



ACTION TRIAL PROTOCOL

INSECTICIDE SEED TREATMENTS IN CONSERVATION SYSTEMS

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

PROTOCOL AUTHORS – Nick Seiter, University of Illinois

Reviewed by 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 2026 growing season, with preference for previous cover crop history on this field.

TREATMENT— 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.*
- *Ideally, 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 foot 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 calibrated yield monitor OR access to scale/weigh wagon that can weigh plots individually

FIELD WORK AND MEASUREMENTS COLLECTED

- Agronomic management information-Farmer provided
 - Previous 3-5 years 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 Seiter laboratory)
- Yield monitor data or yield from each plot, measured via scale/weigh wagon-Farmer provided, post-harvest

ISA OFTN CONTACT INFO

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