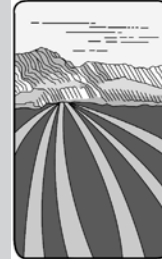


Nursery News

February 2009

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Oregon
Department
of Agriculture

California changes regulations for laurel growers

In late October 2008, the California Department of Food and Agriculture (CDFA) rejected shipments of cherry laurel, Prunus laurocerasus, from several nurseries in Oregon. Entomologists at the CDFA made the clarification that cherry laurel, also known as English laurel, is a host for western cherry fruit fly, Rhagoletis indifferens. This motivated the CDFA to review and update its host list for the exterior cherry fruit fly quarantine (CCF 3256: <http://pi.cdffa.ca.gov/pqm/manual/htm/305.htm>). Cherry fruit fly, native to North America, causes extensive damage to the fruit of some Prunus species.

The CDFA updated the cherry fruit fly exterior quarantine on November 7, 2008. The quarantine regulates both *R. indifferens* and *R. fausta* (black cherry fruit fly) hosts from the states of Oregon, Idaho, Montana, New Mexico, Utah, Washington and Colorado. Quarantine states are restricted from exporting *Prunus* species that are hosts of CFF and capable of producing fruit. The associated soil or planting media within the drip area of host plants is also regulated.

The CDFA has clarified the list of CFF *Prunus* hosts as follows: *Prunus avium* (sweet cherry), *P. cerasus* (sour cherry), *P. emarginata* (bitter cherry), *P. laurocerasus* (cherry laurel including all cultivars such as 'English', 'Otto Luyken', 'Skip', etc.), *P. mahaleb* (Mahaleb cherry), *P. pensylvanica* (pin cherry), *P. salicina* (Japanese plum), *P. serotina* (black cherry), *P. subcordata* (Pacific plum), and *P. virginiana* (choke cherry). This host list is reprinted

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Phytophthora ramorum 2008 update and 2009 highlights

Written by Melissa Boschee, ODA horticulturist

The 2008 *P. ramorum* survey program remained similar to the 2007 survey season. The 2008 season began in mid-February and extended until mid-October with three returning and three new seasonal technicians. During the season one returning technician was hired by our insect trapping program and was replaced, bringing our crew to four new and two returning seasonals. The survey season progressed smoothly with few incidents.

All interstate host shippers, a total of 514 nurseries with 642 growing grounds, were surveyed. Of these, 501 nurseries (629 growing grounds) were under compliance by the completion of the 2008 calendar year. These numbers are similar to the numbers in 2007. Of the 514 nurseries, 214 were high-risk nurseries and the remaining 300 were non-high risk. Non-host and host non-shipping nurseries were also surveyed as part of the annual survey. The horticultural inspection staff completed 533 non-host surveys and 85 non-shipping host inspections between January and December.

The sampling protocol from the 2007 survey season was not modified for the 2008 season. A total of 26,445 Federal Order survey samples were taken from 514 nurseries (642 growing grounds). At high-risk nurseries, an additional 3,293 samples were taken during 280 additional surveys. That number was up 213 from the 3080 samples taken in 2007. High-risk surveys are performed in addition to federal order requirements and are preformed only at nurseries that grow Rhododendrons and/or Camellias.

In total, 922 interstate host shipping inspections were completed - 642 for the federal order and 280 for the additional high-risk surveys. 5.5 percent of the federal order survey samples and 15.21 percent of the high-risk survey samples were positive for *Phytophthora* species. These *Phytophthora* positive samples included 45.45 percent of sites surveyed for the federal order and 46.19 percent for the high-risk surveys.

Of the samples taken during 2008, 13 samples from five nurseries were found positive for *Phytophthora ramorum*. All 13 were found during the Federal Order Survey and zero were found from high-risk surveys. The delimitation, destruction and monitoring of each nursery has been completed and the disease has been eradicated at these nurseries. In comparison to previous years there are far fewer positive nurseries being found. In 2004, 2005, 2006, and 2007 we found 19, 18, 12, and five positives respectively.

In addition, the nursery staff also completed sampling from multiple trace-out inspections. Seventy-five samples were collected from 27 nurseries. One positive was found from a trace-out sample in a landscape. The plant involved in the positive trace-out was removed and destroyed.

For the 2009 survey season we do not anticipate any major changes to the certification program. Some of the program highlights for 2009 include:

- Nurseries that do not ship plants out of Oregon are not required to be certified and will receive one visual inspection.
- Nurseries that grow *P. ramorum* host plants and ship out of state will receive an annual certification inspection between February and October of 2009.
- Nurseries that grow non-host plants and ship out of state will receive an annual inspection during the 2009 calendar year.
- Nurseries that ship out of state and grow either rhododendrons or camellias will receive one additional high-risk inspection during 2009.
- Nurseries under a compliance agreement may only receive host plants from other certified nurseries, or, if that is not possible, the nursery must hold host plants from uncertified sources pending an ODA inspection.



Corylus deja-vu

A control area order has once again been issued in an effort to protect Oregon's hazelnut (filbert) industry. On October 16, 2008, OAR 603-052-0825, Hazelnut Nursery Stock Control Area, was enacted to establish the entire state of Oregon as a control area for Eastern filbert blight (EFB). The disease is already widespread in Oregon, however, a new more virulent strain of the pathogen has been reported from the east coast. With the new control area, the hazelnut industry hopes to avoid another round of massive losses from this familiar disease.

The new rule restricts movement of *Corylus* spp. (filbert) plants into the state of Oregon. *Corylus* shown to be a host of EFB that are imported into Oregon must now be accompanied with a phytosanitary certificate. Certification is possible in two ways:

1. Filbert plants originate from an area officially inspected and found free from EFB
2. The importer agrees to the following conditions:
 - a. A maximum of 25 plants of each cultivar will be imported.
 - b. The plants will be segregated in a greenhouse or similar secure location for a post-entry quarantine period of 2 years.

Oregon nurseries that grow *Corylus* nursery stock, including contorted filbert, may still ship within the state and to points outside of the state without special certification. If you have any questions regarding trade in *Corylus*, please contact your inspector.

Eastern filbert blight (*Anisogramma anomala*) was first detected in the northern Willamette Valley in 1986, but may have been introduced into the Pacific Northwest as early as 1958. In 1987, a quarantine was established within the state of Oregon and areas that were already infested with EFB were defined. *Corylus* that originated or passed through the infested areas, or originated from outside of the state, were not allowed to be shipped into the disease-free areas of Oregon. The quarantine was in effect for more than a decade until it was finally repealed due to natural spread of the disease and noncompliance issues.

A Pacific Coast strain of EFB is firmly established in the state of Oregon. The state's hazelnut industry has been forced to adapt to its presence by implementing a strict fungicide treatment program coupled with proper sanitation practices or by planting EFB-resistant cultivars. The hazelnut breeding program at Oregon State University has worked for many years to breed resistance to the Pacific Coast strain of EFB into new commercial hazelnut cultivars. The new regulation for *Corylus* was enacted to prevent the introduction of the more virulent strain of EFB that can overcome this resistance, and thus prevent a potentially fatal blow to Oregon's hazelnut industry.

For host growers who ship out of state

Preparing for your *P. ramorum* inspection

Starting February 2009, our technicians will make phone calls to arrange appointments with your nursery. When they call please have the following information available:

Do you ship plants out of state?

Are you a host nursery?

A host nursery is any nursery which grows host or associated host material. For an up-to-date list please go to http://www.aphis.usda.gov/plant_health/plant_pest_info/pram

Have you used any fungicides in the last 30 days?

- If no, please tell your technician.
- If yes, please have a list of what has been applied and the dates of application.

Do you have additional growing grounds?

- If no, please tell your technician.
- If yes, please have a list of your additional growing grounds and their locations, including a physical address and zip code.

Once you have been contacted, your technician will set up an appointment to inspect and sample your nursery. You may expedite your inspection by doing the following:

- Provide a map of the nursery layout with host and associated host material clearly marked.
- Have all host and associated host material clearly labeled in the nursery.
- Furnish a staff member to answer the technician's questions.

Please do not apply pesticides to any area of your nursery for 72 hours prior to your inspection and sampling appointment. This will assure complete access to all nursery stock present without violation of pesticide reentry rules.

Thank you for your cooperation. We are looking forward to working with you this next season. If you have questions please contact Melissa Boschee at 503-986-4777.

Phytosanitary Certificate Issuance & Tracking System (PCIT)

A new USDA APHIS online program

The future of federal phytosanitary certificate (FPC) issuance is here! The United States Department of Agriculture, Animal and Plant Health Inspection Service would like all shippers who require federal certification to get on board, and soon. The nationwide system allows the user to create and submit applications for certificates to export commodities. It also allows users to view the progress of their applications, print copies, and create templates for future use.

Currently, just a few wholesale nurseries and Christmas tree companies are submitting their applications for phytosanitary certificates electronically. The Oregon Department of Agriculture staff accesses the online system, completes the application and prints out an FPC on dedicated paper issued by the USDA. To date, only federal offices are required to use PCIT. In the future, the expectation is for all nurseries and Christmas tree growers who export internationally to use the PCIT system to generate FPCs. These certificates are likely to become the standard for international plant trade. Because the certificates are all printed, they are neater and easier to read and are less prone to forgery. The information contained in the certificate is also more likely to be accurate as it has almost all been entered by the shipper. The system has 24-hour access and there's a help desk for questions. The USDA anticipates a reduced PCIT certificate fee by around midyear. This fee will be less than the standard fee for printed or handwritten federal certificates.

The PCIT program may be accessed here: https://pcit.aphis.usda.gov/pcit/faces/pcit_signIn.jsp

Level 1 eAuthentication is required to use PCIT. This process may be started by clicking on the "USDA eAuthentication" link under the log-in button. Once an account is created and it has been authorized, it will be possible to sign in and begin creating applications.

ODA staff will continue to hand-write or type certificates until such time as it will be required to use only the electronic system. However, the more exporters who sign on to use the system now, the easier it will be for all of us in the future.

California regulations: Continued from page 1

in this newsletter in the pull-out reference chart entitled: "2009 California Shipping Regulations." Note that this list does not include *Prunus lusitanica* (Portuguese laurel), nor is it a complete list of flowering cherries. It is our understanding that unlisted cherry species will be admitted into California without special certification. Certification by authorized Oregon Department of Agriculture (ODA) personnel may be possible if host plants are treated in a manner approved by the CDFA. Currently, the CDFA recognizes three alternatives to certify cherry fruit fly host material.

Flower/fruit removal: Regulated nursery stock that has not fruited, or that has had all fruit stripped prior to reaching a maturity level conducive to oviposition may qualify for certification. A regulatory official would have to verify that this condition was met for the previous and current fruiting seasons. Note: this means that in most cases cherry laurels will not qualify for shipment until the summer of 2010 to allow for two years of fruit inspection.

Qualified nursery stock must also be safeguarded from fruiting hosts.

Bareroot: Regulated nursery stock that has had fruit removed and has been barerooted (with roots washed free of soil) and repotted in sterile potting media under regulatory supervision qualifies for certification. Qualified nursery stock must also be safeguarded from fruiting hosts. *Prunus* that are shipped bareroot and free of fruit are not regulated and do not require certification.

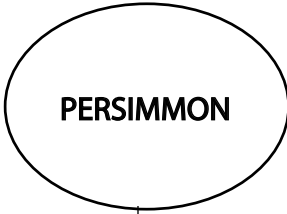
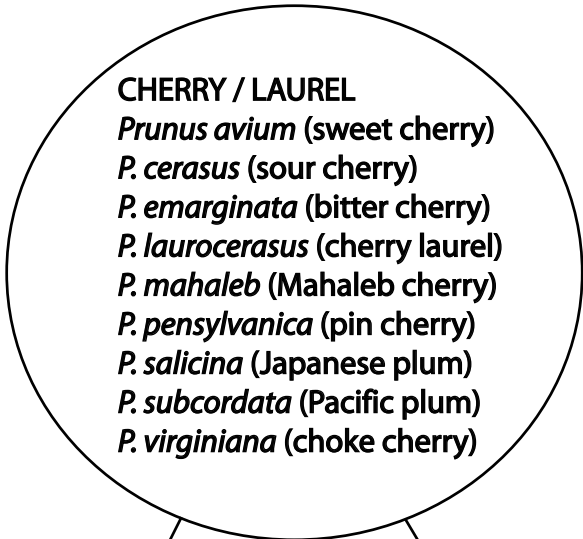
Treated: Regulated nursery stock treated with a product approved by the director of the California Department of Agriculture qualifies for certification. As of 2/10/2009 no treatment has been approved.

For additional certification information and updates, please contact the Oregon Department of Agriculture at 503-986-4640 or visit our Web page at: http://oregon.gov/ODA/PLANT/NURSERY/reg_cff.shtml. The host list is reprinted in this newsletter in the pull-out reference chart entitled: "2009 California Shipping Regulations."

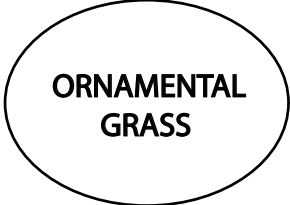
California shipping reference sheet

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2009 CALIFORNIA SH

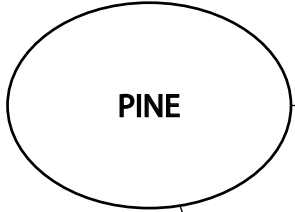


All species of persimmon plants (*Diospyros* spp.) must be certified free from **persimmon root borer**.

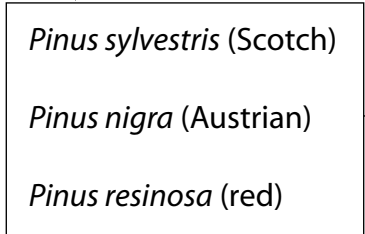


Bareroot and free of fruit -
No certification needed.

B+B or container - Must be in a fruit stripping compliance agreement program for **cherry fruit fly**.



All species require **European pine shoot moth** trapping certificate.

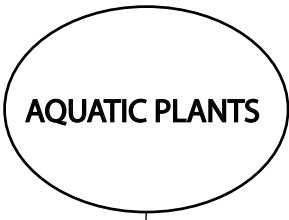


> 1 inch caliper would need to be fumigated to control **cereal leaf beetle**.

< 1 inch caliper could be shipped upon inspection and certification under the "Master Permit" program.

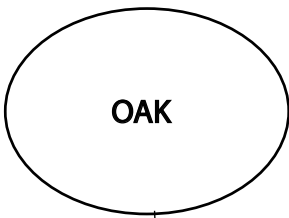
These could transit through California to other states with a signed compliance agreement form.

SHIPPING REGULATIONS

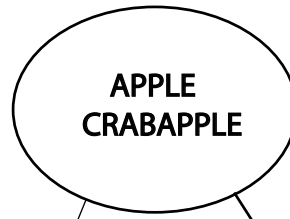


Aquatic plants must be certified free from **Hydrilla**.

Must be treated for **cereal leaf beetle** prior to shipment. Currently carbaryl (Sevin) and malathion are registered for this use.

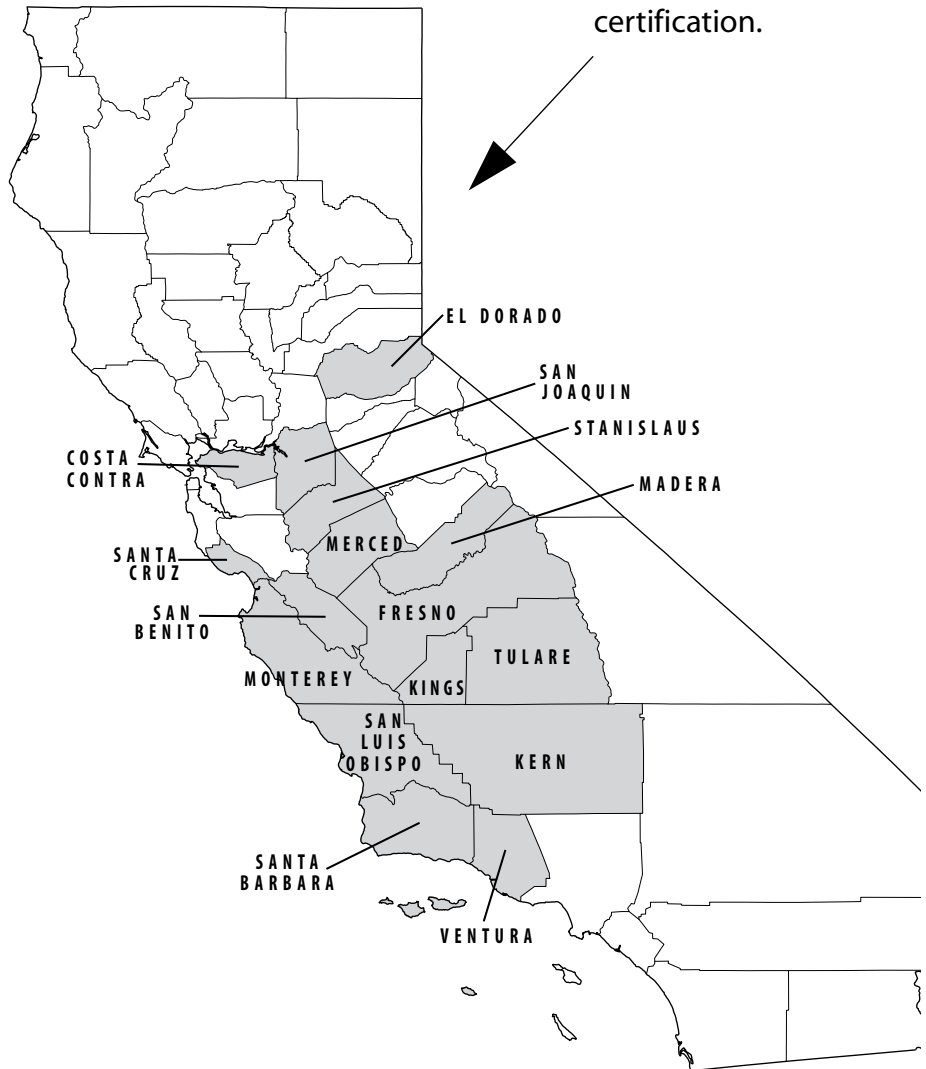


All oak (*Quercus* spp.) require **oak wilt** certificate provided by an ODA inspector. This disease has not been found in the state of Oregon.



Bareroot and free of soil - No certification needed.

B+B or container plants are quarantined by 16 California counties (see map). These could be shipped if those counties approve an insecticidal treatment program for control of **apple maggot**. All other counties require no certification.



The dirty truth about soil

by Scott Rose, ODA horticulturist

Soil is one of our most valuable natural resources. It is a natural resource worth understanding, protecting, and utilizing. Soils can be quite complex, variable, and difficult to understand. Since we all get so much from soil, it should be valuable to review the basic soil properties. The following information can be used as a springboard toward further testing, analysis, and stewardship of the soil that you depend on.

Soils have typically evolved from the interaction of inorganic material (weathered minerals or rock), organic material (carbon based compounds derived from living organisms), biotic activity and deposition (micro and macro organisms), and the availability of and influence of water and air.

Inorganic

The inorganic component of a soil is derived from the breakdown of the earth's crust. The weathering of bedrock can occur locally or it can be deposited or transported from other areas both near and far. The mineral component of a soil consists of various sizes of weathered rock. Sand is the most coarse or largest sized particle (2 mm to 0.05 mm), silt is next (0.05 mm to 0.002 mm), and clay is smaller than 0.002 mm. Clay is the only mineral component that can have a negative ionic charge, which benefits soil fertility by holding onto nutrients that might otherwise be lost to leaching.

Soil texture

Soil texture refers to the proportion of sand, silt and clay in a soil. Textures can vary considerably due to the availability of different types of weathered bedrock. Soil textures are categorized into 12 types, starting with the most coarse particle size and ending with the most fine particle size. Soil survey maps have sub-categories and local names to describe more specific regional soils. The 12 textures are sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay, and clay. Loam is a soil containing a good combination of sand, silt, and clay.

Soil structure

Soil structure is the arrangement of the mineral particles and the pore spaces in a soil. In general, a soil with good structure will drain more quickly. It will have a consistency that allows for the storage and movement of water, air and nutrients. In combination with other soil properties (texture, organic matter, etc.), the soil structure will help determine the overall tilth of a soil. Soil tilth reflects the soil's ability to grow plants. It indicates

how well seedbeds can be prepared, how well seedlings emerge, and how well roots penetrate the soil. Soils are layered vertically into horizons of different composition or structure. The layers together form the soil profile, which is a cross section view of what has been deposited at a particular part of a field. Soil profiles from site to site can vary considerably. The USDA Soil Conservation Service has mapped the soil types of most counties and this information is available to the public. These maps are quite useful when planning to develop a site.

Organic

The organic component of soil holds water and nutrients. Some soils contain considerable amounts of organic matter. Peat or muck-type soils have high organic content and are typically soils influenced by water. They may be in a flood plain or they may be in an area that was previously a flood plain or where flood material was deposited long ago. Humus is the well-decomposed and mostly stable part of the organic matter in a mineral soil. This is what compost is. Most organic material is in the upper horizon of a soil but organic matter can be transported down to lower levels during the evolution of the soil at a particular site. Adding organic matter adjusts the soil structure.

Biotic

Macro and microorganisms make up the living component of soil, and these require organic material, water and air to live. The biotic activities associated with soil are complex and much is not known. Micro-organisms typically include bacteria, fungi, amoeba, algae, and nematodes, to name a few. Macro-organisms such as worms, insects, moles, rodents, and other burrowing organisms all play a role in the development of soils. The biomass of a soil reflects the general health of a soil. Without the living component of a soil, many of the nutrients needed for plants are not available. The biotic inhabitants of the soil are the unsung movers and shakers of the soil. Living organisms can change the soil structure. That mole or gopher that is giving you a headache is doing the same thing that plowing and tilling can do.

Water

Water is the universal solvent. It dissolves, mechanically erodes, transports, and saturates soils. Obviously, it is needed for all kinds of life. However, its impact can be negative when its not in the right place at the right time or is hanging around too long. Soil texture determines the water holding capacity of a soil. Hydric soils are soils

Continued on page 10



Take a virtual field trip to the plant clinic

It is worth the trip to the Oregon State University's plant clinic Web site:
http://science.oregonstate.edu/bpp/Plant_Clinic

The plant clinic works to diagnosis plant problems from a wide variety of customers. As you might expect, they tend to see some of the same seasonal diseases and abotic symptoms every year. For a jumpstart on diagnosing your own plant problems, click on "monthly highlights". You will be able to choose your month of interest, where you will be led through photographs of plant diseases and problems to watch for.

You might further sharpen your diagnostic skills by clicking on "Rhodococcus and Agrobacterium". Here you will find photographs of leafy gall disease and crown gall on dozens of different species.

Once you are at this Web site and enjoying yourself you might as well stay a while. You can read fact sheets, view diagnostic records by county, learn about the diagnostic services offered through the clinic, and learn the proper techniques for taking samples.

that are sufficiently wet in the upper layers to develop anaerobic conditions during the growing season. There are plant types that can indicate whether a soil type is hydric and you can guess that they generally do well in wet conditions. Some people use these indicator plants to determine how water interacts with the soil at a particular site. Indicator plants can help to determine what potential development activities are warranted or even allowed on a site. The permeability of a soil reflects the soil's ability to drain. It can be measured as the number of inches per hour that water moves down through saturated soil. Very slow permeability would be less than 0.06 inches per hour; moderate permeability is 0.6 inch to 2 inches per hour. Very rapid is more than 20 inches per hour. There are categories between these numbers.

Air

As with water in the soil, air within the soil must be at the right place and at the right time for soil to be useful. Soil texture indicates the amount of air a soil can hold. Soils that contain a lot of sand have more available air space than soils high in clay. The larger and coarser the material in the soil, the more air space there is. The smaller the particle sizes in the soil, the less space there is for air. Permeability and air holding capacity can be linked. The more permeable a soil type is, the more available air space there is. Air space can vary considerably from one time of the year to another.

In conclusion, few things are more important to agriculture than soil. Further interest in, and investigation of your particular soil properties should help you get the most from your land. Planting the right thing in the right spot is imperative. Knowing when and when not to work a field helps maintain tilth. Knowing what you are dealing with helps maximize yields and saves you from unnecessary inputs. Its almost spring, lets get dirty.



Grower Assisted Inspection Program

In 2008 the Oregon Department of Agriculture launched a pilot program for Oregon nurseries based on a systems approach for reducing *Phytophthora* species. The Grower Assisted Inspection Program (GAIP) is a volunteer program initiated in 2007 by ODA along with members of the nursery industry. The USDA Natural Resources Conservation Service has provided a grant of \$265,000 for a two-year period. The GAIP was developed in response to the current *Phytophthora ramorum* federal order that regulates shipping for west coast nurseries.

The goals of the GAIP are:

- Prevent the introduction and spread of regulated *Phytophthora* species on Rhododendron, Camellia, and HAP (host and associated host plants).
- Meet or exceed USDA APHIS standards for shipping Rhododendron, Camellia, and HAP potentially infected with regulated *Phytophthora* species.
- Assure that exported Rhododendron, Camellia, and HAP are essentially free from non-regulated aerial *Phytophthora* species.

Participation in GAIP is entirely voluntary and nurseries are encouraged to consider joining. An integral aspect of the program is the development of a mitigation manual by each participating nursery. The ODA has identified four critical control points (CCPs) that GAIP nurseries must address in their mitigation manuals. The CCPs are the key areas where *Phytophthora* introduction and spread are likely to occur and are:

1. water management
2. soil and potting media
3. used containers
4. incoming plant material.

Once the CCPs are examined, the mitigation manual will then document the best cultural practices (BCPs), standard operating procedures, or best available science to be used for *Phytophthora* mitigation. Each nursery will undergo one facility review and two audits (coinciding with the USDA *Phytophthora ramorum* survey) per year. Additional visits may be necessary if a nursery falls out of compliance. Deviation from the mitigation manual will result in an issue of non-compliance, and the nursery may be suspended from the program.

An additional requirement for the GAIP is that an employee of the nursery must take and pass the OSU online course: "Training for Nursery Growers" to receive a certificate of mastery for *Phytophthora*.

<http://oregonstate.edu/instruct/dce/phytophthora>

There are currently 21 volunteers in the GAIP. These nurseries range from large growers to small operations. At press time eight of these nurseries have completed and passed their first facility reviews and their names are posted on the ODA GAIP Web page. <http://oregon.gov/ODA/PLANT/NURSERY/gaip.shtml>.

Nurseries will also receive a GAIP label certifying that the nursery is voluntarily using BCPs to mitigate the introduction and spread of *Phytophthora*.

The GAIP pilot program is scheduled to end in February 2010. At that time it will be evaluated for effectiveness in reducing *Phytophthora* species, in particular the spread of *P. ramorum* in the nurseries. Continuation of the program will be based on the results of evaluation.

For additional questions please contact the Grower Assisted Inspection Program auditor, Melissa Lujan at mlujan@oda.state.or.us, or call 503-510-5529.

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Winter storm causes havoc with Oregon nurseries

A grueling winter snowstorm in the later part of December 2008 has caused great hardship for some Oregon nurseries. Damage was particularly devastating to greenhouses, as the weight of snow and ice collapsed the framing integrity. Plant death and injury was also incurred during the winter storm, although damage estimates may not be immediately known. The Oregon Association of Nurseries (OAN) sent out e-mail notices to nurseries asking for estimates of the extent of destruction. From this information, the OAN has estimated damage between 18 and 31 million dollars from nurseries in 12 Oregon counties.

Oregon Governor Ted Kulongoski and ODA Director Katy Coba have petitioned for federal disaster relief aid. The OAN has been instrumental in initiating the disaster relief effort. Aid for Oregon nurseries is being sought in the form of low interest loans, structural damage conservation grants, and lost revenue/non-insured crop assistance.

For more information, please visit the following OAN links:

<http://www.oan.org>

<http://www.diggermag.blogspot.com>

<http://www.oan.org/displaycommon.cfm?an=1&subarticlenbr=714>