

Screening Aid for Citrus Leprosis (CiLV) Disease Symptoms
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Citrus leprosis is a highly destructive disease of citrus which primarily affects oranges (*Citrus sinensis*). Other species, hybrids, and varieties of citrus exhibit variable levels of resistance and may do not show symptoms. The causal agent of the disease is a virus. Two forms of the Citrus Leprosis Virus have been described. One virus occurs in the cytoplasm while the other can be found in the nucleus of infected cells, being both of them transmitted by mites in the genus *Brevipalpus*.

Citrus leprosis is not systemic, and each lesion is caused by a feeding puncture of a virus-infected mite. Symptoms can be found on citrus leaves, stems, and fruits. On leaves, symptoms will appear 1-2 months after inoculation. Typical lesions are roundish, with a dark-brown central spot about 2-3 mm in diameter, with a chlorotic halo in which 1 to 3 brownish rings frequently appears surrounding the central spot on the top part of the leaf. Lesion size varies from 10 to 30 mm, although larger lesions can be formed by the coalescing of adjacent lesions. In young stems, symptoms appear as small, chlorotic, shallow lesions that become brown or reddish. On bark and twigs, the older the lesion, the corkier they become. This may lead to the girdling of the stem and death or die back. A bark scaling symptom can be observed on the trunk of affected trees, hence the name of scaly-bark also used for this disease.



Typical back-lit effect of citrus leprosis lesions on a sweet orange (*Citrus sinensis*) tree.



Scanning electron micrograph of a female flat mite species, *Brevipalpus phoenicis*, one species known to transmit citrus leprosis virus (less than 1 mm in length).

Photo courtesy of USDA-ARS



Different stages of citrus leprosis lesions on leaves with different levels of gummy impregnation.



Pairs of pictures showing top and bottom of a leaf showing citrus leprosis symptoms



Different stages of citrus leprosis lesions on stem



Citrus leprosis symptoms on fruit

