

# Seeding Rates for Roundup Ready Soybeans

Steve Ruhl, Agriculture and Natural Resources Extension Agent  
Edwin Lentz, Extension Agronomy District Specialist

## Objective

To evaluate the effect of seeding rate on yield of Roundup Ready soybeans.

## Background

County:	Morrow	Fertilizer:	None
Nearest Town:	Mt. Gilead	Herbicides:	PRE: Canopy (3 oz/A) 2,4-D (1 pt/A)
Soil Type:	Centerburg silt loam		POST: Roundup Ultra (1 qt/A) + AMS
Previous Crop:	Corn	Variety:	Vigoro V370RR
Drainage:	Random tile	Planting Date:	May 15, 2000
Tillage:	No-till	Planting Rate:	See Methods
Soil Test:	pH 7.0, P 44 ppm, K 90 ppm	Harvest Date:	October 16, 2000

## Methods

Three population rates were used to determine the effect of seeding rate on yields. They were 100,000, 160,000 and 240,000 seeds per acre. The treatments were replicated three times in a complete random block design. Individual plot size was approximately 0.5 acre. The beans were planted in 30-foot strips, and a 20-foot wide strip was harvested and weighed using a weigh wagon.

## Results

**Table 1. Soybean Population and Yield.**

<b>Planting Rate (seeds/A)</b>	<b>Yield (bu/A)</b>	<b>Harvest Population (plants/A)</b>
100,000	46.3 a	83,000
160,000	48.9 b	109,000
240,000	69.6 b	161,000
LSD (0.05)	2.2	
CV	2.0%	
F	9.1	

Means followed by the same letter are not significantly different.

## **Summary and Notes**

Following the drill's seeding chart, we planted 27 pounds of seed per acre to achieve the lowest seeding rate desired. The seed quality did not look good despite labels indicating 90% germination. According to the seed and plant mortality at the higher rates, the lowest rate came closest to target population.

All the plots were exceptionally clean, and a uniform stand was achieved on all of the plots. The 240,000 and 160,000 seeding rates achieved significantly higher yields than the 100,000 seeding rates.

It appears through this study that final stands above 100,000 plants are needed to get maximum yields. Producers need to calculate the cost of seed per acre at the higher rates and determine if returns from the additional yield offset the additional cost of seed.

## **Acknowledgment**

The author would like to thank Royster Clark and Vigoro for furnishing the soybeans for this study. Also, we appreciate the collaboration of the Morrow County Commissioners for the use of 20 acres of land for plots at the County Home Farm and the collaboration of Dan Barker, Soil and Water Conservation District administrator.

For additional information, contact:

Steve Ruhl  
The Ohio State University  
ruhl.1@osu.edu