

UC Riverside

Journal of Citrus Pathology

Title

Preliminary Evaluation of the Single-Tree, Huanglongbing Find in California

Permalink

<https://escholarship.org/uc/item/6vb230x8>

Journal

Journal of Citrus Pathology, 1(1)

Authors

Wang, J.
Roose, M.
Ramadugu, C.
et al.

Publication Date

2014

DOI

10.5070/C411024179

Copyright Information

Copyright 2014 by the author(s). This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

1.1

Preliminary Evaluation of the Single-Tree, Huanglongbing Find in California

Wang, J.¹, Roose, M.¹, Ramadugu, C.¹, Lee, R.², Manjunath, K.², Lin, H.³, Chen, J.³, Shatters, R.⁴, Polek, M.⁵, LeVesque, C.⁵, and Vidalakis, G.¹

¹University of California, Riverside, CA

²United States Department of Agriculture National Clonal Germplasm Repository for Citrus and Dates, Riverside, CA

³United States Department of Agriculture, Agricultural Research Service, Parlier, CA

⁴United States Department of Agriculture, Agricultural Research Service, Fort Pierce, FL

⁵Citrus Research Board, Visalia, CA

Huanglongbing (HLB, citrus greening) associated with '*Candidatus Liberibacter*' species is a widespread devastating citrus disease not previously reported in California (CA). In March 2012, '*C. Liberibacter asiaticus*' (CLAs) was detected from an Asian citrus psyllid (ACP, *Diaphorina citri*) sample from Los Angeles, CA at the Jerry Dimitman Laboratory of the Citrus Research Board. Subsequent citrus plant surveys within a 400m area of the CLAs-positive ACP sample performed by the California Department of Food and Agriculture identified an infected multi-grafted citrus tree at a residence in Los Angeles, CA. The CLAs-positive tree was removed and nucleic acids from different plant tissues (i.e. roots, trunk, stems, and leaves) were extracted and distributed to several federal, state, and university laboratories nationwide for preliminary evaluation. Labs attempted to identify the species and graft types of the infected citrus, study the genetic characteristics and genome diversity of the detected bacterium, as well as test for other graft-transmissible citrus pathogens (GTCP). Preliminary data suggested that one type of lemon was the original rootstock that received over 20 citrus grafts. CLAs DNA population analysis suggested a possible single Asian origin. Preliminary tests indicated the possible presence of other GTCP. Further evaluations on the CA CLAs-positive find are ongoing.