Citrus Greening is a destructive disease of all commercial citrus species and there is no known cure.

KEY FACTS

- Citrus Greening, often called HLB for its original name Huanglongbing, is caused by a bacterium, Candidatus Liberibacter asiaticus.
- HLB is spread through graft-transmission and an insect vector, the Asian citrus psyllid (ACP).
- Visible symptoms of the disease may not appear for more than one year after initial infection. In this time, all of the neighboring citrus trees may become infected too.
- HLB disease was first identified in Guam in December 2014 but the ACP insect vector has been present for many years in Guam and all the Mariana Islands.

TREE SYMPTOMS: Bright yellow shoots among green canopy, leaf drop.

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Images from USDA-ARS, USDA-APHIS or FAO unless otherwise noted.
**Common Symptoms**

**FRUIT SYMPTOMS:** Fruit often are reduced in size or drop early. Other common symptoms are: (above) lopsided fruit with curved columella (arrow); (above right) poorly colored fruit; or (right) fruit with color inversion.

**LEAF SYMPTOMS:** Blotchy, mottled leaves. Notice that mottling is not uniform on either side of the mid-rib.

**PRESENCE OF ACP:** Top left: adult. Top right: nymphs with distinctive waxy tubule. Left: size comparison for ACP adults.

**Difference Between HLB and Other Problems**

**CITRUS GUMMOSIS**

Tree and leaf symptoms similar to HLB. Look for amber colored sap oozing from the stem.

This disease is caused by Phytophthora spp.

**NUTRITIONAL DEFICIENCY**

Nutritional deficiencies show the same pattern on both sides of the leaf.

**MANAGEMENT RECOMMENDATIONS**

- Provide adequate nutrition for citrus plants.
- Practice good field sanitation. Dispose of HLB-infected debris away from other citrus plantings and sanitize all cutting equipment.
- Monitor for ACP insect vectors regularly. ACP are especially active when a new flush of leaves emerge.
- Follow label recommendations for insecticides, synthetic or organic. Avoid spraying any insecticide when bees are active.