

# Evaluation of Effects of Foliar Fertilizer, Fungicide and Insecticide Applications on Soybean Yields

Gregory A LaBarge, Ohio State University Extension Educator, Fulton County

## Objective

To determine soybean yield response from fungicide, insecticide and fertilizer inputs applied growth stage R2.

## Background

---

Crop Year:	2009	Tillage:	minimum
Location:	Delta, OH	Planting Date:	5/20/2010
County:	Fulton County	Seeding Rate:	145,000 seeds/acre in 30 inch rows
Soil Type:	Hoytville Silty Loam	Variety:	Pioneer 93Y51
Drainage:	Subsurface Drainage 25 ft spacing	Harvest Date:	October 20, 2009
Previous Crop:	Corn		

## Methods

This study was designed with three treatments and a control replicated three times in a randomized complete block design. The treatments consisted of a non-treated check and three foliar applied treatments. Treatments were:

1. Nontreated control
2. Asana XL (6 oz/A)
3. Asana XL (6 oz/A) + Headline (6 oz/A)
4. Asana XL (6 oz/A) + Headline (6 oz/A) + 26-0-0-0.5B (2 Gal/A)

The treatments were applied on July 31, 2009 to soybeans in growth stage R2. Applications were applied with water as a carrier at 12 gallons of total volume applied per acre. Products were tank mixed where multiple products were used. Individual plot sizes were 80 feet wide (one sprayer pass) by 2500 feet in length. Application was made with a Patriot 150 sprayer equipped with air induction nozzles.

The entire treatment area was planted to Pioneer 93Y51. The soybean is a 3.5 maturity soybean with phytophthora profile of 1K resistance gene and 5 field tolerance, rated 7 for Sudden death syndrome, 9 for frogeye leaf spot and not rated for Brown stem rot or Sclerotinia by the company literature.

Insect and disease pressure was not noted during scouting. Minimal soybean aphid activity was noted after growth stage R5.

Harvesting was accomplished with a John Deere 9660 combine equipped with a calibrated Insight yield monitor. A full swath width of consisting of the center 34 feet of each plot were

harvested to determine yield. The data was post process with ArcView GIS 3.3 software and Enhanced Farm Research Analyst Version 1.12 module.

## Results

Soybean Yield (lbs/ac) Response to Insecticide, Fungicide and Foliar Fertilizer Application		Yield (lbs/A)
Non-treated Check		63.8
Asana XL (6 oz/A)		64.6
Asana XL (6 oz/A) + Headline (6 oz/A)		64.7
Asana XL (6 oz/A) + Headline (6 oz/A) + 26-0-0-0.5B		65.0
	LSD (0.10)	NS
	CV %	1.4

## Summary

None of the products produced a yield significantly greater than the untreated check.

## Acknowledgement

The author expresses appreciation to Lawrence Onweller as the cooperating farmer who did all applications and harvest, the Conklin Co. for fertilizer product, and the Ohio Soybean Council for providing funding to conduct this research project.

For more information, contact:  
Greg LaBarge  
OSU Extension Fulton County  
8770 State Route 108, Suite A  
Wauseon, Ohio 43567  
labarge.1@osu.edu

