Plum Pox Virus

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PPV was not confirmed in North America before October, 1999

On October 12, 1999 PPV was found in south central PA on Encore peach

In 2006, PPV found in New York and Michigan
Disease History

- Bulgaria - 1915
- Yugoslavia - 1935
- Hungary - 1941
- Germany - 1956
- Poland / Russia - 1961
- France - 1970
- England (Kent) - 1965
- Spain - 1984
- Chile – 1992
- USA (PA) - 1999
- Canada - 2000

PPV spread

- Infected nursery stock, seedling trees, rootstocks, budding materials
- Aphids
**PPV strains**

- PPV-D, PPV-M, PPV-C, PPV-EA

- European strains, PPV-D, PPV-M

- PPV-D in PA, does not infect cherry, spread slowly by aphids, seed transmission not known

- Strains differ in severity of symptoms on different hosts and in patterns of spread by aphids

**Symptoms on European plum leaf**

- Yellowing of leaf vein
PPV Infected Fruit Trees:

- Reduction in fruit quality
- Yield losses of 80-100% in susceptible cultivars
- Tree death – 5% per year
Intensive Surveys in Prunus Production Regions

Infected orchards removed soon after detection


- Samples processed: 10,332,233
- # Positive Samples: 459 (399 of these in 2000)
- Weeds processed: 83,869 (All negative)
- Bait Plants (from 2002): 31,468 (All negative)
- # Positive Sites (blocks, res.): 119
- Total Com. Acreage Removed: > 1600
- Residential Tree Des. Orders: 214

Cost of Eradication Program:

- PA State Government: over $8.8 M
- U.S. Government: over $31.8 M
- Total: $40.6 M,

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Over $26 M has been paid to growers for indemnity, etc.

Plum Pox Virus Quarantine Area as of July 27, 2000

- Expanded Quarantine Area
- Original Quarantine Area

PA DEPARTMENT OF AGRICULTURE
Revised Quarantine Area
Dickinson and S. Middleton Twp., Cumberland Co., PA
Huntington, Latimore, and portions of Manallen and Tytus Twp., Adams Co., PA

2000 Survey Results as of July 21

- PPV Positive Orchard Blocks
- PPV Negative Orchard Blocks
- Orchard Blocks still to be tested
PPV Quarantine Area, Quarantined Removed/Replanting Allowed: 1/22/07

Areas Related to Plum Pox Virus Quarantine

- Current Quarantine Area
- Quarantine Removed, Replanting Allowed

PPV: Recommendations

- More reliable testing techniques to reduce false readings due to sampling variation and environmental influences (false neg.)

- Additional research to answer questions about the virus, spread, and resistant cultivars

- Concern that there is an expectation that survey costs will decrease when they will increase due to replanting in quarantine areas

- Elimination of extensive sampling outside of PA ignores potential for spread and threatens national stone fruit industry