

Prevention and Control of HLB

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About the Name of HLB

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

Distribution of HLB in China

Lowest temperature is
not lower than zero



Huge Economic Losses



Pathogen Host Ranges

- 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.



**Preferred host of
Diaphorina citri.**



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.



Prevention and Control of HLB

- 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**

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1. Ecological Cultivation System

Ecological Cultivation System



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

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2. Kill **All** Diseased Trees

Avoiding Psyllid Escaping to other places

Spray Chemicals to kill psyllids **firstly** and then kill the diseased trees



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- 3. Using **large and** healthy Seedlings
- 4. **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



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5 . Kill Psyllids in the whole Orchard
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