

## Rusty Citrus Fruit May Be Infestation of Citrus Rust Mites



*Photo by David W. Marshall, UF-IFAS Leon County Extension: Citrus rust mite causes bronzing of satsuma and other citrus fruit in the fall.*

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Thursday October 27, 2011

Tallahassee Democrat

Citrus grown in the home landscape can be attacked by a number of insect and mite pests. Some of these pests are large enough to be spotted early in their infestation. Others are so small that you can't see them without magnification. Consequently, you don't tend to notice their damage until it's too late to do anything about it.

One very small pest that delivers an unsightly punch is the citrus rust mite (CRM). Mites are arachnids, rather than insects, making them related to spiders. While there are several different types of mites that affect citrus, CRM is perhaps the most common.

The citrus rust mite is found on all citrus varieties throughout Florida. Populations of CRM can develop quickly under ideal conditions with a female laying twenty to thirty eggs over a twenty-day period. Although they can be found anytime of the year, their peak populations usually occur during June and July.

Rust mites have piercing-sucking mouthparts and feed on the outside exposed epidermal surface of fruit that is one-half inch or larger and on plant leaves and green twigs. Feeding destroys the rind cells and ultimately causes a very unappealing and alarming looking fruit. The appearance and amount of damage depends on when the infestation occurs. When a fruit is injured in summer or fall, the injured surface is smooth and dark brown in color, commonly referred to as "bronzing". Mites feeding on fruit early in the spring produce a peel referred to as "sharkskin" because of its rough, grayish color. Blemished fruit lose water faster than undamaged fruit and will be smaller and appear substandard.

Citrus rust mites prefer the fruit on the tree's outer canopy that is exposed to sunlight. However, the mite itself will avoid the most sun-exposed portion of the fruit. This behavior results in a "sun spot" of undamaged rind on the sunny side of the fruit. This pattern of damage is helpful in the diagnosis. Not all the fruit on a tree will be afflicted and not every citrus tree in the yard will have an infestation.

Thankfully, this condition has no effect on flavor; it is strictly a surface blemish. It does make fruit unsellable (and sometimes even hard to give away), but it is still good to eat. Unfortunately, there is nothing you can do for it once the fruit is damaged.

Since rust mites are not readily visible to the naked eye, by the time the damage has been observed, spraying would usually be too late to be worthwhile. Therefore, early scouting is critical to avoid fruit blemishes. Use a magnifying glass to look for the mites at the times when infestation is expected to commence. Mite populations usually begin to increase in April on new foliage and reach a peak in June to July. Depending on weather conditions and the occurrence of natural enemies, citrus rust mite populations usually decline in August and September, but increase again in October and November.

Pay special attention to trees recently sprayed with insecticides. The misuse of insecticides can sometime allow an explosion of mites.

Horticultural oils can be used to control many pests that attack citrus, including mites, whiteflies and scales. These products work by suffocating insects and causing them to die. When applied properly, oils provide a very useful tool for controlling some citrus pests without damage to beneficial organisms but the sprays require careful use to avoid plant injury.

In general, be sure to carefully read any insecticide labels before applying them to your citrus trees. Before you spray your citrus with any insecticide, make sure that citrus is included on the label. Also make sure the insects or mites you would like to control are listed on the label.

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