



**RESEARCH
 PROTOCOLS**

Are Soybean Seed Treatments Justified?

Objective: Determine the effect of a common soybean seed treatment (neonicotinoid insecticide + fungicide) on yield and profitability.

Hypothesis: Soybeans grown from treated seed will produce yields no different from those grown from untreated “naked” seed; seed treatment is likely an unnecessary cost.

Farmer-Cooperator will:

- Follow Research Protocols in accordance with Project Design, Data to Collect, Photo List and Timeline detailed below.
- Take photos throughout the project. Try to capture photos that depict the differences you observe between the treatments.
- Keep in contact with PFI with updates and questions.
- Turn in data and complete post-project survey by November 2020.

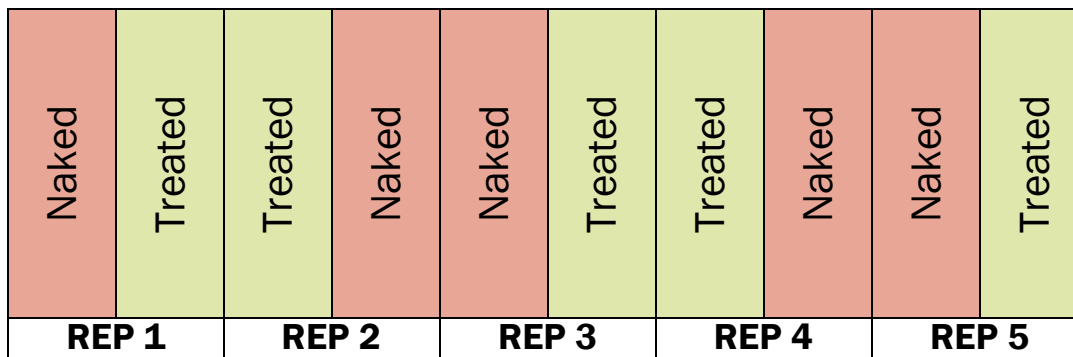
Practical Farmers of Iowa will:

- Help set up research protocol, monitor progress of project and provide support when needed.
- Publish results in a PFI research report, on PFI website and potentially other outlets.
- Provide \$550 research honorarium to cooperator upon receipt of data.

Project Design:

Treatment	Description
Treated	Plant soybean seed treated with Gaucho (neonicotinoid insecticide) and metalaxyl (fungicide).
Naked	Plant seed with no seed treatment.

- Apply these two treatments in a randomized, replicated trial: at least five replications of randomized paired strips. 2 treatments x 5 replications = 10 strips total.
- Strips must be at least as wide as one combine pass and should run the length of the field.
 - Example layout:



Data to Collect (cooperator):

- Costs
 - Document cost of seed treatment in order to calculate return on investment.
- Soybean plant population
 - Take stand counts in each strip three weeks and six weeks after planting.
- Soybean yield
 - Harvest and record grain yield and moisture from each strip.

Project Timeline:

Spring 2020	Summer 2020	Fall 2020
<ul style="list-style-type: none">• Terminate cover crop.• Plant 'Treated' and 'Naked' soybeans in strips on same date.• Take soybean stand counts.• Take photos.	<ul style="list-style-type: none">• Take soybean stand counts.• Take photos.	<ul style="list-style-type: none">• Harvest soybeans from all strips.• Turn in data and photos.• Take post-project survey.

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