



National Potato Variety Evaluation for Sustainability, Resilience and Climate Change

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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.

The Agriculture and Agri-Food Canada (AAFC) 2025 trials found a few selections with key traits. The rates of potato virus Y (PVY) infection are on the rise with increased numbers and generations of aphids. This virus can decrease yields and can downgrade potato seed class. Two selections were found to have resistance to PVY—VF180059-06 is a french fry selection and VF180073-14 is a fresh market red selection. VF180073-14 was also found to be resistant to late blight in an inoculation test.

The Eastern AAFC sites suffered from severe drought and higher than average temperatures in 2025. This allowed for heat and drought tolerance evaluations. F20070-06 and VF20037-08, two french fry selections, were found to have higher processing yields than the checks. F20070-06 also has potato wart resistance. VF180073-13 is a fresh market red with higher yields than the checks. It also had excellent yields in the Simcoe, Ont. heat tolerance trial. All three lines have good potential for heat and drought tolerance.



Potato trials during the 2025 growing season at Agriculture and Agri-Food Canada Harrington Research Farm on Prince Edward Island.

Photo: Scott Anderson

In the Ontario trials during the 2025 field season, F180085-04 was found to be a standout early- to mid-season chipping line. It had strong yield potential along with excellent processing characteristics, including high specific gravity and very low sugar levels at harvest. AG1540 was the highest-yielding late-maturing fresh market selection. Several dual-purpose varieties, including VF19006-002, AG1601.05 and Kingsman showed strong potential for the boiling and baking markets.

Storage trials in Ontario have found several advanced selections with excellent chip processing quality. F180085-04 and MSBB058-1 were standout performers, having excellent indicators for chip colour quality after frying and very low dextrose levels. Lamoka also performed well, while VF19095-26 showed the lowest overall sugar concentrations. This compared to Atlantic, which had substantially higher sugars and produced a darker chip colour.





A potato trial plot on Prince Edward Island on Sept. 4, 2025. The plants have not been top killed, but because of the drought some look like they have. Photo: Andrea Bizeau

KEY TAKEAWAYS:

- Two selections were found to have resistance to PVY—VF180059-06 is a french fry selection and VF180073-14 is a fresh market red selection. VF180073-14 was also found to be resistant to late blight.
- F20070-06 and VF20037-08, two french fry selections, were found to have higher processing yields than the checks. The variety F20070-06 also has potato wart resistance.
- VF180073-13 is a fresh market red with higher yields than the checks. It also had excellent yields in the Simcoe, Ont. heat tolerance trial.
- F180085-04 was found to be a standout early to mid-season chipping line. It had strong yield potential along with excellent processing characteristics, including high specific gravity and very low sugar levels at harvest.
- AG1540 was the highest-yielding late-maturing fresh market selection.
- Several dual-purpose varieties, including VF19006-002, AG1601.05 and Kingsman showed strong potential for the boiling and baking markets.
- F180085-04 and MSBB058-1 were standout performers in a storage trial, having excellent indicators for chip colour quality after frying and very low dextrose levels.
- Lamoka also performed well, while VF19095-26 showed the lowest overall sugar concentrations.

