

# Field Crops Research Protocols

## Roll-Crimping Cover Crops and Soybean Planting Date

**Objective:** Determine agronomic and economic performance of soybeans planted prior to roll-crimping cover crop 2-3 weeks later.

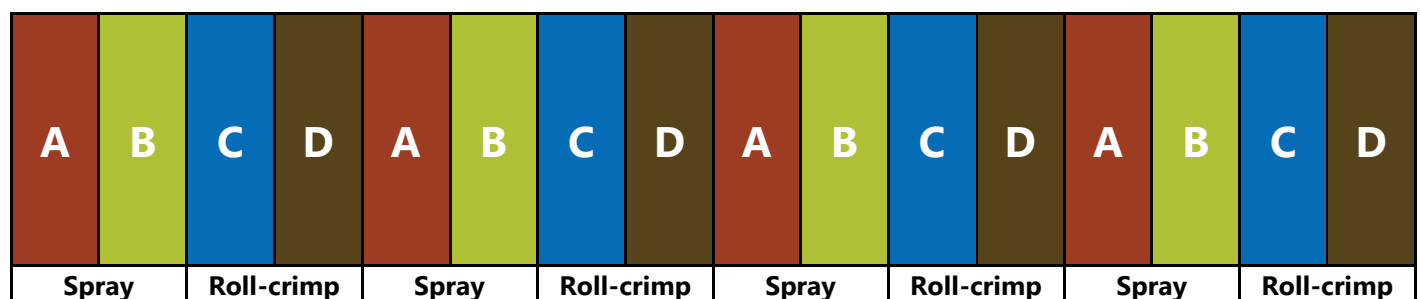
**Goals:** Reduce herbicide use in soybeans.

**Farmer-cooperator will:**

- Take photos throughout the project and keep in contact with PFI with updates and questions.
- Document all costs of production.
- **Fall 2016**, seed cover crop.
- **Spring 2017**, establish 4 replications as shown in the diagram below of the following “systems” treatments:

| Treatment | Description                                | Termination method and date (goal) | Soybean planting date (goal) | Seed treatment (Y/N)? |
|-----------|--|------------------------------------|------------------------------|-----------------------|
| A         | Plant soybeans, then spray cover crop      | Spray, ~May 1                      | ~Apr. 20                     | Y                     |
| B         | Spray cover crop, then plant soybeans      | Spray, ~May 1                      | ~May 5                       | Y                     |
| C         | Plant soybeans, then roll-crimp cover crop | Roll-crimp, ~May 30                | ~May 5                       | Y                     |
| D         | Roll-crimp cover crop, then plant soybeans | Roll-crimp, ~May 30                | ~May 30                      | N                     |

- All strips will be as wide as one combine pass and run the length of the field.
- Collect cover crop biomass samples at time of termination.
- Roll-crimp cover crop in treatments C and D when cover crop reaches anthesis stage.
- **Summer 2017**, conduct soybean stand counts in all strips.
- Make note of and photograph weed pressure in all strips.
- **Fall 2017**, harvest soybean from strips individually.
  - Harvest one, 25-ft wide swath from each treatment strip.
- Turn in data to Practical Farmers of Iowa at the end of the project.



**Practical Farmers of Iowa will:**

- 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 at conclusion of the project in 2017.

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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.*