

Development of High Quality True Sweet Oranges to Replace ‘Hamlin’

Researchers: Jude Grosser, Fred Gmitter, Maria Brenelli, Maria Quirico

Contact: Jude Grosser, jgrosser@ufl.edu

UF/IFAS CREC



Summary: The Florida Processing Industry has always relied on ‘Hamlin’ as the primary orange for the first half of the season. However, ‘Hamlin’ has fallen out of favor because of its higher susceptibility to huanglongbing (HLB), which causes both reduced juice quality (especially low °Brix) and severe fruit drop prior to harvest. Thus, our industry badly needs more robust replacement sweet orange cultivars that produce higher quality juice from the beginning of December until mid-January when ‘Valquarius’ and ‘Vernia’ mature. We are screening selected somaclone-derived nucellar seedling populations of OLL (Orie & Louise Lee) and ‘Vernia’ sweet oranges and we have discovered a higher-

than-expected rate of useful genetic variation. We now have new Vernia clones that mature in early December with ‘Valencia’ juice quality (ratios of 15 with grade A juice color). The following new clones are now available in the Parent Tree Program (PTP) and can be trialed under an Materials Transfer Agreement (MTA) as we work towards budwood scaleup and commercialization: MB-26-20, MB-25-12, MB-26-14, MB-25-2, MB-25-7, and MB-25-9. Two new OLL clones FB-4-13 and FB-7-35 that mature in January are also now available in the PTP and are also available for trial under an MTA. These new OLL clones have exceptional quality for both processing and the fresh market.

Continued evaluation of these new sweet oranges combined with new more HLB-tolerant rootstocks should quickly improve the portfolio of sweet orange cultivars needed to guarantee season-long, high-quality juice for our not from concentrate (NFC) industry.

Take Home Message:

- New early-maturing Vernia clones have potential to replace ‘Hamlin’ with higher quality juice for NFC.
- New mid-season OLL clones have both processing and fresh market potential.
- Combining these new sweet orange clones with improved HLB-tolerant rootstocks will help Florida recover from HLB.

Funding:

UF | IFAS
UNIVERSITY of FLORIDA

NEW VARIETIES
DEVELOPMENT & MANAGEMENT CORP.

Lee Family Groves (St. Cloud)