

## RESEARCH PROTOCOL: HORTICULTURE 2017

### Comfrey as a Companion Plant for Saskatoon

#### Farmer-researcher

Pat Kozowyk, Babalink Farm

This document outlines the steps that Pat will follow to execute her research trial, *Comfrey as a Companion Plant for Saskatoon*, including design, execution, data collection and data sharing. It also serves as a Memorandum of Understanding between Pat and the EFAO.

#### Experimental Design

Pat had previously planted Saskatoon bushes and is curious about the ability of comfrey to help growth and vitality in Saskatoons. Comfrey is a prolific plant, such that its growth provides low maintenance weed suppression as a natural mulch. Even more, as an 'accumulator', its litter is nutrient rich. In 4 blocks across 3 rows of Saskatoons, Pat will randomly assign clusters of Saskatoons to a receive comfrey companion planting or a no comfrey control. Pat will plant comfrey in spring 2017 by dividing existing plants. She will plant comfrey no closer than 15" from an outside trunk (measured at ground level) of each Saskatoon plant in the treatment groups.

**Hypothesis:** Comfrey's ability to act as a natural mulch and nutrient accumulator will lead to more resilient and productive Saskatoon plants.

**Specific predictions:** Saskatoon plants with comfrey companions will have more and better (sweeter, larger) fruit and more side shoots. The original height may or may not grow but there will be better growth in the height of the new shoots from spring to fall.

**Legend**

Saskatoon with comfrey

Saskatoon without comfrey (control)

Planted excluded from study

**Field layout**

plant#	Row1		plant#	Row2		plant#	Row3	
1	o	Martin						
2	o							
3	o			o				
4	o			o			o	Northline
5	o			o			o	
6	o			15 o	Martin		o	
7	o			16 o				
			17 o				x	
8	o		18 o				x	
9	o		19 o				o	
10	o	Martin	20 o				x	
11	o			21 o				x
12	o			22 o			o	
13	o			23 o		33 o	?	
14	o			24 o		34 o		
				25 o	Honeywood	35 o		
				26 o				36 o
	o		27 o			37 o		
	x		28 o			38 o		
	o		29 o					
	o		30 o			39 o	Honeywood	
	o		31 o			40 o		
	o		32 o		41 o			
					42 o			
					43 o			
	o		o		44 o			
	o		x					
	x		o		o			
	x		o		o			
	o		o		o			
						BLACK WALNUT		

***Measurements:***

May - woody measurements: height and # of shoots.

June - Brix from leaves and fruit; observe foraging by birds

July - fruit production (last year the season ended July 11); total amount of fruit picked

October - woody measurements: height and # of shoots

***Other measurements***

- Notes and photos on establishment of Comfrey - how uniform is it?
- Record planting date and arrangement of comfrey (take photos!)
- Record any other observations, including signs of disease or stress, soil moisture, fruit production.

***Statistical test:***

- Paired T-test

**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/0wMjDHmoLzRwLJIE3>
  - \$250 receivable upon remittance of the experimental data and photos, no later than October 31, 2017
- 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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Ontario  
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