# Soybean Seeding Rates in 15-Inch Rows

Jim Lopshire, Agriculture and Natural Resources Extension Agent

## Objective

To evaluate the effect of seeding rate on yield for conventional soybeans planted in 15inch rows.

## Background

| | | | |
|---|---|---|---|
| Cooperator: | Gary and Keith Derck | Herbicide: | |
| County: | Paulding | PRE: 4/15/02 | Boundary - 1.75 pints/A |
| Nearest Town: | Antwerp | | Canopy DF - 2 1/2 oz/A |
| Soil Type: | Latty clay | POST: 7/4/02 | Select - 5 oz/A |
| Drainage: | Systematic | Planter: | Kinze 3600 |
| Tillage: | No-Till | Row Spacing: | 15 inch |
| Previous Crop: | Corn | Planting Rate: | See Treatments |
| Fertilizer: | None Applied | Planting Date: | May 24, 2002 |
| Variety: | Pioneer 9306 | Harvest Date: | October 9, 2002 |

## Methods

Three population rates were used to determine the effect of seeding rate on yield. Planting rates selected were 162,000, 180,000, and 220,000 seeds per acre using a Kinze 3600 no-till planter. Treatment rates were based on settings listed in the planter manual. These treatments were replicated four times in a randomized complete block with each individual treatment strip measuring 80 feet wide and 1,665 feet long. A 60-foot wide strip the full length of the field was harvested for each individual treatment. Soybean yield, moisture, and acres harvested were calculated using a calibrated AgLeader GPS Monitoring System. Harvest moisture levels were adjusted to 13% grain moisture level.

Harvest population counts were made at two different locations for each plot. Populations were determined by counting the number of soybean plants in 1/ 1,000 acre between two adjacent rows for each individual treatment.

## Results

**Table 1. Plant Population, Moisture and Yield for Seeding Rate Treatments.[a]**

| Planted Population (seeds/A) | Harvest Population (plants/A) | Harvest Moisture (%) | Yield (bu/A) |
|---|---|---|---|
| 162,000 | 125,250a | 11.7 | 48.3 |
| 180,000 | 143,750b | 11.9 | 48.4 |
| 220,000 | 173,250c | 11.9 | 50.8 |
| LSD (0.05) | 13,539 | NS | NS |
| F-test | 38.3 | 2.7 | 4.9 |

[a] Means followed by the same letter in the same column are not significantly different.
NS = Not Significant

## Summary

The first-year study showed no significant difference in yield means per acre or soybean moisture among the three plant population treatments. Harvest populations were statistically different for the three treatment means. The herbicide program provided excellent weed control for the entire growing season.

Data from this one-year study suggests that the three statistically different population treatments did not produce a significant yield increase among the three treatment populations. Seed cost per acre ranged from $6.88 per acre for the lowest plant setting of 162,000 plants per acre to $9.35 for the highest plant setting of 220,000 plants per acre. This is a savings of $2.47 per acre.

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For further information, contact:

Jim Lopshire
The Ohio State University
jlopshire@ag.osu.edu