Objective: Determine if terminating a cover crop near soybean planting can reduce the need for herbicides.

Farmer-cooperator will:
- Take photos throughout the project and keep in contact with PFI with updates and questions.
- Fall 2017, seed cereal rye cover crop.
- Spring 2018, establish 4 replications as shown in the diagram below of the following treatments:

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Cover Crop?</th>
<th>Herbicide Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>No</td>
<td>Full program</td>
</tr>
<tr>
<td>B</td>
<td>Yes</td>
<td>Full program</td>
</tr>
<tr>
<td>C</td>
<td>Yes</td>
<td>Low-cost program</td>
</tr>
<tr>
<td>D</td>
<td>Yes</td>
<td>No-residual program</td>
</tr>
</tbody>
</table>

- Strips will be as wide as at least one combine pass and run the length of the field.
- Soybeans will be seeded into all 4 treatments on the same date and at the same population.
- Collect aboveground biomass samples of cover crop from strips just prior to termination.
- Terminate cover crop near the soybean seeding date according to treatment.
- Summer 2018, monitor progress of soybeans and weed pressure in treatment strips.
- Fall 2018, harvest soybeans from strips individually.
- 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 2018.

Contact: Stefan Gailans, Research and Field Crops Director, (515) 232-5661; stefan@practicalfarmers.org

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.