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Visit The American Phytopathological Society website to view pictures of plum pox virus symptoms:
www.apsnet.org/online/feature/PlumPox.

Help fight PPV

Plum pox virus, an exotic disease, threatens ornamental and fruit-bearing trees.

ITHACA, N.Y. – Fruit growers in New York are trying to stave off an invasion by the plum pox virus – an exotic disease first spotted in the state in 2006. But it will take the efforts of gardeners and homeowners help fully eradicate the virus.

“PPV (plum pox virus) is a big threat now in the Lake Ontario region,” says Debbie Breth, Cornell Cooperative Extension educator and team leader for the Lake Ontario Fruit Program. “But anyone who lives near an area where growers produce peaches, nectarines, Japanese and European plums or apricots – including in the Finger Lakes, Hudson Valley and on Long Island – should be on the lookout and avoid planting susceptible species.” (See sidebar: What not to plant.) Unlike European strains, sweet and tart cherries are not susceptible to the virus strain found in the U.S.

The disease was first recognized in Bulgaria in the 1910s, and slowly spread across Europe. It made its North America debut in Pennsylvania in 1999, and in 2006 turned up in New York in two orchards in Niagara County. The virus can reduce yields by 80 to 100 percent in infected trees, causing ring-shaped spots on fruit and turning them mealy.

PPV can be tough to spot. “Infected trees often show no symptoms,” Breth points out. In some cases, the plants appear sickly and fail to thrive. The fruit may be deformed or drop early, or the leaves and fruit may turn yellow, or develop rings, bands or blotches of brown, dead tissue.

The disease is not harmful to humans, and spreads primarily in two ways. More than 20 species of aphids in their winged phase can transmit the disease from plant to plant. These tiny insects can ride the wind, transporting the disease up to 20 miles. People can spread the disease farther and faster by shipping and planting infected nursery stock.

Here’s what you can do to help limit the spread of the virus and eradicate the disease:

- Keep an eye on any susceptible species growing on your property -- *Prunus* species including cherries, peaches, plums, apricots, nectarines, or other stone fruit, both ornamental and those grown for fruit.
- If any appear sickly or show other symptoms (yellowing or browning of leaves or fruit), report them to your county’s office of Cornell Cooperative Extension (find contact information in your phone book or at www.cce.cornell.edu) or the USDA-APHIS office in Lockport, N.Y. (716-433-6482). Suspect plant samples can be tested by Cornell’s Plant Disease Diagnostic Clinic. (More information: plantclinic.cornell.edu.)

More

- Be especially vigilant with any newly purchased stone fruit plants, whether through mail order or from local sources. In certain quarantined areas near Lake Ontario, importing susceptible plants is prohibited.

Early detection is key, notes Breth, because you can't kill the virus with pesticides like you can with most fungal or bacterial diseases. The only remedy is to destroy the plant before it has a chance to infect others. Killing infected trees may take persistence as plum trees tend to regrow even when cut back to the ground.

The New York State Department of Agriculture and Markets is aggressively trying to eradicate PPV before it gains a foothold. In 2007, the agency sampled all orchards within 5 miles of the two infected trees found in 2006, identifying 18 more infected trees in five different orchards. Trees within 50 meters of those infected trees have been removed, nearly 24 acres total. Extensive sampling of orchards in Niagara County found no other infected trees. An additional infection was found in Orleans County, where approximately 3 acres of peach trees were removed. Across the lake in Ontario, Canada, authorities found 261 infected trees in orchards and seven more in residential landscapes.

Commercial fruit orchard surveys will extend to Monroe and Wayne Counties and into other stone fruit production regions in 2008. If producers have questions or concerns about PPV surveys of commercial orchards, contact Raymond Jablonski in the NYSDAM office in Ellicottville, N.Y. (716-799-9293).

The USDA's Animal and Plant Health Inspection Service (APHIS) is surveying for susceptible *Prunus* trees and shrubs on residential properties around the infected orchard sites. Homeowners concerned about potential infections in their *Prunus* trees and shrubs should contact USDA office in Lockport, NY (716-433-6482).

For more information and images of plum pox virus symptoms, visit The American Phytopathological Society website: www.apsnet.org/online/feature/PlumPox. Find maps of quarantine areas in New York and more local information at: www.gardening.cornell.edu/news.

Sidebar: What not to plant

These species – whether grown as ornamentals or for fruit – are of concern in certain zones quarantined or regulated (where planting is prohibited) by the New York State Department of Agriculture and Markets in counties along the southwest shore of Lake Ontario. The quarantine zones may grow based on 2008 surveys, and no-plant zones may be added. Planting *Prunus* species from the list is prohibited in no-plant zones. Homeowners concerned about plum pox virus should keep a close eye on any of these species growing on their property, and avoid importing plants.

Fruit-bearing and ornamental varieties of:

- American plum and wild plum (*Prunus americana*)
- Apricot (*P. ameniaca*)
- Myrobalan plum/cherry plum (*P. cerasifera*)
- European plum (*P. domestica*)
- Peach/flowering peach (*P. peresica persica*)
- Nectarine (*P. persica nucipersica*)
- Japanese plum (*P. salicina*)
- Sweet Almond (*P. dulcis*)

Ornamental varieties of:

- Purple leaf plum (*P. cerasifera*)
- Purple leaf sand cherry (*P. cistena*)
- Flowering Almond (*P. glandulosa*)
- Flowering peach and purple leaf peach (*P. persica*)
- Sand cherry (*P. pumila*)
- Blackthorn and Sloe (*P. spinosa*)
- Japanese flowering cherry and Kwanzan cherry (*P. serrulate*)
- Nanking cherry and Hansen's bush cherry (*P. tomentosa*)
- Flowering/double flowering plum (*P. triloba*)