



**RESEARCH
 PROTOCOLS**

**Planting Corn in Skip-Row Arrangement
 for Interseeding Cover Crops**

Objectives: Determine the effect of not planting every third corn row on 1) corn grain yields and 2) biomass production of interseeded cover crops.

Hypothesis: Not planting every third row of corn (skip row) will produce yields similar to corn planted in every row and will better accommodate the interseeded cover crops.

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 among the treatments.
- Keep in contact with PFI with updates and questions.
- Turn in data and complete post-project survey by November 2020.

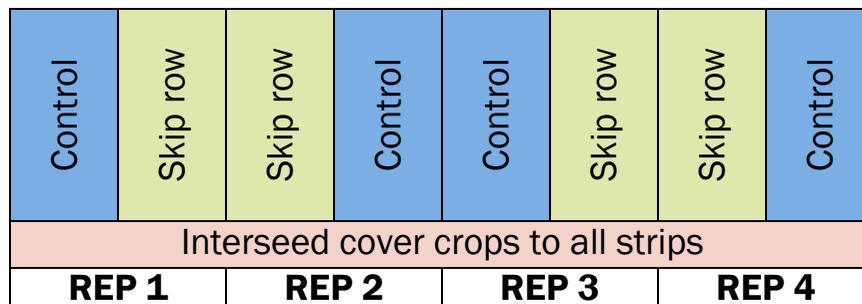
Practical Farmers of Iowa will:

- 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
Skip row	Skip every third row when planting corn. This results in two rows on 36-in. centers, followed by a 72-in. gap and two more rows on 36-in. centers (experimental practice). Plant soybeans in 72-in. gap. Interseed cover crops to corn in May/June.
Control	Plant corn in every row on 36-in. row-widths (typical practice). Interseed cover crops to corn in May/June.

- Apply these two treatments in a randomized, replicated trial: at least four replications of randomized paired strips. 2 treatments x 4 replications = 8 strips total.
- Cover crops for interseeding are entirely at the discretion of the cooperator.
- 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):

- Corn grain yield
 - Harvest and record yield and moisture from each strip.
- Cover crop biomass
 - Just prior to corn harvest, sample aboveground biomass from each strip.
 - Randomly place 1'x1' PVC square in strip
 - Use shears to clip all aboveground plant material from within the square
 - Place all plant material from a single square into one paper bag
 - Label paper bags accordingly
 - Rep #
 - Treatment: Skip row or Control
 - Number of squares sampled from (e.g., 1 square = 1 ft²)
 - Date of collection
 - Optional: Repeat this process 2-3 times per strip
 - (e.g., 2-3 paper bags per strip)
 - Send paper bags to PFI office
 - Samples will be dried and weighed

Photo List (cooperator):

- Corn emerging/growing in both planting arrangements (throughout season).
- Interseeding cover crops; equipment in field.
- Cover crops growing in interrows of both planting arrangements.
- Cooperator in field trial.

Project Timeline:

Spring	Summer	Fall
<ul style="list-style-type: none">• Plant corn in strips (see diagram on previous page).• Take photos.	<ul style="list-style-type: none">• Interseed cover crops to all strips.• Take photos.	<ul style="list-style-type: none">• Collect cover crop biomass samples just prior to corn harvest.• Harvest corn from all strips.• Turn in data and photos.• Take post-project survey.

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