



# Citrus Canker Disease

## In Fort Bend County

SEPTEMBER 1, 2016

### *What's going on?*

Currently the Texas Department of Agriculture, working with the USDA, has issued a quarantine area in northeast Richmond, Texas to isolate a localized outbreak of Citrus Canker Disease. This factsheet is designed to answer common questions and provide action steps for those in need.

### *What is it?*

Citrus Canker Disease is caused by a bacterial pathogen. It is a serious disease of all citrus cultivars and some citrus relatives. For more information, visit the link below.

<http://www.idtools.org/id/citrus/diseases/factsheet.php?name=Citrus+canker>



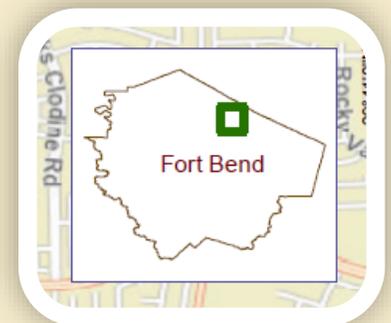
### *Where is it?*

The current quarantine area is located in Richmond, close to Sugar Land, surrounding a stretch of FM 1464 at West Airport Blvd. For more information, visit the link below.

<http://www.texasagriculture.gov/RegulatoryPrograms/PlantQuality/PestandDiseaseAlerts/CitrusCanker.aspx>

For an interactive Google Map of the current quarantine area, visit the link below.

[https://www.google.com/maps/d/viewer?mid=1yXkdWdFF\\_hbH6h0C2bOM6nBhs5g](https://www.google.com/maps/d/viewer?mid=1yXkdWdFF_hbH6h0C2bOM6nBhs5g)



## *What should I do?*

If you live close to this area and have citrus or citrus relatives planted in your landscape, there are several maintenance and prevention strategies we recommend.

- ✓ **Sanitation Practices** – Rake up fallen leaves, branches, twigs, and fruit. Double bag these materials and send to landfill, do not compost. Keep the understory mulched well.
- ✓ **Avoiding Wounds** – Avoid unnecessary pruning or other physical damage done by landscape equipment. Further, use strategies to minimize bird, rodent, or insect damage to trees and fruit.
- ✓ **Tree Health** – Encouraging overall tree health is always a good practice. For an overview of recommended citrus care visit: <http://aggie-horticulture.tamu.edu/fruit-nut/fact-sheets/citrus/>
- ✓ **Chemical Prevention** – Use approved insecticides to minimize common insect damage. Preventive bactericides common for citrus are copper products. Look for neutralized copper sulfate or copper hydroxide products. Each must be labeled for use on citrus.

## *Who should I contact?*

If you suspect your trees to be infected or if you have initial questions about this disease, contact your Fort Bend County Extension Office. Either your local county agent or a certified master gardener hotline representative will eagerly assist you. Please **DO NOT** transport plant samples (to our office, local nurseries, garden centers, etc.). Instead, we ask that you take representative photos and email those to us for review. If we deem it necessary, we will recommend further steps for you to take.

Texas A&M AgriLife Extension - Fort Bend County Office

<http://fortbend.agrilife.org>

(281) 342-3034

Fort Bend County Master Gardener Hotline

<http://FBMG.org>

(281) 341-7068

[FortBendMG@ag.tamu.edu](mailto:FortBendMG@ag.tamu.edu)

Further Resources

<http://aggie-horticulture.tamu.edu/>

<http://saveourcitrus.com>

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# Citrus Canker

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Citrus canker, a contagious plant disease caused by the bacterium *Xanthomonas citri* subsp. *citri* (syn. *X. axonopodis* subsp. *citri*), can cause severe damage to all citrus cultivars and some citrus relatives. The disease is not a risk to human or animal health but makes fruit unsightly and unmarketable.

The disease was introduced into the United States from Japan in the early 1900s. Through quarantine and eradication programs initiated by the federal government and states affected by the disease, citrus canker appeared to have been eradicated from Texas by 1947. However, in October 2015, the disease was confirmed in symptomatic lime and lemon trees in Rancho Viejo in Cameron County. In the summer of 2016, the disease was found in Houston (Harris County) and Richmond (Fort Bend County).

## Information current as of September 2016.

A quarantine is a tool to isolate, reduce, and eradicate potential disease outbreaks. In February 2016, the Texas Department of Agriculture (TDA) quarantined the area in Cameron County where citrus canker samples from lime and lemon trees originated. The United States Department of Agriculture–Animal and Plant Health Inspection Service (USDA–APHIS) recognized this quarantine in June 2016, meaning that both state and federal citrus canker quarantine rules regulate citrus in this area. Currently, portions of Harris and Fort Bend counties are under TDA quarantines for citrus canker and expected to be soon under USDA–APHIS quarantines.

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## Symptoms

The bacterium grows and multiplies in diseased plant parts—all aboveground parts of the citrus tree are susceptible. Citrus canker causes premature leaf and fruit drop, twig dieback, general decline, and blemished fruit (Fig. 1).

Blister-like lesions on leaves and fruit start small and expand as the disease progresses. These lesions may darken to tan or black and develop a water-soaked margin with a yellow halo surrounding it (Fig. 2).

The center of the lesion on leaves as well as on stems and twigs can appear raised and corky or scabby (Fig. 3), surrounded by a water-soaked margin. Mature lesions on older symptomatic leaves may have a shot-hole look (Fig. 2) and these lesions eventually die and fall out.

## Environmental Factors

This bacterium thrives in warm, moist conditions and disease development is optimal at 68°F to 86°F (20°F to 30°C). It oozes out from diseased plant parts where there is ample free moisture and easily spreads to cause new infections. The natural transmission mode is through wind and rains that spread the disease over



Figure 1. Canker-affected orange. Source: Olufemi J. Alabi

short distances by splashing it onto other plants. Tropical storms or hurricanes can accelerate the range and speed of the disease spread. The primary way citrus canker spreads across locations is that human activities can move infected materials (budwood and fruit) from one place to another. The disease also spreads from tree to tree through mechanical contact with pruning and other equipment.

## Control

Since there is no cure for the bacterium, prevention is the best approach to managing citrus canker.

- Exclude the pathogen from areas it is not known to exist by buying plants, budwood, and seedlings only from TDA-certified citrus nurseries.
- Implement TDA regulations before moving citrus materials (including budwood, seedlings, and fruit) within or outside of the state.
- Use good sanitation practices to reduce potential



**Figure 2.** Lesions on leaves of an infected lime tree. Source: Olufemi J. Alabi

disease spread. Practice general cleanliness and use alcohol-based sanitizers, bleach solution, and antibacterial soap solutions to decontaminate equipment and tools and reduce the risks associated with human and mechanical transmission of the disease.

- If you suspect that a citrus plant has citrus canker, report the tree to TDA at (800) 835-5832 or online at <http://www.citrusalert.com/report-a-tree> for further assistance.
- Remove and destroy diseased plants to eliminate potential bacteria for future infections.
- Monitor nearby citrus plants. If new infections appear, take action swiftly. TDA regulations require disposal of infected tree and plant material by burning or bagging and burying it at least 2 feet deep at a municipal landfill.

Plant protection chemicals that contain copper can help prevent infection. These products reduce risks but do not stop the disease from occurring or cure affected trees.

- Application timing is critical to provide protection.
- New, growing tissues are the most susceptible to infection.
- Multiple applications may be needed to ensure proper coverage on the plant.
- Proper chemical use and rates are available on the product label. Always read all directions and labels before using any chemical control agent.



**Figure 3.** Blister-like lesions on orange leaves. Source: Olufemi J. Alabi

Extension Plant Pathology  
<http://plantclinic.tamu.edu>

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