

# Considerations for Managing *Phytophthora ramorum* in Retail Nurseries<sup>1</sup>

For nursery professionals who own, manage, or work in nurseries that sell USDA regulated hosts of *P. ramorum*.

- **Moisture Management**
  - Avoid letting water accumulate under or around blocks of containerized nursery stock.
  - Avoid overhead irrigation of known and associated host plants where practical. When using overhead irrigation, irrigate in the morning to allow leaves to dry as soon as possible.
  - Divert water and soil movement from hillsides populated with *P. ramorum* host plants during storm-related events.
  - Irrigation water from any source other than well or municipal water supplies should be monitored for *P. ramorum* if the pathogen is detected in or near nursery.
- **Nursery Layout and Traffic**
  - Avoid co-mingling high-risk genera (rhododendrons and camellias) with other host and non-host plants
  - Consider relocating high-risk genera to a separate area of the nursery where you can facilitate a higher degree of management (monitoring, sanitation, and watering schedules).
  - Do not place any known or associated hosts on the same ground where *P. ramorum* infected material once sat.
  - If you visit known infested areas, wash shoes, tools, and vehicles that may have contacted contaminated soils or plant material with disinfectant before traveling to disease free areas.
- **Incoming Plants**
  - Prior to purchasing plants from a supplier, contact them and confirm that they follow best management practices that reduce the likelihood of spreading *P. ramorum*.
  - Confirm that the supplier propagates nursery stock from materials on site or that stock is received from shipping nurseries that are licensed and certified according to all applicable phytosanitary laws and regulations.
  - Unload incoming plants in an area that can be cleaned of plant debris. Sweep up debris after deliveries and dispose of properly.
- **Inspection of Plants**
  - Routinely monitor known and associated hosts for symptoms of *P. ramorum* throughout the entire year.
  - All incoming nursery stock should be visually inspected for symptoms of *P. ramorum* prior to introduction into the nursery. Suspect plants should be rejected or held in an isolation block for testing.

---

<sup>1</sup> Developed by Norm Dart, WSU Extension (6/7/2006). Management considerations were adapted and condensed from drafts of the ANLA and CFIA best management practices.

- When purchasing known and associated hosts consider suspending use of Phytophthora specific fungicides on at least 10% of the plants for a two month period to determine if fungicides are masking symptoms.
- **Sanitation and Plant Debris Management**
  - Plant debris under and around nursery stock should be collected and disposed of routinely, especially in areas where high-risk genera (rhododendrons and camellias) are located.
  - Maintain a cull pile specifically for known and associated hosts and do not reuse soil from these cull plants.
  - Cull piles should be located in a separate part of the nursery away from known and associated host plants, and away from soil mixing area.
  - Cull piles should be managed to prevent run-off from running through plant beds, or into parts of the surrounding landscape where hosts are present.
- **Weed Control/Established Hosts on Nursery Grounds**
  - Consider removing established known and associated hosts on the nursery grounds unless they are frequently monitored.
  - Manage weeds on the nursery property that have the potential to act as an alternate host. This includes all known and associated hosts of *P. ramorum*.
- **Record-Keeping**
  - Maintain accurate shipping documentation identifying product, amount, date, and origin or receiver for at least one year for the purpose of identifying trace backs and trace forwards.

## For More Information

This handout is not a comprehensive guide for managing *P. ramorum*, but rather a brief primer on some of the main issues that should be considered when developing a management program for your nursery. Please contact Washington State University if you have questions/or would like more information on managing this plant disease.

**Dr. Gary Chastagner**  
**253-445-4528**  
**chastag@wsu.edu**

**Norm Dart**  
**253-445-4596**  
**normdart@wsu.edu**

