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#### About the Name of HLB

Asian citrus psyllid transmits citrus greening disease, or "huanglongbing" (yellow dragon disease).



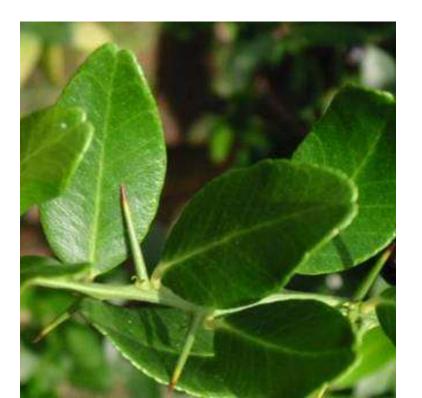
#### Huge Economic Losses



- All citrus species are susceptible irrespective of rootstock;
- Symptom severity may vary with the strains;
  - Highly susceptible: sweet orange, mandarin, mandarin hybrids
  - Moderate: grapefruit, lemon and sour orange
  - Tolerant: lime, pummelo, trifoliate orange.

#### Non-citrus Hosts

 Chinese box orange (酒饼勒) / boxthorn (Severinia buxifolia) is another ornamental host of greening and the Asian citrus psyllid.





 Orange Jasmine (*Murraya paniculata*) is a host for both the psyllid and greening bacterium.



#### Transmission

#### -Vectored by 2 psyllid species

• Diaphorina citri and Trioza erytreae



Adult psyllids usually feed on the underside of leaves and can feed on either young or mature leaves. This allows adults to survive year-round.





When feeding, the adult leans forward on its elbows and tips its rear end up in a very characteristic 45° angle.



- Integrative Application of Five Key and Effective Measures
  - 1. Ecological Cultivation System
  - 2.Kill All Diseased Trees
  - 3. Using large and healthy Seedlings
  - 4. High Density Cultivation Moderately
  - 5. Kill Psyllids in the whole Orchard Rapidly

## **1.Ecological** Cultivation System

## **Ecological Cultivation System**



40 Hacters, Ten years, 3 km away from Disease Orchard, Fujian Province

## 2.Kill All Diseased Trees

#### Avoiding Psyllid Escaping to other places Spray Chemicals to kill psyllids firstly and then kill the diseased trees



Using large and healthy Seedlings
High Density Cultivation Moderately

## **Runing with HLB Competitively,** Get Good Benefit within 8 to 10 Years



Self-controlled Greenhouse

Insect-proof Screenhouses



#### Nursery of Disease-free Seedlings

#### **Using Large and healthy Seedlings**

> At least 2 years old, higher than 1.5 meter





Planted in Jan 2013 , Harvested in Oct 2014 with yield 22.5 T/ Hectares



Planted in Jan 2013 , Harvested in Oct 2015 with yield 48 T/ Hectares

# Preparation of Large and Healthy seedlings beside the Orchard all the time



## 5. Kill Psyllids in the whole Orchard Rapidly



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