



## RESEARCH PROTOCOLS

### Ginger production and variety trial in covered and uncovered beds

**Objective:** Determine if ginger yield or quality is different by seed variety, and to determine if high tunnels or row covers impact ginger yield.

**Hypothesis:** Growers expect that the ginger yield will not be significantly different when grown under a cover, though they do expect better yield from the Hawaiian seed ginger.

#### 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 Nov. 2020

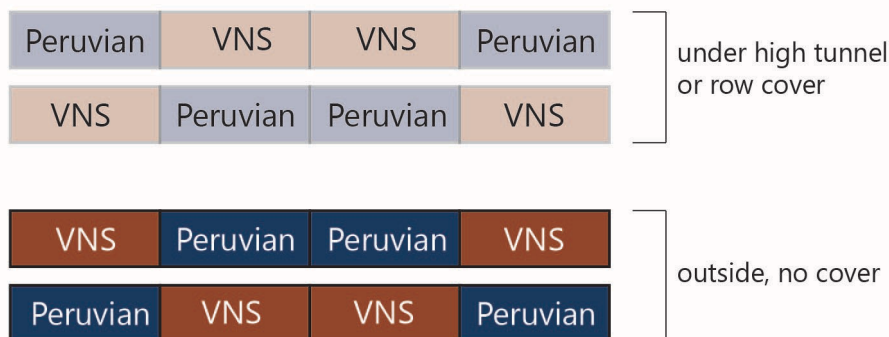
#### Practical Farmers of Iowa will:

- 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 cooperator payment at conclusion of project year.

#### Project Design:

- Paired, randomized, replicated trial of two varieties of ginger in both indoor (or covered) and outdoor settings.
  - Varieties compared: Organic Peruvian Yellow (from Puna Organics and Biker Dude, Hawaii), and organic VNS ginger (purchased from New Pioneer Co-op grocery store).
  - Environment comparison: High tunnel (or under row cover, at some farms), versus outside.

Layout example for the ginger production and variety trial in covered and uncovered beds



**Photo List:**

- preparing seed ginger
- sprouted ginger ready to be planted out
- early-season field-shots of trial
- mature plants in trial
- ginger roots during harvest, in bins, etc.
- harvest-time with farmer in the photo
- bonus for photo of farmer entering data in the field!

- **Data Collected:**

- Dates of: pre-sprouting, sprouting, planting out, harvest.
- Harvest data **by plot**: Number of plants harvested (is this discernible with ginger?), rhizome weight, rhizome firmness, rhizome color, rhizome taste.

**Project Timeline**

<ul style="list-style-type: none"><li>• Review research protocol</li><li>• Complete MOU and pre-project survey</li></ul>
<p><b>March</b></p> <ul style="list-style-type: none"><li>• Prepare 2-oz seed pieces and begin pre-sprouting by mid-March (March 16). Pre-sprout by holding seed pieces at 75-80 degrees in a damp medium (peat, coir, soil mix)</li></ul>
<p><b>April</b></p> <ul style="list-style-type: none"><li>• April 5 (3 weeks after pre-sprouting), move seed pieces to 1020 trays (20 seed pieces/tray) for sprouting. Grow in warm spot with light.</li></ul>
<p><b>May</b></p> <ul style="list-style-type: none"><li>• Prepare beds and plant out when soil temps remain over 70 degrees (around May 16). Rows should be planted 12-18 in. apart, with 12 in. spacing within the rows.</li></ul>
<p><b>June - October</b></p> <ul style="list-style-type: none"><li>• Manage crops normally.</li></ul>
<p><b>October</b></p> <ul style="list-style-type: none"><li>• Harvest ginger rhizomes; record data in accordance with data collection sheet.</li></ul>
<ul style="list-style-type: none"><li>• Enter data and photos (see photo shot list, above), to PFI's google site: <a href="https://sites.google.com/practicalfarmers.org/research/home">https://sites.google.com/practicalfarmers.org/research/home</a>.</li><li>• Complete post-project survey.</li></ul>

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