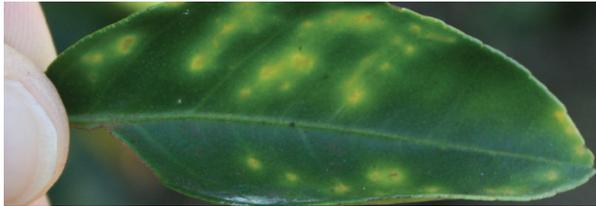


## CITRUS VARIEGATED CHLOROSIS (CVC)

- Currently found in Brazil, Argentina, Costa Rica, and Paraguay
- Bacterial disease caused by *Xylella fastidiosa* subsp. *pauca*
- Transmitted by sharpshooter leafhoppers or grafting
- Not seed transmissible
- Sweet oranges are the most susceptible
- Grapefruit, mandarins, mandarin hybrids, and limes show less severe symptoms
- Rangpur lime, lemons, citron, and pummelo are tolerant to the disease
- Causes severe leaf chlorosis, reddish-brown lesions on the lower side that correspond to yellow areas on the upper surface
- Leaf symptoms may resemble zinc deficiency in early stages
- Stems are unaffected by CVC
- Infected fruit will become hard and have a high acid content; may exhibit sunburn damage
- Fruit is not usable in fresh or processing markets
- Fruit color change is normal
- Infected trees may have an off-season bloom



1. This document is CH202, one of a series of the Plant Pathology Department, UF/IFAS Extension. Original publication date November 2008. Revised July 2019. Visit the EDIS website at <http://edis.ifas.ufl.edu>.
2. M. M. Dewdney, associate professor, Plant Pathology Department, Citrus Research and Education Center; J. D. Burrow, Extension program manager, CREC; O. Batuman, assistant professor, Plant Pathology Department, Southwest Florida REC; A. Levy, assistant professor; and R. H. Brlansky, emeritus professor, Plant Pathology Department, CREC; UF/IFAS Extension, Gainesville, FL 32611.

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### UF/IFAS Extension Offices with Citrus Agents

Hardee, Hendry, Highlands, Lake, Polk, St. Lucie,  
Sumter

### Websites

UF/IFAS Extension Citrus Agents  
<http://citrusagents.ifas.ufl.edu>

UF/IFAS Citrus REC  
[www.crec.ifas.ufl.edu](http://www.crec.ifas.ufl.edu)

UF/IFAS Southwest Florida REC  
<https://swfrec.ifas.ufl.edu>

Local UF/IFAS Extension Office  
<http://sfyl.ifas.ufl.edu/find-your-local-office>

## EXOTIC CITRUS DISEASES<sup>1</sup>

Sweet Orange Scab  
Citrus Leprosis Virus  
Citrus Variegated Chlorosis  
Citrus Tristeza Virus Stem Pitting  
*Pseudocercospora* Fruit & Leaf Spot



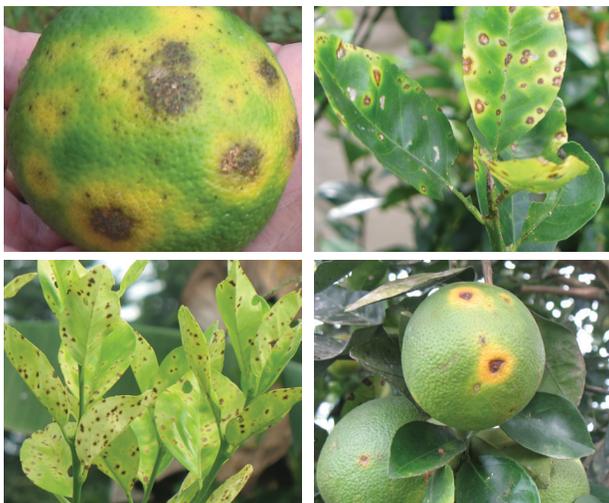
**Early detection is the solution  
to protecting Florida citrus**

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UNIVERSITY of FLORIDA

July 2019

## PSEUDOCERCOSPORA FRUIT AND LEAF SPOT

- Currently found in sub-Saharan Africa, Comoros Islands, and Yemen, but not South Africa
- Fungal disease caused by *Pseudocercospora angolensis*
- Affects all varieties of citrus
- Highly susceptible varieties include grapefruit, orange, pummelo, and mandarin
- Fruit lesions are circular to irregularly shaped
- Young fruit has nipple-like lesions with yellow halo
- Young fruit can become mummified
- Mature fruit lesions are dark brown to black and generally flat or sunken with a yellow halo
- Leaf symptoms are circular to irregularly shaped lesions that can coalesce
- Flat leaf lesions with brown or grayish center surrounded by a yellow halo
- Young flush can be killed and leaf drop can occur
- Leaves are the main source of inoculum
- Spores dispersed long distances by wind
- Short-distance spread by rain-splash
- Often spread with infected plant material



## CITRUS LEPROSIS

- Currently found in Mexico, Brazil, and other South and Central American countries
- Has not been reported in Florida since 1925
- Viral disease transmitted by *Brevipalpus* mites
- *Brevipalpus* mites are commonly found in Florida
- Primarily affects sweet oranges and mandarins, but sour oranges are also susceptible
- Leaf lesions become chlorotic first and then may become brown with or without a necrotic center
- Leaf symptoms smooth to touch
- Causes bark scaling and twig dieback
- Premature fruit drop with numerous lesions
- Flat or depressed lesions with yellow halo on fruit, often with brown centers
- Disease will only spread when the pathogen *and* mites are present



**If you suspect your citrus tree may have one of these diseases, please contact your local UF/IFAS Extension office or the Florida Division of Plant Industry 1-800-282-5153**

## CTV-STEM PITTING

- Found in Asia, Australia, South Africa, Brazil, Colombia, and many other citrus-growing areas
- Viral disease caused by specific isolates of *Citrus tristeza virus* (CTV)
- Spread by different aphid species, mainly the brown citrus aphid
- May cause stunting and tree decline
- When the bark is removed, the trunk, limbs and twigs may have longitudinal pits in the wood, causing a rope-like appearance
- No resistant varieties, but susceptibility varies
- Limes and grapefruit are most susceptible



## SWEET ORANGE SCAB

- Currently found in Argentina, Bolivia, Brazil, Ecuador, Paraguay, and Uruguay
- Fungal disease caused by *Elsinoë australis*
- Symptoms only found on fruit
- Affects all sweet oranges and some tangerine cultivars
- Young fruit have corky, wart-like pustules; tan to gray in color
- Mature fruit lesions become smoother and can resemble wind scar.

