



INSECTICIDE SEED TREATMENTS IN CONSERVATION SYSTEMS

ACTION TRIAL PROTOCOL

In partnership with **UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN**

PROTOCOL AUTHORS – Nick Seiter, University of Illinois

Reviewed by the ISA OFTN Team

OBJECTIVE – Determine the effect of soybean insecticide seed treatments in conservation systems.

- Number of locations: 3 on-farm sites
- Geographic scope: Statewide
- The entire field should be cover cropped for this study ahead of the 2027 growing season, with preference for previous cover crop history on this field.

TREATMENTS – Each site will have insecticide treated seed compared to seed with no insecticide treatment.

Insecticide Seed Treatment Comparison Options:

- 1) Seed with insecticide treatment vs Naked seed control (no seed treatment)
- 2) Seed with both insecticide and fungicide treatment vs Seed with only fungicide treatment control (same fungicide for both)

Control Requirements:

- Other than insecticide, all other management should be same.
- The seed should be the same variety for control as treatment seed.

Treatment Rationale:

- Previous studies and work in other areas have shown insecticide seed treatments have no impact on slugs, a potentially damaging pest in high residue systems. In contrast, these seed treatments have a negative impact on beneficial insects, such as ground beetles, which are natural predators of slugs.
- The treatments will allow evaluation within conservation systems of if insecticide seed treatments are cost-effective or even harmful to soybean yields due to plant injury.

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PLOT LAYOUT – Flexible depending on equipment and field dimensions.

- Minimum field size of 40 acres.
- Trials will consist of at least 4 replications of both a control and insecticide seed treatment (total of 8 plots), each a minimum of 60 feet wide.
- Width of plots can be adapted to farmer's equipment.
 - Must be wide enough to measure yield using farmer's harvest equipment.
 - Minimum width is the larger of either 60 ft or twice the width of the combine header (to avoid edge effect).

EQUIPMENT NEEDED

- Combine with a calibrated yield monitor

FIELD WORK AND MEASUREMENTS COLLECTED

- Agronomic management information - *Farmer provided*
 - Previous 3-5 years of basic management information preferred
 - More detailed current year's management information
- Baseline soil fertility sampling & analysis - *ISA responsible, spring*
- Insect counts and injury assessments, 4-8 times throughout the season - *performed by the Seiter laboratory*
- Yield monitor data - *Farmer provided*

ISA OFTN CONTACT INFO

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