

Field Crops Research Protocols

No-Till vs. Strip-Till Corn Following Twin-Row Cover Crop

Objective: Determine the agronomic and economic effects on corn of no-till vs. strip-till planting following a cover crop seeded in twin-rows.

Farmer-cooperator will:

- Take photos throughout the project and keep in contact with PFI with updates and questions.
- **Fall 2017**, seed cover crop in twin-rows on 30-in. centers (20-in. gaps).
- **Spring 2018**, establish at least 4 replications as shown in the diagram below of two treatments:
 - **No-till**
 - **Strip-till in 20-in. gap between twin-row cover crops**
- Strips will be as wide as at least one combine pass and run the length of the field.
- Collect aboveground biomass samples of cover crop from strips just prior to termination.
- Terminate twin-row cover crops in all strips on same date.
- Plant corn in the 20-in. gap between terminated twin-row cover crops to all strips on the same date.
- Allow Dr. Alison Robertson's team to sample corn seedlings for disease prevalence.
- Work with Theo Gunther at Iowa Soybean Association to coordinate soil and biomass sampling.
- **Summer 2018**, take photos of crop progress.
- Allow Dr. Robertson's team to sample mature corn plants for stalk disease prevalence.
- **Fall 2018**, harvest corn from strips individually.
- Turn in all info and data pertinent to this trial to Practical Farmers of Iowa by the end of the project.



Practical Farmers of Iowa will:

- Help coordinate with Dr. Robertson (ISU) and Theo Gunther (ISA).
- Help set up monitoring 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 compensation when yield data is submitted at conclusion of the project in 2018.

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The terms of this Research Protocols document are subject to the terms of the individual Research Cooperator's Memorandum of Understanding agreement with PFI. To the extent these terms may differ or conflict, the Memorandum of Understanding shall control.