Issues in pest management: Citrus greening

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Citrus greening disease (Huanglongbing)

- Associated with *Ca. Liberibacter asiaticus* (CLas), *africanus* (CLaf) or *americanus* (CLam)
- Vector, *Diaphorina citri* present in FL since 1992
- CLas first detected in the U.S. in Miami-Dade county in 2005
  - Georgia, Louisiana and Mississippi, 2008
  - South Carolina, 2009
  - California and Texas, 2012
  - Alabama, 2017
The pathosystem

- Unculturable
- *L. crescens* as a model
- Prophage
- *Candidatus Liberibacter asiaticus*
- *Citrus spp.* and *Diaphorina citri* (ACP)

- Highly efficient disease transmission
- Amenable to CLas infection

- No resistant cultivars
- Delayed onset of disease symptoms

- Unculturable
- *L. crescens* as a model
- Prophage

Proftella = red
Carsonella = green
DAPI = blue

Liberibacter asiaticus

Delay onset of disease symptoms
Intensive research efforts for HLB management

- Multi ‘omics
- Many candidate therapeutics
- Progress in culturing efforts
- Gene editing of psyllids
- Transgenic approaches
- New delivery strategies for therapeutics
Upcoming speakers

• Monique Rivera, Cooperative Extension Specialist, UC Riverside
• Bryony Bonning, Professor of Entomology and Nematology, UF
• Michelle Heck, Research Molecular Biologist, USDA-ARS EPPRU