

## PSEUDOCERCOSPORA FRUIT AND LEAF SPOT

- Currently found in sub-Saharan Africa 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 with a 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



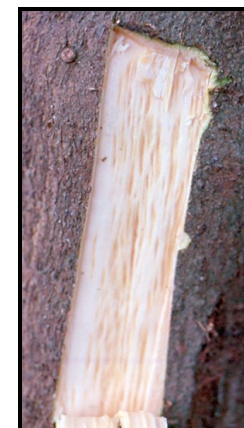
## CITRUS LEPROSIS

- Currently found in 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 only spreads when the pathogen and mites are present



## CTV-STEM PITTING

- Found in Asia, Australia, South Africa, Brazil, Columbia, and many other citrus growing areas
- Viral disease caused by specific strains of *Citrus tristeza virus* (CTV)
- Spread by 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



For more information, please contact the University of Florida, IFAS, Citrus Research and Education Center, Lake Alfred 863-956-1151

## CITRUS VARIEGATED CHLOROSIS (CVC)

- Currently found in Brazil, Argentina, and Paraguay
- Bacterial disease caused by *Xylella fastidiosa*
- Transmitted by sharpshooter leafhoppers or grafting; seed transmission is uncertain
- 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 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



## GROWER RESOURCES

- Exotic Diseases Laminated Sheet
- Compendium of Citrus Diseases, 2nd Edition, APS Press, Minneapolis, Minnesota
- University of Florida EDIS documents  
<http://edis.ifas.ufl.edu/>
- University of Florida Citrus Research and Education Center  
<http://www.crec.ifas.ufl.edu>

## REPORT HIGH SUSPECTS

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

## CONTACTS

### Citrus Research and Education Center

Ron Brlansky, Ph.D.\*  
Plant Pathologist  
863-956-1151 ext. 1300

Megan M. Dewdney, Ph.D.\*  
Plant Pathologist  
863-956-1151 ext. 1267

Michael E. Rogers, Ph.D.  
Entomologist  
863-956-1151 ext. 1224

Timothy M. Spann, Ph.D.  
Horticulturist  
863-956-1151 ext. 1417

Jamie D. Yates\*  
Canker & Greening Extension Education  
863-956-1151 ext. 1302

### Multi-County Citrus Extension Agents

Ryan A. Atwood  
Marion, Lake, Volusia, Orange, Seminole, Brevard, & Osceola Counties  
352-343-4101

Gary K. England  
Citrus, Hernando, Sumter, & Pasco Counties  
352-793-2728

Steve Futch, Ph.D.  
Citrus, DeSoto, Hardee, Manatee, & Sarasota Counties  
863-956-1151

Tim Gaver  
St. Lucie, Martin, Indian River, & Okeechobee Counties  
772-462-1660

Tim Hurner  
Highlands County  
863-402-6540

Chris Oswalt  
Polk & Hillsborough Counties  
863-519-8677

Mongi Zekri, Ph.D.  
Hendry, Glades, Lee, Charlotte, & Collier Counties  
863-674-4092

\*Brochure authors

## EXOTIC CITRUS DISEASES



**Sweet Orange Scab**

**Citrus Leprosis Virus**

**Citrus Variegated Chlorosis**

**Citrus Tristeza Virus Stem Pitting**

**Pseudocercospora Fruit and Leaf Spot**



CH202

Early detection is the solution  
to protecting Florida citrus

**UF** UNIVERSITY of  
**FLORIDA**  
IFAS Extension