

## Soybean Population Study

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### Objective

To determine the effects of soybean seeding rate on soybean yields and provide data for soybean population response curves.

### Background

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Crop Year: 2016

Location: Adams Township

County/Town: Darke/Bradford

Soil Type: Celina Silt Loam

Brookston Silty Loam

Drainage: Systematic Pattern

Previous Crop: Corn

Tillage: No-Till

Soil Test: pH 6.3, P 24 ppm BP1, K 129 ppm

Planting Date: May 16, 2016

Nitrogen: None

Seeding Rate: Varied

Harvest Date: October 18, 2016

### Methods

Six soybean populations were replicated three times in a randomized complete block design. Treatments were planted with a 12 row Kinze planter with split row units (resulting in 15 inch row spacing) 500 feet in length. All treatments received the same tillage and herbicide applications. Variety used was Asgrow 3832. Stand counts were taken at V4 and R7 by obtaining 2 counts using 1/1000<sup>th</sup> of an acre per treatment and calculating the simple average. Plots were harvested with a commercial combine equipped with a 30 foot grain header. Yields and moistures were obtained by using a calibrated yield monitor. Yields were verified using a grain cart. Yields were adjusted to 13% moisture. Precipitation data can be viewed at [cocorahs.org](http://cocorahs.org).

### Results

No.	Target Planting Population	V4 Stand Count	R7 Stand Count	Treatment Average (bu./acre)
1	60,000	46,000	43,666	57.4
2	95,000	50,833	51,000	59.5
3	130,000	68,166	69,666	59.2
4	165,000	98,666	88,000	61.2
5	200,000	122,500	106,000	64.1
6	235,000	145,166	140,000	65.1

CV % 6.84; Not significant



## Summary

As expected from previous research, which has shown that the soybean is adaptive in relation to planted population, soybean yield was not influenced by planting population.

## Acknowledgement

The author expresses appreciation to on-farm collaborators Overholser Farms for the land use, planting and harvesting of this plot.



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