

Farmer-Researcher: Ryan Thiessen, Creek Shore Farms, St. Catharines

In cooperation with Kevin Hamilton, Angie Koch, Ken Laing and Mike Reid

Overarching Research Question: Do spring planted cover crops benefit the production of late season brassica cash crops?

Ryan's Specific Questions:

Experiment 1: *Do cover crops benefit late season brassicas and does a cocktail cover crop containing a legume differ from buckwheat monoculture with respect to plant health and harvestable yield?*

There is potential for a cover crop polyculture to yield greater aboveground biomass and, with a legume, accumulate more N to meet the high N demand of brassicas.

Experiment 2: *How does a cover crop perform interplanted in summer squash with respect to health and yield of late season brussels sprouts?*

Interplanting and cover cropping are two ways to minimize weed pressure and tillage. Combining them may create additional synergies between plants.

Ryan will:

- Take photos throughout the project
- Keep in contact with EFAO with updates and questions
- Establish and conduct experiment as outlined in Protocol below
- Turn in data by October 2016
- Complete farmer-led research program training and surveys
- Present at the Farmer-led Research Meeting in Kingston, November 29-30
- Maintain current membership in EFAO

EFAO will:

- Monitor progress of project
- Conduct training program
- Help set up Research Protocol, write and publish Protocol
- Reimburse cost of field help, if necessary
- Help analyze data, write and publish Research Report
- Reimburse for cost of cover crop seed
- Provide \$500 payment to farmer at conclusion of project
- Reimburse one night's hotel stay for the Farmer-led Research Meeting in Kingston, November 29-30

Research Protocol & Data Collection

- In spring, establish cover crops in randomized and replicated plots following diagram below and try to maintain uniformity in management across beds and blocks.
- Record weed pressure and cover crop ground cover and aboveground biomass prior to termination.
- Plant late season cash crops; **for each crop species, randomize seedlings across assigned beds**
- Record labour for treatment and control plots
- Record yield of brassicas crops in control and treatment plots, including **ball size of Brussels Sprouts**
- Answer questions on data sheet provided.

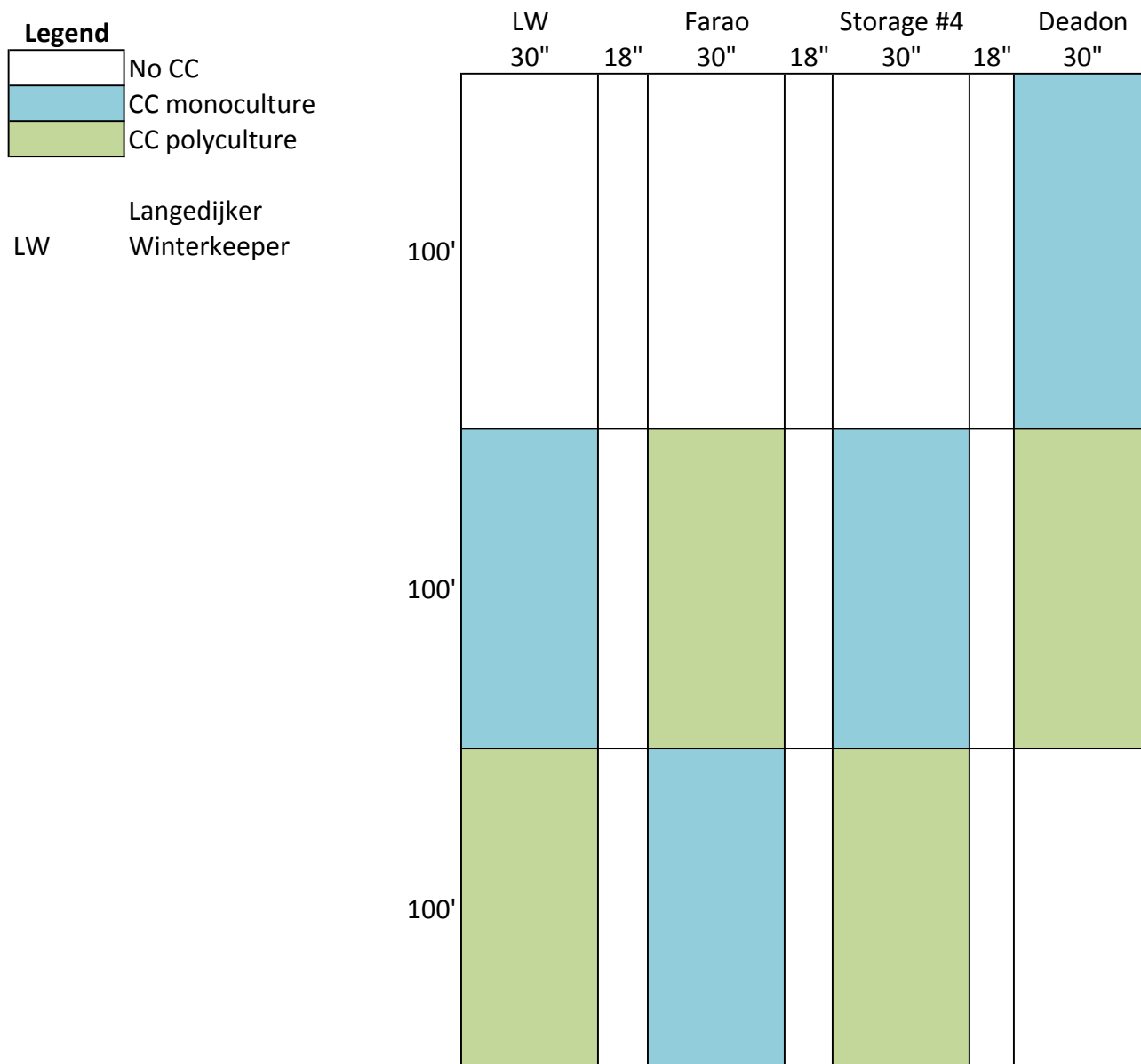
Experimental Design - continued on Page 2

Contact:

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Experimental Design - EXPERIMENT 1 Buckwheat vs Cocktail

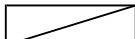
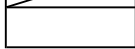


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Experimental Design - EXPERIMENT 2 Brussels Sprouts

Legend

-  Summer squash only (control)
-  CC + summer squash
-  No CC or SS

-  Variety 1
-  Variety 2

