



Variety Trial Network

We collaborate with regional organic and ecological farming organizations across Canada, facilitating on-farm evaluation of commercial varieties and breeding populations.



Orange Nantes Carrots



Red Nantes Carrots



Radicchio



Rutabaga

- The CANOVI trial network facilitates both nationwide and regional trials. Crops and varieties are selected based on farmer interest as expressed in surveys, focus groups, and conversations.
- In 2022, 43 growers are taking part in Canada-wide orange Nantes and red Nantes carrot trials. Rutabaga and radicchio trials centred in the Prairies and Ontario are engaging 16 and 20 growers, respectively.

FARM-SOURCED VARIETY DATA

- CANOVI participants submit trait ratings, photos, and comments using SeedLinked, a freely-available online platform for on-farm variety trialling.
- Interactive data visualizations make trial results available to growers immediately after trial closure.
- CANOVI researchers also perform statistical analysis on the data and present results in winter webinars, short videos, and trial reports.

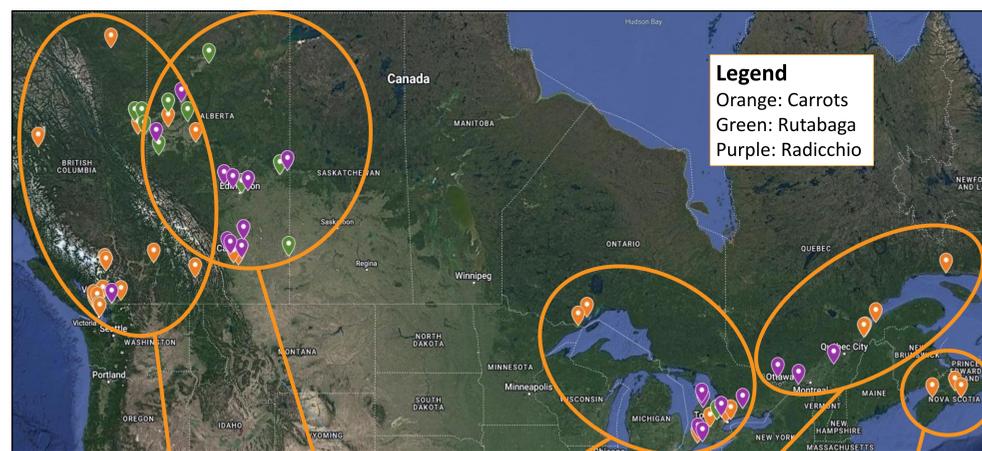


CANOVI trial participants may filter trial data by trait to view results most relevant to their farms and markets. Above are flavour ratings (left) and 'would you grow again?' responses (right) for 2019 red carrot trial varieties.

Project Goals

CANOVI is a farmer-researcher collaboration to improve vegetable varieties for Canadian organic farms.

- With regional partners, the CANOVI team coordinates a network of variety trials in which farmers generate and share data about variety performance across regions.
- CANOVI supports participatory plant breeding projects which use information from the variety trial network for breeding decisions.
- The CANOVI on-farm trial network contributes to a broader understanding of crop-environment interactions through analysis of plant functional traits.



For more information visit ubcfarm.ubc.ca/canovi and seedsecurity.ca/canovi

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Plant Breeding

We support decentralized plant breeding by connecting regional farming communities with experts and resources to develop new varieties and breeding lines.

ORANGE NANTES CARROTS

- Plant Breeding Goals:** Sweet and mild flavour, deep orange colour, minimal taper, blunt tip, long storage
- Plant Breeding Partners:** Organic Seed Alliance (Micaela Colley and Laurie McKenzie), USDA-ARS (Dr. Phil Simon), UBC Farm
- Breeding Approach:** In 2018 we created a new, diverse carrot population by crossing three USDA breeding lines and one farm-selected cultivar. From 2019 through 2021, we performed two cycles of recurrent mass selection and one cycle of half-sib family selection at the UBC Farm and Forstbauer Farm in Chilliwack, BC. Roots selected in each generation were vernalized and then grown to seed in a greenhouse during the winter, in order to compress carrot's biennial seed-to-seed cycle into one year.
- Next Steps:** In 2022, farmers are trialling the CANOVI Orange population against commercially available open-pollinated and hybrid Nantes carrot varieties. Unfortunately, a thrips issue during greenhouse seed production has resulted in low germination, and we will likely need to bolster the genetic diversity of the CANOVI Orange population with individuals from the previous year's selected families. After the project's completion in 2022, the population will be stewarded by Bauta Initiative partner organizations and shared with Canadian organic seed companies for final selection and dissemination.



Indoor mass pollination and seed production with blue bottle fly pollinators



Selecting individuals from the F1 population at Forstbauer Farm (above) and families from the F3 population at UBC Farm (below)



CANOVI Orange Selected F3 Individuals