

Evaluation of Effects of Prophylactic Treatment of Foliar Fungicide, Insecticide or a Combination on Soybean Yields

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Objective

To compare the yield of soybeans treated with foliar fungicide, insecticide or a combination of both to an untreated check and to evaluate the economic value of those treatments.

Background

Crop Year:	2012	Tillage:	Chisel plow
Location:	Milan, OH	Soil Test:	pH 6.7, P 25ppm, K 125ppm
County:	Erie County	Planting Date:	5/31/2012
Soil Type:	Kibbie silt loam	Seeding Rate:	160,000 seeds/acre
Drainage:	Clay tile on 60 foot centers	Variety:	Pioneer 92Y50 RR Soybeans
	0 – 2% slope	Harvest Date:	October 24, 2012
Previous Crop:	Corn		

Methods

This study was designed with five treatments replicated four times in a randomized complete block design. Treatment plots were 10 feet in width and roughly 40 ft. in length. Treatments were made using a hand held sprayer equipped with a 10 foot wand and applied at 3.5 mph. Fifteen feet was left untreated between plots for a buffer. The center 90 inches of the treatment area was harvested using a Kincaid plot combine. Yield measurements were taken by the same machine. Proposed treatments were:

1. 2.0 oz. Stratego Yld Fungicide plus 2.0 oz. Delta Gold Insecticide at V3 fb
4.0 oz. Stratego Yld and 2.0 oz Delta Gold at R2
2. 4.0 oz. Stratego Yld Fungicide plus 2.0 oz. Delta Gold Insecticide at R2
3. 2.0 oz. Delta Gold Insecticide at V3 fb 2.0 oz. of Delta Gold Insecticide at R2
4. 2.0 oz. Delta Gold Insecticide at R2
5. Untreated

Weed Control: The field was chisel plowed and field cultivated prior to planting. The field was treated with glyphosate and Envide 48 hours after planting. Glyphosate was applied again prior to R1. The field was weed free at harvest.

Results

Soybean Yield (bu/A) Response to Treatment of Foliar Fungicide and Insecticide Programs

	Yield (bu/A)
Treatment 1 2.0oz Stratego Yld Fungicide and 2.0oz Delta Gold at V3 fb 4.0 oz Stratego Yld and 2.0 oz Delta Gold at R2	76.5
Treatment 2 4.0 oz Stratego Yld Fungicide and 2.0 oz Delta Gold Insecticide at R2	74.3
Treatment 3 2.0 oz Delta Gold Insecticide at V3 fb 2.0 oz of Delta Gold at R2	77.1
Treatment 4 2.0 oz Delta Gold Insecticide at R2	78.5
Treatment 5 Untreated	74.3
Overall Mean	76.1
LSD (0.05) 9.5	
Tukey's 13.8 - No significant difference between treatments	
CV 8.4	

Summary

As observed in previous seasons, treatment of foliar fungicide or insecticide or a combination of the two did not result in any increase in soybean yield. Moreover, the use of either insecticide or fungicide proved to have a negative effect on profitability under circumstances of low disease and insect pressure.

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