

Fertility Trial in Romanesco, 2018

1. Compare the effects on yield, plant growth rate, and weed progression of two fertilizer treatments (Sustaine and aged compost) to a control (no fertility added) in two successions of a Romanesco cauliflower crop.

Farmer-cooperator will:

- Follow Research Protocols for study
- Take photos of plots and plants throughout the project
- Keep in contact with PFI with updates and questions
- Turn in all data by October 2018

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.

RESEARCH PROTOCOL

Transplanting and In-field practices:

Each farmer can decide their own transplanting and in-field practices, but should record what was done and when. Practices should be consistent for all plots, except for differences in the treatment being studied (fertilizer treatments). Some planting information is requested in the excel document.

Fertility treatments:

Sustaine: Apply as needed based on brassica recommendations from the soil test.

Aged Compost: Compost will be tested prior to application to determine the NPK content. Compost was applied at a rate to best equal the NPK ratio in the Sustaine product.

Control: No additional fertility added to soil.

Compost and Soil Testing:

Soil and compost will be analyzed at Midwest Labs (order tests online; print labels and mail labeled samples to lab).

Compost: Order test: Nitrogen, Phosphate, Potash for solid fertilizer.

Soil: Order S1AN test for soil prior to transplanting or applying soil amendments. Within each plot, aggregate soil cores of 6-in depth to fill the sample bag to the line. Submit a sample for each plot.

Field Layout:

- Treatment plot lengths can be 10-20 plants depending on farm needs
- Four replications of each set is preferred, three is ok.

Rep 1	Rep 2	Rep 3	Rep 4
Sustaine	control	Compost	Sustaine
Compost	Sustaine	control	Compost
control	Compost	Sustaine	control

Harvest and Data Collection:

- Yield: Harvest as needed. Record marketable weight and count by plot; count culls. Take weekly photos of each treatment.

- **See Excel spreadsheet for data collection.**