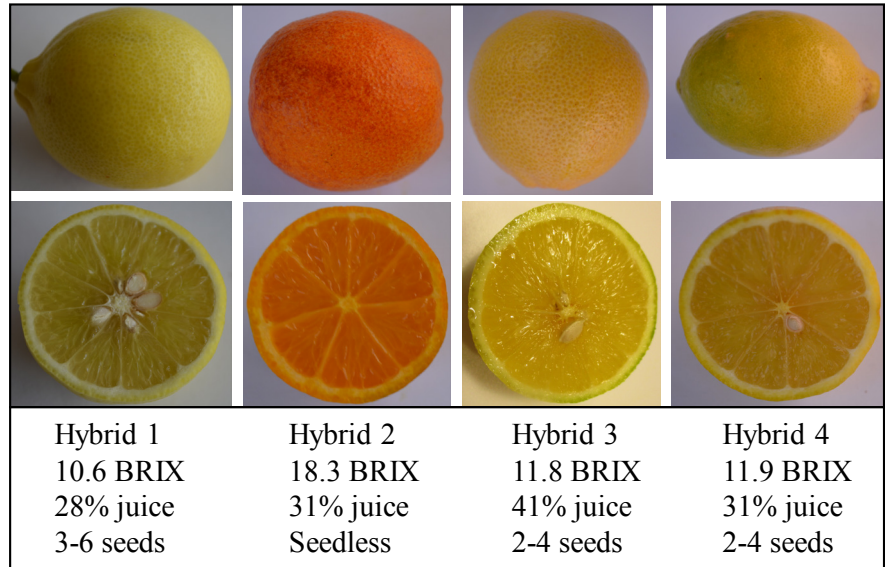


Evaluation and Validation of Novel HLB Tolerant/Resistant Citrus Hybrid Scion Cultivars

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Developing genetic resistance to HLB will provide financially and environmentally sustainable solutions to this destructive disease. The breeding program at UC Riverside, California, has created new citrus scion hybrids incorporating HLB-resistant traits from disease-resistant citrus relatives. Several of these new hybrids were tolerant to the HLB-associated pathogen, CLAs, in disease challenge experiments conducted with a California isolate of CLAs in contained research

facilities in Davis, California. We will evaluate four first-generation hybrids (Citrus x Microcitrus) in field trials in Florida, Texas, and California. The field trials will provide valuable information about the disease tolerance of the hybrids in the field where the plants are exposed to the CLAs pathogen isolates at the respective field locations. Horticultural evaluations and susceptibility of the hybrids to other common citrus pathogens will be assessed in all six locations (a total of 720 trees).

Rootstocks selected for the field trials include US-942 and Carrizo in Florida, sour orange and Bitters C22 in Texas, and Carrizo citrange and Alemow in California. The field trials in Florida and California were planted in 2021; trials in Texas were delayed due to the freeze in 2021. The precocious hybrids are expected to fruit within three years and have lemon-like flavors. We have utilized these hybrids as parents for further breeding to incorporate resistant traits into commercial citrus varieties.

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