Researchers attack plum pox to save N.Y. fruits

September 8 2010, By Lianne Barry

Plum pox virus on a peach.

(PhysOrg.com) -- Last year, 15 trees in New York state tested positive for plum pox virus (PPV), and more than 30 acres of peaches, plums and apricots in six orchards had to be destroyed by their owners. In 2008, 10 trees and 16 acres of trees had to be destroyed. Cornell plant pathologist Marc Fuchs and his team are working to eradicate PPV from New York.

"If PPV is not detected and infected trees are not destroyed, the virus will spread within and between orchards in New York and adjacent states by aphid vectors," said Fuchs, assistant professor of plant pathology at Cornell's New York State Agricultural Experiment Station

in Geneva. "Ultimately, the local stone fruit industry could be destroyed if concerted efforts to eradicate the virus are not implemented."

Plum pox is a viral disease of such stone fruits as peaches, plums and apricots. First reported in Bulgaria in 1915, it has since spread throughout Europe, wiping out thousands of trees. In 1999, PPV was found in Adams County, Pa. The disease remained localized in the continental United States until 2006, when it spread to plum and peach trees in New York's Niagara County.

To date, there are six separate strains of PPV. Strain D is the only one found in North America.

In Fuchs' lab, 28 people were working to process and test stone fruit samples for PPV over the summer.

"A lot of growers depend on the job we do to make sure their crops stay protected from this nasty little virus," said Pat Devellis, a senior at SUNY Brockport who worked under Fuchs this summer. On the job, he has learned to identify the symptoms of plum pox: yellow spots and rings or veins within the leaves or fruits of the tree. Symptoms of PPV vary in type and severity depending on strain, timing of infection, cultivar and environmental factors.

By the end of the year, Fuchs hopes to have tested 250,000 stone fruit samples in combination with U.S. Department of Agriculture and New York State Department of Agriculture and Markets standards.

Provided by Cornell University