



2019 Soybean Variety Trials

Data Summary

Trial Summary:

These trials were planted on April 17 at a seeding rate of 100,000 seeds/A. Plots were 40' long by 12' side (six 24" rows) with four replicates. Three of the center rows were harvested for yield calculations. 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.

The trials had great conditions for emergence and early season growth. However, the rain stopped after April 15 and both trials experienced severe drought and heat stress during the last two weeks of May. Rain fell again on May 31, providing adequate moisture for pollination to occur well. There was also some minor drought stress around the end of June and early July during flowering and pod fill. Weeds and insects were treated at threshold and the trial received Quadris Top SBX at R3. Yields were average for this site, indicating that the drought stress limited the top end yield potential this year.

Data Summary:

The statistical analysis is run at the 90% confidence level. Overall the data quality is strong with CV values of 9.6 and 7.1 for the early variety trial and the late variety trial, respectively.

Early variety yield data is presented on Table 1 below.

Late variety yield data is presented on Table 2 on the following page.

Table 1. Early Variety Yield Data (Group 3.5-4.4)

Brand	Variety	RM	Dry Yield	Test Weight	Moisture
AgriGold	G4440RX	4.4	73.4 a	53.0 abd	13.1 abc
Pioneer	P 38T42R	3.8	72.5 a	54.3 ab	13.3 abc
AgriGold	G3520RX*	3.5	72.4 a	52.4 cde	13.5 ab
Armor	AR 44-D92	4.4	68.5 ab	54.1 ab	13.7 a
AgriGold	G3722RX	3.7	68.4 ab	53.7 abc	13.4 ab
Asgrow	AG 38X8	3.8	68.4 ab	54.4 a	13.5 ab
Pioneer	P 44A27BX	4.4	64.3 bc	52.8 bcd	13.4 ab
USG	USG 7390ET	3.9	63.8 bcd	53.0 abcd	13.4 abc
Armor	AR 42-D27	4.2	62.7 bcd	54.1 ab	12.7 c
USG	USG 7447XTS	4.4	57.3 cde	52.3 cdef	13.2 abc
Pioneer	P 39A58X	3.9	56.5 de	53.2 abcd	13.4 abc
Asgrow	AG 43X8	4.3	55.1 e	50.8 f	13.1 abc

LSD P=.10	7.378	1.532	0.67
Standard Deviation	6.203	1.287	0.563
CV	9.63	2.43	4.24

*Very early variety for this trial. Had some shattering loss, yet still yielded well.

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 or test weight.

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. No lime or fertilizer was needed.

Pike Road 1C

Hyde Loam	22	% OM	40	% Sand	52	% Silt	8	% Clay
SOIL CLASS	%HM	W/V	CEC	% BS	AC	pH	Ca %	Mg %
ORG	6.38	0.7	13.4	74	3.5	5.2	54	17
P-I	K-I	Mn-I	Mn-Al	Zn-I	Zn-Al	Cu-I	S-I	Na-I
53	73	37	45	179	297	43	75	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
4/14/19	-	4/20/19	78.0	54.8	1.1
4/21/19	-	4/27/19	81.0	53.0	0.0
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