



OREGON
ASSOCIATION OF
NURSERIES

29751
SW Town Center
Loop W

Wilsonville, OR
97070

Phone
503.682.5089

Toll-Free
1.800.342.6401

Fax
503.682.5099

Web
www.oan.org

March 25, 2009

Jonathan M. Jones, Senior Staff Officer
Invasive Species and Pest Management
PPQ, APHIS, USDA
4700 River Road Unit 160
Riverdale, MD 20737-1231

Dear Mr. Jones:

Thank you for sending us the revised confirmed nursery protocol (CNP) language for comment. We agree that continued modification of the CNP is necessary as we learn more about the biology and epidemiology of *Phytophthora ramorum* and as we learn from the failures of mitigation efforts at some infected production sites.

We are encouraged that the CNP continues to work well in Oregon, as carried-out by PPQ and ODA staff. Oregon's repeat positive rate remains well below 10%. We believe that this success is due to the diligence and expertise of the regulatory staff in Oregon and the cooperation of nursery management at positive production sites. We are also seeing a shift in cultural practices at many Oregon nurseries which lowers the likelihood of introduction and establishment of *P. ramorum*.

Based on our experience in Oregon, we see two potential deficiencies in the CNP. First, there is no requirement for using inspectors who are both experienced and successful in their *P. ramorum* eradication efforts. This is a very difficult pathogen to detect and eradicate, therefore experience is essential to conduct a proper eradication effort. Next, we understand that an insufficient number of samples are being collected at positive sites in many states, sometimes as few as 5 and commonly less than 40. Typically in Oregon, inspectors collect an average of more than 500 samples from each positive nursery. At large nurseries, this number easily goes into the thousands. This level of intensity is required by the language of the current CNP, as inspectors are required to "*Examine all plants within the nursery and sample any unhealthy plant tissue found.*" The data strongly suggest that the CNP failure rate is inversely proportional to the number of delimitation samples collected.

Production nurseries always have issues with unhealthy plants, be it from improper irrigation or fertilization, sun and wind burn, frost, hail damage, poor root growth and other cultural maladies. These plants are routinely rouged at most nurseries and become part of the burn or compost pile, a feature shared by every production nursery. Given this constant background of unhealthy plants, we wonder how it is even possible to conduct a delimitation survey that only nets 5 samples. If inspectors are prejudicing sample collection by only collecting material with "text book" symptoms of *P. ramorum* and ignoring samples with what may be sun burn, then they are insuring failure of the CNP at that site. Again our experience shows that *P. ramorum* displays "text book" symptoms about 30% of the time and the rest of the time it is symptomatic of a "cultural" problem.

Thus, collecting and testing all unhealthy material is essential to an effective CNP effort.

To remedy these two potential deficiencies and to help harmonize our efforts with Canada, we urge that the CNP be amended by adopting two key provisions of the Canadian Food and Inspection Agency's protocol (PI-010, Eradication Protocol for Propagation Nurseries Confirmed with *Phytophthora ramorum*). Specifically, we suggest that:

1. All delimitation efforts be led by a team of highly experienced PPQ officers, who have led successful *P. ramorum* CNP efforts in the past and who will provide impartial triage at the site and closely direct the sample collection of collaborators.
2. All blocks at the positive nursery must be sampled with at least the minimum number of samples collected as listed in appendix 5, method 2 of PI-010. However, all unhealthy tissue observed should be collected and tested as well as material with symptoms typical of *P. ramorum*.

These two modifications should dramatically drop the CNP failure rate in states that have thus far, been very unsuccessful. PPQ funding may be needed to pay for the delimitation costs at these sites, if local resources are limited.

Comments on specific changes are as follows:

From Page 10- Trace Forward investigation:

High Risk Designation. We believe that differential mitigation for highly susceptible *and* significant sources of inoculum is warranted. However, we are opposed to listing *Kalmia* as a high risk genus, as the available data show that it is not a significant spore producer compared to the other four genera. In fact, the epidemiology study conducted by DEFRA listed *Kalmia* as one of the lowest sporangia producers tested and that it failed to produce any chlamydospores. Additionally, two published reports by Dr. Paul Tooley in the journal *Plant Disease* also show *Kalmia* to be a poor source of inoculum relative to other species and found that rapid leaf drop and plant death following infection with *P. ramorum* would make *Kalmia* a less successful host overall in terms of supporting the pathogen. Based on this research, we again ask that *Kalmia* be removed from the list of high risk genera until data shows it to be a significant source of inoculum. There is simply no scientific data to support listing this genus as "high risk".

Inspection of Plants. The proposed language reads "*The plants sent to the receiving States must be inspected at the receiving nurseries.*" Currently this is an option, so that states and other cooperators can triage the situation and delegate resources as best they can. Making this a requirement will be a problem for the ODA and other state cooperators and will limit their ability to respond effectively with their limited resources. For example, a trace forward could identify a huge number of receiving nurseries, but the plant material might all be very duplicative. In that case, emphasis on identifying the infected lots or cultivars would be more important than uniformly sampling every receiving nursery. In other words, flexibility is important. Rather than ordering that *plants must be inspected*, perhaps the CNP could order that *inspections must be rapidly initiated*. Also, there is no requirement to sample suspicious material if it observed during this inspection. What action should the inspector take if suspicious material is found?

From Page 12 and 16 -Survey the Nursery and Perimeter:

- **Sample minimums:** The proposed language reads “*Examine all plants within the nursery and sample any unhealthy plant tissue found. A minimum of 40 samples shall be taken in a nursery containing less than 200,000 HAP plants. A minimum of 80 samples in a [nursery] containing more than 200,000 and less than 999,999 HAP plants. And a minimum of 120 samples taken in a nursery containing more than 1,000,000 HAP plants. These are absolute minimums. To assure proper delimiting it is expected that the actual numbers will commonly be much higher.*”

We agree that something needs to be done to see that more samples are collected in the delimit process in most states. A one day delimit that yields only 5-20 samples will nearly always fail to find *P. ramorum* and anything that increases this laconic effort is an improvement. However, from a purely statistical basis, collecting 40, 80, or even 120 samples may fail to properly delimit an infection. These new levels will likely invite additional failures of the CNP.

Again, we suggest that PPQ adopt portions of the Canadian Food and Inspection Agency’s protocol (PI-010, Eradication Protocol for Propagation Nurseries Confirmed with *Phytophthora ramorum*) as previously discussed. We also suggest that teams sent to conduct delimits be informed of the pre-visit preparation and level of work they need to perform during the delimit and subsequent surveys. For example, they should be supplied with enough materials to collect thousands of samples if need be and to be told that the collection process should take many days to several weeks to be properly conducted. Similarly, labs must be properly equipped and staffed to handle this large sample load in a timely period.

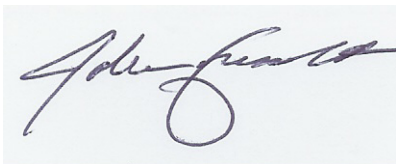
Stressing these factors in the CNP should help cooperators plan and execute a proper delimit, but there still needs to be impartial leadership and triage by an experienced and proven-successful PPQ officer, such as Ken Ball.

From Page 14- Perimeter Survey:

Change distance from 100M to 10M. The new language reads “*Conduct a survey concentrating on plants of all HAP genera located within 10-meters of the infested nursery for symptoms of disease caused by P. ramorum.*” This distance is consistent with the 10M distance used within the nursery for establishing a quarantine block and should work well for establishing a perimeter around the nursery.

Thank you for this opportunity to comment on the proposed changes to CNP 8.0. Please feel free to contact us if you have questions or comments on this communication. We hope the requested changes can be implemented swiftly and look forward to our continued partnership in controlling *P. ramorum* in nurseries nation-wide.

Regards,



John A. Griesbach, Ph.D.
OAN Phytosanitary Consultant