



AMENDED ORDER RESTRICTING MOVEMENT OF
NURSERY STOCK FROM CALIFORNIA NURSERIES
APRIL 22, 2004

United States
Department of
Agriculture

Animal and
Plant Health
Inspection
Service

Marketing and
Regulatory
Programs

Washington, DC
20250

This order replaces ORDER RESTRICTING MOVEMENT OF NURSERY STOCK FROM CALIFORNIA NURSERIES, dated April 9, 2004.

The purpose and goal of this Order is to prevent the spread of *Phytophthora ramorum* (sudden oak death or SOD), through regulatory authority provided for in Sections 412 and 414 of the Plant Protection Act, (7 U.S.C. 7712, 7714). The Administrator of the Animal and Plant Health Inspection Service (APHIS) considers it necessary, in order to prevent the dissemination of *P. ramorum*, to establish restrictions on the interstate movement of nursery stock that has been identified as a host (Attachment I) of *P. ramorum*, as well as certain associated articles (nursery stock of unconfirmed, but potential host species, see Attachment II) from commercial nurseries in non-quarantined counties in California. To fulfill the goal of *P. ramorum* containment, this Order addresses needs for inspection and certification of all host nursery stock and associated articles originating in California.

Restrictions on California Nurseries Located Outside Quarantined Areas

This order will address immediately the discovery of *P. ramorum* in commercial nurseries in California that are outside the quarantined area. The 10 counties currently under quarantine are: Alameda, Marin, Mendocino, Monterey, Napa, San Mateo, Santa Clara, Santa Cruz, Solano, and Sonoma. This order adds Contra Costa and Humboldt to the list of quarantined areas. Given that nurseries outside the quarantined area are not covered by the current regulations, we are implementing new restrictions on the interstate movement of host nursery stock and associated articles from all commercial nurseries in California that are outside the quarantined area. This action is necessary on an emergency basis to prevent the potential spread of *P. ramorum* to non-infested areas of the United States outside California.

The recent detections of *P. ramorum* in the non-quarantined area of California are limited to commercially produced plants inside nurseries. In the quarantined counties in California, *P. ramorum* is known to be established in the natural environment. The disease has not been detected in the environment outside the quarantined area, where dry climate and weather conditions are not conducive to the disease. However, irrigation and other cultural practices in nurseries located outside the quarantined area may create microclimates that are hospitable to *P. ramorum*. Therefore, we are regulating the interstate movement of host nursery stock and associated articles from commercial nurseries in non-quarantined areas in California. We are not regulating the interstate movement of any other articles from the non-quarantined portion of California because positive finds in the non-quarantined area have been limited to nursery stock. We are not expanding the quarantined area beyond the 12 county area



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because *P. ramorum* has not been found in the natural environment outside the currently quarantined area.

Effective immediately, the host nursery stock and associated articles listed in Attachments I and II of this order may not be moved interstate from any commercial nursery in non-quarantined areas of California until the nursery has been inspected and we determine there is no evidence of *P. ramorum* infestation according to the following process:

I. Inspection and Restrictions on Movement of Plants.

Nurseries that ship host nursery stock or associated articles listed in Attachments I and II of this order interstate must be inspected by an APHIS, State, or County inspector for *P. ramorum*. The nursery must be inspected, sampled, and tested. Until testing is completed and the nursery is found free of evidence of *P. ramorum* as described below under part III, the following plants must be withheld from interstate shipment: (1) All host nursery stock and associated articles; (2) all plants within same genus as any host or associated article; and (3) any plants located within 10 meters of a host or associated article.

II. Sampling.

A minimum of 40 samples must be tested per nursery location. One sample may contain more than one leaf, but no more than one sample per plant. Samples will be taken from symptomatic plants unless no symptomatic plants are present. In that case, asymptomatic plants will be sampled. Sampling shall be biased to hosts, associated articles, and nearby plants. The inspector should take nursery fungicide programs into consideration and conduct inspections at times when the best expression of symptoms are anticipated.

III. Testing procedures and protocols.

Samples must be analyzed using a methodology approved by APHIS at a laboratory approved by APHIS.

ELISA prescreening of plant samples may be used to determine the presence of *Phytophthora*.

- If all samples from a single nursery are found to be negative through ELISA prescreening, no further testing is required. The nursery may be considered free of evidence of *P. ramorum*, and the nursery is eligible to issue certificates for the interstate movement of plants provided that it is operating under a compliance agreement with APHIS in accordance with 7 CFR 301.92-6.
- If ELISA prescreening reveals the presence of *Phytophthora* in any plants, plants must continue to be held as described above in part I, and each sample

that returns positive ELISA results must be tested using the test protocol described below.

If ELISA prescreening is not performed, or if results of ELISA prescreening are positive for *Phytophthora*, plant samples must be analyzed using either the APHIS-approved nested PCR or culture test. Samples will be considered positive for *P. ramorum* based on positive results of a nested PCR test or positive results of a culture test. Positive nested PCR tests do not require confirmatory culture tests, nor do positive culture tests require confirmatory nested PCR tests. Note, however, that if culture tests return negative results, a nested PCR test must be conducted, as described below. No culture test is required if a nested PCR test returns negative results.

Nested PCR Test

- If the results of nested PCR tests are negative for all samples in a nursery, no further testing is required. The nursery may be considered free of evidence of *P. ramorum*, and the nursery is eligible to issue certificates for the interstate movement of plants provided that it is operating under a compliance agreement with APHIS in accordance with 7 CFR 301.92-6.
- If any samples tested using the nested PCR protocol return positive results for *P. ramorum*, the nursery from which they originate is prohibited from moving (1) All host nursery stock and associated articles, (2) all plants within same genus as any listed host or associated article, (3) any plants located within 10 meters of a host or associated article, and (4) any genera of other plants found infected until the infestation is delimited and isolated, re-inspected and tested, and an inspector determines that the plants intended for shipment interstate show no evidence of *P. ramorum* infestation. At that time, the nursery will be eligible to ship plants interstate provided that it is operating under a compliance agreement with APHIS in accordance with 7 CFR 301.92-6.

Culture Test

- If the results of culture tests are negative for any samples taken from a single nursery, plants in the nursery must continue to be held as described above in part I, and each plant sample that returns negative culture results must be tested again using the nested PCR test, as described above.
- If any culture tests return positive results for *P. ramorum*, the nursery from which they originate is prohibited from moving (1) All host nursery stock and associated articles, (2) all plants within same genus as any listed host or associated article, (3) any plants located within 10 meters of a host or associated article, and (4) any genera of other plants found infected until the infestation is delimited and isolated, re-inspected and tested, and an inspector determines that the plants intended for shipment interstate show no evidence of *P. ramorum* infestation. At that time, the nursery will be eligible to ship

plants interstate provided that it is operating under a compliance agreement with APHIS in accordance with 7 CFR 301.92-6.

These testing protocols are described in detail at: www.aphis.usda.gov/ppq/ispm/sod/survey.html. Additional test methods may be approved by APHIS in the future.

IV. Certification of Compliance

All host nursery stock and associated articles shipped interstate originating in California must be accompanied by appropriate Federal certification issued under a compliance agreement.

Restrictions on the Movement of Associated Articles from Quarantined Areas

In this order, we are restricting the interstate movement of associated articles (see Attachment II). Under this order, associated articles are subject to the same restrictions that currently apply to regulated articles of nursery stock that are being moved interstate from quarantined areas. Those restrictions include requirements that nurseries where host nursery stock and associated articles are grown be inspected and tested for the presence of *P. ramorum* in advance of the interstate movement of regulated nursery stock. The requirements can be found in § 301.92-11(a).

An interim rule will be issued and published in the Federal Register setting forth the requirements of the order.

/S/ Richard L. Dunkle

Signature of USDA Official

Deputy Administrator, PPQ

Title

April 22, 2004

Date

Attachment I

The complete list of confirmed hosts, including those already listed in the regulations, follows. Those marked with an asterisk are the ones added by this order.

- Arrowwood (a.k.a. Bodnant viburnum) (Viburnum x bodnantense)
- Big leaf maple (Acer macrophyllum)
- California bay laurel (a.k.a. pepperwood, Oregon myrtle) (Umbellularia californica)
- California black oak (Quercus kelloggii)
- California buckeye (Aesculus californica)
- California coffeeberry (Rhamnus californica)
- California honeysuckle (Lonicera hispidula)
- Canyon live oak (Quercus chrysolepis)*
- Coast live oak (Quercus agrifolia)
- Coast redwood (Sequoia sempervirens) (except wood products, including lumber, logs, and firewood)*
- Doublefile viburnum (Viburnum plicatum var. tomentosum)*
- Douglas fir (Pseudotsuga menziesii var. menziesii) (except wood products, including lumber, logs, and firewood)*
- Evergreen huckleberry (Vaccinium ovatum) (except fruit)
- Himalaya pieris (Pieris formosa)*
- Japanese camellia (Camellia japonica)*
- Japanese pieris (Pieris japonica)*
- Laurustinus (Viburnum tinus)*
- Madrone (Arbutus menziesii)
- Manzanita (Arctostaphylos manzanita)
- Pieris “Brouwer’s Beauty” (Pieris floribunda x japonica)*
- Pieris “Forest Flame” (Pieris formosa x japonica)*
- Rhododendron (Rhododendron spp., including azalea)
- Sasanqua camellia (Camellia sasanqua)
- Shreve's oak (Quercus parvula var. shrevei)
- Tanoak (Lithocarpus densiflorus)
- Toyon (Heteromeles arbutifolia)
- Western starflower (Trientalis latifolia)*
- Witch hazel (Hamamelis virginiana) (except wood products)*
- Wood rose (Rosa gymnocarpa)*

Attachment II

Associated articles are nursery stock of the following species: Twenty-nine additional plant species have been identified as associated with P. ramorum because results of culture or Polymerase Chain Reaction (PCR) tests returned positive results for the fungus. For each of these plant species, traditional Koch's postulates have not yet been completed or documented and reviewed, but given the positive results of culture or PCR tests, we believe it is necessary to restrict the interstate movement of these hosts until the results of Koch's postulates are complete. When the results of Koch's postulates are complete, we will address the issue by listing positive articles as regulated and restricted articles, and by removing from regulation plant species that return negative results.

- Burkwood viburnum (Viburnum x burkwoodii)
- California hazelnut (Corylus cornuta)
- Camellia (Camellia reticulata and Camellia x williamsii)
- Cascara (Rhamnus purshiana)
- Chinese pieris (Pieris formosa var. forrestii)
- Chinese pieris (Pieris formosa var. forrestii x Pieris japonica)
- David viburnum (Viburnum davidii)
- Drooping leucothoe (Leucothoe fontanesiana)
- European beech (Fagus sylvatica)
- European cranberry bush viburnum (Viburnum opulus)
- European turkey oak (Quercus cerris)
- European yew (Taxus baccata)
- Fragrant viburnum (Viburnum farreri (= V. fragrans))
- Grand fir (Abies grandis)
- Holm oak (Quercus ilex)
- Horse chestnut (Aesculus hippocastanum)
- Lilac (Syringa vulgaris)
- Lingonberry (Vaccinium vitis-idaea)
- Mountain laurel (Kalmia latifolia)
- Northern red oak (Quercus rubra)
- Poison oak (Toxicodendron diversiloba)
- Prague viburnum (Viburnum x pragense)
- Salmonberry (Rubus spectabilis)
- Southern red oak (Quercus falcata)
- Strawberry tree (Arbutus unedo)
- Sweet chestnut (Castanea sativa)
- Viburnum eskimo (Viburnum x carlcephalum x V. utile)
- Victorian box (Pittosporum undulatum)
- Wayfaringtree viburnum (Viburnum lantana)