

General comments

We appreciate the opportunity to provide feedback but we would like to have an ongoing discussion of forestry aspects of the *Phytophthora ramorum* regulations, analogous to that used to prepare the *Phytophthora ramorum* Regulatory Working Group Reports. Forests are an integral part of the regulations, and the forestry community wants to be more involved.

The topics and content in the *Phytophthora ramorum* Regulatory Working Group Reports do not fully address forestry concerns about the federal *P. ramorum* regulation. We raise many points below, but understand that regulations must be practical and enforceable so costs and feasibility make some suggestions difficult to implement.

The vision statement for the APHIS *P. ramorum* regulatory program, adopted by consensus at the December 2009 stakeholders meeting, clearly states that the program is aimed at protecting the environment but the program details and requirements largely end at the nursery property line. Protocols for sampling around the perimeters of nurseries need to be comprehensive, required and clear as to who will conduct the survey. Soil and water sampling are key.

Nursery soil infestations are often the source for infested run-off, which is the mostly likely pathway for establishment in a forest. Treatments for soil and water, as well as, prevention of run-off are critical to program success.

Currently there is no clear direction for response to new wildland finds in the United States. The wildland protocol was withdrawn without notice (The *Phytophthora ramorum* APHIS Response Protocol for Forest and Wildland Environments Version 1.0, updated November 21, 2008). There is an over reliance on the residential /landscape protocol in situations like the 2009 wildland salal detection in Pierce County, Washington as evidenced by the recent soil positive detection in the adjacent forest. We would like to discuss reinstating a wildland protocol.

It would be helpful if the *P. ramorum* Regulatory Working Group Report and the APHIS *P. ramorum* regulation explained the connection or links to the Forest Service *P. ramorum* framework.

The 2009 *P. ramorum* regulatory program vision calls for a shift towards systems approaches for the *P. ramorum* regulation. This is an important target and emphasis needs to be placed on how to transition to systems approaches.

Recognition of hosts from outside US borders. The current APHIS official host list is dated February 2010 and does not include Japanese Larch or western hemlock, officially reported as hosts in the United Kingdom. What is the current policy for recognizing new hosts? Where is it posted? When changes to regulation conventions are made, where are they posted and discussed? Regulation of commercial conifer species may adversely impact timber interests, and the environmental protection implications

are also significant. Discussions would be helpful in public and professional forums with input from an array of stakeholders with a science-based, transparent process.

Monitoring Survey and Reporting

A critical function of the federal government, regarding a pest of national concern, is survey (monitoring) and reporting. We have several suggestions for improvements.

State survey for *P. ramorum* is optional; states can apply for CAPS funds. This leaves a gap when some opt not to participate. We suggest a risk based survey plan with surveys done in the states that the Forest Service, APHIS and other risk models indicate are at highest risk.

There are various surveys conducted by USDA Forest Service, and state agriculture and forestry departments. Survey results need to be assembled in one place that is accessible to any interested party and kept up to date (results posted within 30 days of laboratory confirmation).

With regulatory authority contained in APHIS and monitoring of streams being done by the USDA Forest Service, environmental contamination outside a nursery is often hard to determine.

Unaddressed pathways

Retail nurseries are an ongoing issue comprising 40% of nursery positives in 2010. Other possible plant movement channels include internet sales and farmer's markets. Action must be taken to prevent pathogen shipment in all these pathways.

Nursery regulation

We are concerned that nursery stock shipments are the most likely means of long distance pathogen spread. We have seen that positive plants can lead to positive soil, run-off and waterways. Positive waterways can lead to infected vegetation. Once an infestation becomes established, unless it is caught early and eradicated (clear cut), there are no known effective treatment strategies. Since there is no known control for a wildland outbreak, a conservative trigger approach is justified. Therefore, understory plant infection needs to be a trigger for significant action, more than just additional monitoring.

There currently is a disconnect between nursery and environmental sampling, with the environmental sampling often done by the USDA Forest Service. The USDA Forest Service does not have regulatory authority. Without regulatory authority the environmental survey can be difficult to accomplish in a timely and effective manner.

Nursery Assessment Teams seem useful and we request that, where practical, forestry expertise be included to ensure adequate environmental survey; draw from state forestry, USDA Forest Service Forest Health Protection or university personnel.

Focusing more intently on repeat nurseries may be helpful. Adding stiffer consequences for repeat finds might serve as incentives for growers.

It seems that most of the time no *P. ramorum* is found under the current trace back system, even when there are repeated positive plants that are associated with specific nurseries. Maybe one approach would be that if there was more than one trace back to a nursery, it would trigger mandatory water monitoring at that nursery for some period of time?

Treatment

The program needs to intensify efforts to reduce or eliminate inoculum in nursery premises rather than focus on the disease on plants. Elimination of the pathogen in soil and water is critical. One recommendation is to continue and intensify APHIS and state agriculture personnel training in water and soil sampling.

Specific comments:

SECTION 4-1. High Risk Plants

Associated plants are those which have been found to have been infected with *P. ramorum* at least one time in the native **ADD “or nursery”** environment but have not been tested and proven to be a host through Koch’s Postulates.

The high risk plants are properly identified – *Camellia*, *Rhododendron*, *Viburnum*, *Pieris* and *Kalmia*. Can *Magnolia*, *Laurus*, *Loropetalum* and *Osmanthus* go on a “special watch” list for PIS inspectors?

We have concerns about importations of the high risk plant genera from infested regions (presently the European Union), due to concerns about inadvertent importation of the *P. ramorum* EU1 population type. We are also concerned that without subspecies level regulation, the NA1, NA2 and EU1 populations may interact to change pathogen behavior.

The importation of rhododendrons in soil or media is a concern. Asymptomatic root infection and infested soil could serve as inoculum to start new infestations.

Action Item 1: In-depth analysis of plant species positive for *P. ramorum*. Analysis of existing records confirms that the 5 high risk plants viz, *Camellia*, *Rhododendron*, *Viburnum*, *Pieris* and *Kalmia*, as identified by National Plant Board in 2006, continue to be the most prevalent species found with the disease **ADD “in nurseries”**.

SECTION 4-2: Quarantine 37

Advance notice of shipment arrival is needed.

SECTION 4-3: Regulatory Survey Working Group

Correction: It is incorrect to state that the number of positive nurseries has been steadily declining. In fact, they have been steady (or even rising a little) since 2007. Furthermore, the number of states with

infestations in soil and water is increasing. If we don't solve the soil/water problem the pathogen will become established in new areas.

“Background: *Phytophthora ramorum* (*P. ramorum*) is the causal agent of the plant disease called Sudden Oak Death which is also referred to as Ramorum Blight, Ramorum Die-Back and Twig Blight or Die-Back. This disease has been detected in nursery stock and the environment in Europe, California and Oregon. Its primary potential-threat is to eastern forest ecosystems ADD **“and uninfested areas in western forest ecosystems”**.

What do the colors stand for in “Figure 2. Total number of nurseries positive in all (27) the states by year”? Add a legend.

The sentence: “Results: Since the outbreak of *P. ramorum* in 2003, a total of 464 nurseries located in 27 states” should be corrected “Since the outbreak of *P. ramorum* in **2001**”...

Action Item 1: Enhanced and stand alone *P. ramorum* survey and funding For FY 2010, 18 states participated in an enhanced *P. ramorum* National **ADD “Nursery”** Survey

SECTION 4-4: Nursery Assessment Teams

Since one of the purposes of the Nursery Assessment Teams is to “Assess risk to environment surrounding *P. ramorum* positive nurseries”, if practical, forestry personnel may be included on the team. Suggest including state forestry or USDA Forest Service, Forest Health Protection or Research; or university.

SECTION 4-5: Triggers

We question the limited response to diseased understory (or overstory) plants in a landscape or natural environment if they are close to a nursery. Why suggest not having a quarantine if this occurrence is in close proximity to a nursery? If *P. ramorum* is present in vegetation infected through runoff water or other means connected with a nursery, it has still leaked out and established an infestation. It needs to be jumped on immediately.

Exactly what protocols would be used to respond to “environmental” finds?

Why doesn't a water positive trigger action to prevent pathogen spread and establishment? Is USDA APHIS/NPB considering switching to regulating pathogen not just disease?

The proposal to change the *P. ramorum* regulatory program to a system similar to the Black Stem Rust of Wheat program does not seem to make sense. The Black Stem Rust model doesn't fit well for *P. ramorum*.

“Most of the positive nurseries are located in the eastern counties, especially in WA and OR.” Change to “Most of the positive nurseries are located in the **western** counties, especially in WA and OR.”

In the Black Stem Rust section, lumber is given as an example of a regulated article. Lumber is not regulated only non-debarked logs are regulated.

SECTION 4-6: Critical Control Points and Best Management Practices

Could Critical Control Points and Best Management Practices be required for recurrent nurseries?

Add to reduce inoculums dispersal bullet list "avoid contamination potential from runoff".

Rather than a separate cull pile for high risk plants, we suggest high risk plants be destroyed and not kept in any cull pile.

CCP Water: 2nd bullet . Water testing should be more frequent if nursery is re-circulating irrigation water and has high risk plants.

SECTION 4-7 Protocols

A Wildland protocol is needed.

For your consideration, for repeat positives require implementation of BMPS.