

EVALUATION OF COTTON VARIETIES FOR YIELD AND PROFITABILITY

Jerry Leita, Cooperator (2009)

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SUMMARY:

In a dry production season, ten cotton varieties planted in two replicated plots on March 30, 2009 yielded from 571 - 721 pounds per acre with a lint value from \$310 - 361 per acre.

OBJECTIVES:

To determine the yield potential of cotton varieties offered by area seed companies. This demonstration will assist the producers by evaluating all major hybrids, comparing them with local and coastal counties actively participating in the standardized demonstration.

MATERIALS and METHODS:

Ten cotton varieties were planted March 30, 2009 at the rate of 62,000 seeds/acre and replicated two times. The hybrids were planted on a 38" row spacing with 6 rows per plot using a John Deere MaxEmerge II vacuum planter. The previous crop planted was corn. Fertilizer applied included 375 lbs of 18-9-3-2s. No insecticide or herbicide was applied at planting.

Following is a history of the crop management:

March 30	Planted
April 27	1 inch rain
May 4	Sprayed 22 oz/acre of Roundup
May 8	Cultivated
May 10	2/10 inch rain
May 18	Sprayed: 0.25 lbs/acre Orthene 4.2 oz.acre PIX 1.9 oz/acre Preference Crop Oil
May 21	Cultivated
June 3	Sprayed: 19 oz/acre Roundup 19 oz/acre Max N 4.7 oz/acre PIX Received 4/10 inch rain while spraying – no kill

Table 1. Evaluation of cotton varieties for yield and quality characteristics. Jerry Leita, Cooperator. Victoria County, TX 2009. ^{1/2/}

Seed Company	Variety	Lint Yield (lbs/acre)		Turnout %		Micronaire		Length (inches)		Strength (g/tex)		Uniformity		Loan Value (¢/lbs)	Lint Value (\$/acre)
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
Phytogen	PHY375	721	a	45.1	ab	4.6	b	1.045	b	27.40	def	82.40	a	50.00	361
DynaGro	DG2570	718	a	44.5	bcd	4.8	ab	1.055	b	29.05	bcd	83.15	a	52.20	375
Stoneville	ST4554	690	ab	43.3	ef	4.65	ab	1.055	b	30.55	ab	82.10	a	52.45	362
Delta Pine	DP935	687	ab	45.3	a	4.65	ab	1.035	b	27.20	ef	81.60	a	50.00	344
Stoneville	ST5458	680	abc	44.0	de	4.55	b	1.05	b	28.40	cde	81.10	a	52.00	354
Phytogen	PHY485	639	bcd	43.1	f	4.85	ab	1.055	b	29.65	bc	83.30	a	52.45	335
Delta Pine	DP920	633	bcd	44.85	abc	4.95	a	1.035	b	25.85	f	81.15	a	50.00	317
Croplan Genetics	CG3220	627	cde	44.15	cd	4.7	ab	1.065	b	28.40	cde	82.35	a	52.00	326
FiberMax	FM9160	593	de	42.65	f	4.05	c	1.07	b	27.90	de	82.15	a	52.15	309
FiberMax	FM840	571	e	41.8	g	3.95	c	1.135	a	31.40	a	83.75	a	54.30	310
Mean		656		43.9		4.6		1.060		28.58		82.31			
LSD (P=.05)		58.187		0.735		0.349		0.0469		1.705		1.829			
Standard Deviation		25.724		0.325		0.154		0.0208		0.754		0.809			
CV		3.92		0.74		3.37		1.96		2.64		0.98			
Bartlett's X2		13.186		5.476		4.609		3.846		6.428		9.661			
P(Bartlett's X2)		0.154		0.791		0.708		0.921		0.491		0.29			

^{1/} Means followed by same letter do not significantly differ (P=.05, LSD)

^{2/} Mean comparisons performed only when AOV Treatment P(F) is significant at mean comparison OSL.