



Citrus Leprosis

Summary

Citrus Leprosis is a serious disease and a threat to the US citrus production. Citrus Leprosis nearly destroyed the Florida citrus in early 1900s, but since 1968 the disease had remained absent. The absence of Leprosis virus particles and the absence of symptoms on surveyed plants from Florida and Texas indicate that the disease no longer exists in the US. Every effort must be taken to avoid the entry of infected citrus and mite infested hosts, particularly from countries where the disease is known to prevail.

Symptoms

Citrus Leprosis is a viral disease transmitted by a vector, the mite *Brevipalpus* spp, by feeding. The infection starts at the vector's feeding site, and spreads to the surrounding areas, but remains localized. Symptoms can be found on leaves, fruits, and stems (Fig. 1 & 2). Lesions on leaves and fruits are frequently round with or

without a dark necrotic center, and surrounded by brown rings and a halo. Lesions may coalesce, and when heavily infected may cause leaf and fruit drop. On twigs, lesions appear as small, chlorotic, shallow lesions that may become brown or reddish; older lesions become corkier, and may cause girdling of the stem and die back. The trunk of affected trees may appear scaly.

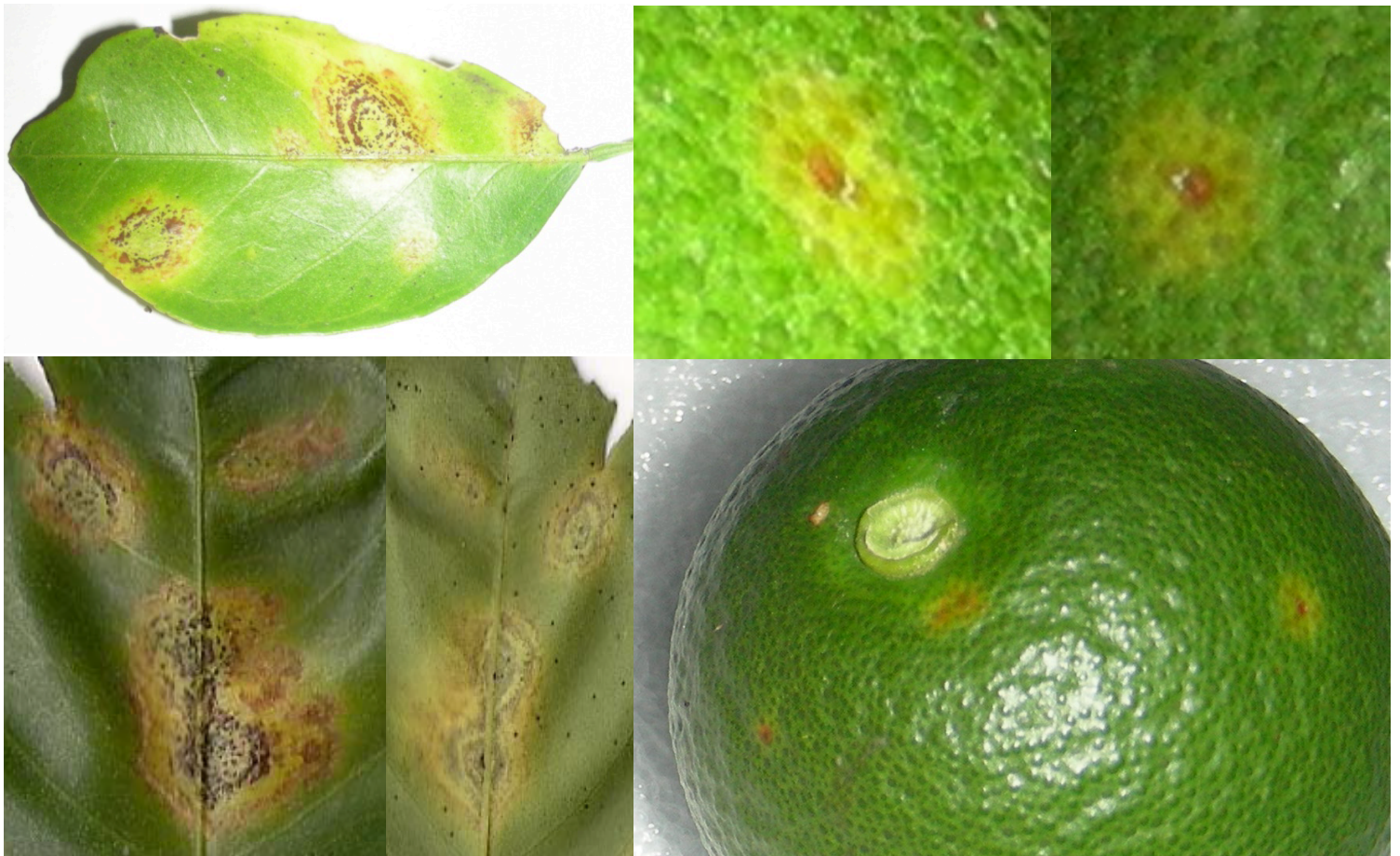


Fig. 1: Typical Leprosis lesions on orange leaves, left, and fruits, right. Details of lesions on the top and bottom of a leaf, in that order, bottom left. Details of small fruit lesions, top right. Photos: Myrian Rybak.



Fig 2: Leprosis lesions on twigs. Photos: Myrian Rybak.

Causal agent

The causal agent of the disease is the Citrus Leprosis Virus. Two forms of the virus have been described: Citrus Leprosis Virus C that occurs in the cytoplasm of infected cells and Citrus Leprosis Virus N that occurs in the nucleus. The virus is transmitted by mites in the genus *Brevipalpus*.

Inoculum source and conditions

Mites acquire and transmit the virus by feeding. The virus does not replicate in the mite, only in the host. Symptoms appear at the feeding sites 30-60 days after infection. The disease is known to affect mainly oranges but the mites have many hosts. The disease is present in most South and Central American countries and Mexico.

Control

Control mite populations to avoid disease dispersal.

- Remove inoculum sources by pruning
- Apply acaricides to reduce mite population
- Use certified budwood
- Install windbreaks to reduce wind borne mites

References

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- Gomez, Hilda. 2009. Screening Aid for Citrus Leprosis (CiLV) Disease Symptoms. USDA, APHIS. PPQ CRRP Program oranges (*Citrus sinensis*).

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