Science Societies

Identifying and conserving crop wild relatives in Canada

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Fruit of the Canadian crop wild relative Saskatoon (Amelanchier alnifolia). Saskatoon is a berry crop of national importance in Canada with a developing international interest. Occurring broadly across Canada, wild populations of Saskatoon contain genetic diversity with potential utility for crop improvement and adaptation. Photo by Jens Ulrich.

Crop wild relatives (CWR)—plants that are closely related to agricultural crops—are valuable genetic resources for crop improvement and adaptation. Natural populations of CWR are threatened, making their conservation critical.

In an article recently published in *Crop Science*, researchers reported on their efforts to advance CWR conservation by identifying their diversity in Canada. They found more than 200 CWR species that are closely related to food crops of domestic and global importance. They prioritized CWR with the highest potential utility for crop improvement, including relatives of fruit crops such as apple, blackberry and raspberry, blueberry, cranberry, currant and gooseberry, grape, Saskatoon, stone fruits (apricot, cherry, peach, and plum), and strawberry.

The team also examined strengths and gaps of CWR conservation in the national system of gene banks and in botanical gardens. They provided a companion application with this report (**https://julrich.shinyapps.io/CWR_app/**) that will enable users—particularly gene bank and botanical garden collection managers—to visualize, target, and fill gaps in the conservation of within-species diversity for prioritized CWR. This work will serve as the foundation for developing an integrative national conservation strategy for the CWR diversity in Canada.

Dig deeper

Ulrich, J.C., Moreau, T.L., Luna-Perez, E., Beckett, K.I.S., Simon, L.K., Migicovsky, Z., Diederichsen, A., & Khouy, C.K. (2022). An inventory of crop wild relatives and wild-utilized plants in Canada. *Crop Science*. **https://doi.org/10.1002/csc2.20807**

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