

Evaluation of Soybean Seeding Rate

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Objective

To determine the effects of three seeding rates on soybean yield.

Background

Crop Year:	2012	Soil Test	pH = 6
Cooperator:	Morrow SWCD/County Home Farm		OM = 3.5%
County/Town:	Morrow/Mt. Gilead		P = 60 ppm
Soil Type:	Centerburg Silt Loam		K = 140 ppm
Drainage:	Random subsurface	Planting Date:	May 21
Previous Crop:	Soybeans	Seeding Rate:	140,000 to 180,000
Variety:	Pioneer 92Y92	Row Width:	7.5 inches
Tillage:	No-Till	Herbicide:	preplant 3.5 oz Canopy and July 10, 1 qt Buccaneer Plus w/Array
		Harvest Date:	October 9

Methods

The study consisted of three replications in a randomized complete block experimental design. Soybeans were planted with a JD1560 drill. Plots were 60 feet wide. Seeding rates were based on drill setting for desired population. Stand counts were conducted on June 20 at the V3 stage of growth using hula hoop method. Three counts per plot were taken and averaged for the plot rating. The center 50 feet of each treatment were harvested with an IH 1480 combine and weighed with a weigh wagon. Yields were calculated from individual treatment row lengths. Row length averaged 354 feet. Yields were adjusted to 13% grain moisture.

Results

Planting seeding rate (seeds/A)	Stand count June 20 (plants/A)	Yield (bu/A)
140,000	85,100	37.9
160,000	88,600	38.4
180,000	98,700	40.4
LSD (0.05)	50,100	2.8
CV	24.34	3.2
P-value	0.79	0.13

Summary

There was no statistically significant difference in yields between the different seeding rates. Rainfall for April to August was 4.04 inches below the 30 year average. Seedling emergence was an issue this spring due to short of optimal moisture. The stand counts taken in June were not significantly different and less than expected.

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