

Research Report: HORTICULTURE 2017

A 'Comfrey' Companion for Saskatoon?



FARMER-RESEARCHER

Pat Kozowyk, Baba Link Farm - West Region

WHY IT MATTERS

Companion plants act as weed suppressors, nutrient accumulators and natural mulches, and provide other services by promoting ecology. Little data, however, exists on the benefit of specific companion plants. **Pat tested the benefits of comfrey companion plants for Saskatoon bushes in her established organic orchard.**

RESEARCH QUESTIONS

Does comfrey promote Saskatoon health and fruit production?

METHODS

Pat planted Saskatoon bushes in 2005 and is curious about the ability of comfrey to help growth and vitality in the bushes. Comfrey (*Symphytum spp.*) 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.

Pat will randomly assign clusters of Saskatoons to a receive either:

1. **Comfrey** companion plants
2. **No comfrey** control

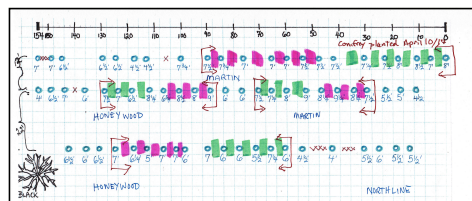


Figure 1. Layout of the trial with 4 blocks across 3 rows of Pat's orchard. **Green** = Comfrey; **Pink** = No comfrey control

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

In Spring 2017, Pat divided comfrey from existing plants and planted comfrey >15" from an outside trunk.



Comfrey (*Symphytum spp.*)

Measurements:

May: height and # of shoots - 2017

June: Brix from leaves and fruit

July: fruit production; total amount picked

October: height and # of shoots - 2017

Photos, observations of bird foraging - 2017

RESULTS

Pat collected woody measurements, including height of tallest stem and number of stems in June and October 2017. In future years, she will measure fruit production and Brix from leaves and fruit.

Over their first growing season of the trial, there was measurable growth of some Saskatoon bushes but the growth was not attributable to their comfrey companion ($P=0.37$; **Fig 1**).

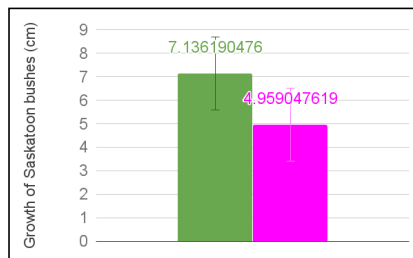


Figure 1. Average growth of comfrey from June to October 2017 ($P=0.37$). **Green** = Comfrey; **Pink** = No comfrey control

Pat will continue to take growth measurements and others over the next few years.



Examples of Saskatoon bushes with and without (N) comfrey companion plants.

TAKE HOME MESSAGE

- Pat is pleased to see a trend towards greater plant height in the Saskatoons planted with comfrey companions, even if there's too much variation to know if the difference is a result of the comfrey.
- Pat notes that the project requires excellent recording and organizational skills, and motivates her to improve that aspect of her farming practice.
- Along with measuring Brix and fruit production in future years, Pat will also consider measuring comfrey. Could a very mature comfrey plant have a negative effect on a Saskatoon plant?
- Pat thinks starting with a young orchard would be very interesting and also suggests other orchard crop combinations, such as comfrey with currants, as a possible future experiment (*anyone interested?!?*)



A row of Saskatoon bushes with comfrey companion plants in one of the orchards at Baba Link Farm.



Pat enjoys a cup of tea in the Saskatoon orchard

FUNDING

Ontario Trillium Foundation

Fondation Trillium de l'Ontario



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Baba Link Farm Weather Data:

Monthly temperatures and precipitation for 2017 and historical averages.

Hamilton RBG CS was selected as the weather station for Baba Link Farm. It is located 8.81 km from the farm. However, there was no data for November and December 2017.

