

Horticulture

Research Protocols

Small-Scale No-Till Lettuce Trial

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.

Rep 1		Rep 2		Rep 3		Rep 4	
Compost	Fabric	Bare	Fabric	Compost	Bare		
Bare	Compost	Fabric	Bare	Compost	Fabric		

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.