Objective: To test and compare soil health data over a three-year period in adjacent fields under different management; ungrazed Conservation Reserve Program (CRP) land, grazed CRP land, perennial pasture and row crop production.

<table>
<thead>
<tr>
<th>2018 - 2020</th>
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<tbody>
<tr>
<td>Row Crops</td>
</tr>
<tr>
<td>Ungrazed CRP</td>
</tr>
<tr>
<td>Grazed CRP</td>
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</tbody>
</table>

Farmer-cooperator, will:
- Take photos throughout the project and keep in contact with PFI with updates and questions.
- Graze a portion of the CRP land each year, using management-intensive grazing principles; grazing will take place once every three years during the time frame allowed by the contract (April 1 through May 14 or August 2 through September 30).
- Leave the remaining CRP acres untouched by livestock, but continue managing according NRCS specifications.
- Continue current no-till and cover crop practices on corn and soybean acres.
- Will determine soil sample locations and establish GPS points within each of the three fields.
- Work with AgSource Laboratories to collect soil health samples four times a year, for three years. Each field will contain multiple samples, replicated across the same soil types and similar slopes, according to AgSource sampling protocols. Collect samples in the fall or spring, and then submit to Practical Farmers of Iowa.
- Work with Dr. Marshall McDaniel at Iowa State University to conduct the tea bag soil health assessment in each of the three fields.
- Record all grazing and cropping activities.
- Turn in data to Practical Farmers of Iowa at the end of each grazing/cropping season.

Practical Farmers of Iowa will:
- Help coordinator with AgSource Laboratories and Dr. McDaniel.
- Monitor progress of project and provide support when needed.
- Analyze the data and write a research report.
- Publish results in a PFI research report, on PFI website and potentially other outlets.
- Provide $550 compensation each year of the project; 2018, 2019 and 2020.

Contact: Meghan Filbert, (515) 232-5661, meghan@practicalfarmers.org

The terms of this Research Protocols document are subject to the terms of the individual Research Cooperators Memorandum of Understanding agreement with PFI. To the extent these terms may differ or conflict, the Memorandum of Understanding shall control.