Objectives: Determine the effect of corn row-width (30-in. vs. 60-in.) on 1) grain yields and 2) biomass production of cover crops interseeded to the corn in early summer.

Hypothesis: Corn planted in 60-in. row-widths will produce yields similar to corn planted in 30-in. row-widths, and the wider row-width will better accommodate the interseeded cover crops.

Farmer-Cooperator will:
- Follow Research Protocols in accordance with Project Design, Data to Collect, Photo List and Timeline detailed below.
- Take photos throughout the project. Try to capture photos that depict the differences you observe among the treatments.
- Keep in contact with PFI with updates and questions.
- Turn in data and complete post-project survey by November 2020.

Practical Farmers of Iowa will:
- Help set up research 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 research honorarium to cooperator upon receipt of data.

Project Design:

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-in.</td>
<td>Plant corn in 30-in. row-widths (typical practice). Interseed cover crops to corn in May/June.</td>
</tr>
<tr>
<td>60-in.</td>
<td>Plant corn in 60-in. row-widths (experimental practice). Interseed cover crops to corn in May/June.</td>
</tr>
</tbody>
</table>

- Apply these two treatments in a randomized, replicated trial: at least four replications of randomized paired strips. 2 treatments x 4 replications = 8 strips total.
- Cover crops for interseeding are entirely at the discretion of the cooperator.
- Strips must be at least as wide as one combine pass and should run the length of the field.
  - Example layout:
Data to Collect (cooperator):

- Corn yield (grain, silage or earlage)
  - Harvest and record yield and moisture from each strip.
- Cover crop biomass
  - Just prior to corn harvest, sample aboveground biomass from each strip.
    - Randomly place 1'x1' PVC square in strip
    - Use shears to clip all aboveground plant material from within the square
    - Place all plant material from a single square into one paper bag
    - Label paper bags accordingly
      - Rep #
      - Corn row-width: 30-in. or 60-in.
      - Number of squares sampled from (e.g., 1 square = 1 ft²)
      - Date of collection
  - Optional: Repeat this process 2-3 times per strip
    - (e.g., 2-3 paper bags per strip)
- Send paper bags to PFI office
  - Samples will be dried and weighed

Photo List (cooperator):

- Corn emerging/growing in both row-widths (throughout season).
- Interseeding cover crops; equipment in field.
- Cover crops growing in interrows of both row-widths (throughout season).
- Cooperator collecting data.
- Cooperator in field trial.

Project Timeline:

<table>
<thead>
<tr>
<th>Spring</th>
<th>Summer</th>
<th>Fall</th>
</tr>
</thead>
</table>
| • Plant corn in strips of 30- and 60-in. row-widths (see diagram on previous page). | • Interseed cover crops to all strips when corn reaches V4-V6 stage  
  • Take photos. | • Collect cover crop biomass samples just prior to corn harvest.  
  • Harvest corn from all strips.  
  • Turn in data and photos.  
  • Take post-project survey. |

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