

**REPLICATED AGRONOMIC COTTON  
EVALUATION (RACE)  
ROLLING PLAINS OF TEXAS, 2014**



# REPLICATED AGRONOMIC COTTON EVALUATION (RACE)

## ROLLING PLAINS OF TEXAS, 2014

Dr. Gaylon Morgan<sup>1</sup>, Professor and Extension Cotton Specialist  
Dr. Jason Woodward<sup>2</sup>, Associate Professor and Plant Pathologist  
Jonathan Ramirez<sup>3</sup>, Extension Assistant  
Katy White<sup>4</sup>, County Extension Agent  
Steven Sparkman<sup>5</sup>, County Extension Agent  
Dale Dunlap<sup>6</sup>, County Extension Agent  
Langdon Reagan<sup>3</sup>, County Extension Agent  
Martin Shaw<sup>7</sup>, County Extension Agent  
Lonnie Jenschke<sup>8</sup>, County Extension Agent  
Jason Westbrook<sup>9</sup>, County Extension Agent  
Jerry Copeland<sup>10</sup>, County Extension Agent  
Chase Moore<sup>3</sup>, Student Worker  
Ira Yates<sup>2</sup>, Technician  
Bobby Rodriguez<sup>2</sup>, Technician  
Dale Mott<sup>1</sup>, Extension Program Specialist Cotton

Texas A&M AgriLife Extension Service

<sup>1</sup>Department of Soil and Crop Sciences, College Station,

<sup>2</sup>Lubbock, <sup>3</sup>Vernon, <sup>4</sup>Wellington, <sup>5</sup>Quanah, <sup>6</sup>Wheeler, <sup>7</sup>Seymour, <sup>8</sup>Childress, <sup>9</sup>Haskell,  
and <sup>10</sup>Benjamin, Texas

## ACKNOWLEDGMENTS

Appreciation is expressed to the cooperators that provided their land, equipment and time in assisting with prepping, planting, managing and harvesting of these plots throughout the year. All cooperators are listed in Table 1. We would like to extend our appreciation to **Cotton Incorporated** through the **Texas State Support Committee**, **Americot/NexGen**, **Bayer CropScience**, **Croplan Genetics**, **Deltapine**, and **Phytogen** for their partial funding of these trials.

## 2014 HIGHLIGHTS

Variety selection is the most important decision made during the year. Herbicide or insecticide decisions can be changed during the season to address specific conditions and pests; however, variety selection is made only once, and will dictate the management of a field for the entire season. The choosing of a variety should be based on genetics first followed by transgenic technology. Attention should also be paid to agronomic characteristics such as yield, maturity, and fiber quality. The Best Management Practices for variety selection are outlined in Figure 1.

In 2014, transgenic varieties accounted for over 99.5% of the United States acreage. Texas producers planted approximately 6.6 million acres in 2014, which was about 500,000 acres less than 2013. According to the USDA-Agricultural Marketing Service “Cotton Varieties Planted 2014 Crop” survey for the Abilene Classing Office, the most popular varieties planted in the region were: Deltapine 1044 B2RF- 9.80%, Phytogen 499 WRF – 6.40%, NexGen 1511 B2RF – 5.60%, Fibermax 1944 GLB2 – 5.40%, Deltapine 1219 B2RF – 4.70%, Stoneville 4946 GLB2 – 3.10%, Phytogen 339 WRF – 0.43%, Croplan 3787 B2RF – 0.28%, NexGen 3306 B2RF – 0.28%, Fibermax 1830 GLT – 0.25%, and Stoneville 4747 GLB2 – 0.09%.

To assist Texas cotton producers in remaining competitive in the Rolling Plains, the Texas A&M AgriLife Extension Service Agronomy program has been conducting, large plot, on-farm, replicated variety trials for four years (Fig. 2). This approach provides a good foundation of information that can be utilized to assist farmers with the variety selection process. We have also been evaluating the use of TopGuard® for Cotton Root Rot Control for the past four years to help farmers control cotton root rot. This last year we began evaluating the use of TopGuard® for Cotton Root Rot applied at preplant with a knifing rig (data not shown).

Twelve Replicated Agronomic Cotton Evaluation (RACE) Trials were planted in 2014; however, drought and a late season hail storm resulted in only nine trials being harvested (Table 1). Two cotton root rot trials were initiated to determine the efficacy and phytotoxicity of TopGuard® for managing cotton root rot in the Rolling Plains of Texas and are listed on Tables 15 and 16. We also initiated two nitrogen fertilizer rate trials, a center pivot irrigated location and a dryland location in Knox County (data not shown).

All the cottonseed companies with RoundupFlex® or Glytol® and Twinlink® and Bt2® or Widestrike® technology had the opportunity to include at least one variety in the RACE trial at each location. All varieties were treated with either Aeris or Avicta Complete Pak seed treatment. Included on pages 7-9 are the cotton variety descriptions provided by the seed companies. Each of these trials were initiated in producers’ fields were replicated, and were managed by the producer including pest and nutrient management. The plot size for each trial is listed in Table 1.

The cotton root rot trials were initiated in producer's fields and consisted of replicated, large plots as well. TopGuard® was applied in a 5 inch "T band" at planting following the double disk openers on the planter, but before the closing wheels closed the seed furrow. The other method used this year at both sites was the "Y split" in furrow application method. TopGuard® was applied at three rates, 1.0, 1.5 and 2.0 pints, and compared to an untreated plot. TopGuard® was applied with a carrier volume of 6.0 gallons per acre through 8002EVS nozzles at a speed of 4.7 miles per hour. The target seeding rate was 5 seeds/ft.

Table 1 provides a list of planting and harvest dates, row spacing and plot area for each location. Tables 2 and 3 show numerical rankings based upon lint value/acre and lint yield for the irrigated variety trials across all locations. Tables 4 and 5 shows numerical rankings based upon lint value/acre and lint yield for the dryland variety trials across all locations. Tables 6 to 14 include the cotton variety yield data, fiber quality, loan value, and gross lint value for each individual location. Tables 15 and 16 shows treatment yield data, and fiber quality for the root rot trial locations. All locations were ginned at Lubbock with the research gin with one lint cleaner. Additionally, all data were standardized to a color grade and leaf of 41-4.

The statistical analysis quantifies the variability of the test site conditions, such as soil type, harvesting, insect damage, etc. A CV (coefficient of variation) of 15% or less is generally considered acceptable and means the data are dependable. Trials with a small LSD (least significant difference) indicate more consistency within the trial and higher likelihood of identifying differences among varieties. A trial location with a large LSD and large CV indicates a higher degree of variability at the trial location. Non-significance is represented as "NS" and indicates no differences among the varieties within the data column at a 5% significance level.



## ***First 40 Days – Fruiting to Finish***

### **The Most Critical Period in Cotton Production Expert Recommendations of Best Management practices for an Efficient, Cost Effective Cotton Production System**

---

---

#### **Variety Selection**

Cultivar selection is the most important decision made in the production enterprise. This decision has a lasting effect on the crop's early-season vigor and on overall plant health and uniformity during the First 40 Days. The crop's ultimate yield and fiber quality potential at harvest begin with variety selection and seed quality.

- ❖ Consider planting disease tolerant varieties, or those that have at least some resistance, where disease is a problem.

#### **Choose Varieties with Genetic Potential for Higher Yield and Excellent Fiber Quality**

Yield remains the ultimate measure of the crop, although the ever-increasing demand for higher fiber quality makes this factor a close second in priority. With more than 70% of the U.S. crop exported, fiber quality will become the single most important factor for U.S. cotton in the foreseeable future. International mill standards and specifications are higher than domestic mills.

- ❖ Long staple length – >35 (>1.08 inches)
- ❖ High strength – 28 to 29
- ❖ Premium micronaire – 3.8 to 4.8
- ❖ High uniformity Index – 82
- ❖ Smooth leaf with plant confirmation suitable for efficient harvest – 21/31 Grades 2-3 leaf

#### **Plant Several Varieties: Consider Specific Traits and Crop Maturity after Yield and Quality**

Consider planting 3 to 4 varieties to determine which cultivars and trait combinations perform best on your farms. Multiple varieties also minimize the risk of planting the entire farm to a potentially poor performing variety or using traits that do not add value to the individual cropping system.

- ❖ Always evaluate more than one year of variety data prior to planting large acreage to a new cultivar.

#### **Select the Highest Quality Seed for Planting**

High quality seed is critical to early success and the crop's ultimate performance. Rapid germination and emergence is best because it narrows the window for seedling disease and minimizes pest impact. In addition to the standard warm germination test, a cool germination test is recommended. Cool/Warm Vigor Index of 160 is best (e.g. 90 warm germ + 70 cool germ – 160)

Early planting into cool soils requires the best vigor index available in the variety you are planting

- ❖ CWVI >160 = Excellent
- ❖ CWVI 140-159 = Good
- ❖ CWVI 120-139 = Fair
- ❖ CWVI <120 = Poor



## Variety Characteristics/Highlights

Below are the cotton variety characteristics and highlights that were included in the 2014 Uniform Variety Trials and other common varieties planted in the Rolling Plains. These cotton variety descriptions were provided by individual seed company representatives or publicly available information.

### DeltaPine 1044 B2RF

- Mid-full maturity
- Semi-smooth leaf
- Excellent fit on dryland and limited irrigation
- Very good Verticillium and Bacterial Blight resistance

### DeltaPine 1219 B2RF

- Medium-tall plant height
- Early maturity variety
- Semi-smooth leaf
- Broadly adapted across Texas
- Good combination of yield and fiber quality

### DeltaPine 0912 B2RF

- Early maturity variety
- Semi-smooth leaf
- Medium plant height

### FiberMax 1830 GLT

- Early/medium maturity
- Excellent fiber quality with high gin turnout
- TwinLink two-gene Bt protection against bollworm
- Liberty and glyphosate herbicide-tolerant

### FiberMax 1944 GLB2

- GlyTol® + LibertyLink® and Bollgard II® technology
- Early-medium maturity more towards medium maturity
- Widely adapted across entire Cotton Belt – irrigated or dryland
- Well suited for limited irrigation

#### NexGen 3306 B2RF

- Early-Medium maturity
- Excellent fiber package
- Very good verticillium wilt tolerance
- Semi-smooth leaf

#### NexGen 5315 B2RF

- Full season maturity
- Smooth leaf
- Excellent resistance to bronze wilt
- Very good seedling vigor

#### NexGen 1511 B2RF

- Medium maturity
- Semi-smooth leaf
- Excellent seedling vigor
- Medium to Tall plant height
- Moderate to aggressive plant growth regulation may be necessary, especially prior to first bloom, on highly productive soils
- Broad adaptation across soil types, geographies, and production systems
- Well adapted to irrigated or dryland throughout all areas of Texas
- High turnout and very good fiber quality

#### Phytogen 333 WRF

- Early maturity
- Hairy leaf
- Excellent seedling vigor
- Outstanding fiber quality package
- Dryland or irrigated conditions

#### Phytogen 499 WRF

- Mid-maturity variety with exceptional yield potential and very high turnout
- Aggressive growth, greater than PHY 375 WRF
- Consistent across soils and environments, suited for dryland and irrigated fields
- Outstanding seedling vigor and early season growth
- Larger seed size ~ 4,000 – 4,200 seed/lb.

#### Phytogen 339 WRF

- Indeterminate, very early maturing
- Semi-smooth leaf
- Medium-tall plant height
- Excellent seedling vigor

### Stoneville 4747 GLB2

- Early-Mid maturity
- Semi-smooth leaf
- Medium height
- Medium storm tolerance
- GlyTol and Liberty herbicide tolerance

### Stoneville 4946 GLB2

- Early-mid maturity
- Dual tolerance to Liberty<sup>®</sup> and glyphosate herbicides
- Root-knot nematode tolerant
- Moderately-aggressive growth habits
- Broadly adapted across all cotton growing regions

### Croplan Genetics 3787B2F

- Mid maturity
- Adapted for dryland but produces good under irrigated conditions
- Excellent seedling vigor and early season emergence
- Very good storm tolerance

**Table 1. Trial, cooperators, planting date, harvest date, row spacing, plot dimensions and area of 2014 Texas A&M AgriLife Extension RACE Trials harvested.**

<b>Cooperator:</b>	<b>Location</b>	<b>Planting Date</b>	<b>Harvest Date</b>	<b>Row Spacing (inches)</b>	<b>Plot Dimensions</b>	<b>Irrigation Method</b>	<b>Plot Area</b>
Layne Chapman	Vernon	May 13	Oct 20	40	8 rows x 900 feet	Pivot Irrigated	0.55
Donald Shoppa	Vernon	Jun 19	Dec 16	40	8 rows x 1533 feet	Dryland	0.94
Jason Poole	Quanah	Jun 3	Dec 2	30	8 rows x 1166 feet	Furrow Irrigated	0.55
Dan Henard	Wellington	May 16	Nov 11	40	6 rows x 1216 feet	Pivot Irrigated	0.55
Barry Long	Wellington	Jun 3	Dec 3	40	4 rows x 1700 feet	Dryland	0.52
Gilbert Casillias	Haskell	May 30	Nov 29	32	6 rows x 1245 feet	Pivot Irrigated	0.45
Doug Easterling	Haskell	Jun 20	Nov 13	40	8 rows x 456 feet	Dryland	0.28
Jeremy Sanders	Munday	Jun 19	Dec 5	40	8 rows x 1158 feet	Furrow Irrigated	0.53
Cris Orsack	Seymour	May 14	Oct 24	40	6 rows x 930 feet	Furrow Irrigated	0.43

**Table 2. Irrigated trials: Variety ranking based on lint value/acre, Rolling Plains, 2014.**

Variety	Irrigated Trial locations					
	Wellington	Haskell	Quanah	Vernon	Seymour	Munday
Phytogen 339WRF	7	1	4	5	7	5
Phytogen 333WRF	3	3	6	7	1	6
Nexgen 3306B2RF	8	4	8	4	6	7
Nexgen 1511B2RF	1	5	5	2	5	2
Deltapine 1219B2RF	5	7	7	1	4	8
Stoneville 4747GLB2	4	8	1	7	8	1
Fibermax 1830GLT	6	2	2	3	3	3
Croplan Genetics 3787B2RF	2	6	3	6	2	4

These are off of our eight varieties chosen by seed representatives.

**Table 3. Irrigated trials: Variety ranking based on lint yield, Rolling Plains, 2014.**

Variety	Irrigated Trial locations					
	Wellington	Haskell	Quanah	Vernon	Seymour	Munday
Phytogen 339WRF	7	2	4	5	8	5
Phytogen 333WRF	3	1	6	7	1	6
Nexgen 3306B2RF	8	4	8	4	5	7
Nexgen 1511B2RF	1	6	5	2	2	2
Deltapine 1219B2RF	5	7	7	1	6	8
Stoneville 4747GLB2	2	5	1	7	7	1
Fibermax 1830GLT	6	3	2	3	4	3
Croplan Genetics 3787B2RF	4	8	3	6	3	4

These are off of our eight varieties chosen by seed representatives. Some locations have more than seven. These extra varieties were chosen by the farmer to evaluate.

**Table 4. Dryland trials: Variety ranking based on lint value/acre, Rolling Plains, 2014.**

Variety	Dryland Trial locations		
	Wellington	Haskell	Vernon
Phytogen 499WRF	4	1	3
Phytogen 339WRF	2	6	4
Nexgen 5315B2RF	8	3	7
Nexgen 1511B2RF	3	4	1
Deltapine 1044B2RF	5	5	2
Stoneville 4946GLB2	6	2	5
Fibermax 1944GLB2	7	7	6
Deltapine 0912B2RF	1	-	-

<sup>1</sup>This variety was the grower standard for the Wellington location

**Table 5. Dryland trials: Variety ranking based on lint yield, Rolling Plains, 2014.**

Variety	Dryland Trial locations		
	Wellington	Haskell	Vernon
Phytogen 499WRF	4	1	3
Phytogen 339WRF	2	6	5
Nexgen 5315B2RF	8	3	4
Nexgen 1511B2RF	3	4	1
Deltapine 1044B2RF	5	5	2
Stoneville 4946GLB2	6	2	6
Fibermax 1944GLB2	7	7	7
Deltapine 0912B2RF <sup>1</sup>	1	-	-

<sup>1</sup>This variety was the grower standard for the Wellington location

**Table 6. Uniform Stacked-Gene Cotton Variety Trials, 2014**  
**Wilbarger Co., Vernon TX<sup>1</sup>**  
**Cooperator: Layne Chapman Langdon Reagan, County Extension Agent**  
**Jonathan Ramirez, Extension Assistant**  
**Dr. Gaylon Morgan, Extension Cotton Agronomist**

Variety	Lint (lbs/acre)		Turnout (%)		Micronaire (units)		Length (inches)		Strength (g/tex)		Uniformity (%)		Loan Value (¢/lb)		Lint Value (\$/acre) <sup>2</sup>	
Deltapine 1219B2RF	2340	a	37.5	a	3.90	a	1.17	a	33.80	a	81.85	a	54.35	a	1271.50	a
Nexgen 1511B2RF	2101	a	35.1	a	4.40	a	1.10	b	33.00	ab	82.15	a	53.50	c	1124.00	a
Fibermax 1830GLT	1949	a	32.9	a	4.25	a	1.18	a	33.10	ab	82.25	a	54.30	a	1058.00	a
Nexgen 3306B2RF	1945	a	32.6	a	4.05	a	1.17	a	32.90	ab	82.60	a	54.40	a	1058.00	a
Phytogen 339WRF	1915	a	31.4	a	4.05	a	1.15	a	32.90	ab	82.80	a	54.40	a	1042.00	a
Croplan 3787B2RF	1811	a	29.0	a	4.25	a	1.14	a	31.25	b	82.05	a	54.33	a	984.00	a
Phytogen 333WRF	1774	a	29.6	a	4.05	a	1.16	a	32.25	ab	82.85	a	54.40	a	965.00	a
Stoneville 4747GLB2	1623	a	31.6	a	4.30	a	1.14	a	29.55	c	81.05	a	53.85	b	873.50	a
<b>Mean</b>	<b>1932</b>		<b>32.4</b>		<b>4.16</b>		<b>1.15</b>		<b>32.34</b>		<b>82.20</b>		<b>54.19</b>		<b>1047.00</b>	
P>F	0.7639		0.8293		0.0754		0.01		0.0024		0.0752		0.0001		0.7639	
LSD (P=0.05)	965.7606		13.5941		0.315		0.0319		1.342		1.104		0.1715		523.76	
STD DEV	408.3554		5.748		0.133		0.0135		0.567		0.467		0.0725		221.46	
CV%	21.14		17.71		3.21		1.17		1.75		0.57		0.13		21.15	

<sup>1</sup> Indicates the location was center pivot irrigated.

<sup>2</sup> Lint values were calculated using the 2014 Upland Cotton Loan Valuation Model from Cotton Incorporated.

**Table 7. Uniform Stacked-Gene Cotton Variety Trials, 2014**  
**Wilbarger Co., Vernon TX<sup>1</sup>**  
**Cooperator: Donald Shoppa Langdon Reagan, County Extension Agent**  
**Jonathan Ramirez, Extension Assistant**  
**Dr. Gaylon Morgan, Extension Cotton Agronomist**

Variety	Lint (lbs/acre)		Turnout (%)		Micronaire (units)		Length (inches)		Strength (g/tex)		Uniformity (%)		Loan Value (¢/lb)		Lint Value (\$/acre) <sup>2</sup>	
Nexgen 1511B2RF	421	a	30.8	a	4.60	ab	1.08	a	33.47	a	81.53	a	53.12	a	223.30	a
Deltapine 1044B2RF	399	ab	26.9	b	3.80	d	1.11	a	33.87	a	82.87	a	53.85	a	215.00	a
Phytogen 499WRF	388	ab	29.1	ab	4.20	bc	1.10	a	33.73	a	82.30	a	53.83	a	209.00	a
Nexgen 5315B2RF	360	abc	27.3	b	4.03	cd	1.12	a	32.95	a	82.62	a	54.15	a	129.70	a
Phytogen 339WRF	333	bc	27.9	b	4.30	abc	1.11	a	33.20	a	82.90	a	54.13	a	180.00	a
Stoneville 4946B2F	316	bc	26.9	b	4.70	a	1.12	a	35.10	a	82.27	a	54.20	a	171.00	a
Fibermax 1944GLB2	301	c	28.5	ab	4.60	ab	1.12	a	33.03	a	80.67	a	53.63	a	161.70	a
<b>Mean</b>	<b>360</b>		<b>28.2</b>		<b>4.32</b>		<b>1.11</b>		<b>33.62</b>		<b>82.17</b>		<b>53.85</b>		<b>184.24</b>	
P>F	0.0055		0.0141		0.0003		0.1263		0.1725		0.1197		0.2704		0.2293	
LSD (P=0.05)	57.4692		2.07073948		0.305		0.0335		1.672		1.688		0.9798		81.78	
STD DEV	31.9787		1.15226149		0.17		0.0187		0.931		0.939		0.5452		45.96	
CV%	8.89		4.09		3.93		1.68		2.77		1.14		1.01		24.95	

<sup>1</sup> Indicates the location was dryland.

<sup>2</sup> Lint values were calculated using the 2014 Upland Cotton Loan Valuation Model from Cotton Incorporated.

**Table 8. Uniform Stacked-Gene Cotton Variety Trials, 2014  
Hardeman County, Quanah TX<sup>1</sup>  
Cooperator: Jason Poole  
Steven Sparkman, County Extension Agent  
Jonathan Ramirez, Extension Assistant  
Dr. Gaylon Morgan, Extension Cotton  
Dr. Jason Woodward Plant Pathologist Agronomist**

Variety	Lint (lbs/acre)		Turnout (%)		Micronaire (units)		Length (inches)		Strength (g/tex)		Uniformity (%)		Loan Value (¢/lb)		Lint Value (\$/acre) <sup>2</sup>	
Nexgen 1511B2RF	2008	a	37.0	a	4.35	a	1.10	b	82.05	a	31.30	a	51.80	a	1041.00	a
Phytogen 333WRF	1995	a	33.1	a	4.50	a	1.12	b	81.65	a	30.15	a	52.05	a	1038.50	a
Phytogen 339WRF	1946	a	38.6	a	4.45	a	1.12	b	82.80	a	31.95	a	53.60	a	1045.00	a
Stoneville 4747GLB2	1929	a	32.1	a	4.55	a	1.13	b	81.10	a	28.55	a	53.15	a	1025.00	a
Deltapine 1219B2RF	1854	a	35.4	a	3.90	a	1.13	b	81.05	a	31.70	a	52.78	a	978.50	a
Nexgen 3306B2RF	1846	a	34.6	a	4.50	a	1.13	b	82.95	a	32.05	a	54.15	a	1000.00	a
Fibermax 1830GLT	1550	a	35.3	a	4.25	a	1.19	a	83.10	a	32.75	a	53.58	a	830.00	a
Croplan 3787 B2RF	1490	a	32.1	a	4.40	a	1.11	b	82.75	a	29.40	a	53.15	a	793.50	a
<b>Mean</b>	<b>1827.1</b>		<b>34.7</b>		<b>4.36</b>		<b>1.13</b>		<b>82.18</b>		<b>30.98</b>		<b>53.03</b>		<b>968.94</b>	
P>F	0.3895		0.5759		0.1782		0.0298		0.064		0.0719		0.5327		0.5014	
LSD (P=0.05)	595.8239		8.53784837		0.488		0.0442		1.512		2.714		2.752		335.16	
STD DEV	251.934		3.4891082		0.206		0.0187		0.639		1.148		1.1636		141.71	
CV%	13.79		10.03		4.73		1.66		0.78		3.7		2.19		14.63	

<sup>1</sup> Indicates the location was furrow irrigated.

<sup>2</sup> Lint values were calculated using the 2014 Upland Cotton Loan Valuation Model from Cotton Incorporated.

**Table 9. Uniform Stacked-Gene Cotton Variety Trials, 2014  
Collingsworth, Wellington TX<sup>1</sup>  
Cooperator: Dan Henard  
Katy White, County Extension Agent  
Jonathan Ramirez, Extension Assistant  
Dr. Gaylon Morgan, Extension Cotton Agronomist  
Dr. Jason Woodward, Plant Pathologist**

Variety	Lint (lbs/acre)		Turnout (%)		Micronaire (units)		Length (inches)		Strength (g/tex)		Uniformity (%)		Loan Value (¢/lb)		Lint Value (\$/acre) <sup>2</sup>	
Nexgen 1511B2RF	1481	a	36.4	a	3.87	a	1.11	f	32.00	bc	82.40	bc	54.03	a	800.00	a
Stoneville 4747GLB2	1423	a	33.2	a	3.37	b	1.18	c	30.80	c	81.23	c	51.77	a	736.00	a
Phytogen 333WRF	1422	a	33.2	a	3.40	b	1.15	de	32.03	bc	82.20	bc	52.95	a	753.00	a
Croplan 3787B2RF	1397	a	34.1	a	3.50	ab	1.14	e	30.83	c	82.17	bc	54.07	a	755.00	a
Deltapine 1219B2RF	1343	a	34.1	a	3.33	b	1.17	cd	34.03	ab	81.27	c	51.87	a	696.30	a
Fibermax 1830GLT	1308	a	33.2	a	3.47	ab	1.23	a	32.83	abc	82.60	b	53.20	a	695.00	a
Phytogen 339WRF	1261	a	32.8	a	3.50	ab	1.17	cd	32.90	abc	82.63	b	53.13	a	671.70	a
Nexgen 3306 B2RF	1233	a	32.3	a	3.47	ab	1.20	b	34.97	a	83.80	a	53.27	a	657.00	a
<b>Mean</b>	<b>1359</b>		<b>33.7</b>		<b>3.49</b>		<b>1.17</b>		<b>32.55</b>		<b>82.29</b>		<b>53.04</b>		<b>720.50</b>	
P>F	0.0613		0.452		0.0269		0.0001		0.0039		0.0003		0.3294		0.0598	
LSD (P=0.05)	163.149		3.798		0.275		0.0192		1.916		0.84		2.2988		91	
STD DEV	93.1543		2.1685		0.157		0.011		1.094		0.48		1.3126		51.96	
CV%	6.86		6.44		4.51		0.94		3.36		0.58		2.47		7.21	

<sup>1</sup> Indicates the location was center pivot irrigated.

<sup>2</sup> Lint values were calculated using the 2014 Upland Cotton Loan Valuation Model from Cotton Incorporated.

**Table 10. Uniform Stacked-Gene Cotton Variety Trials, 2014  
Collingsworth County, Wellington TX<sup>1</sup>  
Cooperator: Barry Long  
Katy White, County Extension Agent  
Jonathan Ramirez, Extension Assistant  
Dr. Gaylon Morgan, Extension Cotton Agronomist  
Dr. Jason Woodward, Plant Pathologist**

Variety	Lint (lbs/acre)		Turnout (%)		Micronaire (units)		Length (inches)		Strength (g/tex)		Uniformity (%)		Loan Value (¢/lb)		Lint Value (\$/acre) <sup>2</sup>	
Deltapine 0912B2RF	774	a	37.3	a	4.95	a	1.06	a	31.75	a	82.15	a	51.08	a	395.00	a
Phytogen 339WRF	751	a	32.3	a	4.75	a	1.08	a	31.15	a	81.95	a	52.05	a	391.50	a
Nexgen 1511B2RF	737	a	35.0	a	4.60	a	1.07	a	31.65	a	81.80	a	52.40	a	386.50	a
Phytogen 499WRF	724	a	34.1	a	4.70	a	1.08	a	30.60	a	81.00	a	52.83	a	382.50	a
Deltapine 1044B2RF	690	a	34.2	a	4.80	a	1.08	a	30.60	a	82.45	a	52.93	a	365.00	a
Stoneville 4946GLB2	687	a	33.5	a	4.30	a	1.08	a	31.95	a	82.40	a	53.10	a	365.00	a
Fibermax 1944GLB2	675	a	34.3	a	4.45	a	1.10	a	31.90	a	83.50	a	53.43	a	359.50	a
Nexgen 5315B2RF	625	a	34.1	a	4.85	a	1.06	a	31.05	a	81.70	a	49.70	a	310.00	a
<b>Mean</b>	<b>708</b>		<b>34.3</b>		<b>4.68</b>		<b>1.07</b>		<b>31.33</b>		<b>82.12</b>		<b>52.19</b>		<b>369.38</b>	
P>F	0.5002		0.736		0.49		0.7761		0.4275		0.309		0.6636		0.2476	
LSD (P=0.05)	160.544		6.15460314		0.714		0.0613		1.732		1.986		4.9052		70.17	
STD DEV	67.8833		2.60236909		0.302		0.0259		0.732		0.84		2.0741		29.67	
CV%	9.59		7.58		6.45		2.41		2.34		1.02		3.97		8.03	

<sup>1</sup> Indicates the location was dryland.

<sup>2</sup> Lint values were calculated using the 2014 Upland Cotton Loan Valuation Model from Cotton Incorporated.

**Table 11. Uniform Stacked-Gene Cotton Variety Trials, 2014  
Knox County, Munday TX<sup>1</sup>  
Cooperator: Jeremy Sanders  
Jerry Copeland, County Extension Agent  
Jonathan Ramirez, Extension Assistant  
Dr. Gaylon Morgan, Extension Cotton Agronomist  
Dr. Jason Woodward Plant Pathologist**

Variety	Lint (lbs/acre)		Turnout (%)		Micronaire (units)		Length (inches)		Strength (g/tex)		Uniformity (%)		Loan Value (¢/lb)		Lint Value (\$/acre) <sup>2</sup>	
Stoneville 4747GLB2	1334	a	33.0	a	3.80	a	1.21	ab	30.57	c	82.07	b	54.20	a	723.00	a
Nexgen 1511B2RF	1294	a	37.3	a	3.93	a	1.19	b	33.27	a	82.50	ab	54.48	a	705.00	a
Fibermax 1830GLT	1280	a	35.1	a	3.90	a	1.24	a	32.50	ab	83.73	a	54.57	a	698.70	a
Croplan 3787B2RF	1257	a	36.8	a	3.73	ab	1.22	ab	30.83	bc	83.43	ab	54.38	a	683.70	a
Phytogen 339WRF	1210	a	33.1	a	3.70	ab	1.20	ab	33.23	a	83.43	ab	54.50	a	659.30	a
Phytogen 333WRF	1195	a	32.8	a	3.53	b	1.23	ab	32.07	abc	83.53	ab	53.33	a	639.00	a
Nexgen 3306B2RF	1167	a	33.1	a	3.50	b	1.23	ab	32.53	ab	83.77	a	53.30	a	621.70	a
Deltapine 1219B2RF	908	b	30.3	a	3.27	c	1.24	a	32.93	a	82.70	ab	51.47	b	466.70	b
<b>Mean</b>	<b>1206</b>		<b>33.9</b>		<b>3.67</b>		<b>1.22</b>		<b>32.24</b>		<b>83.15</b>		<b>53.78</b>		<b>649.64</b>	
P>F	0.0048		0.0547		0.0001		0.0192		0.002		0.0165		0.0004		0.0016	
LSD (P=0.05)	178.1191		4.2713		0.189		0.03		1.268		0.996		1.1046		97.74	
STD DEV	101.7018		2.4388		0.108		0.0171		0.724		0.568		0.6307		55.81	
CV%	8.44		7.19		2.94		1.41		2.25		0.68		1.17		8.59	

<sup>1</sup> Indicates the location was furrow irrigated.

<sup>2</sup> Lint values were calculated using the 2014 Upland Cotton Loan Valuation Model from Cotton Incorporated.

**Table 12. Uniform Stacked-Gene Cotton Variety Trials, 2014<sup>1</sup>**  
**Haskell County, Haskell TX<sup>2</sup>**  
**Cooperator: Gilbert Casillias**  
**Jason Westbrook, County Extension Agent**  
**Jonathan Ramirez, Extension Assistant**  
**Dr. Gaylon Morgan, Extension Cotton Agronomist**  
**Dr. Jason Woodward, Plant Pathologist**

Variety	Lint (lbs/acre)		Turnout (%)		Micronaire (units)		Length (inches)		Strength (g/tex)		Uniformity (%)		Loan Value (¢/lb)		Lint Value (\$/acre) <sup>3</sup>	
Phytogen 333WRF	557	a	31.6	bcd	3.40	b	1.05	b	27.07	c	79.47	ab	48.60	abc	270.70	a
Phytogen 339WRF	545	a	31.3	bcd	3.33	b	1.07	ab	30.17	ab	79.77	ab	50.08	ab	273.30	a
Fibermax 1830GLT	516	a	34.6	a	4.10	a	1.07	ab	29.47	b	80.53	a	52.62	a	272.30	a
Nexgen 3306B2RF	482	a	29.8	d	3.60	b	1.10	a	31.53	a	80.20	a	52.80	a	255.00	a
Stoneville 4747GLB2	472	a	30.4	cd	3.63	b	1.01	c	23.17	d	77.30	c	44.10	c	208.00	a
Nexgen 1511B2RF	469	a	33.6	ab	3.97	a	1.00	c	28.83	bc	79.13	ab	47.35	bc	222.30	a
Deltapine 1219B2RF	452	a	30.7	bcd	4.00	a	0.98	c	27.27	c	77.23	c	46.77	bc	212.00	a
Croplan 3787B2RF	451	a	33.4	abc	4.17	a	1.00	c	27.43	c	78.43	bc	48.08	abc	216.70	a
<b>Mean</b>	<b>493</b>		<b>31.9</b>		<b>3.78</b>		<b>1.04</b>		<b>28.12</b>		<b>79.01</b>		<b>48.80</b>		<b>241.29</b>	
P>F	0.2789		0.0015		0.0001		0.0001		0.0001		0.0001		0.0007		0.09	
LSD (P=0.05)	106.143		2.0389		0.29		0.0338		1.482		1.144		3.2599		58.72	
STD DEV	60.6052		1.1642		0.166		0.0193		0.846		0.653		1.8613		33.53	
CV%	12.29		3.65		4.39		1.87		3.01		0.83		3.81		13.89	

<sup>1</sup> Limited water and hail storm was a yield limiting factor.

<sup>2</sup> Indicates the location was pivot irrigated.

<sup>3</sup> Lint values were calculated using the 2014 Upland Cotton Loan Valuation Model from Cotton Incorporated.

**Table 13. Uniform Stacked-Gene Cotton Variety Trials, 2014<sup>1</sup>**  
**Haskell County, Haskell TX<sup>1</sup>**  
**Cooperator: Doug Easterling**  
**Jason Westbrook, County Extension Agent**  
**Jonathan Ramirez, Extension Assistant**  
**Dr. Gaylon Morgan, Extension Cotton Agronomist**  
**Dr. Jason Woodward, Plant Pathologist**

Variety	Lint (lbs/acre)		Turnout (%)		Micronaire (units)		Length (inches)		Strength (g/tex)		Uniformity (%)		Loan Value (¢/lb)		Lint Value (\$/acre) <sup>3</sup>	
Phytogen 499WRF	333	a	37.5	a	5.03	a	1.01	a	31.63	a	81.73	a	46.83	a	157.00	a
Stoneville 4946GLB2	311	a	37.7	a	5.03	a	1.01	a	30.53	ab	80.03	a	47.87	a	149.00	a
Nexgen 5315B2RF	282	a	39.4	a	5.10	a	1.00	a	29.70	b	79.77	a	46.25	a	130.00	a
Nexgen 1511B2RF	271	a	37.5	a	5.13	a	0.97	a	29.67	b	79.90	a	43.73	a	119.70	a
Deltapine 1044B2RF	255	a	37.6	a	5.03	a	0.99	a	29.90	b	78.70	a	45.57	a	118.70	a
Phytogen 339WRF	241	a	39.2	a	4.90	a	1.00	a	30.47	ab	80.00	a	47.88	a	114.70	a
Fibermax 1944GLB2	201	a	36.2	a	5.17	a	1.04	a	30.63	ab	80.53	a	46.97	a	93.70	a
<b>Mean</b>	<b>271</b>		<b>37.9</b>		<b>5.06</b>		<b>1.00</b>		<b>30.36</b>		<b>80.09</b>		<b>46.44</b>		<b>126.11</b>	
P>F	0.3882		0.2879		0.4451		0.2814		0.0203		0.122		0.6306		0.3918	
LSD (P=0.05)	125.576215		2.8224		0.264		0.0534		1.069		1.916		5.2197		61.75	
STD DEV	70.5822977		1.5864		0.149		0.03		0.601		1.077		2.9338		34.71	
CV%	26.08		4.19		2.94		2.99		1.98		1.34		6.32		27.53	

<sup>1</sup> Indicates the location was dryland.

<sup>2</sup> Lint values were calculated using the 2014 Upland Cotton Loan Valuation Model from Cotton Incorporated.

**Table 14. Uniform Stacked-Gene Cotton Variety Trials, 2014  
Baylor County, Seymour TX<sup>1</sup>  
Cooperator: Cris Orsack  
Martin Shaw, County Extension Agent  
Jonathan Ramirez Extension Assistant  
Dr. Gaylon Morgan, Extension Cotton Agronomist  
Dr. Jason Woodward Plant Pathologist**

Variety	Lint (lbs/acre)		Turnout (%)		Micronaire (units)		Length (inches)		Strength (g/tex)		Uniformity (%)		Loan Value (¢/lb)		Lint Value (\$/acre) <sup>2</sup>	
Phytogen 333WRF	1886	a	31.0	a	4.13	bcd	1.14	bc	32.80	cd	82.10	c	49.57	a	932.30	a
Nexgen 1511B2RF	1813	a	35.1	a	4.53	a	1.10	d	32.50	cd	81.87	cd	48.02	a	870.00	a
Croplan 3787B2RF	1665	a	35.0	a	4.27	abc	1.13	c	32.20	d	83.17	ab	55.07	a	917.00	a
Fibermax 1830GLT	1607	a	33.7	a	4.43	ab	1.16	ab	33.83	bc	82.57	bc	55.00	a	883.00	a
Nexgen 3306B2RF	1583	a	31.7	a	4.27	abc	1.19	a	35.50	a	83.80	a	52.69	a	838.00	a
Deltapine 1219B2RF	1573	a	28.4	a	3.90	d	1.15	bc	34.70	ab	81.10	de	55.66	a	881.10	a
Stoneville 4747GLB2	1571	a	27.6	a	4.33	abc	1.13	cd	30.00	e	80.90	e	37.82	a	568.30	a
Phytogen 339WRF	1336	a	29.0	a	4.03	cd	1.12	cd	33.27	cd	82.37	c	55.86	a	754.90	a
<b>Mean</b>	<b>1629</b>		<b>31.5</b>		<b>4.24</b>		<b>1.14</b>		<b>33.10</b>		<b>82.23</b>		<b>51.21</b>		<b>830.57</b>	
P>F	0.0603		0.1169		0.0168		0.0004		0.0001		0.0001		0.3085		0.2921	
LSD (P=.05)	308.1592		6.2137		0.326		0.028		1.393		0.792		16.4677		313.28	
STD DEV	169.3969		3.4157		0.186		0.016		0.795		0.452		9.0524		172.21	
CV%	10.4		10.86		4.39		1.4		2.4		0.55		17.68		20.73	

<sup>1</sup> Indicates the location was furrow irrigated.

<sup>2</sup> Lint values were calculated using the 2014 Upland Cotton Loan Valuation Model from Cotton Incorporated.

**Table 15. Evaluation of TopGuard® for Cotton Root Rot Control, 2014<sup>1</sup>**

**Knox County, Knox City, TX**

**Cooperator: Jimmy Tankersley**

**Dr. Jason Woodward, Plant Pathologist**

**Jonathan Ramirez, Extension Assistant**

**Ira Yates, Technician; Bobby Rodriguez, Technician; and Chase Moore, Student Worker**

<b>Treatments</b>	<b>Lint (lbs/acre)</b>		<b>Turnout (%)</b>		<b>Micronaire (units)</b>		<b>Length (inches)</b>		<b>Strength (g/tex)</b>		<b>Uniformity (%)</b>		<b>Loan Value (¢/lb)</b>		<b>Lint Value (\$/acre)<sup>3</sup></b>	
Untreated	816	a	32.5	a	3.77	a	1.12	a	32.80	a	80.20	a	53.95	a	440.30	a
1.0 Pint Y-Split	909	a	33.4	a	3.93	a	1.12	a	33.23	a	81.20	a	54.02	a	490.70	a
1.0 Pint T-Band	921	a	34.0	a	3.87	a	1.13	a	33.60	a	81.43	a	54.22	a	499.30	a
1.5 Pints Y-Split	779	a	33.0	a	3.90	a	1.13	a	33.67	a	80.53	a	53.97	a	420.70	a
1.5 Pints T-Band	875	a	32.9	a	3.90	a	1.12	a	32.93	a	80.73	a	53.95	a	472.30	a
2.0 Pints Y-Split	757	a	33.9	a	3.67	a	1.12	a	32.80	a	80.50	a	54.17	a	410.00	a
2.0 Pints T-Band	803	a	31.5	a	3.80	a	1.13	a	33.87	a	81.07	a	54.23	a	435.70	a
<b>Mean</b>	<b>837</b>		<b>33.0</b>		<b>3.83</b>		<b>1.12</b>		<b>33.27</b>		<b>80.81</b>		<b>54.07</b>		<b>452.71</b>	
P>F	0.1236		0.5349		0.7287		0.6582		0.8463		0.6306		0.9139		0.1578	
LSD (P=0.05)	136.0209		2.8382		0.376		0.0245		2.087		1.569		0.7023		77.48	
STD DEV	76.4529		1.5953		0.212		0.0138		1.173		0.882		0.3947		43.55	
CV%	9.13		4.83		5.52		1.22		3.52		1.09		0.73		9.62	

<sup>1</sup>Method used for applying the TopGuard® was 5 inch T Band application and Y Split in furrow application. T denotes T band and Y denotes Y split application method. Variety used was Deltapine 1219B2RF

<sup>2</sup>Indicates the location was pivot irrigated.

<sup>3</sup>Location had no disease pressure.

<sup>4</sup>Lint values were calculated using the 2014 Upland Cotton Loan Valuation Model from Cotton Incorporated

**Table 16. Evaluation of TopGuard® for Cotton Root Rot Control, 2014<sup>1</sup>**

**Knox County, Munday, TX**

**Cooperator: Ramirez Farms**

**Dr. Jason Woodward, Plant Pathologist**

**Jonathan Ramirez, Extension Assistant**

**Ira Yates, Technician; Bobby Rodriguez, Technician; and Chase Moore, Student Worker**

Treatments	Lint (lbs/acre)		Turnout (%)		Micronaire (units)		Length (inches)		Strength (g/tex)		Uniformity (%)		Loan Value (¢/lb)		Lint Value (\$/acre) <sup>2</sup>	
Untreated	635	a	29.3	a	4.10	a	1.08	a	32.80	a	82.03	a	53.33	a	384.30	a
1.0 Pint Y-Split	761	a	31.0	a	4.28	a	1.08	a	32.18	a	81.93	a	53.03	a	417.80	a
1.0 Pint T-Band	759	a	31.6	a	4.25	a	1.08	a	32.13	a	81.98	a	53.25	a	394.50	a
1.5 Pints Y-Split	684	a	29.1	a	4.28	a	1.08	a	32.35	a	82.20	a	53.31	a	358.30	a
1.5 Pints T-Band	736	a	31.1	a	4.23	a	1.08	a	33.18	a	82.35	a	53.35	a	358.50	a
2.0 Pints Y-Split	752	a	31.5	a	4.28	a	1.09	a	32.83	a	82.03	a	53.25	a	371.00	a
2.0 Pints T-Band	721	a	31.3	a	4.25	a	1.08	a	32.58	a	82.15	a	53.11	a	403.80	a
<b>Mean</b>	<b>721</b>		<b>30.7</b>		<b>4.24</b>		<b>1.08</b>		<b>32.58</b>		<b>82.10</b>		<b>53.23</b>		<b>384.03</b>	
P>F	0.4934		0.767		0.5745		0.9898		0.2459		0.9251		0.9943		0.6257	
LSD (P=0.05)	142.6406		4.2828		0.207		0.0275		0.943		0.777		1.0614		78.87	
STD DEV	96.0135		2.8828		0.139		0.0185		0.635		0.523		0.7145		53.09	
CV%	13.31		9.39		3.29		1.71		1.95		0.64		1.34		13.83	

<sup>1</sup> Method used for applying the TopGuard® was 5 inch T Band application and Y Split in furrow application. T denotes T band and Y denotes Y split application method. Variety used was Phytogen 339WRF.

<sup>2</sup> Indicates the location was pivot irrigated.

<sup>3</sup> Location had moderate disease pressure.

<sup>4</sup> Lint values were calculated using the 2014 Upland Cotton Loan Valuation Model from Cotton Incorporated.



<http://cotton.tamu.edu/>

The information given herein is for educational purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by Texas AgriLife Extension Service is implied.

Educational programs conducted by Texas AgriLife Extension Service serve people of all ages regardless of socioeconomic level, race, color, sex, religion, handicap or national origin.

Issued in furtherance of Cooperative Extension Work in Agriculture and Home Economics, Acts of Congress of May 8, 1914, as amended, and June 30, 1914, in cooperation with the United States Department of Agriculture. Edward G. Smith, Director, Texas A&M AgriLife Extension Service, The Texas A&M University System.