**Spraying vs. Rolling Cover Crops and Soybean Row-Width**

**Objectives:** Determine (1) if rolling a cover crop after soybean seeding is a viable termination option, and (2) whether soybean row-width has any effect on the success of rolling.

**Farmer-cooperator will:**
- Take photos throughout the project and keep in contact with PFI with updates and questions.
- Fall 2016, seed cereal rye cover crop.
- Spring 2017, establish 4 replications as shown in the diagram below of the following treatments:

<table>
<thead>
<tr>
<th>Cover crop termination method</th>
<th>Treatment</th>
<th>Soybean Row-Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spray</td>
<td>A</td>
<td>Plant soybeans in 30-in. rows</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>Drill soybeans in 10-in. rows</td>
</tr>
<tr>
<td>Roll</td>
<td>C</td>
<td>Plant soybeans in 30-in. rows</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>Drill soybeans in 10-in. rows</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.
- Spray cover crop termination method will occur near the soybean seeding date (A and B).
- Roll cover crop termination method will occur at cover crop anthesis after soybean seeding date (C and D).
- Summer 2017, monitor progress of soybeans and weed pressure in treatment strips.
- Fall 2017, 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 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.*