RESEARCH PROTOCOL: HORTICULTURE 2017
Foliar Sprays for Cut Flowers

Farmer-researcher
Jessica Gale, Sweet Gale Gardens

This document outlines the steps that Jessica will follow to execute her research trial, *Foliar Sprays for Cut Flowers*, including design, execution, data collection and data sharing. It also serves as a Memorandum of Understanding between Jessica and the EFAO.

Experimental Design
Compare a nutrient spray on plant health of Sweat Pea and compare an anti-fungal spray for survivability of Lisianthus.

Hypothesis
Foliar sprays improve plant performance.

Predictions
Application of nutrient spray will result in Sweet Pea plants with healthier plants (greater stem length) and application of an anti-fungal spray will result in great survivability (more live plants) of Lisianthus.

Units of concentration per spray
- Liquid seaweed: 3 ounces per 3 gallons, in spray pack
- Chamomile: recommended dosage of 4 ounces of tea per gallon, 12 ounces tea per spray pack. In a concentrate, 16 ounces of bulk tea brewed to one gallon = 4 x concentration. Dosage= 4 cups per gallon or 12 cups of tea for 3 gallons, in spray pack.

Spray Schedule
- Once weekly: approximately 10 minutes per section spraying, 40 minutes total maximum
- Sweet peas: 8 weeks of spraying, forecasting late April planting and finishing late June as blooms begin
- Lisianthus: 12 weeks of spraying, forecasting May planting and finishing spraying around mid August before blooms, 3 gallons per week

Randomized complete block design

Spray
No spray control
No spray buffer (no measurement taken)

Sweet Pea garden layout

		Bed 1	Bed 2	Bed 3	Bed 4	
		14'				
	Block 1					Block 3
	Block 2					Block 4
100'						

Lisianthus garden layout

		Bed 1	Bed 2	Bed 3	Bed 4	
		14"				
	Block 1					Block 3
	Block 2					Block 4
100'						

Measurements

- Sweet pea: stem length at harvest
- Lisianthus: # of dead plants removed in a section / # total of plant section

Statistical test

- Paired t-test of control vs treatment for both Sweet Pea and Lisianthus

Research Expense Budget

- 9 bags of bulk chamomile tea= $174.80 ($154.80 tea, $20 shipping* see receipt)
- Seaweed spray = $75.89 ($42.16 seaweed, $25 shipping, $8.73 HST)
- Flagging tape= $5.64
- Additional research expenses pending approval

Memorandum of Understanding

Compensation for farmer-researcher

- Farmer-fee of $500 per farm
    - $250 receivable upon acceptance of this Research Protocol and Memorandum Of Understanding (MOU)
      Acceptance form: https://goo.gl/forms/0wMjDHmoLzRwLJlE3
    - $250 receivable upon remittance of the experimental data and photos, no later than October 31, 2017 (or October 31, 2018 for experiments with data collection in 2018)
- Reimbursement for approved research expenses
    - See budget above for approved research expenses
    - Fill out Reimbursement Form and send receipts (digital or hard copy)
      Reimbursement form: https://goo.gl/forms/6Rkj75dU7QGxBNDj2
- Reimbursement for hotel stay at the Farmer-led Research Workshop, November 28, 2017 in conjunction with the EFAO Conference in Collingwood, Ontario

In addition to the compensation above, the EFAO will

- Help set up Research Protocol, write and post Protocol in the Research Library
- Monitor progress of project, including check-ins and help with troubleshooting
- Deliver or mail a Farmer-Researcher farm gate sign
- Conduct training program related to on-farm research (training webinar link here)
- Help analyze data, write and post a Research Report in the Research Library

Farmer-researcher will

- Maintain current membership in EFAO
- Establish and conduct experiment as outlined in Research Protocol above
- Record data outlined in Protocol and/or data collection sheet
- Take high quality photos throughout the project
- Keep in contact with EFAO with updates, problems and questions
- Turn in data in a digital format and 3-10 best photos by October 31, 2017
- Complete feedback surveys related to the program
- Provide upto 1 hour of mentoring, including reviewing related protocols in 2017 and/or 2018, and phone consultation with fellow farmer-researchers on related projects.

If possible, the farmer-researcher will

- Host a Field Day on their farm or participate in a “Field Day” webinar
- Attend and present at the Farmer-led Research Workshop November 28, 2017 in conjunction with the EFAO Conference in Collingwood, Ontario

Contact

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