



2019 Cotton Variety Trials

Data Summary

Trial Summary:

These trials were planted on May 8 at a seeding rate of 43,500 seeds/A on 36” rows. Plots were 40’ long and 2 rows wide with four replicates. The early variety trial was harvested on September 27 and the late variety trial was harvested on September 30. Soil type was a Hyde Loam classified as organic by NCDA.

This trial had good conditions for emergence. However, the rain stopped after April 15 and the trial experienced severe drought and heat stress during the last two weeks of May. Rain fell again on May 31, providing adequate moisture for the crop to recover. However, the drought affected the crop growth in such a way that it never grew rapidly. These trials only received one application of mepiquat at 6 oz/A at first bloom. Normally this site would require four applications starting at 6 oz/A and finishing at 16 oz/A. Yields were slightly below average for this site, indicating that the drought stress limited the top end yield potential this year.

Data Summary:

The statistical analysis was run at the 90% confidence level. Overall the data quality is fair with CV values of 12.73 and 11.94 for the early-mid variety trial and the mid-full variety trial, respectively. There was a bit more variability in the data this year compared to other years. However, this is typical when there is a drought event.

Early -mid variety yield data is presented on Table 1 below.

Mid-full variety yield data is presented on Table 2 on the following page.

Table 1. Early-Mid Season Variety Yield Data

Brand	Variety	Lint Yield
Deltapine	DP 18R411 B3XF	1026.8 a
Phytogen	PHY 350 W3FE	985.5 a
Stoneville	ST 4550 GLTP	901.3 ab
NexGen	NG 3522 B2XF	839.8 b
Phytogen	PHY 340 W3FE	830 b
Deltapine	DP 1916 B3XF	827.3 b
Phytogen	PHY EXP 3B07 W3FE	774.5 b
LSD P=.10		137.89
Standard Deviation		112.45
CV		12.73

Means followed by same letter or symbol do not significantly differ (P=.10, LSD).

Means shaded in green are not statistically different from the highest yield.

Table 2. Mid-Full Season Variety Yield Data

Brand	Variety	Lint Yield
NexGen	NG 4936 B3XF	1017.5 a
Deltapine	DP 18R445 B3XF	925 a
Stoneville	ST 5471 GLTP	881.3 a
LSD P=.10		141.43
Standard Deviation		107.56
CV		11.94

Means followed by same letter or symbol do not significantly differ (P=.10, LSD).

Means shaded in green are not statistically different from the highest yield.

Seed Company Contact Information

We would like to thank all of the seed companies that sponsored hybrids in these two trials this year. We look forward to continuing and expanding our cotton variety testing next year.

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Site and Weather Information

Soil data is presented below. %OM, sand silt and clay samples were taken in 2015 and the chemical analysis was run by NCDA in winter 2018-19. This trial received 100 lb/A 0-0-60 preplant, 10 gal 14-14-03S in 2x2 starter and 20 gal/A 30% nitrogen at layby.

Pike Road 1C

Hyde Loam	24	% OM	40	% Sand	52	% Silt	8	% Clay
SOIL CLASS	%HM	W/V	CEC	% BS	AC	pH	Ca %	Mg %
ORG	6.99	0.7	13.6	73	3.7	5.2	53	17
P-I	K-I	Mn-I	Mn-Al	Zn-I	Zn-Al	Cu-I	S-I	Na-I
55	71	36	44	212	352	42	71	0.3

The following table presents weather data on a weekly basis. The drought period from mid-April to the end of May is highlighted.

Weekly Weather Data Summary

Dates			Temperature		Rainfall
			High	Low	Inches
4/28/19	-	5/4/19	83.6	57.4	0.0
5/5/19	-	5/11/19	82.4	55.7	0.0
5/12/19	-	5/18/19	79.7	58.0	0.0
5/19/19	-	5/25/19	87.3	59.9	0.0
5/26/19	-	6/1/19	93.3	68.1	2.9
6/2/19	-	6/8/19	84.7	63.2	0.9
6/9/19	-	6/15/19	81.4	60.3	1.3
6/16/19	-	6/22/19	90.1	66.9	0.8
6/23/19	-	6/29/19	91.5	66.0	0.0
6/30/19	-	7/6/19	93.4	69.0	0.3
7/7/19	-	7/13/19	91.3	71.1	1.8
7/14/19	-	7/20/19	96.4	74.9	0.1
7/21/19	-	7/27/19	90.6	68.0	0.3
7/28/19	-	8/3/19	90.8	63.3	0.7
8/4/19	-	8/10/19	91.4	68.8	1.1
8/11/19	-	8/17/19	89.9	69.7	0.7
8/18/19	-	8/24/19	90.8	72.5	2.3
8/25/19	-	8/31/19	86.6	64.3	0.3
9/1/19	-	9/7/19	87.0	67.4	5.9
9/8/19	-	9/14/19	86.7	68.3	1.0
9/15/19	-	9/21/19	83.0	62.0	0.0
9/22/19	-	9/28/19	87.6	62.3	0.0
9/29/19	-	10/5/19	85.2	61.3	0.0
10/6/19	-	10/12/19	74.8	58.1	0.2