# **SUDDEN OAK DEATH (SOD)**



# WHAT IS THE THREAT:

Sudden Oak Death is a fungal disease of forest trees caused by the fungus *Phytophthora ramorum*. It has devastated native California oak forests since 2000. SOD also infects smaller nursery plants so plants on the susceptible list must be Certified SOD free before shipment out of the state.

#### WHERE IS THE THREAT:

This disease is found mainly along the coast in northern California and into southern Oregon. SOD prefers cool, moist foggy areas but not further inland which is hot and drier. However, prior to shipping limitations, infected nursery plants were found in many other states. The disease causes a bole canker on coast live oak, California black oak, Shreve oak, tan oak and canyon live oak.

### **SYMPTOMS:**

*P. ramorum* cause two types of symptoms depending upon the host plant. Bole or trunk cankers form on tan oak and other California native oaks. Shrubs or other plants show a leaf spot that can lead to shoot death and dieback. Trunk cankers are the most threatening to oaks as they can coalesce into one another and girdle the tree. The leaf spotting hosts are no less important as they vector the disease through splashing rain to the trunks of susceptible oaks. The California bay laurel is the primary inoculation source for this disease in the forest.

## WHAT TO DO ABOUT IT:

Treatment in the early spring or fall with trunk injection or bark spray with PHOSPHO-jet, a systemic fungicide, is the recommended strategy. This treatment will arrest the size of the trunk canker but will not eliminate it so annual treatment is necessary to extend the useful life of the tree.



Coast live oak dying.



Tip blight symptoms of sudden oak death on tanoak.



Tip droop symptom of sudden oak death on tanoak

All images taken by: Header image: Joseph OBrien, USDA Forest Service, Bugwood.org; Coast Live Oak: Joseph OBrien, USDA Forest Service, Bugwood.org; Tip blight: Joseph OBrien, USDA Forest Service, Bugwood.org; Tip Droop: Tip droop symptom of sudden oak death on tanoak.

