Objectives:

1. Determine if no-till planting of Salanova lettuce reduces labor compared to tilled, bare soil plantings and tilled, landscape fabric plantings.
2. Determine if no-till vs. tilled plantings of Salanova have different yields and quality.
3. Track input costs of no-till vs. tilled plots for Salanova.

Farmer-cooperator will:
- Follow Research Protocols for study
- **Take photos** throughout the project.
- Keep in contact with PFI with updates and questions
- Turn in all data by October 2017

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 cooperator payment at conclusion of project year.

RESEARCH PROTOCOL

**Crops:** Salanova

**Transplanting and In-field practices:**
Each farmer can decide their own in field practices, but should record what was done and when. Practices should be consistent for both varieties and all plots.

**Please provide PFI with the following planting info:**
Seeding date:
Transplant date:
In-row spacing (inches): 6 in.
Between row spacing (inches):
Irrigation (Y/N and type):
Soil amendments/inputs used (product and rate):

**Field Layout:**
- 100 plants/rep at 6 in. spacing (5 rows per 200 in. bed)
- Three treatments x four replications
**Treatments:**
1. **Compost:** Cover surface of bed with 1 in. thick layer of purchased compost.
2. **Fabric:** Roto-till bed and cover with landscape fabric; plant through burned-out holes.
3. **Bare:** Roto-till bed and plant into bare soil.

**Example Plot Layout (for 3 treatments)**
Rep by text color. Treatment by title and cell shading.

<table>
<thead>
<tr>
<th>Rep 1</th>
<th>Rep 2</th>
<th>Rep 3</th>
<th>Rep 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compost</td>
<td>Fabric</td>
<td>Bare</td>
<td>Fabric</td>
</tr>
<tr>
<td>Bare</td>
<td>Compost</td>
<td>Fabric</td>
<td>Bare</td>
</tr>
<tr>
<td>Fabric</td>
<td>Bare</td>
<td>Compost</td>
<td>Fabric</td>
</tr>
</tbody>
</table>

**Harvest and Data Collection:**
- Track **labor by treatment** on datasheet
- Track **expenses by treatment** on datasheet
- Harvest **lettuce as mature. Record weight and count harvested by plot,** after field clean but before washing. If marked as cull after harvest, note as “wash cull”; and do not include wash culls in marketable count or weight.
- **Marketability assessment** by plot in-field: Bolting, tip-burn, bottom rot, flavor (score as Acceptable/Unacceptable)
- **Take photos of the trial in the field and plants at harvest.**
- See **excel workbook (modified enterprise budget)** for pick sheets, scoring, and data entry

**Data Analysis**
Data analysis will be done at PFI by Liz Kolbe and presented in a Research Report at the Cooperators’ Meeting.

**Contact:** Liz Kolbe, Horticulture Coordinator
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