

Horticulture

Research Protocols

Mulch and Foliar Feed Trial in Butternut Squash and Tomato

Objectives: 1. Determine if yields of butternut squash and tomatoes are different between plots using plastic mulch and corn stalk mulch. 2. Determine if yields of butternut squash and tomatoes are different between plots using foliar feeding and not using foliar feeding.

Farmer-cooperator, Dale Raasch, will:

- Take photos throughout the project and send to PFI for use in research report and blog.
- Keep in contact with PFI with updates and questions.
- **Spring 2015**, start tomato and squash seedlings and transplant to field when appropriate.
- Prior to transplanting, lay plastic and cornstalk mulch in alternating rows.
- For each crop, establish a minimum of 4 replications at the time of transplanting as shown in the diagram below with randomized and replicated plots of:
 - Plastic mulch + foliar feed (PF)
 - Plastic mulch + no foliar feed (PNF)
 - Cornstalk mulch + foliar feed (CF)
 - Cornstalk mulch + no foliar feed (CNF)
- **Summer 2015**, begin applying foliar feed to appropriate tomato and squash plots.
- Make note of all management practices throughout the growing season.
- **Fall 2015**, harvest tomatoes and squash from each plot separately: record number of marketable fruits harvested per bed, total weight of marketable fruits harvested per plot, number of culls per bed and weight of 10 random culls for estimating cull weight.
- Turn in all data by October 2015 (if fall crops, can be later)

Rep 1		Rep 2	
CF	CNF	CNF	CF
PNF	PF	PF	PNF
CNF	CF	CNF	CF
PF	PNF	PF	PNF
Rep 3		Rep 4	

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.