

## STATUS OF THE CITRUS CANCKER ERADICATION PROGRAM IN FLORIDA AND UNIVERSITY OF FLORIDA CITRUS CANCKER EXTENSION PROGRAM

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**Abstract.** Citrus cancker, caused by *Xanthomonas axonopodis* pv *citri*, was detected in Florida for the third time in 1995 near the Miami International Airport on a residential citrus tree. Since detection, citrus cancker has spread to sixteen different counties in central and south Florida. Various legal battles in the residential sector have halted eradication efforts in some areas of Florida. However, recent decisions from the Florida State Supreme Court have upheld the eradication process and procedures. Over two million commercial citrus trees and nearly 800 thousand residential trees have been removed. Eradication continues in residential areas and in commercial groves where cancker is detected; quarantines are being removed from areas following successful eradication. A citrus cancker extension program was developed to lead and coordinate education for the commercial citrus industry, homeowners, and non-citrus commercial businesses. The mission of the program is to reduce the spread of citrus cancker by eliminating transport of infected citrus plant material and encouraging decontamination of vehicles and personnel. The Division of Plant Industry continues to address legal issues where necessary and conduct extensive survey and control efforts. Public and private agencies have partnered to continue statewide education activities meeting the needs of various audiences.

### History

Currently the state is waging its third eradication campaign in the last one hundred years. The first detection of citrus cancker was in 1910; citrus cancker had spread throughout the citrus producing Gulf States. It was declared eradicated from Florida in 1933, and later from the United States in 1945. The second detection of citrus cancker in Florida was in 1986 when it was found in a commercial citrus grove in Manatee County; that outbreak was declared eradicated in 1994. A unique and separate introduction of citrus cancker, Asian or A-strain, was detected one year later, 1995, in Miami-Dade County, near the international airport on a residential tree. It spread rapidly throughout Miami-Dade and the lime industry

was decimated. Harvesters from Dade County would later spread the bacterium to Collier and Hendry counties affecting movement of citrus products in and out of those counties. In eight years, citrus cancker spread to 16 counties affecting commercial and residential citrus trees.

In previous eradication programs, infected trees and all trees within 125 feet of them were destroyed. Scientific studies conducted by a team of researchers from USDA, ARS and the University of Florida, IFAS, provided evidence that this radius was not effective at capturing all the bacteria that could spread under Florida weather conditions. The 1,900-foot diameter eradication zone was based on research conducted under the weather conditions in South Florida and implemented in 2000. In this study, over 15,000 trees were identified and monitored for evidence of citrus cancker disease. Approximately 95% of the exposed trees that became diseased were within 1,900 feet of the single disease-positive tree. It was further found that the previously used distance of 125 feet for exposed trees captured only 20% of the trees likely to be infected by the disease from a cancker-positive tree.

### Legal Issues

As a federal and state regulated disease, infected trees are destroyed when they are found. Homeowners were disgruntled by the loss of their dooryard citrus trees; many were unaware of the biology of the disease, what caused the disease, and that the only way to prevent its spread was eradication. Lawsuits were filed in several southeast Florida counties regarding personal property rights and compensation of removed trees. Subsequently, the eradication program was stopped and started several times allowing the disease to spread unchecked. The Florida State Supreme Court decided on February 12, 2004 that eradication of infected and exposed citrus trees was a valid use of the state's police powers.

### Extension and Education Program

A USDA grant was awarded to the University of FL, IFAS to develop an extension education program specifically for citrus cancker. Programs have targeted three main groups: residential/homeowners, commercial citrus industry, and non-citrus commercial businesses such as lawn and landscape operations. Educational materials have been developed and distributed through county extension offices, city halls, and public libraries. Educational training has targeted the Master Gardener and Florida Yards and Neighborhoods programs, which directly interface with the general public and provide a vehicle for distributing citrus cancker educational materials. A series of educational training workshops were held for the commercial citrus industry, specifically harvesters, and nearly 1,000 people participated. Currently, the citrus cancker education program is launching a program to train citrus harvesters and pickers for the approaching 2004-2005 season. A flip-chart and accompanying video have been developed, which were modeled after the worker protection standard program.

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Collaborating with FDACS, Division of Plant Industry and USDA, Animal and Plant Health Inspection Service, the University of Florida, IFAS will continue to provide educational training and distribution of citrus canker educational materials to prevent the further spread of citrus canker disease.

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