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TEXAS HIGH PLAINS REPLICATED AGRONOMIC
COTTON EVALUATION (RACE) TRIALS, 2017



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(RACE) SOUTHERN HIGH PLAINS, 2017**



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REPLICATED AGRONOMIC COTTON EVALUATION (RACE) SOUTHERN HIGH PLAINS, 2017

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Season Overview

For the second year in a row, growers on the Texas High Plains produced over 5 million bales of cotton. Similar to the 2016 season, much of the success in 2017 resulted from timely rains that enabled the crop to support and fill a heavy fruit load developed over the first two to three months of the season. Unlike 2016, the early part of the season was a struggle in many areas to find good planting conditions due to spells of cool and wet weather which were followed by days of hot, dry, and windy conditions making crop establishment a challenge. Early replants were common in many areas across the region, and some replanting activity stretched into late June, or even early July, when much of the area received its first rain since mid-May. Even more precipitation made its way over the northern 2/3rds of the regions during August but bought with it below average temperatures and prolonged stretches of cloudy weather. However, in counties south of Lubbock, lack of rainfall was the issue as system after system missed this large production area including Yoakum, Terry, Lynn, Gaines, Dawson, Howard, and Martin counties. While production on a pounds per acre basis in 2017 was high, in many areas crop maturity was a concern which manifested itself in the fiber quality vales. In particular, low micronaire was an issue for many producers, which is evidenced by the average micronaire of 3.4 across all the Southern High Plains trials. Fiber strength and uniformity were also lower than levels typically observed. Most of the Despite maturity issues throughout the region and the amount of acres exposed to a killing freeze prior to receiving harvest-aid applications, color and leaf grade values remained at acceptable to excellent levels. Conditions during harvest were generally favorable, with delays due to wind or rain minimal. Even with harvest estimates of around 3.5 million acres, the High Plains entered 2018 with the vast majority of cotton harvested completed.

RACE Trial Format

A new format for on-farm variety testing was introduced in 2016, matching a similar method utilized in other areas of Texas. A standard lineup of 11 - 12 commercial varieties was evaluated at each location (Table 1), with all seed companies given the option of participating and selecting varieties to be included. Variety selection could differ between the irrigated and dryland locations, although the majority of varieties were included in both dryland and irrigated locations. This structure of variety testing allows for an evaluation of not only each specific location but also the trends and yield stability of varieties across the region by pooling the data from each irrigated or dryland trial together. In areas in which only 11 varieties were entered, producers were given the option to include a “grower entry” variety of their choosing. The High Plains encompasses the largest area of cotton production in the world, and it is only projected to increase in the near future. While it is impossible to represent every possible scenario in a production environment of this size, the ability to pool this data allows for the highest percentage of acreage to be represented. All locations consisted of a minimum of 3 replications of each variety. All trials were harvested with a cotton stripper utilizing a field cleaner, with the exception of the Yoakum county dryland trial where the field cleaner was bypassed and the Hall county dryland trial which was harvested with a cotton picker. After harvest seedcotton samples were ginned at the USDA-ARS Cotton Production and Processing Research Center in

Lubbock, TX. After ginning lint samples were sent to the Texas Tech University Fiber and Biopolymer Research Institute for classing and HVI quality measurements.

The southern High Plains region consisted of 22 counties, with every county either hosting or bordering a county that hosted a RACE trial (Figure 1). There was a wide range of planting dates and seeding rates represented (Table 2), reflective of the wide geographic area these trials cover, and different cultural practices utilized by cotton producers to address or mitigate issues specific to their location.

At two locations, Dawson County irrigated and Lynn County dryland, misapplications of dicamba occurred resulting in only varieties with the dicamba-resistant XtendFlex™ (XF) trait to survive. The results are included for the XF varieties alone for each location and utilized in the overall XtendFlex varieties yield tables. At the Crosby County irrigated location, severe stand loss resulted from the seedling disease *Rhizoctonia solani*. While this trial was still harvested the results were not included in the pooled data across all trials due to the severe stand loss, although the results from this location are still presented independently. An additional location, the Hall county dryland trial, also had poor emergence. This resulted in extremely variable yields, thus the results from this location were not deemed dependable enough for inclusion in this report. Three locations were lost completely during the early part of the season to either failed stand establishment due to lack of moisture (Lubbock County dryland and Martin County dryland) or due to hail (Hall County irrigated).

Variety entries are presented in Table 1, while location details are included in Table 2. Maturity measurements were taken at the end of the season prior to the application of harvest aids at two irrigated and two dryland locations. These included final plant height, node of first fruiting branch (NFFB), node of uppermost cracked boll (NUCB), node of uppermost harvestable boll (NUHB), total nodes, and percent open bolls (Tables 3 and 4). Results for pooled data (Tables 5 – 9) and location specific data (Tables 10 – 22) are included below. Statistical differences were determined using a 90% confidence interval, while results that aren't statistically different are represented by "NS" in the row containing the protected least significant difference (*pLSD*) value. **All loan and return values are calculated using 52 cents per pound as the base value.**

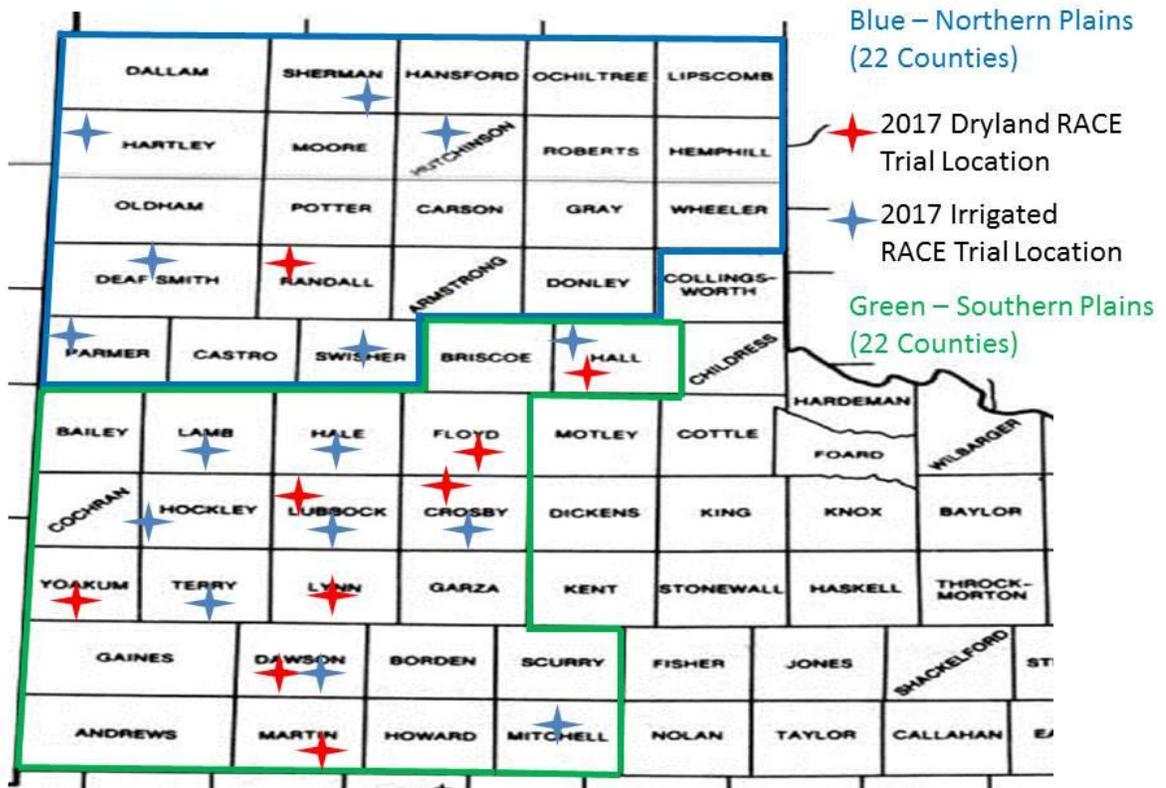


Figure 1. Locations of 2017 High Plains RACE Trials.

Table 1. Variety Entries in Dryland and Irrigated Southern High Plains RACE Trials.

<u>Dryland Location Entries</u>		<u>Irrigated Location Entries</u>	
Variety	Abbreviation	Variety	Abbreviation
Croplan Genetics 9598 B3XF	CG 9598 B3XF ¹	Croplan Genetics 9598 B3XF	CG 9598 B3XF
Deltapine 1522 B2XF	DP 1522 B2XF	Deltapine 1522 B2XF	DP 1522 B2XF
Deltapine 1549 B2XF	DP 1549 B2XF	Deltapine 1549 B2XF	DP 1549 B2XF
Deltapine 1646 B2XF	DP 1646 B2XF	Deltapine 1646 B2XF	DP 1646 B2XF
FiberMax 1830 GLT	FM 1830 GLT	FiberMax 1830 GLT	FM 1830 GLT
FiberMax 1888 GL	FM 1888 GL	FiberMax 1888 GL	FM 1888 GL
FiberMax 1911 GLT	FM 1911 GLT	FiberMax 1911 GLT	FM 1911 GLT
FiberMax 2322 GL	FM 2322 GL	FiberMax 2322 GL	FM 2322 GL
NexGen 3406 B2XF	NG 3406 B2XF	NexGen 3406 B2XF	NG 3406 B2XF
NexGen 4545 B2XF	NG 4545 B2XF	NexGen 3640 XF	NG 3640 XF
NexGen 4601 B2XF	NG 4601 B2XF	NexGen 3699 B2XF	NG 3699 B2XF
NexGen 5007 B2XF	NG 5007 B2XF	NexGen 4689 B2XF	NG 4689 B2XF

B3XF = Bollgard III® XtendFlex™; B2XF = Bollgard II® XtendFlex™; GLT = GlyTol® LibertyLink® TwinLink; GL = GlyTol® LibertyLink®; XF = XtendFlex™

¹CG 9598 B3XF only included at Crosby, Floyd, Hall, and Lubbock dryland and Crosby, Hockley, Lubbock, and Terry irrigated locations.

Table 2. Location details from the 17 Southern High Plains RACE Trial Locations.

Location (county)	Planting Date	Seeding Rate (per acre)	Seasonal Rainfall ¹ (inches)	Harvest Date
Crosby dryland	May 23	21,000 ¹	19.93"	Nov. 30
Crosby irrigated (drip)	June 1	28,000	19.12"	Dec. 4
Dawson dryland	June 10	26,000	11.98"	Dec. 12
Dawson irrigated (pivot)	May 18	39,000	12.84"	Nov. 27
Floyd dryland	May 24	30,000	18.87"	Nov. 6
Hale irrigated (drip)	May 18	49,000	20.74"	Nov. 15
Hall dryland	June 21	45,000	N/A	Highly variable stand
Hall irrigated (pivot)	May 28	50,000	N/A	Hailed out
Hockley irrigated (drip)	May 16	50,000	19.59"	Nov. 27
Lamb irrigated (pivot)	May 19	27,750 ¹	19.95"	Nov. 30
Lubbock dryland	May 20	25,000	N/A	Failed stand – drought
Lubbock irrigated (furrow)	May 8	45,500	13.34"	Nov. 3
Lynn dryland	May 30	24,000	15.72"	Nov. 28
Martin dryland	June 10	19,600	N/A	Failed stand – drought
Mitchell irrigated (pivot)	May 26	39,000	12.80"	Oct. 30
Terry irrigated (pivot)	June 7	30,000	11.37"	Nov. 19
Yoakum dryland	May 26	40,000	16.19"	Nov. 28

¹Two and 1 skip row planting pattern.

Table 3. Maturity Measurements from Two Dryland Locations taken 49 (Crosby) and 35 (Floyd) Days Before Harvest.

Variety	Plant Height (in.)			Node of First Fruiting Branch			Node of Uppermost Cracked Boll		
	<i>Crosby</i>	<i>Floyd</i>	<i>Average Rank</i> ¹	<i>Crosby</i>	<i>Floyd</i>	<i>Average Rank</i>	<i>Crosby</i>	<i>Floyd</i>	<i>Average Rank</i>
CG 9598 B3XF	25.8	20.1	5	9.4	8.6	12	14.6	13.2	12
DP 1522 B2XF	26.6	20.7	8	7.0	6.1	5	12.4	11.0	6
DP 1549 B2XF	28.7	20.5	8	8.3	7.5	11	11.7	11.1	6
DP 1646 B2XF	31.6	19.4	8	7.5	7.0	8	12.7	11.0	7
FM 1830 GLT	23.1	16.5	2	6.8	6.8	6	13.8	11.1	10
FM 1888 GL	29.1	20.6	9	8.1	7.2	10	12.9	11.4	10
FM 1911 GLT	20.3	16.5	1	7.8	6.5	7	12.4	9.8	4
FM 2322 GL	28.9	20.0	7	6.4	5.9	2	12.4	10.4	5
NG 3406 B2XF	25.9	18.7	4	6.5	5.7	2	12.7	9.6	5
NG 4545 B2XF	28.0	21.2	9	8.3	7.2	10	12.7	11.8	10
NG 4601 B2XF	29.6	19.4	7	7.2	6.5	6	11.6	10.2	3
NG 5007 B2XF	33.2	21.5	12	6.6	5.4	2	10.9	10.1	2

Variety	Node of Uppermost Harvestable Boll			Total Nodes			Percent Open Bolls		
	<i>Crosby</i>	<i>Floyd</i>	<i>Average Rank</i>	<i>Crosby</i>	<i>Floyd</i>	<i>Average Rank</i>	<i>Crosby</i>	<i>Floyd</i>	<i>Average Rank</i>
CG 9598 B3XF	16.5	14.4	12	20.7	17.2	12	44%	55%	10
DP 1522 B2XF	14.4	13.2	6	18.1	15.4	6	67%	54%	6
DP 1549 B2XF	15.9	13.8	10	21.0	15.6	11	50%	34%	9
DP 1646 B2XF	16.1	12.6	8	20.5	15.0	8	55%	50%	8
FM 1830 GLT	14.3	12.0	2	17.7	14.0	2	71%	72%	4
FM 1888 GL	15.9	13.0	8	20.0	15.5	9	56%	61%	9
FM 1911 GLT	13.7	12.0	2	16.9	14.1	2	79%	70%	3
FM 2322 GL	15.0	11.5	3	19.7	14.7	6	60%	62%	5
NG 3406 B2XF	14.5	12.3	4	17.9	14.2	3	63%	53%	4
NG 4545 B2XF	15.6	13.9	10	19.5	16.3	9	65%	66%	8
NG 4601 B2XF	15.5	12.7	7	20.5	14.6	7	40%	39%	7
NG 5007 B2XF	15.1	13.1	7	19.3	14.9	6	42%	43%	7

¹Averaged rank across both locations, with the lower ranking reflecting earlier maturity characteristics.

Table 4. Maturity Measurements from Two Irrigated Locations taken 33 (Hale) and 35 (Lubbock) Days Before Harvest.

Variety	Plant Height (in.)			Node of First Fruiting Branch			Node of Uppermost Cracked Boll		
	Hale	Lubbock	Average Rank ¹	Hale	Lubbock	Average Rank	Hale	Lubbock	Average Rank
DP 1522 B2XF	34.1	34.5	8	6.3	6.7	4	12.9	10.9	7
DP 1549 B2XF	37.1	30.5	7	7.0	7.3	8	12.0	9.8	3
DP 1646 B2XF	35.7	37.6	11	6.3	7.1	6	11.9	10.1	3
FM 1830 GLT	28.9	31.7	4	6.2	7.5	6	11.8	10.7	3
FM 1888 GL	31.7	30.2	4	7.3	7.6	10	13.2	13.0	11
FM 1911 GLT	28.5	27.6	1	6.3	7.3	7	11.4	11.2	4
FM 2322 GL	31.4	35.0	7	5.8	6.5	2	12.0	11.0	6
NG 3406 B2XF	31.1	30.7	4	5.4	6.3	1	12.9	10.8	6
NG 3640 B2XF	32.4	32.9	7	6.1	7.1	4	12.0	11.6	7
NG 3699 B2XF	32.9	31.1	6	6.5	7.8	10	13.6	12.8	11
NG 4689 B2XF	34.1	36.7	10	6.4	7.7	9	12.9	11.4	9

Variety	Node of Uppermost Harvestable Boll			Total Nodes			Percent Open Bolls		
	Hale	Lubbock	Average Rank	Hale	Lubbock	Average Rank	Hale	Lubbock	Average Rank
DP 1522 B2XF	16.5	16.7	7	21.6	22.9	7	56%	44%	5
DP 1549 B2XF	17.8	16.6	7	23.2	22.7	8	32%	23%	11
DP 1646 B2XF	16.4	17.3	7	21.9	23.9	10	33%	24%	10
FM 1830 GLT	15.9	17.5	6	20.5	23.0	5	45%	29%	8
FM 1888 GL	16.8	17.9	10	21.5	23.1	7	64%	55%	2
FM 1911 GLT	15.4	15.0	1	20.3	21.8	2	40%	54%	6
FM 2322 GL	15.5	17.7	6	20.8	23.8	7	61%	30%	5
NG 3406 B2XF	15.6	15.2	3	19.1	21.1	1	66%	45%	3
NG 3640 B2XF	16.4	16.5	5	20.9	22.5	4	49%	49%	5
NG 3699 B2XF	18.2	17.9	11	22.5	24.0	11	45%	59%	4
NG 4689 B2XF	16.2	17.0	6	21.5	23.8	8	35%	30%	9

¹Averaged rank across both locations, with the lower ranking reflecting earlier maturity characteristics.

Table 5. Yield Results of Varieties Across the 4 Dryland and 6 Irrigated RACE Trials that Contained the Entire Variety Lineup¹.

Variety	Lint Yield (lbs/acre)	Top Yielder ²	% Trials in High Yield Group ³
FM 1888 GL	1039 a	4	80%
FM 1830 GLT	1015 ab	1	70%
FM 1911 GLT	978 bc	1	60%
DP 1646 B2XF	942 c	1	40%
NG 3406 B2XF	933 c	2	70%
FM 2322 GL	931 c	1	40%
DP 1522 B2XF	839 d	0	30%
DP 1549 B2XF	815 d	0	20%

¹Excluding Crosby irrigated (severe stand loss due to *Rhizoctonia solani*) Dawson irrigated (dicamba injury) Hall dryland (harvested early January) and Lynn dryland (dicamba injury).

²Number of trials in which variety finished with highest yield regardless of statistical differences.

³Percentage of trials in which variety finished in the highest statistical yield group.

Table 6. Yield Results Across four of five Dryland RACE Trials¹.

Variety	Lint Yield (lbs/acre)	Top Yielder ²	% Trials in High Yield Group ³
FM 1888 GL	676 a	2	75%
NG 3406 B2XF	658 a	1	75%
NG 4545 B2XF	643 ab	0	50%
FM 1830 GLT	616 a-c	0	25%
FM 1911 GLT	615 a-c	0	0%
FM 2322 GL	589 bc	0	0%
DP 1522 B2XF	580 bc	0	50%
DP 1646 B2XF	567 c	1	50%
DP 1549 B2XF	562 c	0	50%
NG 5007 B2XF	479 d	0	25%
NG 4601 B2XF	449 d	0	25%

¹Excluding Lynn county (dicamba injury).

²Number of trials in which variety finished with highest yield regardless of statistical differences.

³Percentage of trials in which variety finished in the highest statistical yield group.

Table 7. Yield Results Across six of eight Irrigated RACE Trials¹.

Variety	Lint Yield (lbs/acre)	Top Yielder ²	% Trials in High Yield Group ³
FM 1888 GL	1282 a	2	83%
FM 1830 GLT	1281 a	1	100%
NG 4689 B2XF	1235 ab	1	66%
FM 1911 GLT	1220 a-c	0	83%
NG 3640 XF	1217 a-c	1	66%
DP 1646 B2XF	1193 bc	0	33%
FM 2322 GL	1158 cd	1	33%
NG 3699 B2XF	1150 cd	0	50%
NG 3406 B2XF	1116 d	0	66%
DP 1522 B2XF	1013 e	0	17%
DP 1549 B2XF	983 e	0	17%

¹Excluding Crosby county (severe stand loss due to *Rhizoctonia solani*) and Dawson county (dicamba injury).

²Number of trials in which variety finished with highest yield regardless of statistical differences.

³Percentage of trials in which variety finished in the highest statistical yield group.

Table 8. Yield Results from XtendFlex™ Varieties Across all five Dryland RACE Trials¹.

Variety	Lint Yield (lbs/acre)	Top Yielder ¹	% Trials in High Yield Group ²
NG 3406 B2XF	593 a	3	100%
NG 4545 B2XF	578 a	1	80%
DP 1646 B2XF	517 b	1	60%
DP 1522 B2XF	507 b	0	20%
DP 1549 B2XF	497 b	0	40%
NG 5007 B2XF	406 c	0	20%
NG 4601 B2XF	399 c	0	20%

¹Number of trials in which variety finished with highest yield regardless of statistical differences.

²Percentage of trials in which variety finished in the highest statistical yield group.

Table 9. Yield Results from XtendFlex™ Varieties Across seven of eight Irrigated RACE Trials¹.

Variety	Lint Yield (lbs/acre)	Top Yielder ²	% Trials in High Yield Group ³
NG 4689 B2XF	1229 a	2	100%
NG 3640 XF	1220 a	1	86%
DP 1646 B2XF	1170 ab	2	57%
NG 3699 B2XF	1131 b	0	57%
NG 3406 B2XF	1124 b	1	71%
DP 1522 B2XF	1039 c	0	43%
DP 1549 B2XF	1025 c	1	29%

¹Excluding Crosby county (severe stand loss due to *Rhizoctonia solani*).

²Number of trials in which variety finished with highest yield regardless of statistical differences.

³Percentage of trials in which variety finished in the highest statistical yield group.

Crosby Dryland RACE Trial 2017

Planted – 5/23/2017

Seeding Rate – 21,000 seed per acre (two and one skip row)

Seasonal Precipitation – 19.93”

Harvested – 11/30/2017

Average Lint Yield – 681 lbs./acre (908 lbs./cotton acre)

Table 10. Crosby County Dryland RACE Trial Results.

Variety	Lint Yield (lbs./acre)		Turnout (%)		Micronaire		Length (in.)		Uniformity (%)	Strength (g/tex)		Leaf Grade		Loan Value (cents/lb.)		Return (\$/acre) ¹	
DP 1646 B2XF	780	a	39.31	ab	3.73	ab	1.15	a	78.7	29.9	a-d	2.7	ab	52.88	a	375.65	a
FM 2011 GT ²	747	ab	35.52	f	3.40	c	1.08	e-g	79.2	29.5	a-d	3.0	a	48.60	b-d	334.83	ab
NG 4545 B2XF	710	a-c	37.03	de	3.77	ab	1.06	g	78.9	29.6	a-d	2.7	ab	48.23	cd	310.70	b-d
NG 3406 B2XF	700	a-c	36.58	ef	3.43	c	1.09	c	79.4	29.0	d	2.7	ab	49.95	a-d	316.38	a-d
DP 1549 B2XF	700	a-c	37.30	c-e	3.33	c	1.08	fg	77.5	29.8	a-d	1.7	cd	48.55	b-d	306.36	b-d
FM 1830 GLT	696	a-c	37.89	cd	3.53	bc	1.15	ab	78.7	30.4	ab	3.0	a	51.45	ab	324.58	a-c
CG 9598 B3XF	684	bc	39.52	a	4.00	a	1.10	c-f	79.5	29.3	b-d	2.0	bc	52.42	a	322.66	a-c
FM 1911 GLT	663	b-d	35.36	f	3.33	c	1.11	cd	78.9	29.2	cd	1.7	cd	50.00	a-d	297.34	b-d
FM 2322 GL	655	b-d	38.21	b-d	3.77	ab	1.12	bc	78.4	29.4	a-d	2.7	ab	50.75	a-c	309.57	b-d
FM 1888 GL	634	cd	36.14	ef	3.27	c	1.12	c	79.1	29.9	a-d	2.7	ab	47.60	d	268.58	cd
NG 5007 B2XF	620	cd	38.40	a-c	3.97	a	1.07	fg	78.7	27.2	e	1.0	d	50.25	a-d	278.60	b-d
DP 1522 B2XF	583	d	35.46	f	3.77	ab	1.11	c-e	79.4	30.0	a-c	2.3	a-c	50.67	a-c	260.97	d
NG 4601 B2XF	572	d	37.95	cd	3.80	ab	1.09	d-f	78.8	30.4	a	1.7	cd	50.73	a-c	256.77	d
Mean	681		37.23		3.61		1.10		78.9	29.4		2.3		50.11		308.85	
<i>pLSD</i>	94		1.27		0.27		0.03		<i>NS</i> ³	1.1		0.9		3.05		59.70	
<i>P>F</i>	0.0042		<0.0001		<0.0001		<0.0001		0.1004	0.0004		0.0027		0.0378		0.0219	
<i>CV</i>	11.2950		4.0546		7.7153		2.8325		1.0103	3.4573		33.264		4.2977		14.5876	

¹Return value = (lint yield X loan value) – seed cost

²Grower entry – FiberMax 2011 GT

³Not significant

Crosby Irrigated RACE Trial 2017

Planted – 6/1/2017

Seeding Rate – 28,000 seed per acre

Irrigation – Drip irrigated; no irrigation applied due to severe stand loss caused by *Rhizoctonia solani*

Seasonal Precipitation – 19.12”

Harvested – 12/4/2017

Average Lint Yield – 200 lbs./acre

Table 11. Crosby County Irrigated RACE Trial Results.

Variety	Lint Yield (lbs./acre)		Turnout (%)		Micronaire		Length (in.)		Uniformity (%)	Strength (g/tex)		Leaf Grade	Loan Value (cents/lb.)		Return (\$/acre) ¹	
NG 4689 B2XF	307	a	35.32	cd	4.00	a	1.05	d-f	79.6	29.9	a-c	1.3	51.32	bc	113.15	a
NG 3640 XF	278	ab	34.91	d	3.87	ab	1.04	ef	79.6	31.0	ab	1.0	51.67	bc	107.46	ab
FM 1888 GL	221	bc	35.04	cd	3.57	b-d	1.10	bc	78.8	30.6	ab	1.7	53.03	ab	70.55	bc
CG 9598 B3XF	216	bc	37.36	ab	3.87	ab	1.04	ef	78.3	28.1	d	1.0	50.90	bc	61.01	cd
FM 1911 GLT	190	c	36.69	a-c	3.40	d	1.10	bc	78.9	30.3	a-c	2.0	53.00	ab	55.84	cd
FM 2322 GL	189	c	38.28	a	3.53	b-d	1.09	c	78.5	30.5	ab	1.0	53.67	ab	63.32	cd
DP 1646 B2XF	180	c	38.03	a	3.67	a-d	1.14	ab	79.3	29.5	b-d	1.0	55.82	a	51.30	cd
FM 1830 GLT	178	c	36.71	a-c	3.73	a-d	1.14	a	79.8	31.2	a	1.7	55.70	a	55.32	cd
DP 1549 B2XF	174	c	35.90	b-d	3.43	cd	1.03	f	78.1	28.9	cd	1.3	49.33	c	41.00	cd
NG 3699 B2XF	165	c	35.73	b-d	3.63	b-d	1.09	cd	78.4	30.2	a-c	2.0	54.27	ab	45.50	cd
NG 3406 B2XF	155	c	35.76	b-d	3.60	b-d	1.09	c	79.3	30.6	ab	1.7	54.28	ab	40.17	cd
DP 1522 B2XF	149	c	35.43	cd	3.77	a-c	1.08	c-e	79.9	30.0	a-c	3.3	52.72	a-c	29.88	d
Mean	200		36.26		3.67		1.08		79.0	30.1		1.4	53.00		64.06	
<i>p</i> LSD	73		1.75		0.34		0.04		NS ²	1.5		NS	3.63		39.63	
<i>P</i> > <i>F</i>	0.0036		0.0045		0.0380		0.0002		0.1190	0.0200		0.1185	0.0349		0.0054	
CV	30.7136		4.0971		6.8771		3.8182		1.3728	4.0873		62.9319	4.8948		54.1346	

¹Return value = (lint yield X loan value) – seed cost

²Not significant

Dawson Dryland RACE Trial 2017

Planted – 6/10/2017

Seeding Rate – 26,000 seed per acre

Seasonal Precipitation – 11.98”

Harvested – 12/12/2017

Average Lint Yield – 560 lbs./acre

Table 12. Dawson County Dryland RACE Trial Results.

Variety	Lint Yield (lbs./acre)		Turnout (%)		Micronaire		Length (in.)		Uniformity (%)		Strength (g/tex)		Leaf Grade		Loan Value (cents/lb.)		Return (\$/acre) ¹	
FM 1888 GL	832	a	34.83	a	3.70	b	1.10	a-c	79.8	a-d	30.1	ab	1.3	b	52.05	ab	390.12	a
FM 1911 GLT	706	b	33.62	a-c	4.10	ab	1.07	c-f	79.6	a-d	30.1	ab	1.0	b	53.15	a	335.19	ab
DG 2285 B2RF ²	676	b	33.71	ab	4.00	ab	1.07	c-f	80.1	a-c	29.5	bc	1.7	ab	53.67	a	336.34	ab
NG 4545 B2XF	670	b	34.11	a-c	4.27	a	1.07	c-f	79.3	b-d	30.1	ab	1.0	b	53.30	a	317.89	a-c
FM 1830 GLT	621	cd	30.81	bc	3.67	b	1.12	ab	79.5	a-d	29.5	bc	1.0	b	54.92	a	300.59	b-d
NG 3406 B2XF	615	cd	34.88	a	3.97	ab	1.04	f	80.6	a	28.8	bc	1.7	ab	52.18	ab	279.93	b-d
DP 1522 B2XF	541	de	33.26	ab	3.90	ab	1.05	d-f	80.4	ab	29.8	bc	2.7	a	52.48	ab	240.30	d
FM 2322 GL	539	de	35.07	a	3.63	b	1.08	c-e	79.1	cd	29.2	bc	2.0	ab	54.28	a	257.18	cd
DP 1549 B2XF	459	ef	31.05	bc	2.70	c	1.04	f	77.8	e	28.2	cd	1.0	b	41.82	d	153.95	e
DP 1646 B2XF	404	fg	31.17	bc	2.90	c	1.13	a	79.7	a-d	29.0	bc	1.0	b	50.73	ab	159.21	e
NG 5007 B2XF	335	g	29.09	c	2.73	c	1.05	ef	78.8	de	27.1	d	1.7	ab	45.27	cd	111.44	e
NG 4601 B2XF	326	g	29.32	c	2.67	c	1.09	b-d	79.2	cd	31.6	a	1.3	b	47.98	bc	115.99	e
Mean	560		32.58		3.52		1.08		79.5		29.4		1.4		50.99		249.84	
<i>pLSD</i>	119		3.45		0.5		0.04		1.2		1.7		1.1		4.95		74.09	
<i>P>F</i>	<0.0001		0.045		<0.0001		0.0004		0.0055		0.0033		0.0896		0.0003		<0.0001	
<i>CV</i>	29.9337		8.6029		17.8908		3.2357		1.1613		4.7093		50.8591		9.0840		40.7243	

¹Return value = (lint yield X loan value) – seed cost

²Grower entry – DynaGro 2285 B2RF

Dawson Irrigated RACE Trial 2017

Planted – 5/18/2017

Seeding Rate – 39,000 seed per acre

Irrigation – Center pivot

Seasonal Precipitation – 12.84”

Harvested – 11/27/2017

Average Lint Yield – 1,173 lbs./acre – overspray of dicamba, only XF™ varieties included.

Table 13. Dawson County Irrigated RACE Trial Results.

Variety	Lint Yield (lbs./acre)	Turnout (%)	Micronaire		Length (in.)		Uniformity (%)		Strength (g/tex)		Leaf Grade	Loan Value (cents/lb.)		Return (\$/acre) ¹
DP 1549 B2XF	1280	34.67	3.03	d	1.06	b-d	77.6	c	28.7	b	3.0	48.32	d	556.41
DG 3385 B2XF ²	1247	35.53	3.87	ab	1.08	b	80.5	a	29.3	b	2.7	53.88	ab	604.08
NG 3640 XF	1238	34.50	4.00	a	1.03	d	79.9	ab	30.9	a	3.0	51.57	bc	587.60
DP 1522 B2XF	1203	32.22	3.57	bc	1.07	b	79.4	ab	29.5	b	3.0	52.80	a-c	571.33
NG 4689 B2XF	1194	33.09	3.97	a	1.05	cd	78.6	bc	29.3	b	2.7	50.90	cd	544.91
NG 3406 B2XF	1172	33.05	3.53	bc	1.06	bc	78.6	bc	29.0	b	3.3	50.65	cd	531.64
DP 1646 B2XF	1032	32.13	3.33	cd	1.14	a	78.4	bc	28.8	b	3.3	52.15	bc	471.52
NG 3699 B2XF	1019	30.68	3.80	ab	1.13	a	78.7	bc	29.5	b	2.7	55.20	a	500.13
Mean	1173	33.23	3.64		1.08		79.0		29.4		3.0	51.93		545.95
<i>pLSD</i>	<i>NS</i> ³	<i>NS</i>	<i>0.38</i>		<i>0.02</i>		<i>1.6</i>		<i>1.2</i>		<i>NS</i>	<i>2.78</i>		<i>NS</i>
<i>P>F</i>	<i>0.1111</i>	<i>0.3025</i>	<i>0.0008</i>		<i><0.0001</i>		<i>0.0326</i>		<i>0.0456</i>		<i>0.8829</i>	<i>0.0040</i>		<i>0.2843</i>
<i>CV</i>	<i>12.3632</i>	<i>7.5200</i>	<i>10.1193</i>		<i>3.5431</i>		<i>1.5012</i>		<i>2.9792</i>		<i>23.3325</i>	<i>4.8386</i>		<i>14.3547</i>

¹Return value = (lint yield X loan value) – seed cost

²Grower entry – DynaGro 3385 B2RF

³Not significant

Floyd Dryland RACE Trial 2017

Planted – 5/24/2017

Seeding Rate – 30,000 seed per acre

Seasonal Precipitation – 18.87”

Harvested – 11/6/2017

Average Lint Yield – 440 lbs./acre

Table 14. Floyd County Dryland RACE Trial Results.

Variety	Lint Yield (lbs./acre)		Turnout (%)		Micronaire		Length (in.)		Uniformity (%)		Strength (g/tex)	Leaf Grade		Loan Value (cents/lb.)		Return (\$/acre) ¹	
CG 9598 B3XF	499	a	39.45	a	4.40	a	1.08	c-e	80.2	ab	28.7	1.7	ef	51.45	ab	204.93	a
FM 1888 GL	477	ab	35.10	f	3.63	b-d	1.12	a-c	79.4	a-c	29.2	3.3	ab	50.45	ab	189.83	ab
NG 3406 B2XF	466	ab	35.60	c-f	3.53	cd	1.07	d-f	80.3	a	28.9	2.3	c-e	49.27	b	182.24	a-d
DP 1549 B2XF	452	a-c	36.71	b-e	3.40	d	1.03	f	77.1	d	28.3	1.0	f	45.63	c	158.46	c-e
DP 1646 B2XF	452	a-c	37.67	b	3.57	b-d	1.16	a	78.8	c	29.7	2.3	c-e	52.73	a	185.15	a-c
NG 5007 B2XF	451	a-c	36.83	b-d	3.80	bc	1.06	d-f	79.0	bc	27.7	2.0	de	49.38	b	175.95	a-d
DP 1522 B2XF	443	b-d	35.72	c-f	3.63	b-d	1.10	b-d	79.6	a-c	29.7	2.3	c-e	51.43	ab	176.16	a-d
NG 4601 B2XF	441	b-e	36.99	b-d	3.80	bc	1.10	b-d	79.3	a-c	30.3	2.7	b-d	51.27	ab	178.44	a-d
FM 2322 GL	423	b-e	37.57	b	3.77	b-d	1.13	ab	79.4	a-c	30.0	3.7	a	51.35	ab	176.09	a-d
NG 4545 B2XF	399	c-e	35.53	d-f	3.83	bc	1.06	ef	79.7	a-c	29.6	2.7	b-d	49.42	b	152.05	de
FM 1830 GLT	395	de	37.13	bc	3.93	b	1.15	a	79.8	a-c	30.2	3.0	a-c	52.58	a	159.86	b-e
FM 1911 GLT	387	e	35.19	ef	3.57	b-d	1.10	b-d	79.3	a-c	29.0	2.7	b-d	49.87	b	144.60	e
Mean	440		36.62		3.74		1.10		79.3		29.3		2.5		50.40		173.65
<i>pLSD</i>	55		1.58		0.38		0.04		1.3		<i>NS</i> ²		0.9		2.47		31.21
<i>P>F</i>	0.0081		0.0003		0.0030		<0.0001		0.0041		0.1197		0.0005		0.0005		0.0280
<i>CV</i>	13.2791		3.9980		8.3674		3.8058		1.2975		3.9413		34.1670		4.4453		17.4667

¹Return value = (lint yield X loan value) – seed cost

²Not significant

Hale Irrigated RACE Trial 2017

Planted – 5/18/2017

Seeding Rate – 49,000 seed per acre

Irrigation – Drip

Seasonal Precipitation – 20.74”

Harvested – 11/15/2017

Average Lint Yield – 1,426 lbs./acre

Table 15. Hale County Irrigated RACE Trial Results.

Variety	Lint Yield (lbs./acre)		Turnout (%)		Micronaire		Length (in.)		Uniformity (%)		Strength (g/tex)		Leaf Grade	Loan Value (cents/lb.)		Return (\$/acre) ¹	
FM 1830 GLT	1673	a	35.93	bc	3.37	a	1.23	a	79.2	a-c	31.0	a-c	2.0	54.25	a	829.57	a
FM 1911 GLT	1612	ab	35.20	cd	3.00	b	1.18	b	78.7	bc	30.2	cd	2.0	51.53	ab	752.01	bc
NG 4689 B2XF	1583	bc	34.53	d	3.33	a	1.13	cd	79.8	ab	31.7	ab	1.7	54.03	a	777.21	ab
NG 3640 XF	1563	bc	34.29	de	3.37	a	1.11	de	80.3	a	31.7	a	1.7	53.25	a	769.46	ab
FM 1888 GL	1562	bc	35.68	bc	3.23	a	1.19	ab	79.6	a-c	30.8	a-c	2.7	52.82	a	741.79	bc
DP 1646 B2XF	1530	c	36.61	ab	3.00	b	1.17	bc	76.5	ef	28.9	e	1.7	51.35	ab	699.20	cd
NG 3699 B2XF	1408	d	32.70	f	3.40	a	1.18	bc	78.4	b-d	30.4	b-d	1.7	54.52	a	689.98	cd
FM 2322 GL	1362	d	37.51	a	3.23	a	1.17	bc	78.3	cd	29.4	de	2.3	51.27	ab	630.85	d
NG 3406 B2XF	1205	e	33.31	ef	2.77	c	1.09	de	78.2	cd	28.4	e	2.7	47.53	c	495.45	e
DP 1522 B2XF	1096	f	32.66	f	2.75	c	1.10	de	76.8	de	28.0	e	2.0	47.80	bc	436.38	ef
DP 1549 B2XF	1090	f	32.32	f	2.43	d	1.08	e	75.0	f	28.3	e	2.3	44.13	c	402.70	f
Mean	1426		34.61		3.08		1.15		78.3		29.9		2.1	51.13		656.78	
<i>pLSD</i>	69		1.14		0.23		0.04		1.5		1.26		<i>NS</i> ²	3.52		70.76	
<i>P>F</i>	<0.0001		<0.0001		<0.0001		<0.0001		<0.0001		<0.0001		0.4617	<0.0001		<0.0001	
<i>CV</i>	14.0901		5.0684		10.5362		4.3917		2.1700		4.7525		32.4371	7.0497		21.5257	

¹Return value = (lint yield X loan value) – seed cost

²Not significant

Hockley Irrigated RACE Trial 2017

Planted – 5/16/2017

Seeding Rate – 50,000 seed per acre

Irrigation – Drip

Seasonal Precipitation – 19.59”

Harvested – 11/27/2017

Average Lint Yield – 1,658 lbs./acre

Table 16. Hockley County Irrigated RACE Trial Results.

Variety	Lint Yield (lbs./acre)	Turnout (%)	Micronaire	Length (in.)	Uniformity (%)	Strength (g/tex)	Leaf Grade	Loan Value (cents/lb.)	Return (\$/acre) ¹
CG 9598 B3XF	1975	34.95	3.50 a	1.19 bc	79.8 ab	30.7 bc	1.3	57.22 a	1044.16 a
FM 1888 GL	1802	31.85	3.37 ab	1.20 b	80.3 a	31.3 ab	3.3	53.18 b-d	875.35 ab
FM 1830 GLT	1683	33.80	3.27 a-c	1.24 a	79.6 a-c	31.3 ab	2.0	54.52 ab	837.21 bc
DP 1646 B2XF	1667	31.86	3.07 cd	1.23 a	79.1 bc	30.4 bc	2.0	53.40 bc	801.58 bc
FM 2322 GL	1666	33.05	3.27 a-c	1.19 bc	78.5 c	30.3 bc	3.0	50.45 c-f	776.63 bc
NG 3406 B2XF	1625	31.91	2.93 d	1.13 f	78.9 bc	28.8 d	2.7	49.47 d-f	730.93 bc
NG 4689 B2XF	1618	31.70	3.50 a	1.15 de	80.7 a	31.9 a	2.0	54.55 ab	802.67 bc
DP 1549 B2XF	1607	31.84	2.63 e	1.13 ef	77.3 d	30.3 bc	2.0	47.45 f	685.05 c
DP 1522 B2XF	1581	32.25	3.27 a-c	1.14 ef	79.8 ab	30.5 bc	2.0	52.37 b-d	742.64 bc
NG 3640 XF	1569	30.73	3.17 b-d	1.13 ef	79.9 ab	31.2 ab	2.7	48.55 ef	696.40 c
NG 3699 B2XF	1550	30.84	3.13 b-d	1.17 cd	78.8 bc	29.6 cd	2.3	52.18 b-e	729.43 bc
FM 1911 GLT	1548	31.50	3.00 cd	1.19 bc	78.9 bc	30.1 b-d	3.5	49.59 c-f	672.88 c
Mean	1658	32.19	3.18	1.17	79.3	30.5	2.4	51.91	782.91
<i>pLSD</i>	<i>NS</i> ²	<i>NS</i>	<i>0.26</i>	<i>0.02</i>	<i>1.1</i>	<i>1.3</i>	<i>NS</i>	<i>3.88</i>	<i>182.50</i>
<i>P>F</i>	<i>0.1111</i>	<i>0.2387</i>	<i><0.0001</i>	<i><0.0001</i>	<i>0.0004</i>	<i>0.0043</i>	<i>0.1057</i>	<i>0.0010</i>	<i>0.0216</i>
<i>CV</i>	<i>10.8068</i>	<i>5.8230</i>	<i>8.4861</i>	<i>3.4452</i>	<i>1.3215</i>	<i>3.3514</i>	<i>36.9968</i>	<i>6.5069</i>	<i>16.9534</i>

¹Return value = (lint yield X loan value) – seed cost

²Not significant

Lamb Irrigated RACE Trial 2017

Planted – 5/19/2017

Seeding Rate – 27,750 seed per acre (2 and 1 skip row)

Irrigation – Overhead

Seasonal Precipitation – 19.95”

Harvested – 11/30/2017

Average Lint Yield – 792 lbs./acre (1,056 lbs./cotton acre)

Table 17. Lamb County Irrigated RACE Trial Results.

Variety	Lint Yield (lbs./acre)		Turnout (%)		Micronaire		Length (in.)		Uniformity (%)		Strength (g/tex)		Leaf Grade		Loan Value (cents/lb.)		Return (\$/acre) ¹	
FM 2322 GL	877	a	35.76	a	3.00	a-c	1.14	bc	77.6	bc	29.3	c-e	2.7	a-c	49.95	a-c	401.01	a
FM 1888 GL	861	a	32.44	cd	3.03	a-c	1.16	b	78.9	ab	30.7	a	3.3	a	50.87	ab	391.55	ab
FM 1830 GLT	849	ab	33.47	bc	3.00	a-c	1.20	a	78.4	ab	30.4	a-c	2.7	a-c	51.30	ab	391.80	ab
NG 3406 B2XF	827	a-c	31.50	d	2.77	de	1.10	e	77.9	bc	28.4	ef	2.3	bc	47.30	cd	347.81	a-c
FM 1911 GLT	809	a-c	31.98	cd	2.67	ef	1.14	b-d	76.9	cd	28.8	d-f	3.0	ab	46.93	d	336.01	bc
NG 3640 XF	805	a-c	32.30	cd	3.13	ab	1.10	e	78.8	ab	30.5	ab	2.0	c	50.82	ab	374.08	a-c
NG 4689 B2XF	792	a-c	31.51	d	3.17	a	1.12	c-e	79.6	a	30.7	a	2.7	a-c	52.28	a	370.22	a-c
DP 1522 B2XF	763	bc	31.00	d	2.87	c-e	1.11	e	78.7	ab	29.3	c-e	3.3	a	48.73	b-d	328.01	c
DP 1646 B2XF	750	c	34.02	b	3.00	a-c	1.17	ab	77.9	bc	29.4	b-e	2.3	bc	51.83	a	339.86	bc
NG 3699 B2XF	745	c	31.00	d	2.93	b-d	1.11	de	77.8	bc	29.7	a-d	2.7	a-c	48.82	b-d	318.80	c
DP 1549 B2XF	632	d	31.82	d	2.47	f	1.06	f	75.9	d	27.7	f	3.0	ab	42.07	e	221.67	d
Mean	792		32.44		2.91		1.13		78.0		29.5		2.7		49.17		347.35	
<i>pLSD</i>	94		1.49		0.22		0.03		1.4		1.17		0.8		2.94		56.57	
<i>P>F</i>	0.0016		<0.0001		<0.0001		<0.0001		0.0012		0.0003		0.0665		<0.0001		0.0001	
<i>CV</i>	12.2168		5.1480		8.6599		3.6778		1.6407		3.8758		21.0489		6.9283		19.1609	

¹Return value = (lint yield X loan value) – seed cost

Lubbock Irrigated RACE Trial 2017

Planted – 5/8/2017

Seeding Rate – 45,500 seed per acre

Irrigation – furrow irrigated twice (once every row and once every other row)

Seasonal Precipitation – 13.34”

Harvested – 11/3/2017

Average Lint Yield – 983 lbs/acre

Table 18. Lubbock County Irrigated RACE Trial Results.

Variety	Lint Yield (lbs./acre)		Turnout (%)		Micronaire		Length (in.)		Uniformity (%)		Strength (g/tex)		Leaf Grade		Loan Value (cents/lb.)		Return (\$/acre) ¹	
NG 4689 B2XF	1118	a	35.19	c-e	3.43	a-c	1.13	ef	79.8	ab	31.4	a	2.0	cd	52.18	a-c	509.70	ab
NG 3406 B2XF	1089	a	35.07	c-e	3.13	d	1.11	fg	79.1	b-d	28.5	d	2.7	a-c	47.93	de	450.83	a-c
FM 1830 GLT	1061	ab	37.90	b	3.53	ab	1.20	a	80.0	ab	30.8	ab	2.3	b-d	55.90	a	521.09	a
FM 1888 GL	1040	a-c	35.89	cd	3.30	b-d	1.17	bc	79.7	ab	30.5	a-c	3.3	a	51.32	b-d	456.56	a-c
FM 1911 GLT	1002	a-c	35.94	cd	3.13	d	1.16	b-d	79.1	b-d	30.3	a-c	3.0	ab	51.87	b-d	448.53	a-c
NG 3699 B2XF	995	a-c	34.11	e	3.37	b-d	1.15	cd	77.6	ef	29.5	b-d	2.3	b-d	50.32	c-e	428.01	bc
FM 2322 GL	937	b-d	39.02	ab	3.23	cd	1.14	de	78.0	de	30.1	a-c	2.3	b-d	52.48	a-c	429.73	bc
DP 1646 B2XF	937	b-d	38.76	ab	3.37	b-d	1.18	ab	78.5	c-e	29.3	cd	1.7	de	53.92	a-c	424.52	bc
DP 1522 B2XF	932	b-d	34.76	de	3.20	cd	1.12	e-g	79.2	bc	29.6	b-d	2.3	b-d	51.35	b-d	400.46	cd
CG 9598 B3XF	932	b-d	39.79	a	3.67	a	1.15	c-e	79.2	bc	29.4	cd	1.0	e	54.92	ab	431.85	bc
NG 3640 XF	922	cd	34.82	de	3.40	bc	1.10	g	80.4	a	30.8	ab	2.3	b-d	50.62	cd	407.96	c
DP 1549 B2XF	836	d	36.06	c	2.80	e	1.07	h	76.6	f	29.1	cd	2.0	cd	46.38	e	316.44	d
Mean	983		36.44		3.30		1.14		78.9		30.0		2.3		51.60		435.47	
<i>pLSD</i>	130		1.2		0.25		0.03		1.1		1.4		0.9		3.98		82.22	
<i>P>F</i>	0.0069		<0.0001		<0.0001		<0.0001		<0.0001		0.0101		0.0038		0.0031		0.0147	
<i>CV</i>	12.4309		5.4096		7.9580		3.2935		1.5300		3.5301		35.7607		6.3073		16.8247	

¹Return value = (lint yield X loan value) – seed cost

Lynn Dryland RACE Trial 2017

Planted – 5/30/2017

Seeding Rate – 24,000 seed per acre

Seasonal Precipitation – 15.72”

Harvested – 11/28/2017

Average Lint Yield – 247 lbs/acre; dicamba applied, only XF™ varieties included.

Table 19. Lynn County Irrigated RACE Trial Results.

Variety	Lint Yield (lbs./acre)		Turnout (%)		Micronaire		Length (in.)		Uniformity (%)		Strength (g/tex)		Leaf Grade	Loan Value (cents/lb.)		Return (\$/acre) ¹	
NG 3406 B2XF	333	a	37.22	b	3.53	c	1.06	cd	80.0	a	28.9	b-d	1.3	51.38	b	132.99	a
NG 4545 B2XF	320	a	37.54	b	4.00	a	1.04	de	79.2	a	29.9	a-c	1.0	51.10	b	127.54	a
DP 1646 B2XF	318	a	40.15	a	3.77	b	1.15	a	79.9	a	29.4	a-d	2.0	56.55	a	137.16	a
DP 1549 B2XF	238	b	36.31	b	3.13	e	1.03	e	77.3	b	28.6	cd	1.7	47.08	c	73.32	b
DP 1522 B2XF	211	b	36.17	b	3.53	c	1.07	bc	80.1	a	30.5	ab	2.3	53.20	b	71.32	b
NG 4601 B2XF	197	b	37.44	b	3.33	d	1.08	b	79.6	a	30.9	a	1.7	52.08	b	64.97	b
NG 5007 B2XF	114	c	36.60	b	3.40	cd	1.08	b	79.8	a	27.8	d	1.0	52.92	b	22.43	c
Mean	247		37.35		3.53		1.07		79.4		29.4		1.6	52.05		89.96	
<i>pLSD</i>	54		2.34		0.20		0.02		1.3		1.7		<i>NS</i> ²	2.88		32.55	
<i>P>F</i>	<0.0001		0.0419		<0.0001		<0.0001		0.0076		0.0219		0.1107	0.0006		<0.0001	
<i>CV</i>	35.1899		4.6228		8.1224		3.5722		1.3789		4.4158		43.0260	5.7908		52.1747	

¹Return value = (lint yield X loan value) – seed cost

²Not significant

Mitchell Irrigated RACE Trial 2017

Planted – 5/26/2017

Seeding Rate – 39,000 seed per acre

Irrigation – Center pivot

Seasonal Precipitation – 12.80”

Harvested – 10/30/2017

Average Lint Yield – 1,612 lbs/acre

Table 20. Mitchell County Irrigated RACE Trial Results.

Variety	Lint Yield (lbs./acre)		Turnout (%)		Micronaire		Length (in.)		Uniformity (%)		Strength (g/tex)		Leaf Grade	Loan Value (cents/lb.)		Return (\$/acre) ¹	
FM 1888 GL	1866	a	35.12	c-e	3.70	a-c	1.20	b	81.2	a	32.0	ab	3.3	55.40	a	967.88	ab
FM 1830 GLT	1828	a	36.39	ab	3.73	a-c	1.24	a	80.5	ab	31.9	a-c	2.0	56.95	a	978.52	a
DP 1646 B2XF	1801	ab	36.96	a	3.47	d	1.24	a	79.9	bc	30.3	e	2.3	55.60	a	933.15	ab
NG 3640 XF	1775	a-c	35.34	cd	3.80	ab	1.11	d	81.3	a	31.5	a-d	2.0	55.75	a	940.44	ab
NG 4689 B2XF	1710	bc	34.15	ef	3.83	a	1.14	c	81.2	a	32.4	a	2.7	56.70	a	907.57	ab
FM 1911 GLT	1679	cd	35.27	cd	3.73	a-c	1.18	b	80.5	ab	30.9	c-e	2.3	56.82	a	891.05	bc
FM 2322 GL	1590	d	35.91	bc	3.77	a-c	1.18	b	81.1	a	31.9	ab	3.7	54.62	a	815.32	c
NG 3699 B2XF	1587	d	33.25	fg	3.60	b-d	1.18	b	79.1	cd	30.7	de	3.3	54.67	a	807.96	c
NG 3406 B2XF	1391	e	33.15	fg	3.40	d	1.13	cd	80.4	ab	30.1	e	2.7	54.90	a	701.41	d
DP 1549 B2XF	1296	ef	34.49	de	3.10	e	1.12	d	78.3	d	31.1	b-e	2.7	50.47	b	591.95	e
DP 1522 B2XF	1212	F	32.88	g	3.57	cd	1.15	c	80.4	ab	31.1	b-e	3.3	54.95	a	599.12	e
Mean	1612		34.81		3.61		1.17		80.4		31.3		2.8	55.17		830.40	
<i>pLSD</i>	99		1.04		0.22		0.03		1.0		1.0		<i>NS</i> ²	2.82		86.86	
<i>P>F</i>	<0.0001		<0.0001		<0.0001		<0.0001		0.0001		0.0019		0.1838	0.0089		<0.0001	
<i>CV</i>	14.7153		4.0436		6.5847		3.7963		1.2861		2.7756		31.4495	3.9932		18.2773	

¹Return value = (lint yield X loan value) – seed cost

²Not significant

Terry Irrigated RACE Trial 2017

Planted – 6/7/2017

Seeding Rate – 30,000 seed per acre

Irrigation – Center pivot

Seasonal Precipitation – 11.37”

Harvested – 11/19/2017

Average Lint Yield – 565 lbs/acre

Table 21. Terry County Irrigated RACE Trial Results.

Variety	Lint Yield (lbs./acre)		Turnout (%)		Micronaire		Length (in.)		Uniformity (%)		Strength (g/tex)		Leaf Grade	Loan Value (cents/lb.)		Return (\$/acre) ¹	
NG 3640 XF	668	a	35.51	ab	3.97	a	1.02	de	79.6	ab	31.4	a	1.0	49.25	bc	290.61	a
FM 1911 GLT	668	a	34.78	a-c	3.47	b	1.07	a-c	78.2	c-e	29.8	a-c	2.0	52.63	ab	302.66	a
CG 9598 B3XF	621	ab	37.36	a	3.90	a	1.05	b-d	79.3	a-c	28.6	cd	1.3	50.55	b	263.02	ab
NG 3699 B2XF	612	ab	33.22	bc	3.47	b	1.08	ab	78.3	b-e	30.0	a-c	1.7	50.60	b	262.67	ab
FM 1830 GLT	590	a-c	34.40	bc	3.57	b	1.10	a	77.8	de	30.7	ab	2.0	54.32	a	273.12	ab
NG 4689 B2XF	587	a-c	34.31	bc	4.00	a	1.04	cd	79.1	a-d	29.8	a-c	1.3	49.92	bc	247.11	a-c
NG 3406 B2XF	558	a-c	35.06	a-c	3.57	b	1.06	bc	79.9	a	31.1	ab	2.0	51.58	ab	242.63	a-d
FM 1888 GL	558	a-c	33.35	bc	3.40	b	1.08	ab	78.5	b-e	29.7	a-c	1.7	51.83	ab	239.00	a-d
FM 2322 GL	518	b-d	35.53	ab	3.50	b	1.05	b-d	78.2	c-e	28.7	cd	1.7	51.37	ab	224.71	b-d
DP 1522 B2XF	487	cd	33.02	bc	3.40	b	1.04	b-d	78.8	a-d	29.5	bc	2.0	46.57	c	177.34	de
DP 1646 B2XF	473	cd	37.29	a	3.47	b	1.10	a	77.4	e	29.5	bc	1.7	51.32	ab	192.16	c-e
DP 1549 B2XF	434	d	32.58	c	2.80	c	0.99	e	75.7	f	27.3	d	1.7	40.18	d	127.92	e
Mean	565		34.70		3.54		1.06		78.4		29.7		1.7	50.01		236.91	
<i>pLSD</i>	123		2.73		0.24		0.04		1.3		1.8		<i>NS</i> ²	3.54		65.69	
<i>P>F</i>	0.0099		0.0188		<0.0001		0.0001		0.0002		0.0081		0.3981	<0.0001		0.0007	
<i>CV</i>	21.8517		6.9489		10.1102		3.4176		1.6398		4.8006		35.1324	8.2854		31.5142	

¹Return value = (lint yield X loan value) – seed cost

²Not significant

Yoakum Dryland RACE Trial 2017

Planted – 5/26/2017

Seeding Rate – 40,000 seed per acre

Seasonal Precipitation – 16.19”

Harvested – 11/28/2017

Average Lint Yield – 704 lbs/acre

Table 22. Yoakum County Dryland RACE Trial Results.

Variety	Lint Yield (lbs./acre)		Turnout ¹ (%)		Micronaire		Length (in.)		Uniformity (%)		Strength (g/tex)		Leaf Grade		Loan Value (cents/lb.)		Return (\$/acre) ²	
NG 1511 B2RF ³	866	a	29.83	a	3.90	a	1.07	de	80.2	ab	31.1	ab	2.3	a	53.17	c-e	420.00	a
NG 3406 B2XF	850	ab	27.82	c	3.60	bc	1.08	cd	80.3	ab	30.3	a-d	1.7	ab	53.67	b-e	392.26	ab
NG 4545 B2XF	792	a-c	28.29	bc	3.93	a	1.07	de	79.9	a-d	31.0	ab	1.0	b	51.77	ef	349.55	bc
FM 1888 GLT	759	a-c	27.28	c	3.43	c-e	1.10	bc	79.9	a-d	30.7	a-c	2.3	a	54.73	a-d	347.23	bc
DP 1522 B2XF	755	bc	28.21	bc	3.80	ab	1.10	bc	80.4	a	31.3	ab	1.7	ab	55.65	ab	350.76	bc
FM 1830 GLT	754	bc	30.02	a	3.73	ab	1.17	a	80.0	a-c	31.4	ab	1.0	b	56.87	a	364.93	a-c
FM 2322 GL	739	cd	29.14	ab	3.60	bc	1.10	bc	78.9	cd	30.2	b-d	2.0	a	55.30	a-c	353.69	bc
FM 1911 GLT	703	cd	28.37	bc	3.23	e	1.11	b	79.3	a-d	31.3	ab	1.7	ab	52.85	d-f	308.09	cd
DP 1549 B2XF	638	d	28.33	bc	2.97	f	1.03	f	76.9	e	29.4	d	1.0	b	45.88	g	228.14	ef
DP 1646 B2XF	630	d	30.26	a	3.63	bc	1.13	b	79.5	a-d	29.7	cd	1.0	b	56.15	a	283.11	de
NG 5007 B2XF	508	e	27.22	c	3.50	cd	1.05	ef	78.9	d	27.7	e	1.0	b	50.55	f	192.35	f
NG 4601 B2XF	458	e	27.48	c	3.37	de	1.08	cd	79.2	b-d	31.5	a	1.0	b	51.72	ef	175.38	f
Mean	704		28.52		3.56		1.09		79.5		30.5		1.5		53.19		313.79	
<i>pLSD</i>	<i>111</i>		<i>1.21</i>		<i>0.20</i>		<i>0.03</i>		<i>1.1</i>		<i>1.2</i>		<i>0.9</i>		<i>2.39</i>		<i>\$61.58</i>	
<i>P>F</i>	<i><0.0001</i>		<i><0.0001</i>		<i><0.0001</i>		<i><0.0001</i>		<i><0.0001</i>		<i><0.0001</i>		<i>0.0170</i>		<i><0.0001</i>		<i><0.0001</i>	
<i>CV</i>	<i>21.8182</i>		<i>4.4004</i>		<i>8.3738</i>		<i>3.5631</i>		<i>1.4655</i>		<i>4.2823</i>		<i>47.3001</i>		<i>5.9276</i>		<i>28.9332</i>	

¹Field Cleaner bypassed at harvest.

²Return value = (lint yield X loan value) – seed cost

³Grower entry – NexGen 1511 B2RF



**2017 Texas Panhandle
Replicated Agronomic Cotton Evaluation (RACE)**



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2017 Texas Panhandle Highlights

While variety selection is one of the most important decisions a producer makes in all cotton producing regions, cotton varietal selection in the Texas Panhandle can be especially challenging because producers must pick varieties that perform well in the region's narrow production window between planting and maturity (May-October). However, cool spring conditions at planting frequently result in reductions in early season vigor and seasonal growing degree day (GDD) accumulation. Consequently, region specific variety trials evaluating early to early-mid maturity cotton varieties are necessary to provide producers unbiased comparisons of top-yielding varieties. The Texas Panhandle RACE trials provide producers knowledge of varietal performance and stability under Texas Panhandle environmental conditions. The 2017 production season brought many weather-related challenges. While producers plan to plant cotton in early May, a late spring blizzard on May 5 delayed cotton 2017 planting until mid-May across much of the Texas Panhandle. If crops were quickly planted, producers achieved good stands, but hot-dry conditions in late-May and early-June dried out fields and stressed young cotton plants. Under irrigation, producers managed cotton to achieve very good boll set, but cool, rainy conditions in August and September resulted in cotton reverting to vegetative development. Regionally, cool, rainy conditions persisted through September resulting limited late season GDD accumulation and poor fiber quality (Fig. 1).

Materials and Methods

The 2017 Texas Panhandle RACE Trials were planted at seven locations, but only five locations were harvested. Varieties were planted in a randomized complete block design with three replications at all locations. Agronomic practices including rotation, planting date, and planting populations are outlined in Table 1. Fifteen varieties were evaluated with a core set of nine varieties at each trial location. Fourteen of the varieties were early to early-mid maturing double and triple herbicide stacked varieties, and one variety Phytogen 490 W3FE was a medium maturity variety that was included in the variety set for the dryland locations as well as the Swisher County location. In warm, dry conditions, Phytogen 490 W3FE performs as a determinant variety with a very good yield potential. Weed and insect control measures, if needed, and harvest aid applications were performed by cooperating producers. Plots were harvested using producer/cooperator equipment, and grab samples were taken by plot and 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 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.

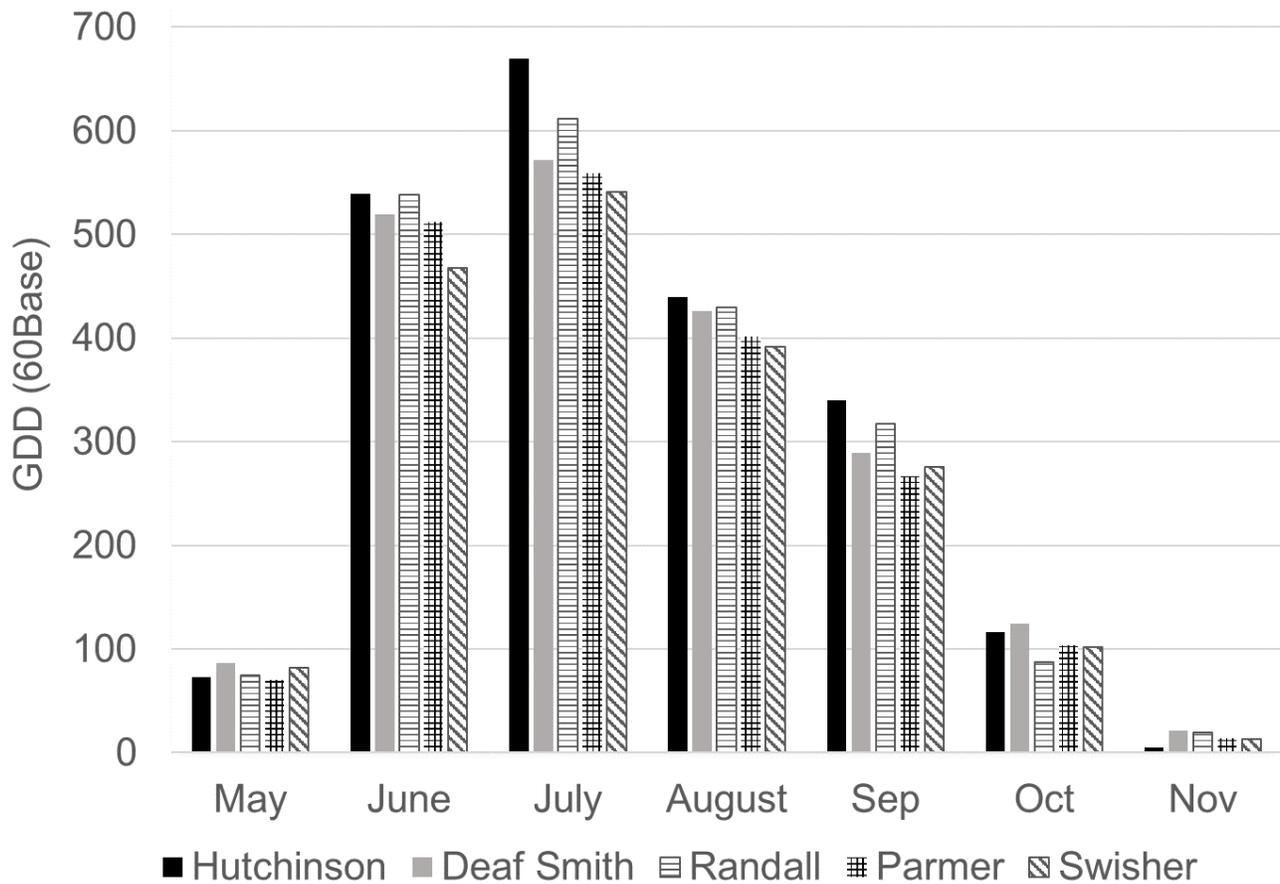


Figure 1. Distribution of growing degree day (GDD60) accumulation from planting.

The Randall County trial was the only planned dryland trial, but due to above average precipitation (21.5 inches) during the 2017 production season, irrigation regimes are not differentiated when comparing varieties between trials. The Hartley County trial was hailed out on June 30, 2017, and the trial in Sherman County was terminated by the producer as the result of a poor stand. Nodes above cracked boll (NACB) measurements were made at the Randall County location on October 18 to evaluate maturity prior to the application of a harvest-aid (Table 4). Measurements confirmed earlier maturity varieties performed better and resulted in less production risk under 2017 GDD limited conditions. The Parmer County trial was planted on a heavily manured field. Heavy precipitation and fertility resulted in excessive vegetative growth and poor development resulting in variable lint yields. Overall, FiberMax 1320GL, Phytogen 330W3FE and Stoneville 4747GLB2 were the top three performing varieties across all locations. Location specific datasets reflect specific yield and quality differences between varieties (Tables 5-9).

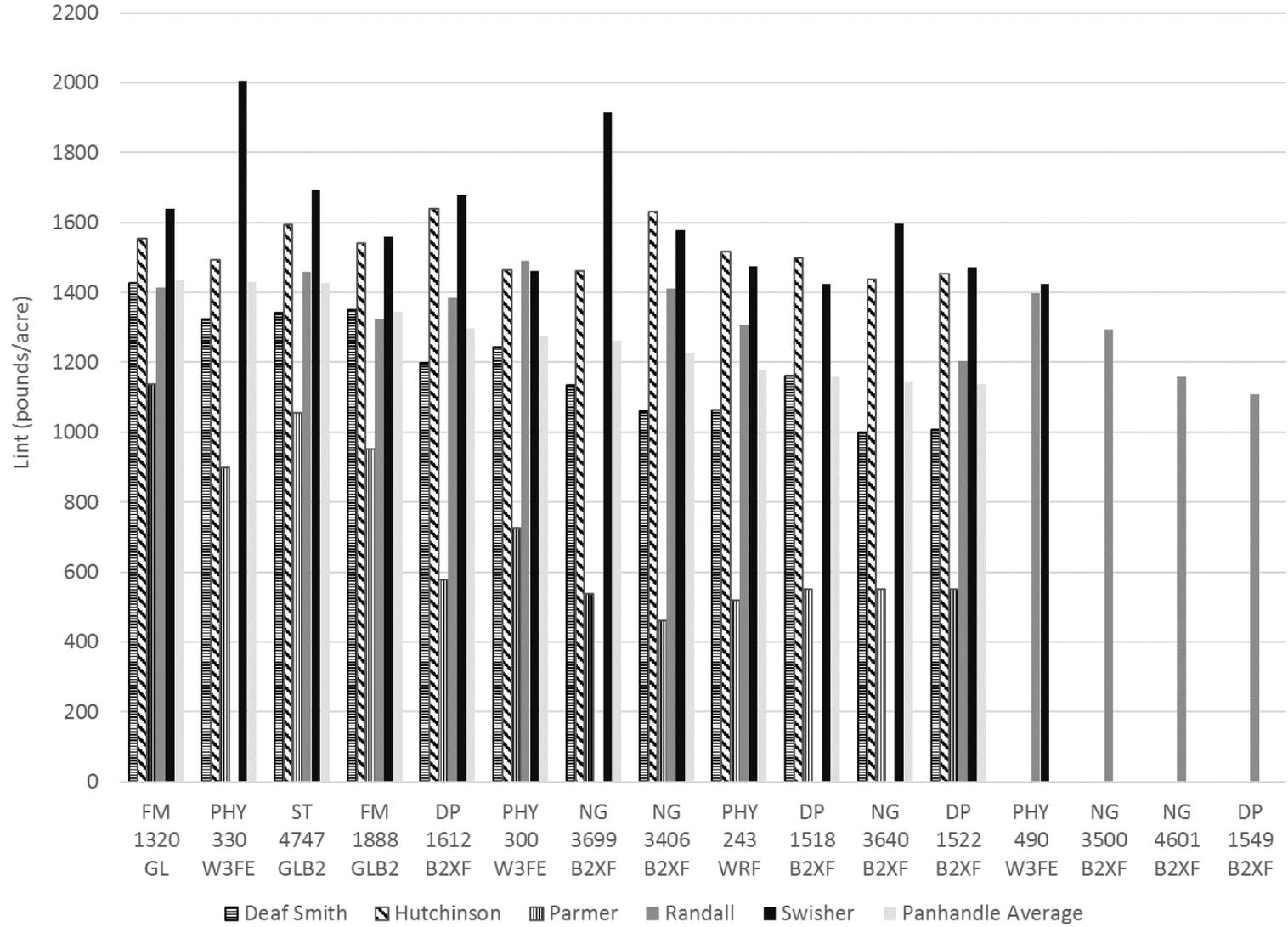


Figure 2. Comparison of variety performance between trials in order of the regional ranking of varieties.

Table 1. 2017 Agronomic information by location.

County	Deaf-Smith	Hartley	Hutchinson	Parmer	Randall	Sherman	Swisher
Location (Nearest Town)	Hereford	Middlewater	Pringle	Farwell	Umbarger	Sunray	Kress
Cooperator	Frank Bezner	Middlewater Farms	Craig McCloy	Williams Farm	Danny Hicks	Tommy Cartrite	Jeremy Reed
County Agent(s)	Rick Auckerman	Michael Bragg	Kristy Slough and Andrew Sprague	Curtis Preston and Sergio Garza	J.D. Ragland	Marcel Fischbacher	John Vilalba and Craig Campbell
Planting Date	17-May-17	26-May-17	18-May-17	17-May-17	20-May-17	16-May-17	19-May-17
Planting Population (Seeds/ac)	50,000	55,000	80,000	50,000	35,000	65,000	50,000
Previous Crop	Corn	Corn	Sorghum w/ wheat cover	Sorghum	Wheat	Corn	Sorghum
Row Spacing (in)	30	30	20	30	30	30	40
Air Temp. at Planting (°F)	68.0	69.4	82.9	67.0	80.5	64.1	60.0
4" Soil Temp. at Planting (°F)	65.0	59.7	60.0	67.3	64.3	67.2	59.5
Trial Condition	Good	Hailed Out	Very Good	Very Growthy	Very Good	Terminated	Very Good
Irrigation	6.5	---	8.3	4.0	Dryland	---	5.5
Precipitation	17.4	---	14.5	15.1	21.5	---	11.2
Growing Degree Days	2039	---	2182	1927	2078	---	1873
Harvest Date	Dec 12-13, 2017	---	16-Nov-17	4-Dec-17	27-Nov-17	---	6 & 7-Dec-17
Varieties	DP 1518 B2XF	DP 1518 B2XF	DP 1518 B2XF	DP 1518 B2XF	DP 1522 B2XF	DP 1518 B2XF	DP 1518 B2XF
	DP 1522 B2XF	DP 1522 B2XF	DP 1522 B2XF	DP 1522 B2XF	DP 1549 B2XF	DP 1522 B2XF	DP 1522 B2XF
	DP 1612 B2XF	DP 1612 B2XF	DP 1612 B2XF	DP 1612 B2XF	DP 1612 B2XF	DP 1612 B2XF	DP 1612 B2XF
	FM 1320 GL	FM 1320 GL	FM 1320 GL	FM 1320 GL	FM 1320 GL	FM 1320 GL	FM 1320 GL
	FM 1888 GLB2	FM 1888 GLB2	FM 1888 GLB2	FM 1888 GLB2	FM 1888 GLB2	FM 1888 GLB2	FM 1888 GLB2
	NG 3406 B2XF	NG 3406 B2XF	NG 3406 B2XF	NG 3406 B2XF	NG 3406 B2XF	NG 3406 B2XF	NG 3406 B2XF
	NG 3640 B2XF	NG 3640 B2XF	NG 3640 B2XF	NG 3640 B2XF	----	NG 3640 B2XF	NG 3640 B2XF
	NG 3699 B2XF	NG 3699 B2XF	NG 3699 B2XF	NG 3699 B2XF	----	NG 3699 B2XF	NG 3699 B2XF
	----	----	----	----	NG 3500 B2XF	----	----
	----	----	----	----	NG 4601 B2XF	----	----
	PHY 243 WRF	PHY 243 WRF	PHY 243 WRF	PHY 243 WRF	PHY 243 WRF	PHY 243 WRF	PHY 243 WRF
	PHY 300 W3FE	PHY 300 W3FE	PHY 300 W3FE	PHY 300 W3FE	PHY 300 W3FE	PHY 300 W3FE	PHY 300 W3FE
	PHY 330 W3FE	PHY 330 W3FE	PHY 330 W3FE	PHY 330 W3FE	----	PHY 330 W3FE	PHY 330 W3FE
	----	----	----	----	PHY 490 W3FE	----	PHY 490 W3FE
	ST 4747 GLB2	ST 4747 GLB2	ST 4747 GLB2	ST 4747 GLB2	ST 4747 GLB2	ST 4747 GLB2	ST 4747 GLB2

Table 2. Characteristics of varieties evaluated in 2017 Panhandle RACE trials.

Variety	Maturity	Herbicide Package	Leaf Type	Storm Tolerance*	Plant Height	Mic	Vert.	Bacterial Blight
Deltapine 1518 B2XF	Early	Glyphos., Glufos., and Dicamba	Light Hair	4	Medium	4.1	Good	Resistant
Deltapine 1522 B2XF	Early-Med	Glyphos., Glufos., and Dicamba	Light Hair	5	Medium	4.3	Poor	Susceptible
Deltapine 1612 B2XF	Early	Glyphos., Glufos., and Dicamba	Light Hair	6	Medium	4.3	Good	Mod. Susc.
Stoneville 4747GLB2	Early-Med	Glyphosate and Glufosinate	Semi-Smooth	7	Short	4.2	Intermediate	Susceptible
FiberMax 1320GL	Very Early	Glyphosate and Glufosinate	Semi-Smooth	7	Short	3.9	Fair	Susceptible
FiberMax 1888GLB2	Early-Med	Glyphosate and Glufosinate	Semi-Smooth	7	Medium	3.9	Fair	Resistant
FiberMax 2322GL†	Med	Glyphosate and Glufosinate	Semi-Smooth	6	Med-Tall	4	Excellent	Susceptible
NexGen 3406B2XF	Early-Med	Glyphos., Glufos., and Dicamba	Semi-Smooth	6	Medium	4.4	Intermediate	Susceptible
NexGen 3640B2XF	Early-Med	Glyphos., Glufos., and Dicamba	Smooth	6	Med-Tall	4.3	Good	Resistant
NexGen 3699B2XF	Early-Med	Glyphos., Glufos., and Dicamba	Smooth	5	Med-Tall	4.2	Tolerant	Resistant
NexGen 3500B2XF	Early-Med	Glyphos., Glufos., and Dicamba	Smooth	6	Med-Tall	3.8	Excellent	Resistant
NexGen 4601B2XF	Medium	Glyphos., Glufos., and Dicamba	Semi-Smooth	6	Med-Tall	4.5	Intermediate	Susceptible
PhytoGen 243WRF	Early	Glyphosate and Glufosinate	Semi-Smooth	Very Good	Short-Med	3.7	Excellent	Resistant
PhytoGen 300W3FE	Early-Med	Glyphos., Glufos., and 2,4-D	Semi-Smooth	Excellent	Medium	4.3	Good	---
PhytoGen 333WRF	Early-Med	Glyphosate and Glufosinate	Hairy	Very Good	Med-Tall	4.1	---	---
PhytoGen 490W3FE	Med	Glyphos., Glufos., and 2,4-D	Semi-Smooth	Very Good	Tall	4.2	---	Resistant

*Storm Tolerance (1-9): 1=Loose Boll, 9=Tight Boll from Company Variety Descriptions.

†Variety included at the producer's request.

Table 3. Four-week stand counts by location.

Trial Location	Deaf Smith	Hartley	Hutchinson	Parmer	Swisher	Randall
	----plants/acre----					
Planted Pop.	50,000	55,000	80,000	50,000	50,000	35,000
DP 1518 B2XF	38768	39785	58225	34267	31690	---*
DP 1522 B2XF	39204	37171	57064	32670	22216	21925
DP 1549 B2XF	---	---	---	---	---	21054
DP 1612 B2XF	48352	39204	63598	42544	30710	27007
FM 1320 GL	42834	39204	54668	37607	29512	21490
FM 1888 GLB2	39494	41818	54377	34412	30165	20909
NG 3406 B2XF	43415	41963	62363	40366	32779	28314
NG 3500 B2XF	---	---	---	---	---	23958
NG 3640 B2XF	43705	39494	60440	40366	27878	---
NG 3699 B2XF	41237	36590	58443	31944	31908	---
NG 4601 B2XF	---	---	---	---	---	21054
PHY 243 WRF	47335	41963	66792	39349	26354	28024
PHY 300 W3FE	44286	45302	64904	43705	28532	25700
PHY 330 W3FE	46754	45157	66865	38768	26572	---
PHY 490 W3FE	---	---	---	---	---	24829
ST 4747 GLB2	41237	37462	47408	39930	29730	26136
Test Average	43052	40426	59596	37994	29004	24200
CV, %	10.01	11.21	11.61	15.63	18.24	13.73
p-value	0.7633	0.2314	0.3194	0.4644	0.7795	0.3542
LSD	7281	7605	11695	10427	8996	5608

* Varieties not planted at the respective location.

Table 4. Nodes Above Cracked Boll measured October 18, 2017 at the Randall County trial prior to a harvest aid application (Means followed by the same letter are not significantly different at the 0.05 probability level).

Variety	NACB
FM 1320 GL	2 a
PHY 300 W3FE	2 ab
NG 3406 B2XF	3 abc
ST 4747 GLB2	3 abc
DP 1612 B2XF	3 abc
PHY 243 WRF	4 abc
FM 1888 GLB2	4 abc
NG 3500 B2XF	4 abc
PHY 490 W3FE	5 bc
DP 1522 B2XF	5 c
NG 4601 B2XF	5 c
DP 1549 B2XF	10 d
Trial Average	4.0
p-value	0.0003
LSD	2.9

Table 5. 2017 Lint yield and quality for the Deaf Smith County RACE Trial, Frank Bezner Farm at Hereford, Texas (Rick Auckerman County Extension Agent).

Variety	Lint Yield		Turnout	Micro- naire	Fiber Length (in.)	Strength (g/tex)	Uniformity %	Lint loan value		Lint value --- \$/acre ---
	--- lb/acre ---	--- % ---						cents/lb		
FM 1320 GL	1426	a	0.34	2.6	1.18	31.2	80.7	49.82	a	707.78
FM 1888 GLB2	1350	ab	0.34	2.3	1.13	31.3	82.1	46.00	ab	620.92
ST 4747 GLB2	1341	ab	0.31	2.5	1.14	28.0	78.4	46.00	ab	617.52
PHY 330 W3FE	1322	ab	0.30	2.3	1.14	30.2	80.8	45.07	abc	595.50
PHY 300 W3FE	1243	abc	0.31	2.6	1.15	31.2	81.9	43.75	bc	543.48
DP 1612 B2XF	1198	abc	0.31	2.8	1.14	30.0	79.5	41.52	bc	498.42
DP 1518 B2XF	1161	abc	0.29	2.4	1.14	30.2	80.4	40.33	bc	468.28
NG 3699 B2XF	1133	abc	0.29	2.5	1.17	31.0	81.3	41.88	bc	476.06
PHY 243 WRF	1062	bc	0.28	2.5	1.17	28.6	77.5	43.22	bc	457.94
NG 3406 B2XF	1059	bc	0.30	2.6	1.17	28.3	79.5	40.07	bc	424.43
DP 1522 B2XF	1007	c	0.29	2.7	1.18	29.7	79.2	39.90	c	401.84
NG 3640 B2XF	1000	c	0.30	2.6	1.12	31.8	81.7	40.43	bc	404.35
Test average	1192		0.30	2.55	1.15	30.13	80.24	43.17		518.04
CV, %	8.46		3.67	8.14	3.30	5.00	1.73	4.61		9.63
p-value	<0.0001		<0.0001	0.14	0.65	0.0571	0.0068	<0.0001		<0.0001
LSD	297.00		0.03	0.61	0.12	4.43	4.08	0.06		146.92

Means within a column with the same letter are not significantly different at the 0.05 probability level.

CV - coefficient of variation.

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

Lint loan value calculated for upland cotton using a \$0.52/pound base not the 2017 \$0.49/pound base.

Table 6. 2017 Lint yield and quality for the Hutchinson County RACE Trial, Craig McCloy Farm at Pringle, Texas (Kristy Slough and Andre Sprague County Extension Agents).

Variety	Lint Yield		Turnout	Micro- naire	Fiber Length (in.)	Strength (g/tex)	Uniformity %	Lint loan		Lint value --- \$/acre ---
	--- lb/acre ---	---%---						value cents/lb		
DP 1612 B2XF	1639	a	0.32	2.8	1.15	30.0	79.5	46.58	a	765.36
NG 3406 B2XF	1632	a	0.33	2.8	1.13	28.3	79.5	44.95	a	732.52
ST 4747 GLB2	1595	a	0.31	2.7	1.15	28.0	78.4	46.50	a	743.92
FM 1320 GL	1555	a	0.32	2.7	1.13	31.2	80.7	47.07	a	733.89
FM 1888 GLB2	1541	a	0.32	2.7	1.20	31.3	82.1	48.52	a	747.87
PHY 243 WRF	1517	a	0.32	2.5	1.13	28.6	77.5	42.57	a	648.62
DP 1518 B2XF	1499	a	0.30	2.7	1.20	30.2	80.4	46.90	a	712.49
PHY 330 W3FE	1494	a	0.30	2.7	1.18	30.2	80.8	47.53	a	710.80
PHY 300 W3FE	1463	a	0.29	2.9	1.17	31.2	81.9	50.17	a	733.94
NG 3699 B2XF	1461	a	0.31	2.7	1.23	31.0	81.3	48.72	a	712.95
DP 1522 B2XF	1453	a	0.32	2.7	1.16	29.7	79.2	44.78	a	650.75
NG 3640 B2XF	1438	a	0.33	2.8	1.14	31.8	81.7	47.53	a	683.13
Test average	1524		0.31	2.73	1.17	30.13	80.24	46.82		714.69
CV, %	10.84		4.83	5.70	2.38	5.00	1.72	5.92		14.79
p-value	0.8654		0.1819	0.5713	0.00	0.0571	0.0068	0.1674		0.9569
LSD	278.33		0.04	0.46	0.08	4.43	4.08	0.08		311.33

Means within a column with the same letter are not significantly different at the 0.05 probability level.

CV - coefficient of variation.

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

2017 base loan value for upland cotton is \$0.52/pound.

Table 7. 2017 Lint yield and quality for the Parmer County RACE Trial, Williams Farm at Farwell, Texas (Curtis Preston and Sergio Mendez County Extension Agents).

Variety	Lint Yield		Turnout	Micro- naire	Fiber Length (in.)	Strength (g/tex)	Uniformity %	Lint loan value cents/lb	Lint value \$ /acre
	--- lb/acre ---	--%--							
FM 1320 GL	1137	a	0.21	2.31	1.15	28.6	78.8	42.90	487.41
ST 4747 GLB2	1056	a	0.19	2.14	1.14	25.0	76.3	38.07	399.64
FM 1888 GLB2	951	ab	0.20	2.08	1.13	25.8	73.9	38.15	400.85
PHY 330 W3FE	899	ab	0.17	2.13	1.13	27.8	78.0	38.72	347.04
PHY 300 W3FE	727	bc	0.16	2.05	1.08	25.9	75.9	37.12	270.01
NG 3699 B2XF	625	bc	0.15	2.04	1.10	25.0	74.7	37.53	231.39
DP 1612 B2XF	577	cd	0.13	2.01	1.09	24.3	75.1	35.63	204.32
DP 1518 B2XF	552	cd	0.13	2.01	1.11	23.4	72.5	35.40	200.99
DP 1522 B2XF	551	cd	0.14	---	---	---	---	---	---
NG 3640 B2XF	551	cd	0.16	2.04	1.07	25.3	77.6	36.80	202.54
PHY 243 WRF	520	cd	0.13	2.01	1.10	23.2	73.2	35.98	187.81
NG 3406 B2XF	460	d	0.11	---	---	---	---	---	---
Test average	717		0.16	2.08	1.11	25.41	75.60	37.63	293.20
CV, %	21.46		21.54	2.41	3.19	3.19	1.63	4.85	17.73
p-value	<0.0001		0.0172	<0.0001	0.2565	0.0041	0.0002	0.0081	<0.0001
LSD	259.31		0.06						

Means within a column with the same letter are not significantly different at the 0.05 probability level.

CV - coefficient of variation.

*Micronaire less than 2.0 for all plots so HVI samples not evaluated.

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

Lint loan value calculated for upland cotton using a \$0.52/pound base not the 2017 \$0.49/pound base.

Table 8. 2017 Lint yield and quality for the Randall County RACE Trial, Danny Hicks Farm, Umbarger, Texas (J.D. Ragland County Extension Agent).

Variety	Lint Yield --- lb/acre ---		Turnout --%--	Micro- naire	Fiber Length (in.)	Strength (g/tex)	Uniformity %	Lint loan value cents/lb	Lint value --- \$/acre ---
PHY 300 W3FE	1490	a	0.32	3.1	1.11	31.2	81.9	51.63 abcd	772.29
ST 4747 GLB2	1458	a	0.31	2.8	1.15	28.0	78.4	48.22 def	704.69
FM 1320 GL	1413	ab	0.31	3.0	1.12	31.2	80.7	50.60 bcde	714.11
NG 3406 B2XF	1412	ab	0.33	2.8	1.13	28.3	79.5	49.92 cde	704.66
PHY 490 W3FE	1398	ab	0.31	3.3	1.17	30.2	80.8	54.48 a	762.64
DP 1612 B2XF	1385	abc	0.32	3.1	1.16	30.0	79.5	51.47 abcd	711.92
FM 1888 GLB2	1323	abcd	0.32	2.8	1.18	31.3	82.1	48.27 def	639.47
PHY 243 WRF	1306	abcd	0.28	2.7	1.18	28.6	77.5	47.03 f	617.24
NG 3500 B2XF	1295	abcd	0.32	3.3	1.12	31.8	81.7	53.13 abc	688.07
DP 1522 B2XF	1203	bcd	0.32	3.1	1.15	30.2	80.4	50.88 bcd	612.35
NG 4601 B2XF	1160	cd	0.35	3.2	1.18	31.0	81.3	54.03 ab	626.35
DP 1549 B2XF	1108	c	0.32	2.7	1.13	29.7	79.2	47.35 ef	526.60
Test average	1329		0.32	2.98	1.15	30.13	80.24	50.58	673.37
CV, %	10.07		4.55	6.32	1.56	5.00	1.72	4.10	12.05
p-value	0.0340		0.0019	0.0033	<0.001	0.0571	0.0068	0.0011	0.0451
LSD	225.62		0.02	0.32	0.03	4.43	2.38	0.03	136.78

Means within a column with the same letter are not significantly different at the 0.05 probability level.

CV - coefficient of variation.

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

Lint loan value calculated for upland cotton using a \$0.52/pound base not the 2017 \$0.49/pound base.

Table 9. 2017 Lint yield and quality for the Swisher County RACE Trial, Jeremy Reed Farm, Kress, Texas (John Villalba and Craig Campbell County Extension Agents).

Variety	Lint Yield lb/acre	Turnout %	Micro- naire	Fiber Length In.	Strength g/tex	Uniformity %	Lint loan value cents/lb	Lint value \$/acre
PHY 330 W3FE	2004 a	0.35	3.39	1.16	30.83	80.8	53.62 a	1069.21
ST 4747 GLB2	1688 ab	0.29	3.27	1.20	28.97	79.8	52.43 a	884.80
DP 1612 B2XF	1679 ab	0.32	3.58	1.17	31.00	81.2	53.42 a	893.14
NG 3699 B2XF	1664 ab	0.33	3.35	1.20	30.23	80.3	55.30 a	921.18
FM 1320 GL	1640 ab	0.29	3.39	1.20	31.70	79.8	53.43 a	875.55
NG 3640 B2XF	1596 ab	0.31	3.60	1.16	31.57	81.6	53.05 a	846.18
NG 3406 B2XF	1579 b	0.28	3.07	1.18	29.63	79.6	53.13 a	835.83
FM 1888 GLB2	1560 b	0.30	3.43	1.21	32.00	80.9	53.55 a	835.37
PHY 243 WRF	1475 b	0.28	3.07	1.21	28.73	78.4	50.63 a	746.82
DP 1522 B2XF	1472 b	0.30	3.48	1.20	30.73	80.9	52.23 a	769.39
PHY 300 W3FE	1462 b	0.27	3.31	1.20	30.67	79.8	52.10 a	762.86
DP 1518 B2XF	1424 b	0.29	3.21	1.21	29.97	80.93	53.67 a	765.67
PHY 490 W3FE	1423 b	0.28	3.07	1.23	31.85	81.45	52.90 a	755.54
Test Average	1590	0.30	3.32	1.20	30.61	80.41	53.04	843.20
CV, %	15.61	13.22	6.01	2.53	2.04	0.84	5.37	15.92
p-value	0.3295	0.6062	0.0251	0.1752	<0.001	0.0001	0.9348	0.2506
LSD	416.54	0.07	0.34	0.05	1.05	1.14	0.0478	225.35

Means within a column with the same letter are not significantly different at the 0.05 probability level.

CV - coefficient of variation.

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

2017 base loan value for upland cotton is \$0.52/pound.

2017 Hutchinson County Row Spacing Trial

Historically, narrow row spacings have been used by select Texas Panhandle producers as a strategy to enhance cotton maturity. However, new early maturing cotton varieties are yielding greater than the more determinant varieties previously planted in the Texas Panhandle. Consequently, there are producer inquiries about continuing the practice of planting on narrow, 20-inch row spacings as a strategy to enhance maturity and yield with newer varieties. On average, Texas Panhandle producers plant cotton using a seeding rate of 2.5 to 3.5-seeds per row foot on 30-inch rows. To maintain the recommended seeding rate per row foot, planting populations increase as row spacings decrease. Increased seeding rates often result in increased inter-row competition that potentially affects boll and fiber development. The 2017 Hutchinson County row spacing trial evaluated the lint production and fiber quality of FiberMax 1320 and Stoneville 4747 on three row spacings (20, 30 and 40 inches) in plots adjacent to the Hutchinson County RACE trial. The 2017 trial demonstrated significant variety and row spacings interactions. Stoneville 4747 yielded greater on all row spacings with the greatest lint production being on 30-inch rows (Table 11). The 40-inch row spacing yielded the lowest for both varieties. While yields were lowest on the 40-inch rows, there were no significant differences between the final four-week plant stands on the 30- and 40-inch rows suggesting that differences were not the result of a greater number of fruit bearing plants on the 30-inch spacing (Fig. 3). The 2017 plots were not mapped for physiological growth and development, but it was observed that fruiting position increased as row spacing increased. On 40-inch rows, it was noted that the third position bolls were consistently small and unfilled, which was potentially the result of inefficient resource utilization. The trial will be repeated in 2018 and 2019 to obtain a 3-year dataset of which is necessary for evaluation of a management practice under varying environmental conditions.

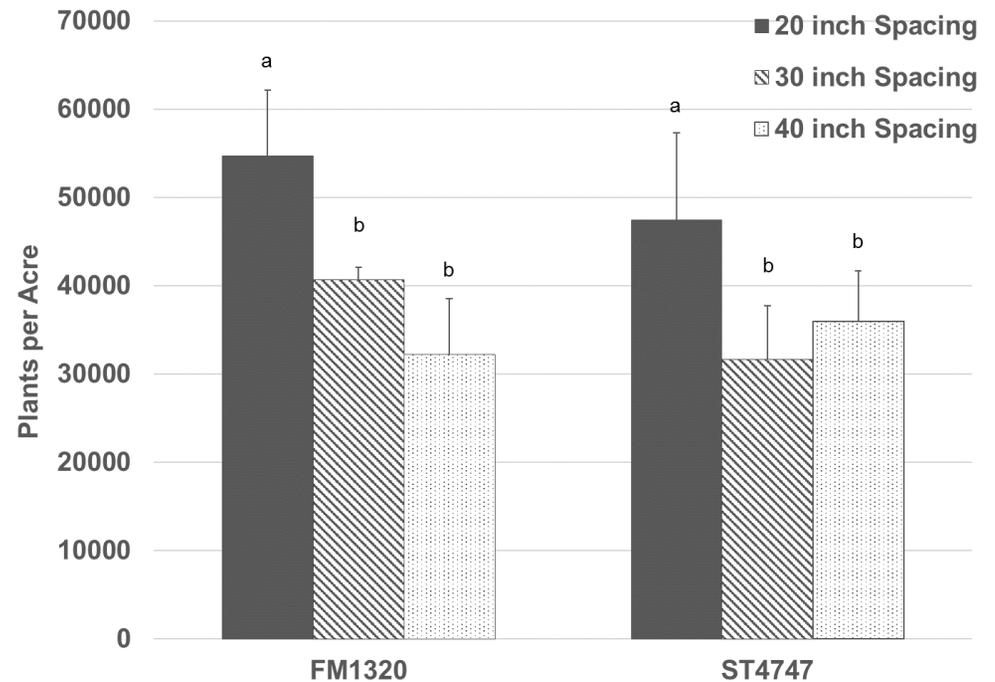


Figure 3. 4-week stand counts in the Hutchinson County row spacing trial.

Table 10. 2017 Harvest lint yield and quality results from the Hutchinson County Cotton Row Spacing Trial, Pringle, Texas, Craig McCloy Farm (Kristy Slough and Andrew Sprague County Extension Agents).

Variety	Row Spacing (in.)	Lint Yield -- lb/acre --	Turnout --%--	Micro-naire	Fiber Length (in.)	Strength (g/tex)	Uniformity %	Lint loan value \$/lb	Lint value ----- \$/acre -----	Seed Cost*
FM 1320 GL	20	1554.9	0.32	2.72	1.13	31.2	80.7	0.4707	733.89	109.09
ST 4747 GLB2	20	1595.1	0.31	2.69	1.15	28.0	78.4	0.4650	743.92	105.82
FM 1320 GL	30	1542.6	0.32	2.62	1.15	30.4	80.0	0.4780	737.24	75.00
ST 4747 GLB2	30	1704.3	0.33	2.67	1.18	28.3	79.4	0.4748	809.63	72.75
FM 1320 GL	40	1311.1	0.30	2.60	1.15	31.5	81.0	0.4713	618.45	54.55
ST 4747 GLB2	40	1447.8	0.32	2.64	1.14	28.4	78.2	0.4682	678.97	52.91
Significant Difference (p-value)										
Variety		0.0205	0.2062	0.7126	0.2906	0.0020	0.0036	0.7728	0.2150	<0.0001
Row Spacing		0.0012	0.2095	0.5178	0.1906	0.7851	0.9750	0.8643	0.0421	<0.0001
Variety x Row Spacing		0.4875	0.0187	0.8031	0.26	0.7891	0.2141	0.9962	0.7636	<0.0001

Means within a column with the same letter are not significantly different at the 0.05 probability level.

CV - coefficient of variation.

Seed Cost does not account for any promotional discounts.

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

Lint loan value calculated for upland cotton using a \$0.52/pound base not the 2017 \$0.49/pound base.



<http://cotton.tamu.edu>

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