



## LIBERTY LINK COTTON VARIETY PERFORMANCE EVALUATION

**Texas AgriLife Extension Service**  
Nueces County, 2011

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### Summary

This test was located on the Darrell Lawhon Farm on CR 73B, north of Concordia. Soil moisture conditions at planting were moderate and rainfall during the growing season was below normal. Four commercial liberty link cotton varieties were evaluated for agronomic performance. The best performing variety in this test was FM 1845 LLB2 with 944 pounds per acre lint yield. The average plot lint yield for the four varieties evaluated in this test was 879 lint pounds per acre.

### Objective

To evaluate commercially available liberty link cotton varieties growing under Nueces County conditions in a replicated evaluation.

### Materials and Methods

Cotton varieties were planted in a replicated study with three replications. Each variety plot consisted of 6 rows, 2949 feet in length. Seed was planted using a John Deere 1770 NT planter. Soil moisture conditions at planting were marginal at planting depth. Stand counts were taken at three areas in the field for each variety approximately one month following planting. Rainfall was below normal. The monthly rainfall received was; March = 0.31, April=0 inches, May=1.75 inches, June=0.71 inch, and July= 0 inch for a total of 2.77 inches from planting through harvest. Plots were harvested on July 19, 2011 with a John Deere Picker. Fiber analysis was conducted by the Fiber & Bio-polymer Research Institute using standard HVI classing procedures.

**Table 1: Agronomic data for Liberty Link Cotton Performance Evaluation, Lawhon Farm, Concordia, (Nueces County), Texas, 2011.**

Planting Date: 3/11/2011	Rows/Plot: 6 -with 3 replicates	Row Width: 38 inch
Fertility: 250# 22-10-0	Herbicide: 1qt/ac Prowl pp	Previous Crop: Sorghum
Planting Rate: 45,000 plants/Ac	Soil Type: Victoria clay	Insecticide: Seed treatment

## Results and Discussion

The data tables below provide comparison data on fiber quality and lint yield as well as the final plant population for each variety involved in this test.

**Table 2. Comparison of cotton plant population and lint yield between varieties, Lawhon Farm, Nueces County, Texas, 2011.**

Cotton Variety	Plant Population (# plts/ac)	Lint Yield (lbs/ac)	Seed Cotton (lbs/acre)
FM 1845 LL B2	39,212	944.3 a	2360.3 a
FM 835 LL B2	35,265	877.7 b	2229.0 a
FM 1773LLB2	33,101	853.0 bc	2213.7 a
FM STV 4145LLB2	34,374	840.3 c	2234.7 a

**Table 3. Comparison of lint yield, lint quality, and loan value ranked by highest lint value per acre between varieties, Lawhon Farm, Nueces County, Texas, 2011**

Variety	Lint (lbs/ac)		Turnout %		Micronaire		Length (inches)		Strength (g/tex)		Uniformity		Loan Value (¢/lb)		Lint Value (\$/acre)	
FM 1845LLB2	944	a	40.07	a	4.4	a	1.15	a	32.4	a	83.0	ab	53.95	a	509.48	a
FM 835LLB2	878	b	39.37	a	3.8	c	1.13	b	31.2	b	83.3	a	54.12	a	474.97	b
FM 1773LLB2	853	bc	38.53	a	4.3	ab	1.12	b	30.2	c	82.4	bc	53.75	a	458.48	b
ST 4145LLB2	840	c	37.6	a	4.0	bc	1.06	c	28.9	d	81.6	c	51.50	b	432.80	c
<b>Mean</b>	<b>879</b>		<b>38.89</b>		<b>4.1</b>		<b>1.11</b>		<b>30.68</b>		<b>82.58</b>		<b>53.33</b>		<b>468.93</b>	
P>F	0.0014		0.1388		0.02		0.0005		0.0005		0.0061		0.0044		0.0004	
LSD (P=.05)	35.1		NS		0.307		0.0255		0.934		0.746		1.15		19.66	
STD DEV	17.55		1.123		0.154		0.0128		0.467		0.373		0.5764		9.84	
CV%	2.0		2.89		3.72		1.15		1.52		0.45		1.08		2.1	

Means followed by same letter do not significantly differ (P=.05, LSD)

## Conclusions

Cotton varieties performed well in a growing season with below normal rainfall. The significant difference between varieties stresses the need to continue to evaluate performance of new varieties as they are introduced in the local area. The best performing variety in this test was FM 1845 LLB2, producing 944 pounds of lint per acre.

## Acknowledgements

The cooperation and support of Darrell Lawhon for implementing this demonstration is greatly appreciated. Moreover the support provided by Bayer CropScience for providing seed for the test is also appreciated.

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