

# Field Crops Research Protocols

## Cereal rye seeded into seed corn early/late/post-harvest + rye termination comparison

**Objectives:** 1) Determine the performance of a cereal rye cover crop aerially seeded into seed corn at two dates prior to harvest and drilled directly following harvest. 2) Determine the agronomic and economic performance of soybeans in rotation following two cover crop termination dates.

**Farmer-cooperator, Jack Boyer, will:**

- Take photos throughout the project.
- Keep in contact with PFI with updates and questions.
- **Spring 2014**, plant seed corn.
- **Summer 2014**, establish a minimum of 4 replications of the treatments as shown in the diagram below with randomized and replicated strips of:
  - Cereal rye seeded into standing corn in mid-August (early planting);
  - Cereal rye seeded into standing corn in late August (late planting)
  - Cereal rye drilled into corn stubble (after harvest).
- **Fall 2014**, collect cereal rye biomass samples, send to PFI.
- Collect soil samples for Haney Test.
- **Spring 2015**, establish within the strips two additional sub-treatments of:
  - Cereal rye terminated before soybean planting;
  - Cereal rye terminated at soybean planting.
- Collect cereal rye biomass samples at the two different termination times, send to PFI.
- Collect soil samples for Haney Test
- **Fall 2015**, harvest soybeans from strips separately.
- Turn in data to Practical Farmers of Iowa at the end of the project.

Termination post-planting soy	Termination post-planting soy	Termination pre-planting soy	Termination pre-planting soy	Termination pre-planting soy	Termination post-planting soy
Early planting	Late planting	After corn harvest	Early planting	Late planting	After corn harvest
<b>REP 1</b>			<b>REP 2</b>		

**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 \$1,100 compensation at conclusion of the project in 2015 and cover the cost of rye seed.