

Soybean Seeding Rates in 30-Inch Rows

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Objective

The objective of this research was to determine whether soybean yields will be affected when decreasing the seeding rates from the recommended rate of 160,000 to 175,000 seeds per acre.

Background

Cooperator:	County Farm	Fertilizer:	100 lb/A 0-46-0 and 125 lb/A
County:	Darke		0-0-60, broadcast
Nearest town:	Greenville	Tillage:	No-till
Soil Type:	Miami silt loam/ Eldean loam	Herbicide:	PRE: Roundup Ultra Max 26 oz/A Scepter 1.4 oz/A
Previous Crop:	Corn		POST: Roundup Ultra Max 26 oz/A
Drainage:	Subsurface	Variety:	Ebberts 1351RR
Soil Test:	pH 7.5, P 24 ppm, K 160 ppm	Row Width:	30 inches
		Planting Date:	May 1, 2001
		Planting Rate:	See Methods
		Harvest Date:	October 22, 2001

Methods

Soybeans were planted using a Buffalo slot planter with Kinze brush-type seed meter units. Three treatments of different planting rates were replicated four times in a randomized complete block with each treatment strip of twelve 30-inch rows approximately 2/3 acre in size. One stand count was taken approximately three weeks after emergence in each of the four replications of each treatment to verify differences in seeding rates. Plants were counted in 30-inch row lengths in areas of rows that were uniform in emergence. Entire strips were harvested for yield results. Harvest moisture was determined using a field moisture tester. A weigh wagon was used to determine weight of grain harvested in each plot. Yields were adjusted to 13% moisture. Results indicate attempted seeding rates, plant populations, and yields of each test.

Results

Table 1. Soybean Population and Yield.¹

Planted Population (seeds/A)	Harvest Population (plants/A)	Yield (bu/A)
75,000	71,148	65.8
125,000	113,256	66.1
175,000	166,980	65.5
LSD (0.05)		NS
F		< 1
CV (%)		1.7

Summary and Notes

There were no significant differences in the yields when comparing three different seeding rates of soybeans planted in 30-inch rows. The most recent recommendation from Ohio State University on seeding rates in 30-inch rows is nine seeds per foot of row, or approximately 157,000 seeds per acre. This was an exceptionally good year for growing soybeans in our area. It would be interesting to see if lower number of plants in wide rows could yield as well as higher populations under hotter and/or dryer conditions.

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