

**PEST ALERT**  
**New Invasive Species, Oak Wilt, Found in Ontario and  
Canada for the First Time**

In June 2023, the **Canadian Food Inspection Agency** confirmed the presence of oak wilt (*Bretziella fagacearum*) in Niagara Falls, Ontario after receiving reports of symptomatic trees in the area. **This is the first known case of oak wilt in Canada.** The loss of oak trees would be felt in both urban and natural spaces as oaks are in many backyards, parks, woodlots, and forests.

Oak wilt is a fungal pathogen that spreads through the vascular system of infected oak trees, restricting the upward movement of water and nutrients. The leaves of infected trees can wilt and drop without these resources, resulting in complete defoliation early in the spring and summer.



Photos: Leaf discolouration of red oaks infected with oak wilt.

Red oak species are particularly vulnerable to oak wilt and can die in as little as two weeks after infection. While white oaks can slowly develop the signs and symptoms of oak wilt, the infection is far more apparent in red oaks. The leaves of infected trees will have brown discolouration starting along the leaf edges that moves inward towards the middle margin. Discolouration, wilting, and defoliation are all typically seen higher in the crown first but will move downwards as the disease progresses.

Another common sign of oak wilt on dead red oaks are vertical cracks in the bark, which are created from underlying pressure pads that form as the fungus grows. Please note that there are many factors that may cause discoloured oak leaves and other symptoms of oak wilt, including drought.





Photo: Crack in the bark of infected red oak tree (left). Pressure pad found underneath the vertical crack (right).

## **Economic Impacts**

A **study** from 2020 estimates the value of standing oak timber in Eastern Canada at \$126 million. The estimated cost of removal and replacement of impacted oak street trees is between \$266 to \$420 million.

The loss of oak trees could reduce biodiversity, habitat, and food for wildlife, as acorns are an important wildlife food. Oak wilt may also result in significant losses in environmental services as oak trees help to stabilize slopes, limit soil erosion, and reduce air pollution.

### **Prevent the Spread**

- **Do not prune oak trees from April to October** when sap beetles are active. Sap beetles can spread the oak wilt fungal spores on their bodies from infected trees to healthy ones as they move around in search of food.
- **Do not move firewood.** Fungal mats could be present under the bark of firewood and be unintentionally spread to new areas.
- **Be on the lookout for oak wilt**, particularly when living in or near border cities. Oak wilt has spread throughout 24 US States, several of which border Ontario.

### **Report**

- Report all possible detections to the [Canadian Food Inspection Agency](#) immediately.

### **Additional Resources**

- Learn how to identify the signs and symptoms of oak wilt. For more information on oak wilt biology, spread, prevention, and management, visit the Invasive Species Centre's [Oak Wilt Species Profile](#) and [Oak Wilt Training](#) course.
- Oak wilt will be a feature at the 2024 Invasive Species Forum, taking place February 12-15, with the theme of Empowering Action. Learn more [here](#).
- Visit the Canadian Food Inspection Agency [website](#).
- [Join](#) our mailing list to receive updates on upcoming events and webinars.