What are the best fall lettuce varieties for southern Ontario?

**Method**

To compare different varieties for fall growing, these farmers - in consultation with Johnny’s, High Mowing and Fedco seed companies - selected 11 lettuce varieties of interest. Each grower chose a subset and everyone committed to planting two replicates of each variety in their last two plantings of lettuce (Table 1 on page 2).

**Results**

Germination, Disease and Frost Tolerance

See Tables 2 and 3 on page 2.

- Data were limited, but Winter Wonderland and Speckled Amish had the worst germination (Table 2).
- Overall and flavour rankings (1 high - 5 low) and notes from the lettuce variety trial in Iowa (1, 2).
- While results are limited for some varieties, the group’s least favourite.
- Magenta, a red/green batavian, and Ruby Star, a red leaf, were the top performers with respect to overall vigour, flavour and germination.
- Adriana was the group’s least favourite.

**Background**

The fall slot for lettuce is challenging because lettuce has to handle both the heat and dryness of summer and the cold and wet of fall.

** Crunch time: The best**

Overall, the growers found that Magenta and Ruby Sky were the best performing varieties in this trial. These varieties had high overall and flavour ranking (<2.5), good germination and were rated the best by multiple growers. Interestingly, Magenta was a top performer in two summer lettuce variety trials in Iowa (1, 2).

- I will definitely continue growing Magenta. I have never grown Ruby Sky or Starfighter and I will grow them again as fall lettuce. I may try Lavelock again as well. As far as Magenta, I have found it to be a very reliable variety in all seasons. It stood up well in this trial, although it did not germinate as well as some others and tended to be the last variety ready to harvest but it stood through some wet days...with the fast harvested October 31 still in good condition.” - Ann

- “Magenta and Starfighter were my favourites. Both sized up nicely and held a desirable shape (whereas others were somewhat deformed). Both were tasty and had no disease or rot issues. Magenta did suffer some frost damage though. Ruby Sky was also pretty nice in this trial in both plantings.” - Hilary

- “Found [Aerostar romaine] very sturdy, grew well into the fall. Good flavour and nice big head without disease or pest pressure. Magenta also very nice with crunchy leaves and good flavour.” - Joanna

** Crunch time: The worst**

Adriana was one of the lowest ranking varieties, was rated the worst by multiple growers and was one of two varieties to show signs of disease. Growers noted:

- Lacked softness and buttery flavour
- Did not size up well or form nicely compared to spring and summer plantings.
- Unattractive outer leaves

**Take Home Message**

“Testing varieties in the field is a great way to test before using them in the hoop house” - Harold

Multi-farm trials are a good way for farmers to assess varieties. In this trial, 8 growers trialed 11 varieties. While results are limited for some varieties, Magenta and Ruby Sky were the group’s favourites with respect to overall vigour, taste and germination, and Adriana was the group’s least favourite.

In future years, the grower may use this dataset to select a smaller number of varieties for further evaluation. They will pay special attention to measurement selection so that data is collected consistently across farms.

**References**


Read online: efao.ca/research-library
What are the best fall lettuce varieties for southern Ontario?

Farmer-Researchers

Angie Koch
Fertile Ground Farm - West
Joanna Kowalczyk
Table Community Food Center - East
Lise-Anné Leéville and David Mazur-Goulet
BreetBox Cooperative Farm - East
Hilary Moore
Maplelane Farm - East
Leslie Moskovits
Cedar Down Farm - West
Harold Saunders
Saunders Family Farm - West
Ann Slater
Ann Slater Organic Farm - West

METHOADS continued

List of the lettuce varieties that the growers selected for this trial. EFAO staff blind coded the seeds to minimize bias during the trial.

Table 1: Plot Location
- Growers tried to avoid the edge of the field and the end of the bed.
- They avoided areas with known soil, shade or irrigation differences that would affect some plots more than others.
- If possible, they planted the trial in a spot where it had the same crop on either side of it.

Trial Arrangement
- For each planting, growers created two replicate blocks of the trial space (2 replicate sections with 8+ heads per section).
- They distributed the plots in multiple side-by-side beds or across one bed.
- For each bed or section, growers randomly assigned the order in which they planted.
- They used stakes to label the plots and drew a field map showing the order and location of varieties.

RESULTS continued

Seeding and transplanting dates. Semicolons (;) denote different plantings.

Table 2: Seeding and transplanting dates. Semicolons (;) denote different plantings.

<table>
<thead>
<tr>
<th>Variety</th>
<th>Type</th>
<th>Colour</th>
<th>Source</th>
<th>Certification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adriana</td>
<td>Romaine</td>
<td>Green</td>
<td>Johnny’s</td>
<td>No</td>
<td>All</td>
</tr>
<tr>
<td>Winter Wonderland</td>
<td>Romaine</td>
<td>Green</td>
<td>Fedco</td>
<td>HS, HM, DW-G</td>
<td></td>
</tr>
<tr>
<td>Speckled Amish</td>
<td>Butterhead</td>
<td>Green with spindles</td>
<td>Fedco</td>
<td>Organic</td>
<td>AS, HS, JR</td>
</tr>
<tr>
<td>Magenta</td>
<td>Batavian/ Romaine</td>
<td>Green/Red</td>
<td>High Mowing</td>
<td>Organic</td>
<td>AR, AS, WM, GM, LM</td>
</tr>
<tr>
<td>Ruby Sky</td>
<td>Leaf</td>
<td>Red</td>
<td>Johnny’s</td>
<td>Organic</td>
<td>AS, WM, LM</td>
</tr>
<tr>
<td>Newkure</td>
<td>Romaine</td>
<td>Green</td>
<td>High Mowing</td>
<td>No</td>
<td>AS</td>
</tr>
<tr>
<td>Green Star</td>
<td>Leaf</td>
<td>Green</td>
<td>High Mowing</td>
<td>Organic</td>
<td>AR</td>
</tr>
<tr>
<td>Spartak</td>
<td>Romaine</td>
<td>Green</td>
<td>High Mowing</td>
<td>Organic</td>
<td>AS, LM</td>
</tr>
<tr>
<td>Aerostar</td>
<td>Romaine</td>
<td>Green</td>
<td>High Mowing</td>
<td>Organic</td>
<td>AR, HS, JR</td>
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<tr>
<td>Starfighter</td>
<td>Leaf</td>
<td>Green</td>
<td>Johnny’s</td>
<td>No</td>
<td>AS, HS, WM-G, LM</td>
</tr>
<tr>
<td>Loveland</td>
<td>Batavian/ Leaf</td>
<td>Green/Red</td>
<td>High Mowing</td>
<td>Organic</td>
<td>AR, AS, WM-G, LM</td>
</tr>
</tbody>
</table>

Trial lettuce growing at Ann’s (top), Harold’s (middle) and David and Lise-Anné’s (bottom).

REFERENCES
Read online: efao.ca/research-library

ACKNOWLEDGEMENTS
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