

## Sudden Oak Death - U.S. nursery trade impacts

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From the time dying oaks were first reported in the San Francisco Bay area of northern California, nursery and landscape professionals have been curious and concerned. The concern turned to outright fear when researchers identified the cause - a microbe now named *Phytophthora ramorum* - and began to connect the dots among new host plants such as rhododendrons, and then verified the presence of the fungus in Europe. For the commercial nursery industry, this remains a new phenomenon with far more questions than answers. Affected industry businesses legitimately worry about their very survival, while they also seek to do their part to prevent long-distance spread of the disease.



**Figure 1. Typical California nursery producing for the North American marketplace**

U.S. nursery and greenhouse farms produce an array of trees, shrubs, flowers, and other plants valued by the U.S. Department of Agriculture at over \$13 billion per year. That places the industry into the third-highest value crop category in the U.S., after corn and soybeans but ahead of wheat, cotton, and tobacco. California is the largest producer of nursery and greenhouse crops, growing about \$2 billion worth of plants annually. Oregon ranks fifth overall and second in production of woody plants. These are the two states

where *P. ramorum* has been detected so far, although the Oregon infestation is small, far from production areas, and under eradication. Most California plant production also takes place far from known infestations of *P. ramorum*.

The nursery industry faces many direct impacts when a new pest or disease gains entry into the country. Some of those impacts are felt by a few; others are felt broadly by growers and gardening consumers alike. Typical impacts can include actual crop loss, loss of markets, increased production costs for pest management and compliance, and loss of plant viability and diversity. Sudden Oak Death's impacts on the nursery industry so far have been more from regulatory impacts than from actual crop loss. So far, *P. ramorum* has only been found in California in a few nurseries under the absolute worst conditions (small local-market nurseries growing plants under infected oaks and tanoaks).

More on Nursery Impacts: Over time, nursery operations have clustered in areas that offer certain production and/or marketing advantages, such as uniquely favorable growing climates and proximity to major markets. Such is the case in Oregon and California, which enjoy temperate climates and favorable soils. Both are major exporters - California exports roughly half of its production of plants and flowers to markets in other states or countries, while Oregon exports an estimated 90% of its production!

When a new pest or disease becomes established in the country and quarantines or other safeguards are put into place, markets are disrupted or lost. In the case of Sudden Oak Death, action by the California Dept. of Food and Agriculture, the Oregon Dept. of Agriculture, and USDA Animal and Plant Health Inspection Service (APHIS) persuaded or precluded many other states from implementing their own restrictions. This was good for affected producers, who found that they had to adapt to only one set of rules rather than 20 or 30 different and conflicting requirements. Uniformity also aids compliance. However, Canada is a major market for these states' crops, and Canada took a much more cautious approach, shutting its markets to most plant crops from the entire states of Oregon and California. Without reopened market access, Oregon nurseries alone faced losses in sales to Canada of \$15 to \$20 million. Although Canada's markets were reopened to Oregon growers approximately one year ago, the situation has been tougher to resolve for California.

Beginning in the spring of 2001, the American Nurseryman and Landscape Association formally began to push for USDA to establish a quarantine for *P. ramorum* to protect uninfested areas while the microbe could be studied and better understood. The Federal quarantine imposed by APHIS in February 2002 established a uniform set of rules for nurseries to follow in shipping plants around the country. This has reduced potential loss of domestic markets, and sales losses for plant retailers across the country who could have lost access to product sources just before the spring season. It also has kept compliance costs somewhat under control. Still, individual nurseries within the counties where Sudden Oak Death

has been detected have lost the ability to ship some plants, and they face delays securing needed inspections, the added cost of maintaining records, and so on. One Monterey County greenhouse operation had to completely shift its production from floral azaleas to other crops, even though the grower was far from the nearest reported *P. ramorum*, and there was no reason to suspect any problems with the operation. We hope this situation will improve with time and experience.

The ultimate potential impact for the nursery industry is tied to consumer perceptions. If consumers are led - or misled - to believe that flowers and plants may harbor the pathogen, they may simply quit buying. Even after a few years of research effort on Sudden Oak Death, the unknowns still outweigh the knowns. Each announcement of a new host complicates the situation and places nurseries in further jeopardy.

We do know that millions of plants have been shipped over the last 5 years from counties where *P. ramorum* has been found, yet so far national survey efforts in the U.S. and Canada have not detected it. This contrasts with the situation in Europe, where a different mating type of *P. ramorum* has caused mainly a nursery phenomenon. This reality supports stringent regulation and monitoring of incoming plants from Europe and elsewhere.

Historically, most plants have moved freely around the world with visual inspection as the primary defense against introducing new pests. This paradigm will not sustain us in the future. More than a century after Dutch elm disease and chestnut blight changed the face of North America, what have we learned? An overhaul of our approach to international spread of pests is urgently needed. With SOD, if worst-case scenarios play out in the U.S., we could lose prized forest and urban oak species that are fundamental colors in the industry's plant palette.

At this point, the American nursery industry is taking the issue very seriously. Job #1 is to better understand the industry's potential risks and role in preventing this disease. We are working to secure research in areas including:

- Rapid field diagnostic tests for identifying *Phytophthora ramorum* on nursery stock;
- Role and use of fungistats and fungicides;
- Role of common soil-less media components in sustaining or preventing *P. ramorum*;
- Parameters for demonstrating and maintaining *P. ramorum* pest-free production sites.

The industry takes the situation most seriously. We must move expeditiously yet methodically to understand the problem and to implement measures that ensure safe movement of plants and plant products in the marketplace. The nursery and landscape industry is committed to doing its part to maintain and enhance its contribution to the built environment and natural areas of the U.S.

