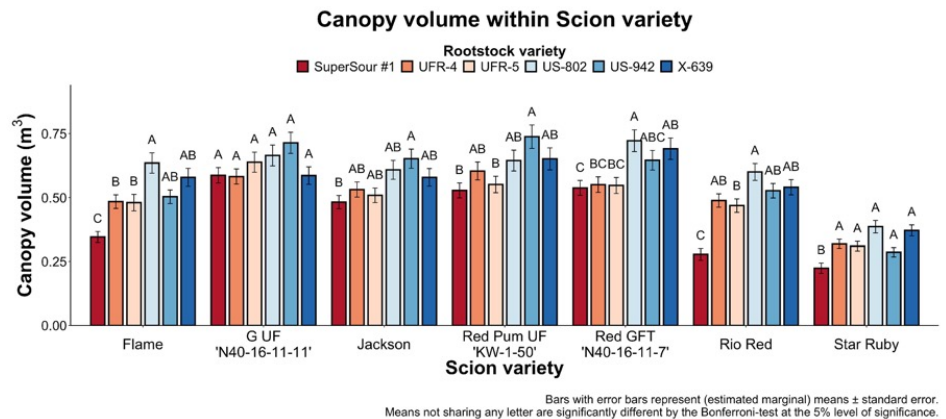


Large-Scale Field Evaluation of Grapefruit Scion/Rootstock Combinations to Identify Potential Tolerance Against Huanglongbing

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Take Home Message:

- Rootstocks US-802 and US-942 and scion hybrids 'N40-16-11-11' and 'N40-16-11-7' are thus far developing the greatest canopy volume.
- Through the end of 2022, 'Jackson' was the thickest scion, followed closely by the UF hybrids 'N40-16-11-11' and 'N40-16-11-7'.
- Measurement of 'Star Ruby' will be discontinued to focus resources on monitoring the performance of the other varieties.

Effort Statement: Results from 2022 were collected and analyzed and funding obtained from CRDF to continue the project.

Summary: A variety trial study was conducted to determine the fittest potential of tolerant grapefruit scion/rootstock combinations in the Indian River District (IRD) and Central/West (C/W) growing regions of Florida. Seven scions ('Rio Red', 'Star Ruby', 'Flame', RG UF N40-16-11-7, R Pum UF KW-1-50, 'Jackson', and G UF N40-16-11-11) and six rootstocks (US-1691 [SS1], UFR-4, UFR-5, US-802, US942, and X-639) developed by the University of Florida and the U.S. Department of Agriculture were evaluated. Each block consisted of 42 combinations, seven trees per combination spaced 10 x 25 ft, planted between fall 2020 and spring 2022. The growers utilized their own cultural practices on each experimental site. Results from 2020/21, 2021/22, and 2022/23 growth shows US-802 and

US-942 as the best rootstocks for developing fuller canopy volume, as the scion hybrids 'N40-16-11-11' and 'N40-16-11-7' from the UF breeding program had more vigor and canopy volume. 'Star Ruby' did not perform as hoped, mainly due to a genetic mutation, documented for this clone over 30 years ago, which displays "winter-bleach"-like symptoms during the summer of 2022. Scion stem diameter three-year averages are more consistent in terms of scion/rootstock combination. Due to the genetic mutation in 'Star Ruby', its development was stunted regardless of the rootstock it was grafted onto. 'Jackson' is known by its intense vigor and was one of the thickest scions, followed closely by the UF hybrids 'N40-16-11-11' and 'N40-16-11-7'.

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