



NURSERY ADVISORY No. 01-2014

DATE: June 23, 2014
TO: All County Agricultural Commissioners
FROM: Pest Exclusion/Nursery, Seed, and Cotton Program
Plant Health and Pest Prevention Services
SUBJECT: *Phytophthora tentaculata*

A new plant pathogen, *Phytophthora tentaculata*, has been detected in several counties in California. The first detection in 2012 was at a nursery in Monterey County on *Mimulus aurantiacus*. This detection marks the first find of this pathogen in North America. Since the initial detection, this pathogen has been found on nursery stock in Alameda, Butte, Placer, and Santa Cruz counties.

Nursery stock cleanliness standards should be enforced for this pathogen as a pest of limited distribution. Any blocks of infested plants should be placed on hold until the standards of cleanliness can be met.

During nursery stock cleanliness inspections, county inspectors are encouraged to thoroughly inspect known hosts for this new emerging pathogen. If additional finds are identified, it will help to determine the distribution of the disease, and to complete a risk assessment.

Background

P. tentaculata is a known pathogen of concern in Europe, China and Japan. In 1993, the pathogen was first detected on *Chrysanthemum sp.*, *Delphinium sp.* and *Verbena sp.* in Germany. Since the first detection, the host list has increased to include *Gerbera jamesonii*, *Origanum vulgare*, *Santolina chamaecyparissus*, *Lavendula angustifolia*, *Chichorium intybus*, *Aucklandia lappa* and *Calendula arvensis*. Additionally, in California the pathogen has been detected on *Mimulus aurantiacus*, *Frangula californica*, *Heteromeles arbutifolia*, and *Salvia sp.*



Symptoms and Signs

Phytophthora tentaculata causes root and stem rot of *Mimulus aurantiacus* in California nurseries. Roots and stem collars develop necrotic and sunken lesions with few feeder roots. In Europe and China, the pathogen is reported to cause crown, root, and stalk rot of nursery plants. Subsequently, above ground symptoms include stunting, leaf russetting and yellowing to browning (chlorosis), defoliation and dieback of twigs, brown to black lesions girdling the basal stem and eventually, death of the entire plant.



Disease Dispersal and Prevention

Movement of *P. tentaculata* may occur over short and long distances through infected nursery stock. Also, as the pathogen is soil-borne and water-borne, it may easily spread by any means that aids in the movement of soil and/or water from infected plants to non-infected ones. These include contaminated potting soils, cultivation tools and equipment, cultivation practices, and irrigation water.

The use of nursery stock and plantings that have been lab-tested to be free of *Phytophthora tentaculata* is the best means to prevent an introduction of the pathogen.

Inspection Procedures and Hold Notice

To determine the distribution and limit the spread of this new pathogen, all nurseries selling host species should be thoroughly inspected during nursery stock cleanliness inspections. All suspect samples should be submitted to the CDFA Plant Pest Diagnostics Lab in Sacramento. Samples should comprise of an entire plant.

Plants that are infested do not meet the California Nursery Stock Standards of Cleanliness (FAC 6902 and CCR 3060.2) and may not be offered for sale. Any other host plants that may have been exposed to infestation should be considered potentially infested and should be thoroughly inspected. Plants that are a part of the infested block should be placed on hold and the infested plants and other symptomatic plants in the block should be disposed of.

If you have any questions regarding this advisory, please contact Kristina Weber at (916) 654-0435 or by e-mail at kristina.weber@cdfa.ca.gov.

