	65.57	8.11	--	57.47

For lint yield and net value/acre, means within a column with the same letter are not significantly different at the 0.05 probability level.

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.

\$250/ton for seed.

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

Table 8. 2015 HVI fiber property results from the Dryland Cotton Variety Trial, Ryan Davis Farm, Gray County, Pampa, Texas.

Entry	Micronaire	Staple	Uniformity	Strength	Elongation	Leaf	Rd	+b	Color grade	
	units	32 ^{nds} inch	%	g/tex	%	grade	reflectance	yellowness	color 1	color 2
FiberMax 1320GL	3.7 a	35.9	81.0	30.7	7.3	4.0	78.5	7.2	3.0	1.0
FiberMax 1830GLT	3.7 a	37.8	80.7	30.3	6.0	2.7	80.8	6.4	3.0	1.0
FiberMax 1900 GLT	3.7 a	36.5	80.3	31.4	5.8	4.7	78.5	6.7	3.7	1.0
FiberMax 2011GT	3.5 a	35.5	80.7	29.4	6.4	4.7	79.1	6.6	3.7	1.0
NexGen 3306B2RF	3.7 a	37.5	83.4	32.8	7.9	2.3	79.1	6.7	3.7	1.0
PhytoGen 222WRF	3.7 a	36.3	81.8	28.7	8.3	4.0	78.0	6.9	4.0	1.0
PhytoGen 333WRF	3.7 a	36.1	81.6	29.2	7.1	4.7	77.7	7.3	3.3	1.0
Stoneville 4747GLB2	3.6 a	36.4	79.5	27.5	5.8	5.0	78.9	6.3	4.0	1.0
Test average	3.7	36.5	81.1	30.0	6.8	4.0	78.8	6.8	3.5	1.0
CV, %	2.4	1.4	1.1	2.7	2.8	18.1	0.9	3.5	--	--
OSL	0.3596	0.0009	0.0066	<0.0001	<0.0001	0.0030	0.0041	0.0010	--	--
LSD	NS	0.9	1.6	1.4	0.3	1.3	1.3	0.4	--	--

For micronaire, means within a column with the same letter are not significantly different at the 0.05 probability level.

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 9. 2015 Harvest results from the Irrigated Cotton Variety Trial, Middlewater Farms Farm, Hartley County, Middle Water, TX.

Variety	Lint turnout ----- % -----	Seed turnout	Bur cotton yield	Lint yield ----- lb/acre -----	Seed yield	Lint loan value \$ /lb	Lint value	Seed value	Total value	Ginning cost \$/acre	Seed/Tech cost	Net value
Deltapine 1212B2RF	28.9	43.3	6212	1798 a	2687	0.5745	1032.67	335.90	1368.57	186.37	81.70	1100.50 a
Deltapine 1518B2RF	27.9	42.9	6201	1730 ab	2657	0.5687	984.03	332.18	1316.20	186.04	84.34	1045.82 ab
FiberMax 1320GL	28.9	43.8	5910	1707 ab	2587	0.5742	979.87	323.33	1303.20	177.30	76.00	1049.90 ab
FiberMax 1830GLT	30.3	41.6	5450	1650 ab	2270	0.5737	946.75	283.75	1230.50	163.51	87.00	980.00 b
FiberMax 1900 GLT	28.2	44.3	5936	1671 ab	2627	0.5682	949.64	328.40	1278.05	178.08	89.00	1010.96 ab
FiberMax 2011GT	29.5	43.4	5845	1724 ab	2538	0.5743	990.00	317.29	1307.29	175.36	71.25	1060.69 ab
NexGen 3306B2RF	26.5	44.5	5915	1568 b	2631	0.5767	903.95	328.84	1232.79	177.45	78.63	976.71 b
PhytoGen 222WRF	26.6	44.6	6147	1634 ab	2743	0.5730	936.30	342.93	1279.23	184.40	81.26	1013.57 ab
PhytoGen 333WRF	27.7	46.0	6410	1774 a	2949	0.5757	1021.51	368.58	1390.09	192.29	81.26	1116.54 a
PhytoGen 339WRF	29.2	43.7	5836	1707 ab	2548	0.5757	982.53	318.46	1300.99	175.07	81.26	1044.66 ab
Stoneville 4747GLB2	27.2	42.9	6185	1684 ab	2655	0.5680	956.70	331.84	1288.53	185.56	86.93	1016.05 ab
Trial Average	28.3	43.7	6004	1695	2627	0.5730	971.27	328.32	1299.59	180.13	81.69	1037.76
CV, %	2.7	3.5	2.3	2.3	2.3	0.8	2.2	2.3	2.3	2.3	--	2.4
OSL	<0.0001	0.1504	<0.0001	<0.0001	<0.0001	0.2821	<0.0001	<0.0001	<0.0001	<0.0001	--	<0.0001
LSD	1.3	NS	234	165.8	104	NS	37.16	13.04	50.10	7.03	--	109.60

For lint yield and net value/acre, means within a column with the same letter are not significantly different at the 0.05 probability level.

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

Assumes:

\$3.00/cwt ginning cost.

\$250/ton for seed.

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

Table 10. 2015 HVI fiber property results from the Irrigated Cotton Variety Trial, Middlewater Farms Farm, Hartley County, Middle Water, TX.

Entry	Micronaire		Staple	Uniformity	Strength	Elongation	Leaf	Rd	+b	Color grade	
	units		32 ^{nds} inch	%	g/tex	%	grade	reflectance	yellowness	color 1	color 2
Deltapine 1212B2RF	3.8	ab	38.0	81.7	33.4	9.8	3.0	0.0	0.0	2.0	1.0
Deltapine 1518B2RF	3.6	b	38.1	82.2	31.3	9.0	3.0	0.0	0.0	2.0	1.0
FiberMax 1320GL	3.8	ab	37.1	81.7	32.9	9.3	3.0	0.0	0.0	2.0	1.0
FiberMax 1830GLT	3.5	b	38.6	81.9	32.5	8.3	3.0	0.0	0.0	2.0	1.0
FiberMax 1900 GLT	3.5	b	38.3	81.6	34.0	7.2	3.0	0.0	0.0	2.0	1.0
FiberMax 2011GT	3.7	ab	37.5	82.6	33.5	8.2	3.0	0.0	0.0	2.0	1.0
NexGen 3306B2RF	3.7	ab	39.8	84.1	35.0	10.2	3.0	0.0	0.0	2.0	1.0
PhytoGen 222WRF	4.0	a	37.1	82.5	30.6	10.4	3.0	0.0	0.0	2.0	1.0
PhytoGen 333WRF	3.8	ab	37.9	82.9	32.7	9.0	3.0	0.0	0.0	2.0	1.0
PhytoGen 339WRF	3.7	ab	38.1	82.6	32.5	9.7	3.0	0.0	0.0	2.0	1.0
Stoneville 4747GLB2	3.6	b	37.9	81.2	31.6	7.5	3.0	0.0	0.0	2.0	1.0
Trial average	3.7		38.0	82.3	32.7	9.0	3.0	0.0	0.0	2.0	1.0
CV, %	3.1		1.1	0.8	2.4	3.3	--	--	--	--	--
OSL	0.0018		<0.0001	0.0025	<0.0001	<0.0001	--	--	--	--	--
LSD	0.2		0.7	1.1	1.3	0.5	--	--	--	--	--

For micronaire, means within a column with the same letter are not significantly different at the 0.05 probability level.

CV - coefficient of variation.

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

Color and leaf grade were standardized to 21-3 for the Hartley County location.

Table 11. 2015 Harvest results from the Irrigated Cotton Variety Trial, Tommy Cartrite Farm, Sherman County, Sunray, Texas.

Variety	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 -----	-----	-----	-----
Deltapine 1212B2RF	31.1	48.9	4237	1319	bc	2073	0.55	726.48	259.07	985.56	127.10	83.18	775.27 bcd
Deltapine 1518B2RF	33.1	48.5	4280	1417	ba	2076	0.54	764.80	259.55	1024.35	128.41	85.87	810.06 ab
FiberMax 1320GL	29.9	41.7	4136	1237	dc	1724	0.55	675.79	215.46	891.25	124.07	77.38	689.80 de
FiberMax 1830GLT	31.2	42.7	3489	1087	e	1491	0.55	593.71	186.38	780.08	104.68	88.58	586.82 f
FiberMax 1900 GLT	34.0	50.7	4094	1392	ab	2077	0.53	740.82	259.60	1000.43	122.81	90.62	787.00 bc
FiberMax 2011GT	33.2	48.3	4092	1358	bc	1976	0.57	773.79	247.03	1020.82	122.75	72.55	825.53 ab
NexGen 3306B2RF	31.4	53.0	3696	1160	de	1960	0.52	598.54	245.02	843.55	110.88	80.06	652.62 ef
PhytoGen 222WRF	33.7	48.4	4279	1443	ab	2072	0.56	800.99	258.99	1059.98	128.36	82.73	848.89 ab
PhytoGen 333WRF	33.6	57.1	4007	1347	bc	2289	0.54	724.76	286.06	1010.82	120.21	82.73	807.88 ab
PhytoGen 339WRF	31.3	49.3	3948	1236	cd	1945	0.54	664.43	243.08	907.51	118.43	82.73	706.34 cde
Stoneville 4747GLB2	34.4	48.8	4423	1509	a	2201	0.56	829.20	275.07	1104.27	132.70	88.51	883.07 a
Trial average	32.44	48.86	4034	1307		1971	0.54	711.08	246.35	957.43	121.03	82.63	761.21
CV, %	11.6	14.2	5.6	5.6		5.5	3.2	5.6	5.5	5.6	5.6	--	6.2
OSL	0.9031	0.3988	0.0023	<0.0001		<0.0001	0.1190	<0.0001	<0.0001	<0.0001	0.0023	--	<0.0001
LSD	NS	NS	384	125		186	NS	68.94	23.22	92.11	11.53	--	94.24

For lint yield and net value/acre, means within a column with the same letter are not significantly different at the 0.05 probability level.

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

Table 12. 2015 HVI fiber property results from the Irrigated Cotton Variety Trial, Tommy Cartrite Farm, Sherman County, Sunray, Texas.

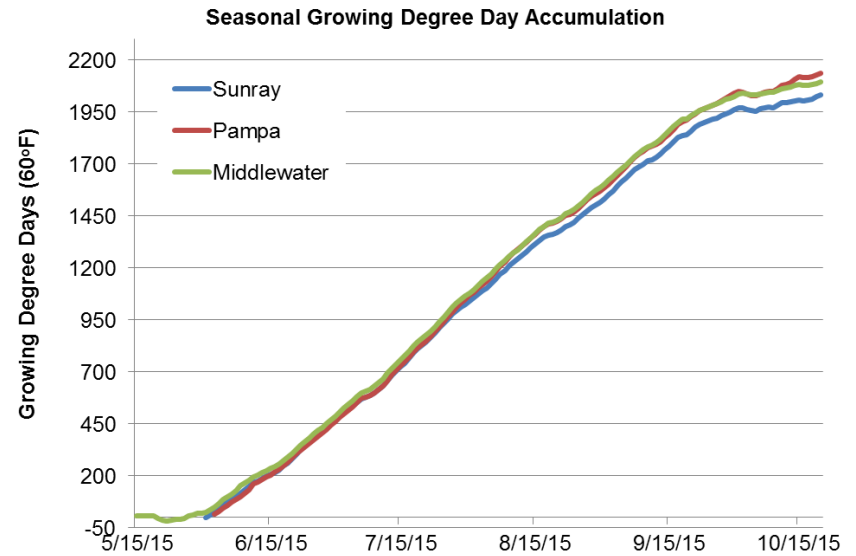
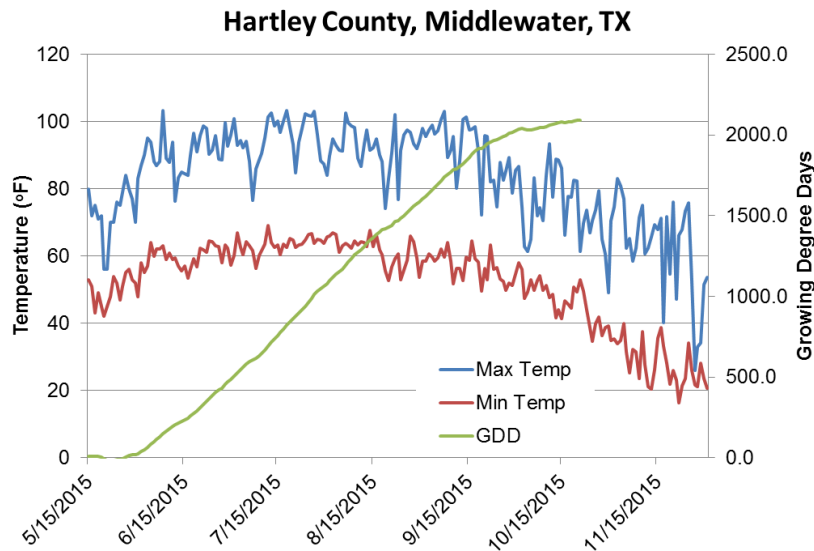
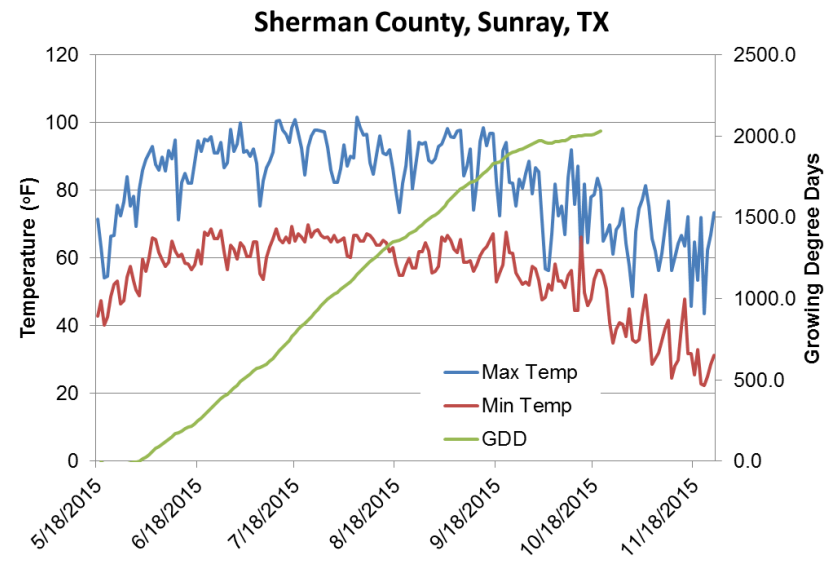
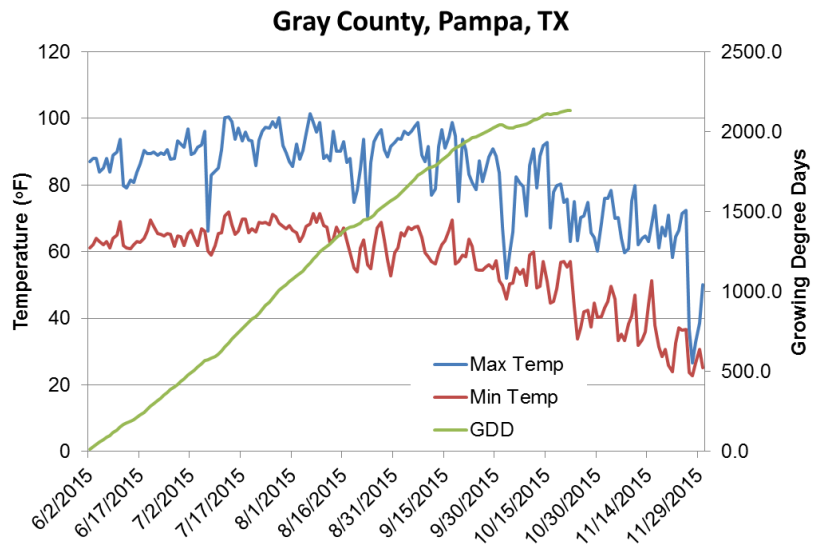
Entry	Micronaire		Staple	Uniformity	Strength	Elongation	Leaf	Rd	+b	Color grade	
	units		32 ^{nds} inch	%	g/tex	%	grade	reflectance	yellowness	color 1	color 2
Deltapine 1212B2RF	3.70	ab	36.4	80.8	29.3	7.0	4.0	79.7	7.5	2.7	1.0
Deltapine 1518B2RF	3.79	ab	36.8	80.0	29.3	6.6	4.7	79.0	7.1	3.0	1.0
FiberMax 1320GL	3.65	abc	37.0	81.3	29.8	7.2	4.3	77.8	7.7	3.0	1.0
FiberMax 1830GLT	3.83	a	36.6	81.8	30.0	7.8	4.3	78.8	7.5	3.0	1.0
FiberMax 1900 GLT	3.40	c	36.4	78.6	29.8	6.0	3.7	78.7	7.3	3.0	1.0
FiberMax 2011GT	3.96	a	37.5	81.6	31.0	7.9	2.3	79.2	8.3	3.0	1.0
NexGen 3306B2RF	3.48	bc	36.5	80.5	29.1	6.8	5.5	78.7	7.3	3.0	1.0
PhytoGen 222WRF	3.80	ab	36.7	81.2	28.8	6.7	3.7	80.4	7.3	3.0	1.0
PhytoGen 333WRF	3.76	ab	36.4	79.8	27.6	7.5	4.3	77.1	8.2	3.0	1.0
PhytoGen 339WRF	3.71	ab	36.9	81.0	28.4	7.3	4.3	78.6	7.3	3.3	1.0
Stoneville 4747GLB2	3.85	a	36.8	80.7	30.1	7.1	4.0	78.7	7.7	3.0	1.0
Test average	3.7		36.7	80.7	29.4	7.1	4.1	78.8	7.6	3.0	1.0
CV, %	5.2		2.1	1.7	6.2	10.6	24.2	1.6	5.6	--	--
OSL	0.0695†		0.7230	0.2708	0.6568	0.1760	0.1201	0.2054	0.0367	--	--
LSD	0.3		NS	NS	NS	NS	NS	NS	0.7	--	--

For micronaire, means within a column with the same letter are not significantly different at the 0.05 probability level.

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



Figures 1 – 4. Daily max and min temperatures and seasonal growing degree day accumulation (GDD).