## Best Management Practices for Pollination in Ontario Crops



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Tree nuts are usually grown under warmer conditions than are found in Ontario, but there are several types of nuts native to the province that are of interest for local consumption or commercial development (beaked hazelnut, black walnut). There are some non-native commercial species that have been imported. Many nuts require long hot growing seasons, and because they are growing near the northern limit of hardiness, they can be a risky crop. Most are wind-pollinated and self-fruitful, although there are exceptions, and wild populations of at least some species appear to have mechanisms in place to encourage cross-fertilization, and produce higher quality nuts when cross-pollinated.

## **Pollination Recommendations**

This genus is also a member of the walnut family, and has similar reproductive biology. It includes a number of valuable nut crops such as pecan, shagbark hickory (*Carya ovata*), shellbark hickory (*C. laciniosa*), and northern pecan (*C. illinoinensis*). Also available are "hican" trees, which are a hybrid between shellbark hickory and pecan. Pecans in particular are poorly suited to the Ontario climate, although there are some naturally occurring genetic lines that have been found growing as far north as southern Wisconsin. These trees were likely planted by native Americans, and those that have managed to survive and produce fruit resulted in small, localized populations. All trees in this genus are self-fruitful, but the quality of the product seems to benefit from the planting of mixed cultivars, as much as is possible considering the climate restrictions. The trees can be expected to abort a high proportion of pistillate flowers whether or not they have been pollinated in response to resource availability, rather than pollination deficiencies.

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