

Response of Soybean to Insecticide and Fungicide Applications at R3 Growth Stage

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Objective

To compare foliar application of fungicide, insecticide and fungicide plus insecticide at plant growth stage R3 to untreated on soybean yield.

Background

Crop Year: 2014

Location: Hodge Farms

County/Town: Miami/ Tipp City

Soil Type: Miami silt loam

Drainage: Pattern tiled

Previous Crop: Corn

Tillage: No-till

Soil Test: pH 5.8, OM 0.9%, CEC 9.6,
P 20 ppm, K 99 ppm

Planting Date: May 28

Variety: Wellman W4333

Seeding Rate: 170,890 s/A

Harvest Date: October 27

Methods

The trial was established as a randomized complete block, in the grower's field, consisting of four treatments, replicated four times. Foliar applications were applied at R3 reproductive growth stage (August 6), with a 60-foot wide sprayer in strips 800 feet long. Harvest and a yield check were made with a Gleaner combine from one 30 feet wide pass from each plot. Grain was weighed by grain cart, calibrated against the local grain elevator's certified scales. Yield was calculated in bushels/acre at 13% moisture.

The following four treatments and rates of products were evaluated.

- 1) Untreated check
- 2) Insecticide: Warrior (Lambda-cyhalothrin) at 1.8 oz/A at R3
- 3) Fungicide: Quadris Top (Azoxystrobin + Difenconazole) at 12 oz/A at R3
- 4) Both the fungicide and insecticide at R3: Quadris Top plus Warrior

Results

An ANOVA (analysis of variance) was conducted to compare yield response to each treatment. Results are shown in Table 1.

Table 1. Soybean Yield following foliar applications at R3.

Foliar treatment	Yield (bu/A)
Untreated	61.7
Insecticide (Warrior)	64.0
Fungicide (Quadris Top)	63.9
Both insecticide & fungicide	61.9
LSD (0.10)	NSD

Summary

There were no significant differences among the treatments ($p= 0.5750$) as shown in Table 1.

While some Bean leaf beetle feeding and a low level of soybean aphids were observed at R3, levels appeared similar across treatments. No late greening effects were noted at the end of September.

Acknowledgement

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