





CITRUS CANKER

The threat to Florida agriculture



QUARANTINE ALERT

Citrus canker is caused by a highly contagious bacteria that infects cultivated species of citrus (orange, grapefruit, lime, lemon, and kumquat). This bacteria is not harmful to humans. There is no cure for this infection. There are three known varieties: Asiatic citrus canker, false citrus canker and Mexican lime cancrosis; bu these differ only in microscopic characteristics of the bacteria.

SYMPTOMS

Symptoms of infection usually appear during the summer, when the weather is hot and rainy. Oily looking 2 - 10 mm circular spots first appear on upper portion of leaves. On leaves, stems, thorns and fruit, circular lesions become raised and blister-like, growing into white or yellow spongy pustules. These pustules then darken and thicken into a light tan to brown corky canker, which is rough to the touch. Older lesions on leaves and fruit tend to have more elevated margins and a sunken center. Ocasionally these lesions are surrounded by a yellow halo. Older lesions on leaves may fall out, leaving round holes in the leaves. Sunken craters are especially noticeable on fruits, but the lesions do not penetrate far into the rind. Heavily infected trees often loose their leaves and fruit, and are unable to produce more fruit!





HISTORY

Citrus canker may be found in southern Asia, Japan, the Middle East, Africa, South America and now North America. The disease was first discovered in North America in the early 1900s and again in 1986. It was eradicated on both occasions, but was observed again in 1995 and is now present in both the Miami and Tampa Bay areas of Florida.

Florida is by far the state most at risk from citrus canker because of Florida's high humidity throughout the year, seasonal hurricanes and frequent thunderstorms accompanied by high wind gusts.

Citrus canker is spread locally primarily by wind, rain, overhead irrigation, and contaminated equipment. Citrus canker is spread over long distances primarily by movement of infected plant materials, including fruit, wood, and foliage. Citrus canker is the only plant pathogen to have been successfully eradicated (in Mozambique, South Africa, New Zealand, Australia and twice in the U.S.A.), which reflects its needs for proper weather conditions and a citrus host.

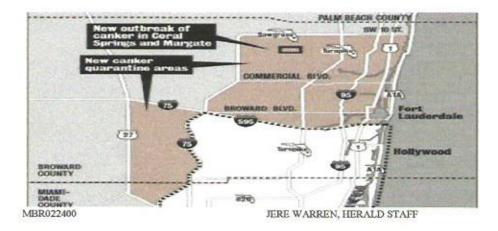
PREVENTION AND TREATMENT

When environmental conditions are favorable for the spread of the disease, chemical control measures are almost futile. However, materials containing coppe (bordeaux mixture, copper hydroxide, basic copper chloride, copper oxychloride, and tribasic copper sulfate) may help protect leaves and fruit from acquiring the disease. These materials can reduce the incidence of disease, but they will not eliminate an infection; plus, excessive use of copper may cause a toxic effect on plants.

If you suspect a citrus plant is infected with the citrus canker bacteria, please do not move the plant! Mark the plant and call the Citrus canker hotline immediately! Eradication of infected and adjacent trees is the most effective means of protecting our citrus industry from the disease. Once positively identified, diseased trees in commercial groves and residences are removed and burned.

Surrounding, disease-free trees within 1900 feet may be destroyed as well, depending upon a risk assessment determined by the inspector. Areas where trees have been destroyed must be kept free of citrus sprouts and seedlings. Movement of citrus fruit budwood and other plant parts is prohibited from property on or adjacent to sites where infected plants are located. All clothing, tools, and equipment used in infested areas must be properly disinfected by using a bleach solution or quaternary ammonia solution.

QUARANTINE



This quarantine extends through Broward, Miami-Dade, Collier, Hendry, Hillsborough, and Manatee counties. If you reside within the quarantined area, you can expect a visit from an agriculture employee. Infected trees will be removed and burned. Owners will be given a \$100 voucher to replace the tree with a non citrus tree. You may not plant a citrus species in your yard for 2 years after the quarantine is lifted! Providing the bacteria with a host will only coax its return. Please contact the citrus canker hotline for further information regarding the tree replacement vouchers. It is important to cooperate with inspectors because if left unchecked, this disease could destroy all of the citrus trees in Florida. We appreciate your help and understanding as we try to eradicate this monster.

HOW CAN I HELP?

- Contact the Citrus Canker Helpline at (305) 598-6988 or (800) 850-3781 if you think you might have infected trees.
- Give USDA (and contracted tree removal company) permission to remove infected trees.
- Let inspectors into your yard to check your citrus trees.
- Do not move any citrus trees, citrus plants or citrus fruit off your property.
 If you are going to dispose of any citrus plant parts, please double bag them first.
- Disinfect yourself, clothes, equipment and shoes after working near a citrus tree.
- Insist that lawn maintenance crews disinfect themselves and their equipment before and after working on your property.

FOR MORE INFORMATION

Animal and Plant Health Inspection Service

Dean W. Gabriel, Ph.D. Plant Pathology Department, University of Florida Select index ° citrus canker

Department of Agriculture and Consumer Services

The Miami Herald



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For additional information or assistance contact: Rebecca McNair Jalil (Jay) Vedaee Agriculture and Extension Education Division 3245 College Avenue



Davie, Florida, USA 33314 (954) 370-3725 (954) 370-3737 Fax e-mail: mcnair@broward.org jvedaee@broward.org 2000 NACo Achievement Award Trilingual Website

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