

Plant Industry Laboratory

2016 NURSERY SURVEY FOR SUDDEN OAK DEATH

In 2016 the DATCP Nursery Program and Plant Industry Bureau (PIB) Laboratory participated in a Farm Bill funded survey for “Sudden Oak Death” (SOD). This disease, first reported in 1995, has been killing live oak and tanoak in coastal forests of California and Oregon. It is caused by the fungus-like pathogen *Phytophthora ramorum*, which can affect more than 100 species of trees and shrubs, including ornamentals popular in the nursery trade. *P. ramorum* causes lethal bleeding cankers on tree hosts, as well as leaf and shoot blights on shrubs, which are a major way of spreading the disease. *P. ramorum* infected plants have been inadvertently shipped throughout the country but the disease has never been found in Wisconsin nurseries or environment.



Rhododendron with Phytophthora leaf and shoot blight

Although Wisconsin is not considered at high risk for the establishment of this disease, the state has numerous susceptible tree and shrub hosts in forests and urban landscapes including: Oak, maple, beech, ash, fir, Douglas fir, yew, rhododendron, lilac, and viburnum. Federal quarantines, state regulations, and regular monitoring of disease pathways are designed to keep this potentially devastating disease out of the state. DATCP’s SOD survey efforts began in 2004 and 2005, followed by spot checking during routine annual nursery inspections in non-survey years.

Beginning May 5, 2016 nursery inspectors checked ornamentals at 157 nurseries and dealers, with an emphasis on cultivars that are most commonly infected (rhododendron, camellia, viburnum, pieris and kalmia). The vast majority of ornamentals appeared healthy. Any plants with signs of leaf necrosis and/or shoot blight were submitted to PIB lab for diagnosis. By Aug 30, a total of 108 symptomatic plant samples belonging to 21 genera were collected from 51 businesses in 27 counties. PIB lab, which is accredited by USDA to perform DNA based testing for *P. ramorum*, analyzed all samples.

Lab results showed that *P. ramorum* was not present in any of the screened nursery stock. Further testing identified five other species of *Phytophthora* causing leaf and shoot blight in 8.4% (9 of 107) of samples. *Rhododendron* were found to be infected with *P. cactorum*, *P. nicotianae*, *P. syringae* and *P. chlamydospora*. Lilac, honeysuckle and forsythia were affected by *P. nicotianae*, *P. cactorum* and *P. citrophthora* respectively. Most of these species are commonly found in the Wisconsin environment. *P. chlamydospora* is a recently recognized species that occurs worldwide in streams, soils and woody ornamentals. These species cause diseases that need to be carefully managed but they are not as devastating as *P. ramorum*. For more information about SOD see <http://www.suddenoakdeath.org/>. Wisconsin state regulations (ATCP21.19) can be found at https://docs.legis.wisconsin.gov/code/admin_code/atcp/020/21/19.