

Notice of possible graft incompatibility between US-1283 rootstock and some commercial scions

Kim D. Bowman¹ and Ute Albrecht² ¹USDA, ARS, USHRL, Ft. Pierce, FL ²SWFREC, UF/IFAS, Immokalee, FL 2/14/2020

The US-1283 rootstock was released by USDA in 2014, based on field performance with Hamlin 1-4-1 sweet orange in trials at two different locations in Florida severely affected by huanglongbing disease. One of these trials was in St. Lucie County and of 14 years duration, while the second trial was in Orange County and of 11 years duration. In both trials, healthy trees and normal graft unions were observed for the trees of Hamlin grafted on US-1283 rootstock. Following release of the new rootstock, commercial use and additional field trials were limited because no seeds of US-1283 were available for nursery propagation. Seeds became available to initiate additional studies in 2018, and subsequently it has been observed that US-1283 can be uniformly propagated by seed for commercial nursery use. During the propagation of trees for additional field trials, it has been noted that some scions grafted on US-1283 exhibit abnormal and unhealthy growth in the nursery, suggesting that those graft combinations would not provide for healthy long-term field performance. The scions Star Ruby grapefruit, Bearss lemon, and Tango mandarin were each observed to produce abnormal bud unions and/or unhealthy scion growth in the nursery, when budded on US-1283 seedlings. In contrast, in addition to making long-term healthy trees with Hamlin 1-4-1 scion, trees of Valencia 1-14-19, Valencia UF B9-65, and Washington Navel sweet oranges grafted on US-1283 have appeared normal and healthy, at least in the early stages. Based on these limited observations, it is recommended that citrus nurseries and growers use caution in considering compatibility with scions other than sweet orange for this rootstock. Additional studies have been initiated, and further information on the compatibility of this rootstock with a broader range of scions will be provided as it becomes available.