

Phytophthora ramorum detected in Pennsylvania

The following information CAN BE SHARED with clientele, Master Gardeners and the general public.

On Feb. 18, 2010 the Penn State Plant Disease Clinic received a sample of *Laurus nobilis*, known commonly as bay laurel, true laurel, sweet bay, laurel tree, Grecian laurel, or bay tree. Some people use its leaves in cooking. The tips of the leaves submitted were dead or dying and it was reported by the grower that 95% of well rooted plants in 12 or so flats exhibited the symptoms. The United States Department of Agriculture-Animal Plant Health Inspection Service (USDA-APHIS) confirmed the plants to be infected with *Phytophthora ramorum*, the Sudden Oak Death pathogen known to occur in trees and shrubs on the west coast of the U.S. and in Europe. **The sample came from a commercial, primarily wholesale, greenhouse in eastern Pennsylvania.** *Phytophthora ramorum* can infect many important ornamental trees and shrubs under the right conditions. There is a great deal of concern that this fungus-like organism could cause significant economic damage to eastern forests and landscapes if not excluded from the region.

The 'bay laurel' submitted was not *Umbelluaria californica*, the California bay or California bay laurel that grows on the west coast and is a major host of *Phytophthora ramorum* that then spreads to oaks. However, *Laurus nobilis* is known to be a host of *Ph. ramorum*.

The actual source of the *Ph. ramorum* in Pennsylvania is still under investigation and is very much in question. The infected plants had been grown in Pennsylvania from seed obtained from a source in California. As yet, there are no known cases of *Ph. ramorum* being seedborne. I learned recently that the 'seed' is sometimes received not as cleaned seed but as seed still in the drupe (fruit). That raises the possibility that the pathogen may have been in parts of the fruit other than the actual seed. It is also possible that the pathogen was infecting other plants in the greenhouse and spread to the *Laurus*. APHIS is doing 'trace backward' investigations to determine where the pathogen may have come from and 'trace forwards' to determine whether various plants sold by the Pennsylvania greenhouse are carrying the pathogen.

SO WHAT YOU SAY!!

Phytophthora ramorum has, to date, been excluded from the eastern U.S. but this occurrence may indicate that the plant pathogen is now or will soon be in the region from multiple sources. In 2009, *Laurus nobilis* was named as the Herb of the Year by the International Herb Association (IHA). *Laurus nobilis* seed can be purchased from a number of sources including through Amazon.com. Web information indicates that the seed is difficult to germinate. It is my understanding that people have been encouraged to grow this plant and that it has been used in various Master Gardener projects. If seed or tissue associated with seed is actually the source of the pathogen, it is possible that *Phytophthora ramorum* has arrived in the east with seed purchased by backyard gardeners, etc. Where is the 'failed to germinate' material discarded? Where are plants with dying leaf tips discarded?

The photo below (and attached) is of the actual sample as it arrived at Penn State. It is not very impressive. If you are presented with *Laurus nobilis* plants with dead or dying leaf tips or entire plants dead or dying... those symptoms may be caused by:

too much water

too little water

too much fertilizer

chilling or freeze damage

Phytophthora ramorum infection

Send a sample to the Plant Disease Clinic after filling out the Clinic form obtained at the county Cooperative Extension office (also attached). Please put the plant or plant parts in a clean Ziploc or similar bag with a DRY paper towel. Place that bag inside another bag with the clinic form OUTSIDE both bags. Put the bagged sample and form either in a padded envelop or a cardboard box. Use overnight delivery OR mail it early in the week so that it arrives in the clinic promptly and does not sit in a post office over a weekend. If that requires holding the sample a day or two, then put the packaged sample in a refrigerator (not freezer) or in a cool place out of direct sunlight until it can be sent.

There is much we don't know about the circumstances surrounding this occurrence and, therefore, we can't release specifics such as the name of the greenhouse. But, the information above can be used in newsletters, training sessions, news releases, grower presentations, etc.

