

Soybean Fungicide/Insecticide Study, Darke County

Samuel G. Custer, Ohio State University Extension Educator, Darke County

Objective

To determine the effects of fungicide and insecticide treatments on soybean yields to determine best management practices when frogeye leaf spot disease is detected in soybeans.

Background

| | |
|------------------------------|--|
| Crop Year: 2018 | Tillage: Minimum Tillage |
| Location: Adams Township | Soil Test: pH 6.3, P 24 ppm BP1, K 129 ppm |
| County/Town: Darke/Bradford | Planting Date: May 12, 2018 |
| Soil Type: Miamian Silt Loam | Nitrogen: None |
| Brookston Silty Clay Loam | Seeding Rate: Varied |
| Drainage: Systematic Pattern | Harvest Date: 10/17/2018 |
| Previous Crop: Soybeans | Rainfall: 14.25 in – April-August |

Methods

This study was organized as a randomized complete block with three replications. Treatments were planted with a 12 row Kinze planter with split row units (resulting in 15 inch row spacing). Plot width was 60 feet. Plot length was field length. All treatments received the same tillage and herbicide applications. The soybean variety used was Asgrow 3832. Fungicide/Insecticide treatments were made at R4 with a tractor and sprayer equipped with narrow tires. 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 adjusted to 13% moisture. Precipitation data were obtained from cocorahs.org and recorded daily. Return for product was calculated by subtracting additional inputs from additional bushels produced.

Treatments

| | |
|---------------------------|---|
| Untreated | None |
| Fungicide | Trivapro (13.7 oz/ac) |
| Fungicide and Insecticide | Trivapro (13.7 oz/ac) Province II (1.6 oz/ac) |

Results

| No. | Treatment | Grain Moisture % | Treatment Average (bu./acre) | Return for Product (\$/ac) |
|-----|-----------------------|------------------|------------------------------|----------------------------|
| 1 | Untreated | 14.5 | 60 b | |
| 2 | Fungicide | 14.4 | 65 a | 35 |
| 3 | Fungicide/Insecticide | 14.4 | 66 a | 44 |

Grain Moisture CV %: 0.60; Not significant

Yield LSD (0.10): 3.70; CV %: 3.32

Treatment means with the same letter are not significantly different.



THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES

agcrops.osu.edu

CFAES provides research and related educational programs to clientele on a nondiscriminatory basis. For more information: go.osu.edu/cfaesdiversity.

Summary

Frogeye was identified in this soybean crop on July 2 at a rate of more than two lesions per 25 foot of row. There was no significant difference in the grain moisture at harvest. There was a significant difference in yield between no treatment and fungicide and fungicide and insecticide. There was an economic gain by making the fungicide treatment but no significant additional gain could be attributed to the insecticide treatment.

Acknowledgement

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



THE OHIO STATE UNIVERSITY

For more information, contact:

Sam Custer

OSU Extension, Darke County

603 Wagner Avenue

Greenville, Ohio 45331

custer.2@osu.edu



THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES

agcrops.osu.edu

CFAES provides research and related educational programs to clientele on a nondiscriminatory basis. For more information: go.osu.edu/cfaesdiversity.