CITRUS DISEASE SPOTLIGHT

Melanose

By Megan Dewdney

Temperatures are warming, and melanose will be on the minds of grapefruit producers. Grapefruit is the most susceptible type of citrus to melanose, but all citrus can be infected by the fungus. Melanose is particularly bad in years that freezes have caused a large amount of dead wood in the tree canopies because the spores are produced in fungal structures on the dead twigs. Similarly, declining trees that have thinner canopies and many dead twigs will have greater problems with melanose.

Scientific name: *Diaporthe citri*

Leaf and stem symptoms: Young tissues of leaves and twigs are susceptible. The initial symptoms occur four days to seven days post-infection if temperatures are between 24° and 28°C, but symptoms take longer to occur when temperatures are cooler. The lesions begin as tiny water-soaked depressions with a translucent yellow halo which disappears over time. The cuticle is ruptured and a gummy substance is exuded. The gummy substance hardens and becomes brown, leaving the surface of leaves and twigs with the texture of sandpaper (Fig. 1). The lesions can be scattered, clustered or in streaks. In severe cases, the leaves remain pale green or turn yellow and eventually fall off. Inoculum from structures embedded in the wood is only produced on dead twigs that are either infected while living or colonized once dead.

Fruit symptoms: Fruit are susceptible from fruit set until late June or early July. Melanose symptoms can vary from mudcake melanose (Fig. 2), which is a solid infected area that can cover most of the fruit surface, to small isolated speckles. Lesions will be tear-stain shaped, especially on fruit, because the spores are deposited by water droplets (Fig. 3). As on leaves and twigs, the lesions have a sandpaper feel which distinguishes them from rust mite damage and greasy spot. The lesions tend to be a reddish color, especially on green fruit. If fruit are infected when young, they can be stunted and may even drop.

Fig. 1. *Young melanose symptoms on a grapefruit leaf showing raised lesions and some lesions with yellow halos*

Fig. 2 (bottom left). *Mudcake melanose symptoms on grapefruit with a streaked pattern*

Fig. 3 (bottom right). *Melanose lesions on grapefruit exhibiting the tear-shaped lesions where water droplets had dried*

Because April is usually dry, fungicide applications are generally not needed until mid- to late-April. Applications on grapefruit should be made approximately every three weeks until mid-July. In most years, one or two applications would be sufficient for most orange or tangerine cultivars. A copper residue model is available to improve copper application timing at http://www.agroclimate.org/tools/cudecay/. More details can be found in the Florida Citrus Pest Management Guide (http://www.crec.ifas.ufl.edu/extension/pest/).

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CITRUS WEED SPOTLIGHT

Cutleaf evening primrose (*Oenothera laciniata*)

By Stephen H. Futch

LEAVES: alternate, elliptic to lance-shaped, with irregularly notched or lobed margins

STEMS: low-growing, often prostrate, branching near the base, hairy

FLOWERS: yellow, tubular, fade to red-pink, in leaf axils

SEEDS: capsule is cylindric, 4-ribbed and hairy; seed just over a half-inch long, angled, pitted

LIFE CYCLE: biennial

HEIGHT: low-growing, usually spreading, less than 1 foot tall

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