



## National Potato Variety Evaluation for Sustainability, Resilience and Climate Change

### LEAD RESEARCHERS

#### Erica Fava

National potato variety trial coordinator and industry liaison

#### Jen McFarlane

Soft fruits IPM coordinator and research coordinator with E.S. Cropconsult

#### Katerina Jordan

Associate professor at the University of Guelph

The national potato variety evaluation is working to boost profits and sustainability for the Canadian potato industry by finding new potato selections with improved productivity, disease resistance and climate resilience. New selections are being compared to currently grown potato varieties across the major potato production areas of Canada.

Over the past winter, trial coordinators attended local meetings to provide updates to industry on the trial. Additionally, meetings were held with trial coordinators to discuss improvements that could be made for the growing season. At some trial sites, researchers conducted processing quality assessments on the lines in storage.

Three chip lines, F180085-04, F170084-09 and F160032-06, which store well for chip processing, were selected for a more detailed new storage/processing study in Ontario. Assessing ideal storage temperatures for new chipping varieties is a complementary project that will help predict storage potential.

For the 2025-2026 year, all sites have been planted, and trial coordinators have started gathering field and agronomic data. Agriculture and Agri-Food Canada's (AAFC) breeding program chose six lines to graduate from the trials and put into industry trials for 2025. Many of these lines carry disease resistance, have early maturity and good dormancy, and have very good processing quality in storage.

The researchers are continuing to evaluate the processing quality of lines from the 2024 trials. Three french fry lines (VF170093-09, VF19046-16 and VF19001-04) and two chip lines (F180085-04 and VF19010-22) from the AAFC breeding program have had consistently good colour through eight months in storage at 7 C.



Planting potato trials for the 2025 growing season at Ste-Marie-Salomé, Que. Photo: Sophie Massie

Several lines were also selected for a heat tolerance trial in Simcoe, Ont. Based on this trial, several lines were identified as showing promise as heat tolerant lines. A fresh market red line, VF180073-13, produced the highest yields in the trial. VF170114-01, a fresh market red, and VF140855-07, a french fry type, also had yields higher than other checks. All three of these lines produced attractive tubers and high marketable yields and are in the 2025 trials or are being evaluated by industry.





Potato trials at Delta, B.C. Photo: Toban Dyck



A potato plant at the trials in Delta, B.C. Photo: Toban Dyck

#### KEY TAKEAWAYS:

- Three chip lines, F180085-04, F170084-09 and F160032-06, which store well for chip processing were selected for a more detailed new storage/processing study in Ontario.
- Three french fry lines and two chip lines from the AAFC breeding program have shown consistently good colour throughout eight months in storage at 7 C.
- As part of a heat tolerance trial in Simcoe, Ont., several lines were identified as showing promise as heat tolerant lines.

