CENTRAL LOUISIANA COTTON OVT RESULTS

D.D. Fromme
LSU AgCenter
Alexandria, LA
G.O. Myers
LSU AgCenter
Baton Rouge, LA
Josh Lofton
LSU AgCenter
Winnsboro, LA
K. Shannon
LSU AgCenter
Alexandria, LA

Abstract

Variety selection is the most important decision made during the year. Unlike herbicide or insecticide decisions that can be changed during the season to address specific conditions and pests, variety selection is made only once, and variety selection dictates the management of that field for the entire season. In 2014, a cotton OVT was planted at the Dean Lee Research & Extension Center located at Alexandria, Louisiana. The objective of this trial is to assist Louisiana cotton producers in the selection of varieties for the upcoming season. Each year, this OVT contains 40-50 varieties. At the end of the season, statistical analyses are conducted on lint yield, gin turnout, fiber quality parameters, loan value, and gross lint value per acre. Results are summarized and distributed to the seed companies, consultants, and producers.

Introduction

Variety selection is the most important decision made during the year. Unlike herbicide or insecticide decisions that can be changed during the season to address specific conditions and pest, variety selection is made only once, and variety selection dictates the management of that field for the entire season. To assist cotton producers with variety selection, OVT are planted throughout the different growing regions of the state. These locations contain 40-50 varieties. The objective of this trial was to assist producers and seed companies in evaluating the performance of cotton varieties under Louisiana growing conditions.

Data featured in the table includes statistical analyses of lint yield, gin turnout, fiber quality parameters (micronaire, length, strength, and uniformity, loan value, gross lint value per acre. Values reported for any two varieties that differ by more than the LSD value are expected to be different in 95 of every 100 comparisons. Varieties that are statistically different from one another will not have the same letter next to the corresponding number value in the column. The coefficient of variation (CV) is reported for each of the variables measured at both locations. The CV is a measure of the uniformity of the test location (soil uniformity, moisture, drainage, disease, etc.). Lower coefficients (<10) of variation are desirable. Seed cotton samples were ginned on a research gin with no lint cleaner. Consequently, our gin turnout percentages will always be higher when compared to gin turnout percentages from a commercial gin. Lint samples are sent to the fiber lab at LSU located in Baton Rouge Louisiana.

Materials/Methods

The Central Louisiana OVT was planted at the Dean Lee Research & Extension Center located at Alexandria, Louisiana. Planting date was April 29, 2014. Soil type was a clay texture. Seeding rate was 41,000 seed per acre. Row spacing was 38 inches. Plot sizes were 2 rows by 50 feet in length. No irrigation was provided. Experimental design was a randomized complete block. Number of replications was four. Harvest date was October 24, 2014. Harvest method was with a two row machine picker.

The trial mean for the OVT was 1254 pounds of lint per acre. The top yielding variety was DG CT14515 with a lint yield of 1520 pounds of lint per acre. The variety that produced the highest gin turnout was BX 1532GLT. AT Nitro and DG CT14515 produced the highest loan value and highest gross lint value, respectively (Table 1).

Acknowledgements

Appreciation is expressed to the participating seed companies and to the Dean Lee Research & Extension Center farm crew for providing assistance throughout the season.

Table 1. Summary of results, central Louisiana cotton OVT trials, 2014.

*Variety	Lint lbs/ac.		Turnout (%)		Micro.		Length (inches)		Strength (g/tex)		Uniform. (%)		Loan Value (¢/lb)	
DG CT14515	1520	a	46.6	c-f	4.5	e-i	1.14	g-l	29.7	a-f	83.7	a-g	54.05	a
PX5540-10WRF	1502	ab	44.6	g-l	3.9	qrs	1.16	c-j	30.3	abc	84.1	a	54.31	a
ST 4747BLB2	1472	abc	47.0	bcd	4.5	e-h	1.18	b-e	25.5	s	82.1	j	52.55	a
PHY 339WRF	1419	a-d	44.5	g-l	4.1	n-r	1.16	c-j	28.2	f-p	82.9	a-j	54.05	a
MON13R35 2B2R2	1415	a-d	47.7	abc	4.4	e-m	1.16	c-i	30.9	ab	83.3	a-j	54.24	a
PX5540-63WRF	1395	a-e	45.0	e-i	4.0	o-s	1.17	c-h	29.4	b-i	84.0	abc	54.2	a
PX5540-57WRF	1377	a-f	42.9	k-p	3.9	rs	1.19	bcd	28.3	f-p	84.2	a	54.14	a
MON12R22 4B2R2	1363	a-g	44.3	h-m	4.3	h-n	1.18	b-g	29.0	c-m	84.1	a	54.08	a
ST 4946GLB2	1342	a-h	42.9	j-p	4.5	e-h	1.12	l-o	28.5	d-o	84.0	abc	53.78	a
BX 1534GLT	1338	a-h	44.2	h-n	4.0	p-s	1.14	g-l	29.3	c-j	82.6	d-j	54.06	a
ST 6448GLB2	1326	a-i	41.9	o-r	4.5	e-i	1.19	bcd	28.4	e-p	82.5	e-j	53.9	a
PX3122-851WRF	1316	a-j	45.1	e-i	4.2	j-o	1.16	c-i	28.8	c-n	83.3	a-j	54.05	a
SSG UA222	1316	a-j	43.3	i-o	4.3	h-n	1.18	b-f	30.0	a-d	83.5	a-i	54.13	a
PX4990-7WRF	1308	a-j	46.3	c-g	4.5	e-i	1.12	l-o	29.7	a-f	82.8	b-j	53.75	a
NG 5315B2RF	1293	b-k	45.4	d-h	4.4	e-l	1.15	f-l	27.7	k-q	83.5	a-h	53.93	a
DP 1311B2RF	1289	b-k	47.6	abc	4.6	c-f	1.12	l-o	27.9	i-q	82.6	d-j	53.64	a
BX 1533GLT	1284	c-l	42.4	n-r	4.3	i-n	1.19	abc	29.9	a-e	82.4	g-j	54.08	a
DP1321B2RF	1282	c-l	44.3	h-m	4.8	a-d	1.15	e-l	29.1	c-m	83.4	a-j	53.96	a
BX 1536GLT	1268	c-l	44.7	f-k	4.2	l-q	1.13	h-m	29.2	c-k	83.4	a-i	53.89	a
PX499-36W3RF	1257	c-l	46.6	c-f	4.2	i-n	1.09	o	27.8	j-q	82.5	e-j	53.21	a
DG 2285	1255	d-l	42.6	m-q	4.5	e-i	1.16	c-j	27.9	h-q	83.4	a-i	53.88	a
PX444-13WRF	1253	d-l	46.6	c-f	3.9	rs	1.22	a	27.3	n-r	84.1	ab	54.14	a
CL 3787B2RF	1239	d-l	46.3	c-g	4.5	d-g	1.16	d-k	29.1	c-l	83.7	a-f	53.99	a
DP 1133B2RF	1237	d-l	46.6	cde	4.6	b-e	1.16	c-j	30.3	abc	83.8	a-e	54.18	a

PHY 333WRF	1236	d-l	44.2	h-n	4.1	m-r	1.16	c-j	26.4	qrs	82.7	c-j	53.1	a
FM 1944GLB2	1231	d-l	40.9	qr	4.3	f-n	1.2	ab	29.1	c-m	83.4	a-i	54.09	a
PHY 495W3RF	1223	d-l	45.5	d-h	4.5	e-h	1.11	mno	31.1	a	84.2	a	53.85	a
PHY 427WRF	1219	d-l	45.4	d-h	4.2	l-q	1.12	l-o	28.4	e-p	83.5	a-i	53.85	a
PX375-08W3RF	1214	d-l	44.3	h-m	4.1	m-r	1.12	k-o	27.9	g-q	83.2	a-j	53.66	a
BX 1535GLT	1208	d-l	42.1	o-r	3.9	rs	1.21	ab	28.0	g-p	82.5	e-j	53.66	a
DP 1137B2RF	1204	d-l	44.8	f-j	4.5	e-i	1.13	i-n	28.6	d-o	83.1	a-j	53.94	a
DP 0912B2RF	1195	e-l	42.8	l-p	4.9	a	1.12	k-o	29.0	c-m	83.3	a-j	52.7	a
NG 1511B2RF	1167	f-l	44.9	e-i	4.8	abc	1.14	h-m	29.8	a-f	83.7	a-g	53.34	a
DG CT14515	1159	g-l	49.3	a	4.3	i-n	1.14	h-m	26.9	p-s	82.3	hij	53.66	a
PX5540-10WRF	1158	g-l	43.3	i-o	4.8	ab	1.15	f-l	26.9	p-s	82.8	c-j	52.94	a
ST 4747BLB2	1155	g-l	48.8	ab	4.5	e-i	1.12	l-o	27.6	l-r	82.7	d-j	53.61	a
PHY 339WRF	1142	h-l	42.6	m-q	4.4	e-k	1.13	i-n	27.0	o-s	82.2	ij	53.21	a
MON13R35 2B2R2	1138	h-l	44.1	h-n	4.4	e-k	1.1	no	27.5	m-r	82.6	d-j	52.19	a
PX5540-63WRF	1129	h-l	41.2	pqr	3.9	rs	1.16	c-i	28.8	c-n	82.4	f-j	54.08	a
PX5540-57WRF	1128	h-l	42.2	o-r	4.8	abc	1.12	l-o	29.5	b-g	83.1	a-j	52.84	a
MON12R22 4B2R2	1119	i-l	45.5	d-h	4.5	e-h	1.14	h-m	29.5	b-h	83.9	a-d	54.05	a
ST 4946GLB2	1104	jkl	42.8	l-p	4.2	k-p	1.12	k-o	26.0	rs	82.5	e-j	52.88	a
BX 1534GLT	1086	kl	40.6	r	4.3	g-n	1.13	j-o	28.5	d-o	83.1	a-j	53.76	a
BX 1532GLT	1084	kl	46.7	cde	4.4	e-j	1.12	l-o	27.6	l-q	82.9	a-j	53.21	a
ST 5288B2F	1069	l	42.0	o-r	3.8	s	1.19	abc	29.9	a-e	83.5	a-h	54.26	a
BX 1530GLT	1219	d-l	45.4	d-h	4.2	l-q	1.12	l-o	28.4	e-p	83.5	a-i	53.85	a
ST 5289GLT	1214	d-l	44.3	h-m	4.1	m-r	1.12	k-o	27.9	g-q	83.2	a-j	53.66	a
PX3003-10WRF	1208	d-l	42.1	o-r	3.9	rs	1.21	ab	28.0	g-p	82.5	e-j	53.66	a
ST 5032GLT	1204	d-l	44.8	f-j	4.5	e-i	1.13	i-n	28.6	d-o	83.1	a-j	53.94	a
SSG HQ210CT	1195	e-l	42.8	l-p	4.9	a	1.12	k-o	29.0	c-m	83.3	a-j	52.7	a
PHY 499WRF	1167	f-l	44.9	e-i	4.8	abc	1.14	h-m	29.8	a-f	83.7	a-g	53.34	a
PX375-20W3RF	1159	g-l	49.3	a	4.3	i-n	1.14	h-m	26.9	p-s	82.3	hij	53.66	a

DG 2355	1158	g-l	43.3	i-o	4.8	ab	1.15	f-l	26.9	p-s	82.8	c-j	52.94	a
BX 1531GLT	1155	g-l	48.8	ab	4.5	e-i	1.12	l-o	27.6	l-r	82.7	d-j	53.61	a
AT Nitro	1142	h-l	42.6	m-q	4.4	e-k	1.13	i-n	27.0	o-s	82.2	ij	53.21	a
Mean	1254		44.51		4.33		1.15		28.57		83.18		53.71	
P>F	0.0006		0.0001		0.0001		0.0001		0.0001		0.0114		0.0603	
LSD (P=.05)	216.64		1.8675		0.246		0.0335		1.582		1.306		NS	
STD DEV	154.73		1.3338		0.176		0.0239		1.13		0.933		0.8527	
CV%	12.34		3		4.06		2.09		3.95		1.12		1.59	