

# Relationship Between Seeding Rates and White Mold Development in Soybeans

Glen Arnold, Agriculture and Natural Resources Extension Agent  
E. M. Lentz, Extension Agronomy Specialist  
Anne Dorrance, State Soybean Pathologist

## Objective

To evaluate the effect of seeding rate on white mold development in soybeans.

## Background

Cooperator:	Dan Heitzman	Soil test:	pH 6.5, P 40 ppm, K 125 ppm
County:	Putnam	Fertilizer:	None
Nearest Town:	Continental	Planting Date:	June 3, 2002
Drainage:	Natural	Planting Rate:	See below
Soil type:	Silty clay loam	Row Width:	15-inch
Tillage:	Chisel plowed/disked in the fall	Herbicides:	Boundary 2 pt/A Canopy 3.5 oz/A
Previous Crop:	Clover	Harvest Date:	October 17, 2002
Variety:	TS 401		

## Methods

Experimental design was a randomized complete block with three treatments replicated six times. Treatments were three seeding rates: 110,000; 165,000; and 225,000 seeds per acre. The plots were planted with a White 6100 planter. Individual planted plot size was approximately 1/4 acre. The soybeans were planted in 30-foot wide strips for a length of about 360 feet. Using a Gleaner L-3 combine, a 20-foot wide strip was harvested the length of the plot and weighed using a weigh wagon. Harvest population was estimated by counting soybean plants in four adjacent rows for a length of 50 feet.

## Results

Even though the field selected had a history of white mold, environmental conditions were not conducive for disease development. Thus, the results will only discuss the effects of seeding rate on grain yield.

**Table 1. Soybean Yield and Harvest Population.<sup>a</sup>**

<b>Planted Population (seeds/A)</b>	<b>Harvest Population (plants/A)</b>	<b>Yield (bu/A)</b>
110,000	95,774 a	60.0 a
165,000	124,349 b	58.9 a
220,000	175,895 c	60.5 a
LSD (0.05)	12,974	NS
F-test	97	<1

<sup>a</sup> Means followed by the same letter in the same column are not significantly different. NS = Not Significant

## **Summary**

A uniform stand was achieved for all seeding rates due to adequate rainfall following planting. Drought conditions were not conducive to white mold development. The plot received less than eight inches of rainfall during the growing season. Final harvest populations were statistically different, but grain yields were not statistically different. Thus, according to this trial, seeding rates between 110,000 and 220,000 seeds/ A had no effect on yield.

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For additional information, contact:

Glen Arnold  
The Ohio State University  
arnold.2@osu.edu