



2021 Agricultural Outlook Forum

*Building on Innovation:
A Pathway to Resilience*

Issues in pest management: Citrus greening

Introduced by Laura A. Fleites, PhD

AgroSource, Inc.



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

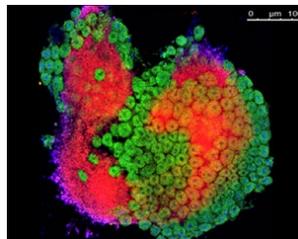


The pathosystem

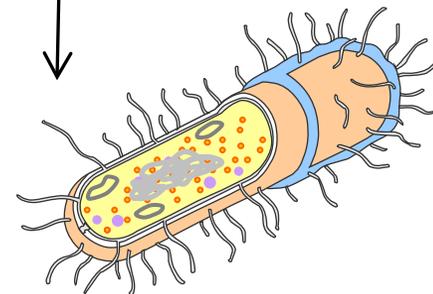
- No resistant cultivars
- Delayed onset of disease symptoms



Diaphorina citri
(ACP)



Proffella= red
Carsonella = green
DAPI= blue



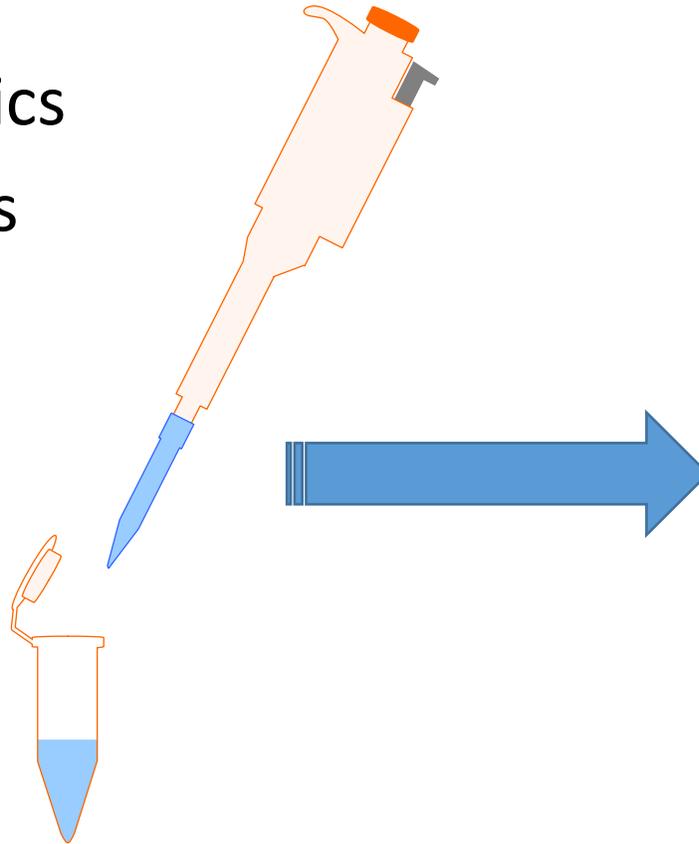
Candidatus
Liberibacter asiaticus

- Highly efficient disease transmission
- Amenable to CLas infection

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

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

