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:

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

- 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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