Plum Pox Virus

The Threat

The plum pox potyvirus damages cultivated peaches, plums, nectarines and apricots ("stone fruit"), as well as native and ornamental Prunus species. The virus is carried by live plant materials and transmitted from one plant to another by more than 20 species of aphid – small, plant-feeding insects in the superfamily Aphidoidea. Trees infected with plum pox virus show varying levels of impact; symptoms of the virus can appear as damaged leaves, flowers, and fruit. This disease is economically important because it causes trees to greatly reduce fruit production and the remaining fruit is typically unmarketable, posing a significant threat to the annual billion-dollar stone fruit industry in the U.S. Certain strains of plum pox virus also infect susceptible trees in natural areas, reducing available food and habitat for many species of birds and game.

The Response

Since the discovery of plum pox virus in Pennsylvania in September of 1999, intensive survey and eradication efforts have been used to contain and eliminate plum pox.

In March of 2000, the United States Secretary of Agriculture declared a state of emergency in order to prevent the spread of the virus from two counties in Pennsylvania to the rest of the United States and to other countries. This action allowed the United States Department of Agriculture to provide the funding necessary for eradication of infected trees and to pay compensation to affected growers.

In 2009, a joint USDA/Pennsylvania Department of Agriculture survey collected more than 225,000 samples from cultivated and native fruit trees. All the samples were free of plum pox virus. After three consecutive years of negative surveys, Pennsylvania can now declare the virus officially eradicated.

Challenges

In 2006, for the first time since nationwide surveys began in 2000, the national survey detected plum pox infected trees outside of Pennsylvania – in both New York and Michigan. Since then, surveys in Pennsylvania and Michigan have found no further infections and those states declared plum pox eradicated in 2009. However, extensive survey and eradication activities continue in New York.

-Based on text from the Pennsylvania Department of Agriculture

JohnHammond,USDAARS

Characteristic fruit and leaf symptoms

EPPO Archive

Characteristic ring spot symptom

ELEMENTS OF SUCCESS!

- Prompt response to initial detection with aggressive eradication effort
- Support from high-ranking officials
- Availability of compensation for trees removed in the eradication program
- Cooperation from fruit farmers
- National and focused survey efforts to identify subsidiary infestations

Scott Bauer, USDA ARS

An alate (winged) green peach aphid (Myzus persicae), an important vector of plum pox virus

After three years of negative surveys, Pennsylvania and Michigan have declared plum pox eradicated.

Plum Pox Virus

The plum pox virus poses a significant threat to the billion-dollar stone fruit industry in the United States. U.S. states affected by the plum pox virus are Michigan, New York, and Pennsylvania.

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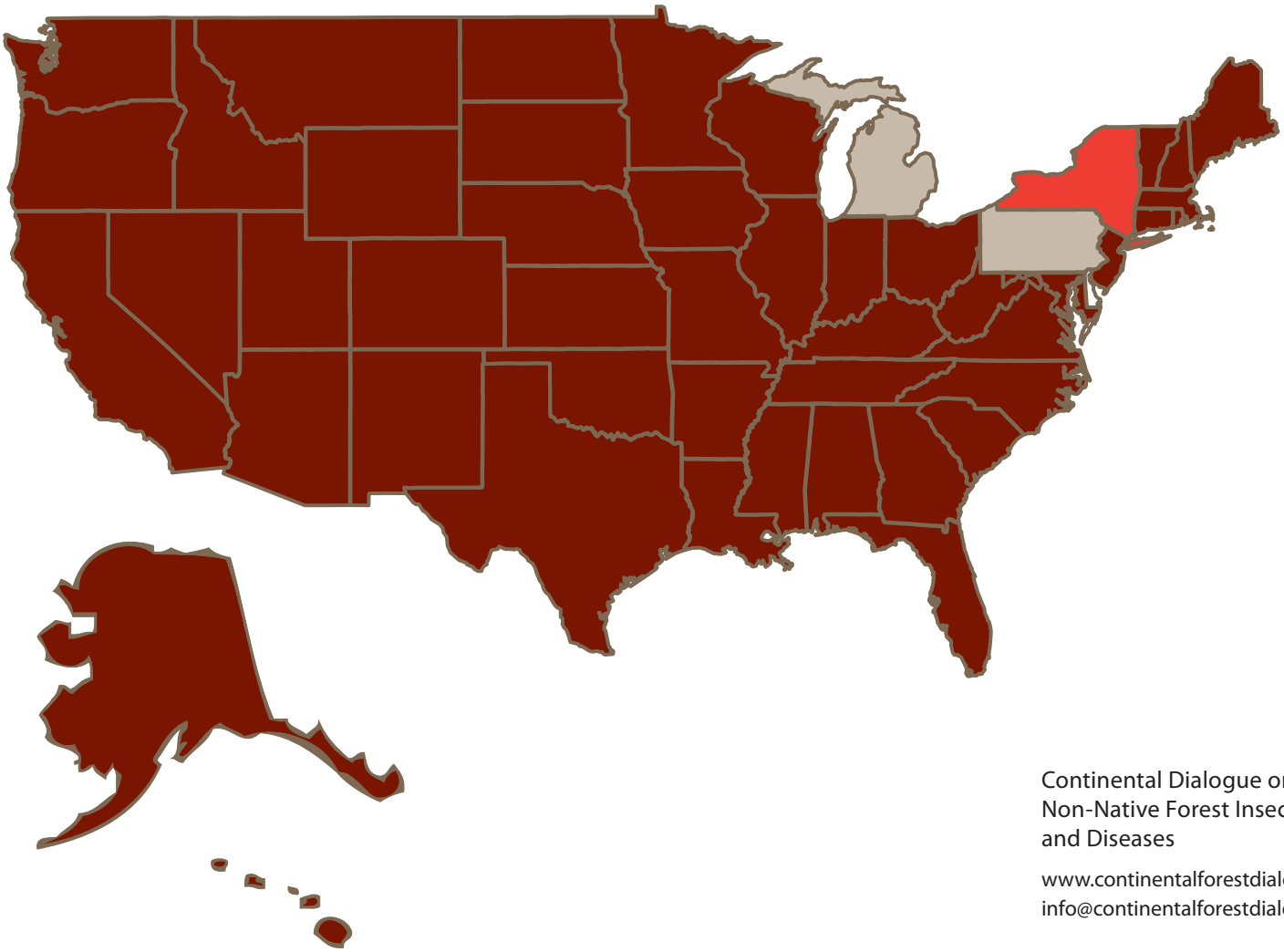

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