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Citrus Disease Guide

*The Quick ID Guide to
Emerging Diseases
of Texas Citrus*

The *Quick ID Guide to Emerging Diseases of Texas Citrus* enables Master Gardeners, citrus enthusiasts, and homeowners to rapidly identify potentially damaging citrus diseases. The guide consists of a set of flash cards which depict general symptoms of different diseases. Early detection of pathogens makes managing disease issues more successful.

This resource is produced in part with grants from the
Texas Citrus Producers Board
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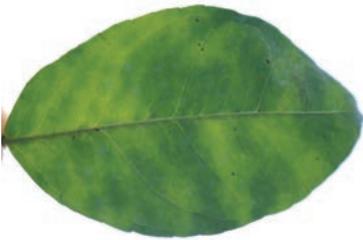
Texas Department of Agriculture
www.agr.state.tx.us

Texas Plant Disease Diagnostic Lab
plantclinic.tamu.edu

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January 2012

Citrus Greening



Citrus Greening

Definition

Citrus greening (Huanglongbing) is a bacterial disease that can greatly reduce fruit production and kill trees. This is one of the more serious citrus diseases in the world. It was first identified in Florida in 2005 and has since been reported in Georgia, South Carolina, and Louisiana. In January 2012, this disease was confirmed to be present in Texas.

Symptoms

Leaves: They appear to have blotchy mottling and are yellowing. Leaves also may look narrow and are bunched together. Symptoms may initially appear on a single shoot.

Twig and branch: Dieback may occur, resulting in leafless twigs or branches.

Fruit: They are smaller and lopsided. Orange-brown discoloration may appear on tissue where the fruit attaches to the tree.

Insect vector: The Asian Citrus Psyllid is small, measuring 2-4mm. These insects sit at a 45° angle. Nymphs are typically yellow and secrete a waxy substance when feeding on the plant.

If you suspect that you might have this problem, contact the Texas Department of Agriculture (800-835-5832) or the Texas A&M AgriLife Extension Service for assistance. Early detection of citrus greening will help reduce damage from this pathogen.

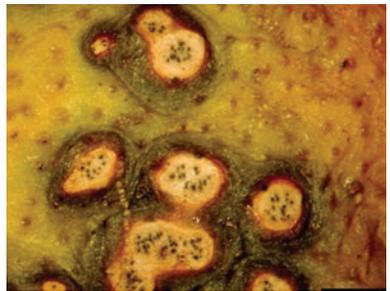
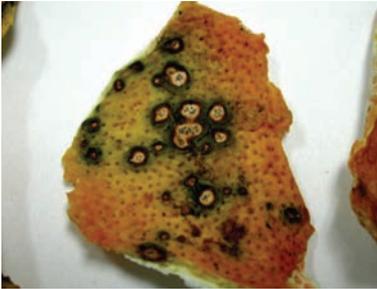
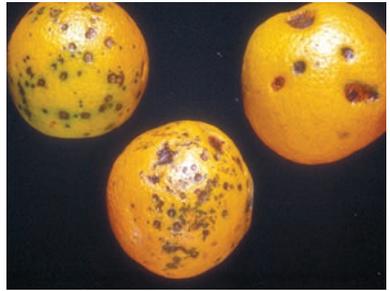
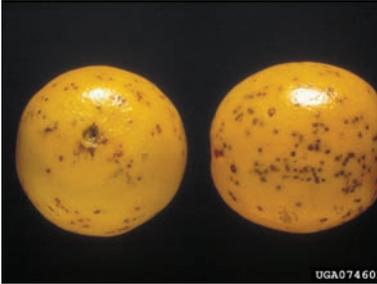
Photo credits

Jeffrey W. Lotz, Florida Department of Agriculture and Consumer Services, Bugwood.org

Sheila McBride, Texas A&M AgriLife Extension Service

Ron French, Texas A&M AgriLife Extension Service

Citrus Black Spot



Citrus Black Spot

Definition

The fungus *Guignardia citricarpa* (Anamorph: *Phyllosticta citricarpa*) causes citrus black spot. This fungal disease results in black necrotic lesions on fruit. When severe, the fruit drops prematurely and reduces yield.

Symptoms

Fruit: A superficial lesion appears on the fruit rind. It typically begins as small orange or red spots with black margins and eventually becomes brown or black. This disease flourishes in warm and wet conditions. All citrus cultivars are somewhat susceptible to it. Sweet Valencia, lemons, mandarins, and grapefruits are most affected.

While this disease was found in Florida in March 2010, there is NO current report of it in Texas. If you suspect that you might have this problem, contact the Texas Department of Agriculture (800-835-5832) or the Texas A&M AgriLife Extension Service for assistance. Early detection of citrus black spot will help reduce damage from this pathogen.

Photo credits

P. Barkley, Biological and Chemical Research Institute, Bugwood.org
Division of Plant Industry Archive, Florida Department of Agriculture and Consumer Services, Bugwood.org
Cesar Calderon, USDA APHIS PPQ, Bugwood.org

Citrus Canker



Citrus Canker

Definition

The bacterium *Xanthomonas axonopodis* pv. *citri* causes citrus canker. This bacterial disease results in premature leaf and fruit drop, twig dieback, general decline, and blemished fruit.

Symptoms

Leaf: The disease starts as tiny blister-like lesions. It progresses to distinct necrotic-raised corky lesions that often have a yellow halo.

Stem and twig: The diseased portion may appear scabby or corky. It is often surrounded by a water-soaked margin.

Fruit: It has dark brown to black lesions that are raised. They often have a yellow halo.

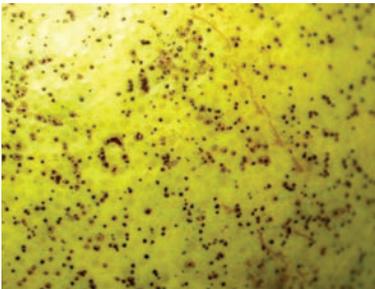
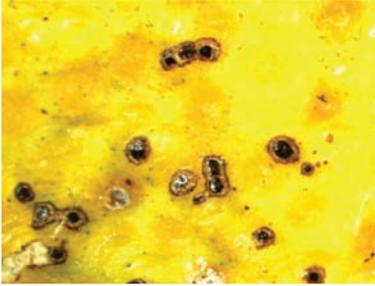
There is NO current report of this disease in Texas. If you suspect that you might have this problem, contact the Texas Department of Agriculture (800-835-5832) or the Texas A&M AgriLife Extension Service for assistance. Early detection of citrus canker will help reduce damage from this pathogen.

Photo credits

Timothy Schubert, Florida Department of Agriculture and Consumer Services, Bugwood.org

Sheila McBride, Texas A&M AgriLife Extension Service

Melanose



Melanose

Definition

The fungus *Diaporthe citri* causes this disease. Melanose primarily occurs on grapefruits.

Symptoms

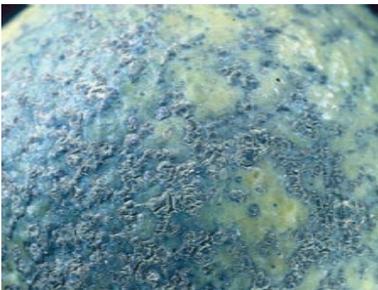
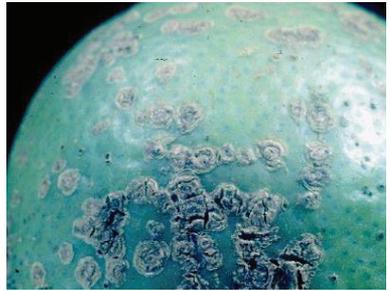
Leaves: Lesions begin as small, circular dark depressions with yellow margins. As the disease progresses, spots become raised and turn dark brown. Leaves turn yellow and prematurely drop.
Fruit: Spots initially are small, light brown, and sunken. As the disease progresses, spots become dark and raised. Spots that are close together can coalesce to form a rough-irregular or rough surface. Damage is typically superficial on fruit. Lesions can typically be found on dying twigs.

This disease occurs in Texas and is more serious in older groves or plantings. It can be severe following rainy periods in the spring and seems to be worse when preceded by a freeze.

Photo credit

Cesar Calderon, USDA APHIS PPQ, Bugwood.org

Sweet Orange Scab



Sweet Orange Scab

Definition

The fungus *Elsinoe australis* causes sweet orange scab (SOS). The disease can result in significant damage to sweet oranges, tangerines, and tangerine hybrids. This disease should not be confused with Citrus Scab, which in Texas does not affect sweet oranges.

Symptoms

Fruit: The lesions appear cork- and wart-like on the fruit. Their colors are usually tan or gray. Lesions are not usually on leaves or twigs. SOS damage is usually superficial and does not affect internal fruit quality. However, infected fruits tend to drop prematurely. The pathogen requires moisture for spore production and disease development. Water splashing disseminates fungal spores. Long distance spread is believed to be caused by people who move the infected fruit.

This disease was first discovered in Texas in late July 2010. The next month, it surfaced in Louisiana. If you suspect that you might have this problem, contact the Texas Department of Agriculture (800-835-5832) or the Texas A&M AgriLife Extension Service for assistance.

Photo credit

Division of Plant Industry Archive, Florida Department of Agriculture and Consumer Services, Bugwood.org