Evaluating Huanglongbing-Resistant Hybrids as Interstocks and Rootstocks

Researchers: Manjul Dutt, Ozgur Batuman, Lauren Diepenbrock, Jude Grosser, Nabil Killiny

Contact: Manjul Dutt, manjul@ufl.edu

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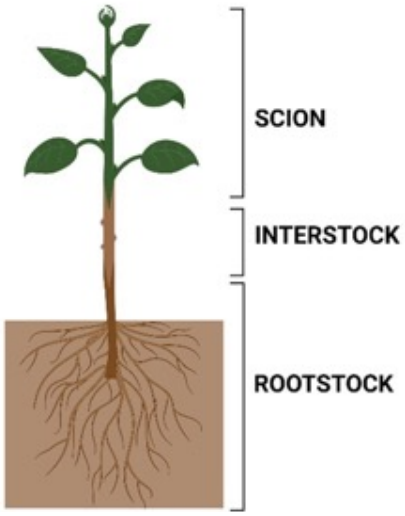

Take Home Message:

- New generation of rootstocks and scions with Australian lime genetics can be utilized in the fight against HLB.
- Field trials with clonally propagated hybrid lines to be initiated in 2023 to obtain statistically valid data.
- Additional advanced F2 and F3 hybrids with lower Australian lime genetics but tolerant to HLB are also currently being evaluated.

Effort Statement: Several hybrids have been observed to be HLB-tolerant with some that have no *C*Las being detected in the phloem.

Summary: A large population of huanglongbing (HLB)-resistant germplasm with Australian lime genetics has been produced at the UF/IFAS Citrus Research and Education Center, mainly through conventional breeding with the HLB-resistant citrus relatives. The core hypothesis behind this study is that HLB-resistant Australian lime hybrids can impart resistance to susceptible citrus scions, so that trees can fight off the *C*Las pathogen on their own. Several promising lines have been produced and are being evaluated. We aim to identify the most effective rootstocks with Australian lime genetics for HLB resistance to the scion, assess the impact of interstocks in protecting scions against HLB, and understand the role of metabolites in the HLB resistance process. It may be possible to confer this HLB resistance to the scion using interstocks that are resistant to HLB. Using an interstock may allow citrus growers to topwork a grove with a new interstock/scion combination, perhaps saving a grove that would otherwise be destroyed. It is anticipated that at the end of this project, citrus growers will be able to utilize our newly developed HLB-tolerant germplasm to keep their groves productive and profitable and reverse the declining citrus acreage.

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