



Detections of *Phytophthora ramorum* in plant nurseries

The Government of Canada is committed to working with stakeholders to prevent movement of *Phytophthora ramorum* (*P. ramorum*) through movement of infected nursery stock and retain continued market access for Canadian nursery plants and forest products.

P. ramorum is a regulated, fungus-like plant pest that can affect a wide range of host plants including native and non-native plants, shrubs and trees. Signs of the pest include loss of leaves, twig die-back, leaf spotting and death to affected plants. The Canadian Food Inspection Agency (CFIA) requires the destruction of plants found to be positive and all hosts within two metres of the infected plant(s).

P. ramorum poses a risk to Canada's plant resource base and to the nursery sector. This pathogen continues to be considered a quarantine pest to Canada and to many of our trading partners. Phytosanitary import requirements are in place to mitigate the risk of introducing this plant pathogen to Canada with imported nursery stock and CFIA carries out annual surveys to monitor for the presence of *P. ramorum* at Canadian nurseries.

CFIA conducts surveys for *P. ramorum* at nurseries as the trade in nursery plants is an acknowledged pathway for the introduction and spread of *P. ramorum*. Nurseries that propagate their stock from infected plants, or grow and redistribute infected plants may facilitate widespread dispersal of the pathogen into susceptible host populations in the natural environment.

CFIA recognizes that the measures required to prevent the spread of *P. ramorum* can be challenging for a nursery operation. CFIA makes every effort to work with impacted nurseries to effectively implement eradication measures as quickly as possible.

Questions and Answers:

1. What is *P. ramorum* and what are the risks it poses?

P. ramorum is a quarantine pest which can affect a wide variety of nursery plants and trees. It is a harmful pathogen that can cause mortality in several oak tree species and also causes twig and foliar diseases in numerous native and non-native plants, shrubs, and trees.

P. ramorum was first detected in Canada in 2003.

More information is available on CFIA's website:

<http://www.inspection.gc.ca/plants/plant-pests-invasive-species/diseases/sudden-oak-death/eng/1327587864375/1327587972647>

2. What surveillance does CFIA conduct for this disease?

CFIA conducts a National *P. ramorum* survey every year. This survey targets nurseries that propagate host plants and nurseries that grow *P. ramorum* host plants beyond the year of import or propagation, including wholesale nurseries that are not themselves propagators or importers. Nurseries with the high risk host plants *Rhododendron spp.*, *Camellia spp.*, *Viburnum spp.*, *Pieris spp.* and *Kalmia spp.* are of particular interest.

CFIA also surveys locations where *P. ramorum* was previously found.

In BC, CFIA focuses its *P. ramorum* surveillance activities on nurseries in southwestern BC, which has a climate that presents the greatest risk of *P. ramorum* introduction and spread to the natural environment. There are 20 national survey sites planned for BC in 2019.

3. Could *P. ramorum* be introduced to nurseries from the general environment?

According to the Canadian Forestry Service (CFS), Natural Resources Canada, there is no evidence of *P. ramorum* occurring in the natural environment in BC. The focus of the CFIA's inspection program targets nurseries as they are the most likely pathway for the introduction and spread of *P. ramorum*.

For questions concerning *P. ramorum* outside of nursery production please contact Natural Resources Canada. NRC information on *P. ramorum* is available at: <https://www.exoticpests.gc.ca/us-details/disease/1000142>

4. What is CFIA's response when *P. ramorum* is confirmed?

When the presence of *P. ramorum* is confirmed in a nursery, CFIA implements the measures described in the document "*PI-010: Regulatory Response Protocol for Nurseries Confirmed with Phytophthora ramorum*". The protocol describes the quarantine and follow up measures required to prevent further spread of *P. ramorum*. This includes an initial site-wide quarantine for all host plants, further testing, destruction of affected plants as required and quarantine of host plants adjacent to destruction areas for a minimum of 90 days. The ongoing testing involves samples from plants, soil, growing media and water as required.

All plants confirmed to be infested with *P. ramorum*, and host plants within two metres, are destroyed.

CFIA's protocol was revised in 2019, to provide a more targeted response to a detection of this pest and to decrease the impact of a detection on an affected nursery. Additionally, these changes permit greater consistency between Canada and the United States' response protocols for *P. ramorum*.

CFIA consulted with federal and provincial industry stakeholders and government partners on the revised response protocol, which was published on May 1, 2019, and implemented during the 2019 survey season.

The *Regulatory Response Protocol for Nurseries Confirmed with Phytophthora ramorum* is available in its entirety on CFIA's website:

<http://www.inspection.gc.ca/plants/horticulture/manuals/pi-010/eng/1357672417208/1357672483930>

5. What resources are available to assist nurseries in preventing the introduction of *P. ramorum*?

A Nursery Sector Biosecurity Guide (the Guide) has been developed by the CFIA as a supporting document to the National Voluntary Farm-Level Biosecurity Standard for the Greenhouse, Nursery and Floriculture Sectors (the Standard) to assist producers in developing a biosecurity plan. The Standard contains biosecurity measures of relevance and provides sector-specific biosecurity measures for consideration to help nursery producers achieve the pest risk mitigation goals identified in the target outcomes previously set within the Standard.

The Guide can be found at:

<http://www.inspection.gc.ca/plants/plant-pests-invasive-species/biosecurity/nursery-sector-biosecurity-guide/eng/1485922257359/1485922305072>

The measures outlined in the Guide are based on scientifically sound principles. Implementing these measures will help reduce the risk of pest introduction, help enhance pest management within a nursery and mitigate the spread to additional nurseries and to the surrounding landscape.

There are also industry-developed programs, such as the Clean Plants *P. ramorum* Certification Program, developed by the BC Nursery & Landscape Association, which can assist nurseries in minimizing the risks of importing, establishing and distributing *P. ramorum*.

6. What is the number of positive results to date for 2019?

As of July 31, 2019:

- There have been detections from National Surveys at one site on Vancouver Island and one site in the Lower Mainland.
- There have been detections from Post-Eradication Surveys at two sites in the Lower Mainland. Post-eradication detections are not unexpected due to the nature of the pathogen.
- There has been a detection in soil at one site in the Lower Mainland from follow up activities in relation to a previous non-compliance.

7. What is the number of positive results for previous years?

National Survey results are reported on CFIA's website. The 2018-2019 national surveillance results for *P. ramorum* may be found at, <http://www.inspection.gc.ca/plants/plant-pests-invasive-species/plant-pest-surveillance/2018-2019-plant-protection-survey-report/eng/1501889533057/1501889533572>

In 2018 there was one new detection from a National Survey in Abbotsford, BC. Following any detection, CFIA conducts post-eradication monitoring for 2 consecutive years. In 2018, for instance, *P. ramorum* was detected at 5 nurseries during post-eradication surveys.

National Survey results for *P. ramorum* in nurseries prior to 2018 are available at, <http://publications.gc.ca/site/eng/9.831610/publication.html>.

8. Are producers compensated when *P. ramorum* is confirmed?

There is currently no compensation available for growers required to undertake eradication activities related to *P. ramorum*.

The *Phytophthora ramorum Compensation Regulations* were put in place as part of an emergency response to provide support to impacted nurseries for eradication efforts as very little was known about the pathogen and its potential spread in the nursery pathway. These expired Regulations provided compensation to growers for eradication activities ordered by CFIA Notices issued between January 1, 2003 and December 31, 2010.

In moving from an emergency response program to a normalized response program, best management practices were developed by industry for nurseries to prevent the introduction of this pathogen to their facility and to minimize the impact if it were detected.