

Living Mulch in Peppers, Broccoli and Cucumbers

Objectives for Peppers:

1. Determine if whole season, low growing white clover in the pathways next to pepper plants will impact the yield of peppers.
2. Evaluate the biomass, weed suppression, and percent cover of the clover in the pathways next to peppers.

Objective for Broccoli:

1. Evaluate the performance (percent cover, biomass, weed suppression) of three late season cover crops in the understory of broccoli plants.

Objectives for Cucumbers:

1. Determine if living cover in the sprawl zone of cucumbers impacts the labor time required for harvest.
2. Determine if living cover in the sprawl zone of cucumbers keeps fruits cleaner after rain.
3. Determine if cucumber plants prefer to vine toward living cover in the sprawl zone, or away from it.
4. Determine if living cover in the sprawl zone impacts yield.

Farmer-cooperator, **Rob Faux**, 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.
- **Summer 2015**, establish cover crops and peppers, broccoli, and cucumbers in randomized, replicated plots for each project as in diagram below.
 - Peppers: Establish clover in June when peppers are transplanted.
 - Broccoli: Transplant broccoli and cultivate until August 1.
 - Cucumbers: Transplant cucumbers, establish cover crops 2-3 weeks later.
- Record yield and cover crop performance for peppers and white clover.
- Record yield, harvest time, cleanliness of fruit, and cover crop performance for cucumbers and cover crop.
- **Late Summer 2015**, establish late season cover crops in broccoli.
- **Fall 2015**, record cover crop performance for broccoli covers.
- Allow cover crops for all projects to winter kill.
- Turn in all data by October 2015.

Pepper Project:

Rep 1	Rep 2	Rep 3	Rep 4
Clover	No cover (control)	No cover (control)	Clover
No cover (control)	Clover	Clover	No cover (control)

Broccoli Project:

Rep 1	Rep 2	Rep 3	Rep 4
Cover 1	No cover (control)	Cover 1	Cover 3
Cover 2	Cover 1	No cover (control)	Cover 2
Cover 3	Cover 2	Cover 3	No cover (control)
No cover (control)	Cover 3	Cover 2	Cover 1

Cucumber Project:

Rep 1	Rep 2	Rep 3	Rep 4
Cover	No cover (control)	No cover (control)	Cover
No cover (control)	Cover	Cover	No cover (control)

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.*
- *Reimburse costs of seed.*
- *Provide \$550 cooperator payment at conclusion of project year.*