



## RESEARCH PROTOCOLS

### Organic Control of Vine Borer in Winter Squash

**Objective:** Which method provides the best control for vine borers in winter squash?

**Hypothesis:** ??

#### **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 November 2019

#### **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:**

- Each farm will set up a randomized, replicated trial with three replications of four or five treatments on their preferred winter squash variety.
- **Slocum:**
  - Red Kuri squash, 8 plants/plot
  - Treatments: Control (no treatment), Newspaper, Bt Injection, Row Cover
  - 4 treatments x 3 reps = 12 plots
  - 12 plots x 8 plants per plot = 96 plants total for trial
- **Quee:**
  - Blue Hubbard squash, 8 plants/plot
  - Treatments: Control (no treatment), Newspaper, Bt Injection, Row Cover, Spinosad
  - 5 treatments x 3 reps = 15 plots
  - 15 plots x 8 plants per plot = 120 plants total for trial
- **Data Collected:**
  - Scouting: Number of plants alive after 40 days and 80 days.
  - Harvest: Number of fruit
  - Complete excel workbook with information on treatment and planting for each farm.

- **Example Trial Layout:**

Rep 1	Rep 2	Rep 3
Control	Row Cover	Newspaper
Newspaper	Control	Bt Injection
Bt Injection	Newspaper	Control
Row Cover	Bt Injection	Row Cover

**Project Timeline:**

March	April - October	November
<ul style="list-style-type: none"> <li>• Edit/Approve Protocol</li> <li>• Complete MOU &amp; pre-survey</li> </ul>	<ul style="list-style-type: none"> <li>• Start seed</li> <li>• Layout plots, Prepare treatments, Transplant</li> <li>• Conduct trial and collect data! Take photos!               <ul style="list-style-type: none"> <li>• 40-day scout, 80 day scout by plot</li> <li>• Record harvest count by plot</li> </ul> </li> <li>• Update other cooperators and PFI with progress of trial</li> </ul>	<ul style="list-style-type: none"> <li>• Turn in data and photos</li> <li>• Take post-survey</li> </ul>

**Contact:** Liz Kolbe, Horticulture and Habitat Programs Manager, (515) 232-5661; [liz@practicalfarmers.org](mailto:liz@practicalfarmers.org)