



CALIFORNIA OAK MORTALITY TASK FORCE REPORT OCTOBER 2003

MANAGEMENT

The systemic fungicide AGRI-FOS® and Pentra-Bark surfactant were approved October 1, 2003 by the California Department of Pesticide Regulation (DPR) for use by licensed pesticide applicators to treat individual oak and tanoak trees at high-risk of contracting *Phytophthora ramorum*. AGRICHEM's AGRI-FOS® (EPA Reg. No. 71962-1) and Pentra-Bark were granted a Special Local Needs (Section 24(c) registration, SLN CA-030011). This newly approved treatment will prevent infection of oak and tanoak trees at risk of contracting *P. ramorum* but will not cure trees already heavily colonized by the pathogen.

Free, half-day, treatment-application training sessions, targeted at licensed pesticide applicators, will be offered on October 20th in San Rafael and October 21st in Felton. Further information on the training sessions will be posted at the COMTF website, About Sudden Oak Death, [Upcoming Events](#). For more information on the pesticide contact: William Stringfellow, AGRICHEM representative at (330) 721-0602. For more information on the training sessions contact Katie Palmieri (formerly Facino) at (916) 747-1924 or j.palmieri@comcast.net.

A slow-the spread treatment for the *Phytophthora ramorum* infestation in Redway (near Garberville) has been proposed by the Humboldt County Agriculture Department. To lower *P. ramorum* inoculum levels before winter rains enhance spore dispersal, known infected trees and neighboring symptomatic hosts will be removed, litter raked-up under the canopy, and all removed materials burned. After 2 years of aerial surveys with ground-checking and other detection surveys in Humboldt County, only a portion of Lower Redway (less than 0.25 sq. miles) is infested by *P. ramorum*. Seven California bay laurel trees and 1 coast redwood sapling have been confirmed infected. The operation is expected to commence in November or early December. Humboldt County will conduct a follow-up, county-wide survey next spring with support from the USDA Forest Service, State and Private Forestry.

The second of two Sudden Oak Death collection yards under the SODBusters program is scheduled to open October 29th at the Santa Cruz County Transfer Station in Ben Lomond. Vision Recycling, Inc. will operate the collection yard under the direction of the SODBusters team. For more information on the facility and for disposal of *Phytophthora ramorum*-infested material, go to the SODBusters website at: <http://groups.ucanr.org/sodbusters/>.

**MONITORING**

***Phytophthora ramorum* was detected on two, 5-gallon *Camellia sasanqua* "Showa-no-Sakae" plants at a nursery in Placer County.** The two infected plants were part of a March, 2003 shipment of ten plants from an infested nursery in Stanislaus Co. The detection at the nursery in Placer County was the result of a trace forward survey of nurseries that received infected varieties of camellia from the infested Stanislaus nursery. The Placer County nursery is a retail nursery located near Roseville, CA. The plants were inspected by staff from the Placer County Agricultural Commissioner's office and CDFA on September 4, 2003, and confirmed positive for *P. ramorum* by the CDFA Plant Pest Diagnostic Center on September 26, 2003.

The USDA Interim Infected Nursery Protocol has been implemented. No additional plants in the immediate area of the infected plants displayed symptoms of the disease. No symptoms of the disease were observed on native oaks on the nursery property or on plants within the 1/4 mile buffer area surrounding the nursery. For further information contact Nick Condos, California Department of Food and Agriculture, <mailto:NCondos@cdfa.ca.gov>.

***Phytophthora ramorum* has been found approximately 10 miles north of the San Luis Obispo County line near Plaskett Creek, extending the southernmost known *P. ramorum* infested area about 15 miles.** About a dozen dead and dying tanoaks were detected via aerial survey, then ground-checked and confirmed by the Rizzo laboratory at UC Davis. On the ground, adjacent infected California bay laurel were also observed, sampled, and tested positive. The aerial survey is part of the on-going USDA Forest Service/Cal Poly San Luis Obispo 2003 *Phytophthora ramorum* aerial survey. Previously Julia Pfeiffer Burns State Park contained the southernmost detected infestation. For more information check the [oak mapper](http://www.suddenoakdeath.org/) at <http://www.suddenoakdeath.org/>.

RESEARCH

Relationships between *Phytophthora ramorum* (Sudden Oak Death) and failure potential in coast live oak

In *Phytophthora ramorum* infested coast live oak stands, oak trees are failing at approximately 10 times the rate that existed prior to the disease outbreak. This disconcerting information for managers and owners of *P. ramorum* infested oak woodlands is explained in a USDA-Forest Service funded study of coast live oak failures by Tedmund J. Swiecki and Elizabeth Bernhardt, Phytosphere Research.

Swiecki and Bernhardt catalogued oak tree failures in coast live oak (*Quercus agrifolia*) in six natural stands infested by *Phytophthora ramorum* in Marin County, California. For each failure they estimated the year the failure occurred; the condition of the tree; colonization with *Hypoxylon thouarsianum*, other decay fungi, beetle boring and other defects; and noted stand characteristics. Nonfailed trees in the stands were used as the control population to which failed trees were compared. Results from natural woodlands were compared to coast live oak failures recorded in the California Tree Failure Report



Program (CTFRP, see <http://treefail.ucdavis.edu/>) database. Failures recorded in the CTFRP database date back as far as 1987 and occurred primarily in urban trees, not in natural stands.

Stands of coast live oak that have been impacted by *P. ramorum* show tree-failure rates that are much higher than recent historical failure rates. Overall, 83% of failed trees were infected with *P. ramorum*. Branch, scaffold, bole and root crown failures showed a strong association with advanced symptoms of *P. ramorum*. Early *P. ramorum* symptoms, characterized by bleeding only, were not associated with an increased likelihood of failure.

Bole failures are the most common type of failure among recent failures in *P. ramorum* affected woodlands. For bole failures, the average annual failure rate in 2001-2002 was 5%, compared to an annual rate estimated at less than 0.5% for the years 1992 - 1996. Root failures, which account for 39% of the oak failures in the California Tree Failure Report Program, were only observed in 4% of the failed trees examined. Among recent failures, 39% of the bole failures and 30% of the scaffold failures occurred in live stems. The majority of observed root and root crown failures also occurred in live trees.

Wood decay was the most consistent and important factor influencing failure potential. Decay was present and rated as a contributing factor in almost all failures. Fruiting bodies of *H. thouarsianum* and other wood decay fungi, decay columns, and canker rot symptoms were significantly more common among failures than among nonfailed controls. Beetle boring was also significantly more common among failures than nonfailed trees. Other factors related to increased failure potential include overtopping of the tree canopy, local alteration of the stand canopy due to dead or failed trees, multiple trunks, multiple branches arising from the same point, and asymmetric canopy shape. Failures in live and dead trees were largely influenced by the same factors.

Based on Swiecki and Bernhardt's findings, they have developed guidelines for assessing failure potential in wildland coast live oak stands infested by *P. ramorum* which are posted at www.phytosphere.com/ and at www.suddenoakdeath.org/. For more information contact Ted Swiecki, Phytosphere Research, phytosphere@phytosphere.com.

MEETINGS

Federal, State, and European *Phytophthora ramorum* regulators and scientists met in the Netherlands and England from September 8 – 12, 2003. Representatives from the United States, California, Oregon, and Washington discussed the current disease situation during their site visits to nurseries and gardens associated with *Phytophthora ramorum* and to the Central Science Laboratory in England.

Scientists in the Netherlands reported detecting *P. ramorum* infested plants in 41 of the 1100 nurseries growing host plants. Field-grown infected host plants have or will be removed, with the plots monitored and kept free of known hosts for three years.



The United Kingdom reported, in two years of surveys, finding 306 infested sites among the 5000 nurseries, parks and gardens with host plants. In an 800 acre public garden, two recently planted, diseased Rhododendrons infected adjacent established Rhododendrons. The United Kingdom has active programs in survey, detection, and eradication, with 25% of their regulatory work force committed to limiting *P. ramorum* spread.

For more information contact Jonathan M. Jones, National *Phytophthora ramorum* Program Manager, USDA-APHIS-PPQ Invasive Species and Pest Management,

EDUCATION

An art show focusing on oaks and Sudden Oak Death will open October 24 and will continue through November at the Sonoma County Museum. The show, presented by the Oak Tree Initiative Project, is sponsored by Jordan Winery of Healdsburg, in collaboration with the California Oak Foundation with all proceeds and donations benefiting Sudden Oak Death research and education. As part of the event, there will be a panel discussion on November 20 with Dr. Matteo Garbelotto, a leading Sudden Oak Death researcher from UC Berkeley, and Janice Alexander, Sudden Oak Death Regional Outreach Coordinator. Future plans for the art show may include a traveling exhibit through the central California coast and a book. The Sonoma County Museum is located at 425 Seventh Street in Santa Rosa. Future COMTF newsletters will post additional details.

WEB NEWS – WWW.SUDDENOAKDEATH.ORG

Thirteen *Phytophthora ramorum* related abstracts from the 2003 annual meeting of the American Phytopathological Society (APS) held in August in Charlotte, North Carolina are posted in the Publications and Resources section of <http://www.suddenoakdeath.org/>, under [APS Resources](#). In addition, *P. ramorum* related disease notes, articles and abstracts published by the American Phytopathological Society are catalogued for reference.

CALENDAR OF EVENTS

- 10/13/03 - Department for Environment, Food and Rural Affairs (DEFRA), U.K., will hold a meeting for interested organizations to discuss *Phytophthora ramorum* at the Central Science Laboratory, York. The current state of understanding of the disease and current controls will be explained.
- 10/24/03 – Oaks and Sudden Oak Death art show at Sonoma County Museum, 425 Seventh Street, Santa Rosa, featuring a Sudden Oak Death panel discussion on November 20.

HOST OF THE MONTH

***Phytophthora ramorum* on lilac (*Syringa vulgaris*)**



One of the recently discovered *Phytophthora ramorum* hosts is lilac (*Syringa vulgaris*). This tall, long-lived shrub, one of the most popular landscape plants in temperate regions of the US and Europe is valued for its fragrant flowers.

There are 22 botanical species of *Syringa* and over 1000 cultivated varieties. The genus name means “pipe”, referring to its hollow stems. *Syringa vulgaris*, or common lilac, originated from Persia and southeastern Europe, and was introduced to central Europe in the 16th century, then brought to North America by early settlers.

P. ramorum-infected lilacs (*Syringa vulgaris* "Belle de Nancy") were discovered in March 2003 in a nursery in Aberdeen, Scotland by Dr. Alexandra Schlenzig, Scottish Agricultural Science Agency. Symptoms were black buds on some of the stems, resembling frost damage, which failed to sprout and develop leaves. Two months later, Dr. Schlenzig found another infected batch of lilacs in the same nursery. Symptoms on *S. vulgaris* "Katherine Havermeyer" included leaf lesions, brown areas around the leaf edge. In some cases, wilting could be observed, as well as dieback where infected buds failed to sprout. *P. ramorum*-infected lilacs were also found in June 2003 in England on two *S. vulgaris* in a nursery in Sussex and 10 plants of *S. vulgaris* “Madame Lemoire” from North Yorkshire. Symptoms on those plants were limited to leaf lesions.

References:

http://www2.ville.montreal.qc.ca/jardin/en/info_verte/lilas/lilas.htm#lilas

<http://www.gardenersnet.com/lilac.htm>

Dr. Alexandra Schlenzig, personal communication

Dr. Alan Inman, DEFRA, UK, personal communication