



Summer Leaf Lettuce Variety Trial

Farmer-Researchers

| | Farmer(s) | Farm Name | Location |
|----|-------------------------|---------------------------|------------------|
| 1 | Angie Koch | Fertile Ground Farm | St Agatha (West) |
| 2 | Ann Slater | Ann Slater Organics | St Marys (West) |
| 3 | Lise-Anne Léveillé | BeetBox Coop. Farm | Ottawa (East) |
| 4 | Harold Saunders | Saunders Family Farm | Dunfield (West) |
| 5 | Jon Gagnon | Earth to Table Farm | Millgrove (West) |
| 6 | Laurie and Corey Ahrens | Edible Acres | Dunfield (West) |
| 7 | Martina Schaefer | Spiral Farm | Elora (West) |
| 8 | Norah Quast | Parker Farm | Puslinch (West) |
| 9 | Sarah Judd | Meadow Lynn Market Garden | Simcoe (West) |
| 10 | Hilary Moore | Maplelane Farm | Lanark (East) |

Research Priorities: Seed Production, Varietal Selection and Breeding

EFAO Contact: Rebecca Ivanoff, rebecca@efao.ca

Objective

To document the best summer leaf lettuce across different farms in Ontario during the 2020 season.

Background

The hot summer weather in Ontario can make it hard to germinate and grow leaf lettuce of a marketable quality. This year, 10 growers from across Ontario - many who participated in last year's trial - will trial six varieties of leaf lettuce in a randomized and replicated trial over two planting dates. The farmers opted to trial fewer varieties with more replicates.

This trial is in conjunction with a Fall Leaf Lettuce Variety Trial with the same grower group a different list of varieties. You can read last year's fall lettuce variety trial here:

<https://efao.ca/wp-content/uploads/EFAO-Lettuce-2019.pdf>



Variety Selection

This trial includes lettuce 6 varieties, all of which will be transplanted in the field with 2 replicates each at the last 2 lettuce plantings of the season. Each grower will grow all six varieties.

The seed packet will have “code names” in order to conduct a blind trial. This is used to reduce observation and measurement bias.

Full Variety List for Summer 2020

| Blind Code | Variety | Type | Colour | DTM | Source | Lot/ Batch # | Utility Patent Granted | Certification | Breeder |
|------------|---------------------|-----------------------|--------------|---------|-----------------------|--------------|------------------------|---------------|-----------------------|
| LS1 | Green Star | Leaf | Green | 52 Days | High Mowing | 07728 | no | OG | |
| LS2 | Magenta | Summer Crisp/ Batavia | Red | 48 Days | Johnny's | 64689 | no | OG | |
| LS3 | Muir | Summer Crisp/ Batavia | Green | 50 days | Johnny's | 64268 | Yes | OG | Vitalis Organic Seeds |
| LS4 | Nevada | Summer Crisp/ Batavia | Green | 48 Days | Johnny's | 64866 | no | OG | |
| LS5 | New Red Fire | Leaf | Red | 55 days | High Mowing | 06601 | no | OG | |
| LS6 | Tropicana | Leaf | Green | 52 days | Vitalis Organic Seeds | 5.945.895 | Yes | OG | Vitalis Organic Seeds |

Research Plan

| Time | Task | Methods & Measurements or Action Item |
|--------------------------|------------------------|--|
| May | Seeding | Rebecca will contact you as a reminder |
| June | Translating | Rebecca will contact you as a reminder |
| End of July | Observations | Rebecca will contact you as a reminder |
| End of July - Mid August | Harvest | Rebecca will contact you as a reminder |
| Deadline September 30 | Submit data and photos | Submit data and photos to Rebecca |



| | | | |
|--------------------|---------|-----------------------------------|----------------------------|
| Before November 15 | Invoice | Send Sarah invoice for farmer-fee | SEED PRODUCTION & BREEDING |
|--------------------|---------|-----------------------------------|----------------------------|

Planting and Cultivation Recommendations

The table below provides suggestions based on practices discussed by the group. Use the suggestions if they make sense for your farm. The trial should be grown as you would normally grow lettuce in the field for summer harvest, including your normal bed and row spacing.

Please record your planting dates, spacing, and other cultivation practices on this [Field Worksheet](#) and then enter them into these [Data Sheets](#) later in the season.

Each of you should have received approximately 100 seeds of each variety. **We suggest that you plant 50 seeds for each planting.** This way, each farm will have at least 12 plants per section for a total of 24 heads per planting.

| | |
|-----------------------|--|
| Plot size per variety | 12+ heads per section 2 sections per planting = 48+ heads total for the trial. |
| Row and bed spacing | In-row: 12", Between-row: 12-14" |
| Seeding dates | Mid to end of May (your two main summer successions, perhaps 2 weeks apart) |
| Transplanting dates | Mid to end of June |
| Days to harvest | 45-55 (End of July-mid-August) |

How to Arrange the Trial

The trial arrangement is flexible as long as you plant at least 2 sections of *at least* 12 heads per section (and you can plant more lettuce if you have space available).

Please observe these best practices as best you can and record what you do:

- For each planting, create two replicate blocks of your trial space by dividing the space in half (see layout below)
- Plots may be distributed in multiple side-by-side beds or planted in one bed (see examples below)
 - In each half, plant the varieties in a random order, either by drawing variety names out of a hat, etc. or randomly choosing the flat to transplant next.
 - Each of the 2 replicate sections should have a blocks of 12-20 heads of each variety; the order of the planting will be different in each section.
- Avoid the edge of the field and the end of the bed when finding a place for the trial.
- Avoid areas with known soil, shade or irrigation differences that would affect some plots more than others. That is, try to plant your trial plot in a homogenous area in your field.
- If possible, plant the trial in a spot where it has the same crop on either side of it.



- Use stakes to label the plots AND draw a field map showing the order and location of varieties. This serves as a backup in case the stakes get lost! Feel free to snap a photo of the layout and send to Rebecca, which is a third back-up!

Examples of field layout

Example 1: Layout with 2 replicate blocks of 6 varieties (12-20 heads/variety) down a single row. Note: each variety is randomly assigned to a section in each replicate block.

| Replicate block A | | | | | | Replicate block B | | | | | |
|-------------------|-----|-----|-----|-----|-----|-------------------|-----|-----|-----|-----|-----|
| LS5 | LS2 | LS3 | LS4 | LS6 | LS1 | LS4 | LS3 | LS1 | LS5 | LS2 | LS6 |

Example 2: Layout with 2 replicate blocks of 6 varieties (12-20 heads/variety) planted across multiple rows. Note: each variety is randomly assigned to a section in each replicate block.

This layout can also be used within one bed, with two rows of lettuce on each side of the bed.

| Replicate block A | | | | Replicate block B | | | |
|-------------------|--|-----|--|-------------------|--|-----|--|
| LS5 | | LS3 | | LS6 | | LS1 | |
| LS1 | | LS6 | | LS4 | | LS2 | |
| LS2 | | LS4 | | LS2 | | LS5 | |

Evaluation

On-farm evaluation will consist of rating the varieties according to several traits and recording your observations. We ask that you evaluate the lettuce at a few points during the season, as outlined below.

All these Record Sheets can be found [here](#). They include

- Crop Management Records - once per season
- Germination Rates - once per planting
- Growing Season Observations for each variety per planting-once a week during harvest
- End-of-Season Questions - once per season

These forms are to be used in the field for data collection. Then this data is to be added here in these [Data Sheets](#).

Materials

Please list all the equipment that you need for this project. Indicate “in-kind” under Total Cost for any materials that you already own or have access to. For pre-approved research expenses, for which you will be reimbursed, please indicate cost.

| Material | Quantity Required | Note |
|--------------|---------------------------|--|
| Lettuce Seed | 100 seeds of each variety | Rebecca will source and mail to farmer-researchers |



SEED PRODUCTION
& BREEDING

| | | |
|-------------------------------|--|--|
| Plastic T-Stake Field Markers | Four stakes for each variety (for a total of 24 stakes each) | Rebecca will source and mail to those who request them |
| Postage to mail seed | 10 | Envelopes and postage for each farmer-researcher. |

Farmer-fee

For farmer-researchers selling the lettuce: \$250 per farmer, invoiced to EFAO after farmer-researchers submit data.

For farmer-researchers leaving the lettuce in the field until it bolts or is otherwise unmarketable: \$300 per farmer, invoiced to EFAO after farmer-researchers submit data.

Memorandum of Understanding

Farmer-researchers agree to keep an active membership with EFAO throughout the duration of their trial. Reimbursement for research expenses and farmer-fees will be paid to current members only.

Please also refer to efao.ca/farmer-led-research for a **Memorandum of Understanding** of other responsibilities. Specifically refer to sections:

- *What is expected of me as a farmer-researcher?*
- *What support will I receive from EFAO as a farmer-researcher?*

To check the status of your membership, log in here:

<https://efao.z2systems.com/np/clients/efao/login.jsp> or contact Martina, martina@efao.ca.

Acknowledgements

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