

Soybean Yield Response to Insecticide Seed Treatment

Wm. Bruce Clevenger, Ohio State University Extension Educator, Defiance County

Objective

To determine the response of soybean yield to insecticide seed treatment

Background

Crop Year:	2017	Previous Crop:	Soybean
Location:	Defiance, Ohio	Tillage:	No till
County:	Defiance County	Planting Date:	June 6, 2017
Soil Type:	Roselms loam, Paulding clay	Seeding Rate:	165,000 seeds/A
Drainage:	Surface & Random Subsurface	Harvest Date:	September 6, 2017

Methods

A soybean trial was established to evaluate the soybean yield response to insecticide seed treatment compared to soybean yield without insecticide seed treatment (control). The design was a split plot with two treatments and five replications. Plots were 120 feet wide by approximately 1,000 feet field length. Soybean seed treatment was commercially applied to the same seed lot number for both the treatment plots and the control plots. All seed was treated with a fungicide seed treatment (active ingredient urea phosphite) but only the treatment plots received the additional insecticide seed treatment (active ingredient imidacloprid) at the rate of .05 oz per 100 pounds of seed. Soybeans were planted with a twin row planter that has 8 inch spaced twin rows on 30 inch center spacing. All plots received the same nutrient and weed control practices. Plots were harvested with a commercial combine with the yield record taken from the entire 120 foot width and length of each plot. Yield was determined by a calibrated yield monitor with yield adjusted to 13% moisture. Data were analyzed using ANOVA and means separated using LSD at $\alpha=0.05$.

Results

Treatment	Yield (bu/acre)
Insecticide Seed Treatment	37.2 ^A
Control	36.0 ^A
Yields with the same letter are not significantly different	LSD (0.05) 1.7 C.V. = 2.58

Summary

There was no significant difference in soybean yield between the insecticide seed treatment and the control. During 2017, no early season insect pressure (such as seed maggot, wireworm, or



bean leaf beetle) was observed. Additionally, no early or late season soybean aphids were detected.

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For more information, contact:
Wm. Bruce Clevenger
OSU Extension – Defiance County
06879 Evansport Road, Suite B
Defiance, OH 43512
clevenger.10@osu.edu



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AND ENVIRONMENTAL SCIENCES

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