

SW Flatwoods Sweet Orange Rootstock Trial, LaBelle

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CREC Citrus Plant Improvement*

SW Flatwoods Sweet Orange Rootstock Trial - Description

Trial consists of 29 sweet orange/rootstock combinations (approximately 1000 trees planted as resets in 2014) in a poor soil type of the southwest Florida flatwoods location. The scions are: 'Valencia' B9-65, OLL-8 and OLL-20 sweet oranges on 7 new sour orange-like hybrid rootstocks along with UFR-2, UFR-4, UFR-15 and UFR-17 rootstocks. The goal is to identify scion/rootstock combinations for resetting in southwest Florida.

SW Flatwoods Sweet Orange Rootstock Trial - Summary

- Location: LaBelle, Hendry county
- Scion: 'Valencia' B9-65, OLL-8 and OLL-20 sweet oranges
- Rootstocks: 7 new sour orange-like hybrid rootstocks and UFR-2, UFR-4, UFR-15 and UFR-17 rootstocks
- Date planted: 2014
- Data:
 - 2017/18: Yield; HLB rating; tree size rating.
 - 2018/19: Yield; HLB rating; tree size rating.
- Trial status: **ACTIVE**

Table 1. SW Flatwoods Sweet Orange Rootstock Trial - List of rootstocks, parentage and number of trees for B9-65.

B9-65		
Rootstock	Parentage	Number of Trees
43x20-04-12	Liang Ping Yau pummelo x Cleopatra	100
46x20-04-9	Hirado Buntan pummelo x Cleopatra	112
46x20-04-12	Hirado Buntan pummelo x Cleopatra	31
46x20-04-2	Hirado Buntan pummelo x Cleopatra	105
UFR 15: 46x20-04-37	Hirado Buntan pummelo x Cleopatra	57
46x20-04-42	Hirado Buntan pummelo x Cleopatra	83
46x20-04-47	Hirado Buntan pummelo x Cleopatra	75
46x20-04-48	Hirado Buntan pummelo x Cleopatra	50
46x20-04-64	Hirado Buntan pummelo x Cleopatra	81
UFR 17: Green 2	[Nova+HBPummelo] x [sour orange+Carrizo]	24
UFR 4: Orange 19	[Nova+HBPummelo] x [Cleopatra+Argentine trifoliolate orange]	73
White 1	[Nova+HBPummelo] x [Succari+Argentine trifoliolate orange]	47

Table 1 (cont'd.). SW Flatwoods Sweet Orange Rootstock Trial - List of rootstocks, parentage and number of trees for OLL20.

OLL20		
Rootstock	Parentage	Number of Trees
43x20-04-12	Liang Ping Yau pummelo x Cleopatra	101
46x20-04-9	Hirado Buntan pummelo x Cleopatra	110
46x20-04-12	Hirado Buntan pummelo x Cleopatra	24
UFR 15: 46x20-04-37	Hirado Buntan pummelo x Cleopatra	62
46x20-04-42	Hirado Buntan pummelo x Cleopatra	62
46x20-04-47	Hirado Buntan pummelo x Cleopatra	57
46x20-04-48	Hirado Buntan pummelo x Cleopatra	130
46x20-04-64	Hirado Buntan pummelo x Cleopatra	74
UFR 17: Green 2	[Nova+HBPummelo] x [sour orange+Carrizo]	112
UFR 4: Orange 19	[Nova+HBPummelo] x [Cleopatra+Argentine trifoliate orange]	95
White 1	[Nova+HBPummelo] x [Succari+Argentine trifoliate orange]	23

Table 1 (cont'd.). SW Flatwoods Sweet Orange Rootstock Trial - List of rootstocks, parentage and number of trees for OLL8.

OLL8		
Rootstock	Parentage	Number of Trees
43x20-04-12	Liang Ping Yau pummelo x Cleopatra	6
43x20-04-2	Liang Ping Yau pummelo x Cleopatra	157
46x20-04-9	Hirado Buntan pummelo x Cleopatra	130
46x20-04-12	Hirado Buntan pummelo x Cleopatra	104
46x20-04-2	Hirado Buntan pummelo x Cleopatra	97
UFR 15: 46x20-04-37	Hirado Buntan pummelo x Cleopatra	68
46x20-04-42	Hirado Buntan pummelo x Cleopatra	75
46x20-04-47	Hirado Buntan pummelo x Cleopatra	80
46x20-04-48	Hirado Buntan pummelo x Cleopatra	74
46x20-04-64	Hirado Buntan pummelo x Cleopatra	59
UFR 17: Green 2	[Nova+HBPummelo] x [sour orange+Carrizo]	6
UFR 4: Orange 19	[Nova+HBPummelo] x [Cleopatra+Argentine trifoliate orange]	208
White 1	[Nova+HBPummelo] x [Succari+Argentine trifoliate orange]	26

Rating legend for following graphs

<u>Tree Size Rating</u>
5 = Tallest with full canopy 4 = Tallest with thinner canopy 3 = Average size 2 = Smaller with thin canopy 1 = little to no growth thin canopy
<u>HLB Rating</u>
5 = Healthy with very little HLB 4 = Healthy with some HLB 3 = HLB thru out the tree 2 = Heavy HLB thin canopy 1 = Heavy HLB thin canopy with very little growth
<u>Yield [boxes/tree]</u>
3 = Very good yield good fruit size 2 = Medium yield 1 = Low yield with small fruit 0 = No fruit

Fig. 1. SW Flatwoods Sweet Orange rootstock trial – Tree size and HLB rating and Yield [boxes/tree, Nov./17].*

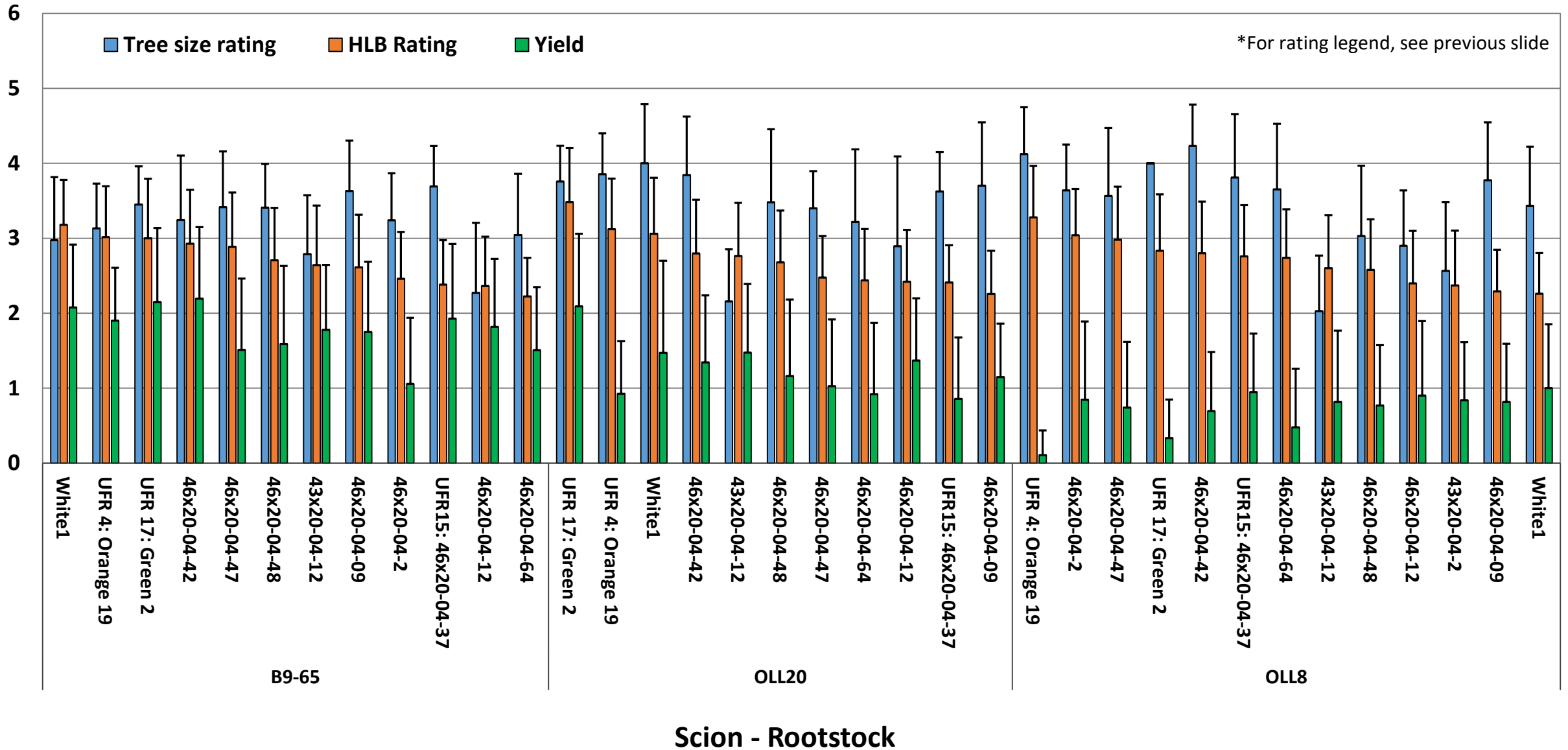
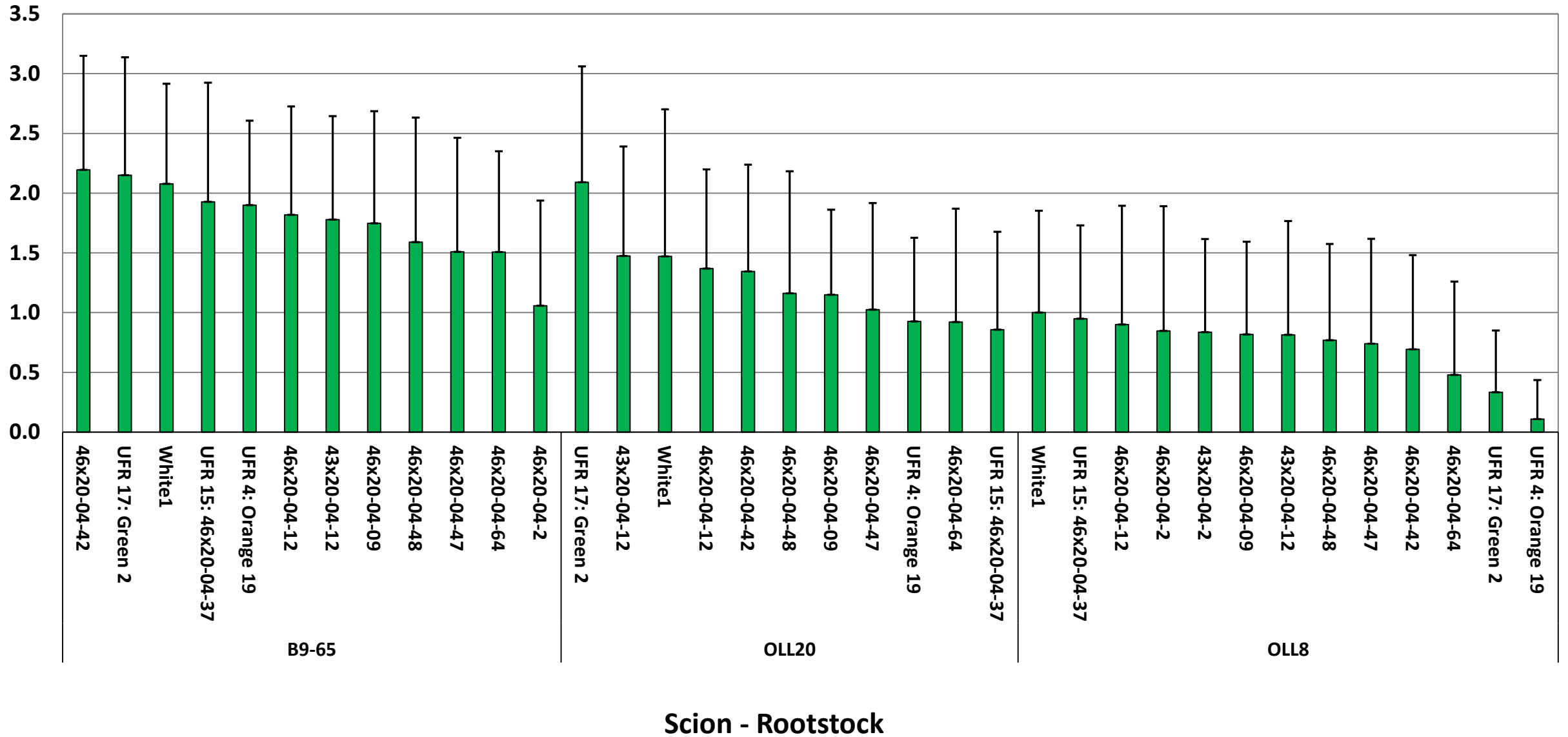
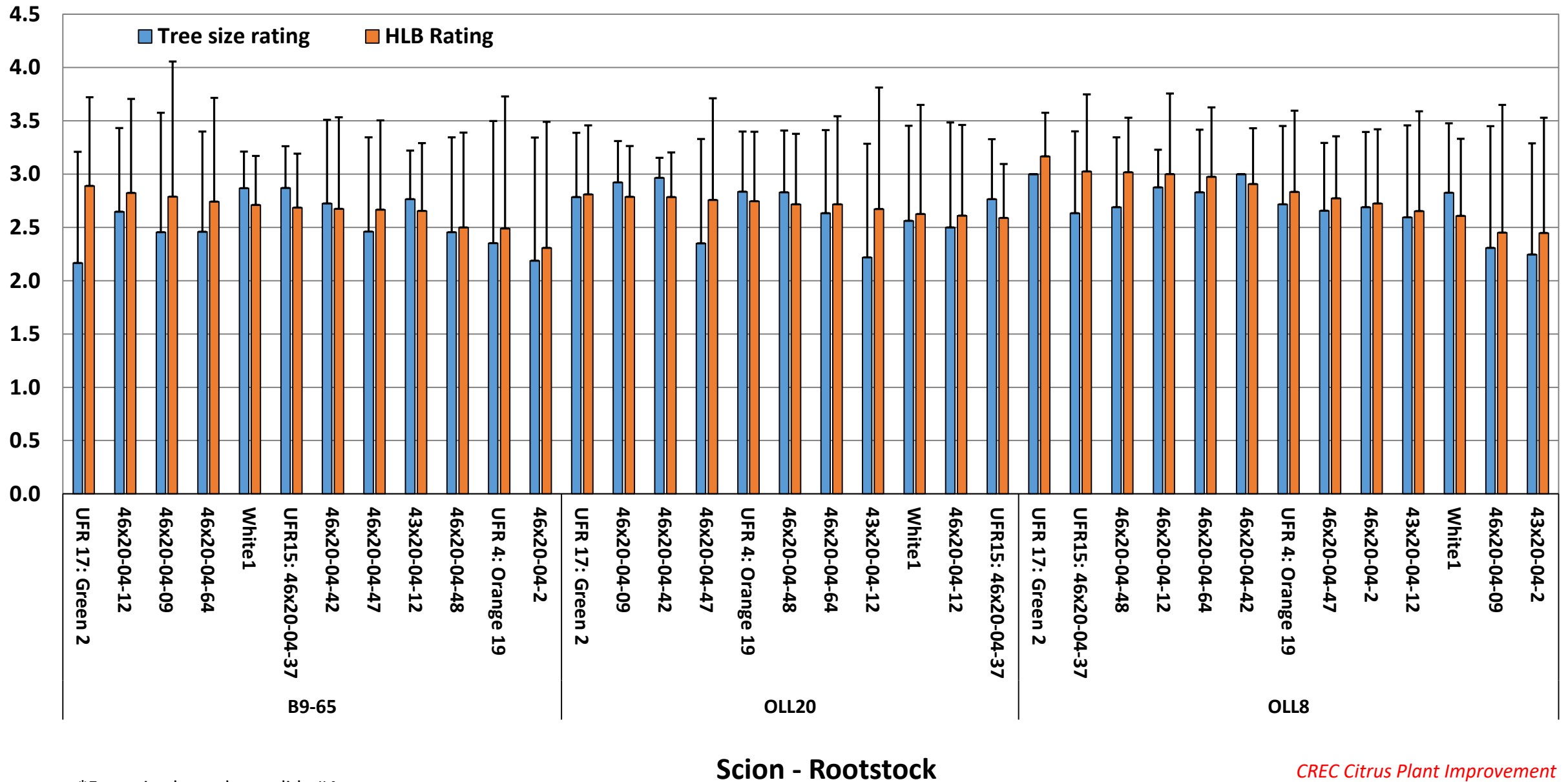


Fig.2. SW Flatwoods Sweet Orange rootstock trial – Yield* [boxes/tree]: mean + std. dev. [Nov./17].



*For rating legend, see slide #4

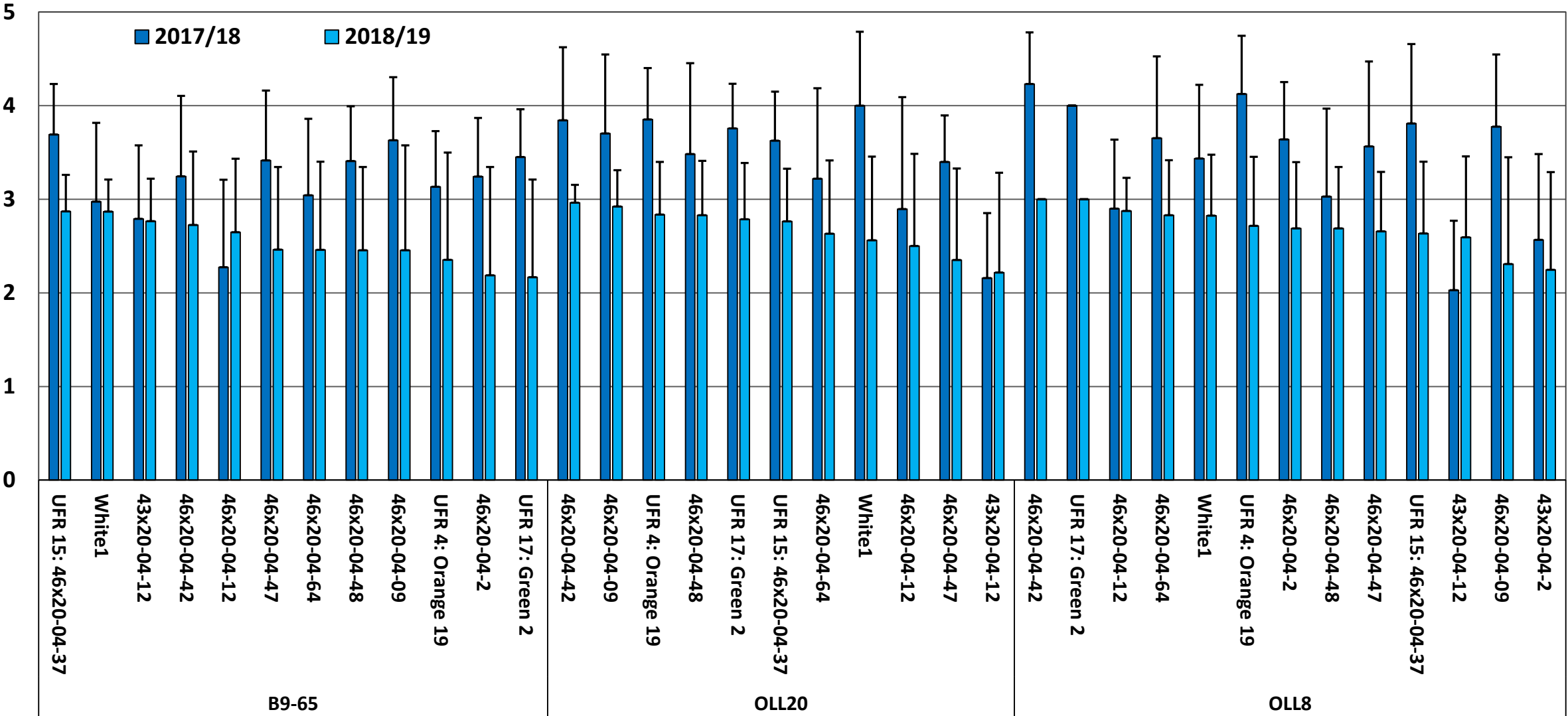
Fig. 3. SW Flatwoods Sweet Orange rootstock trial – Tree size and HLB rating* [Nov./18].



*For rating legend, see slide #4

Scion - Rootstock

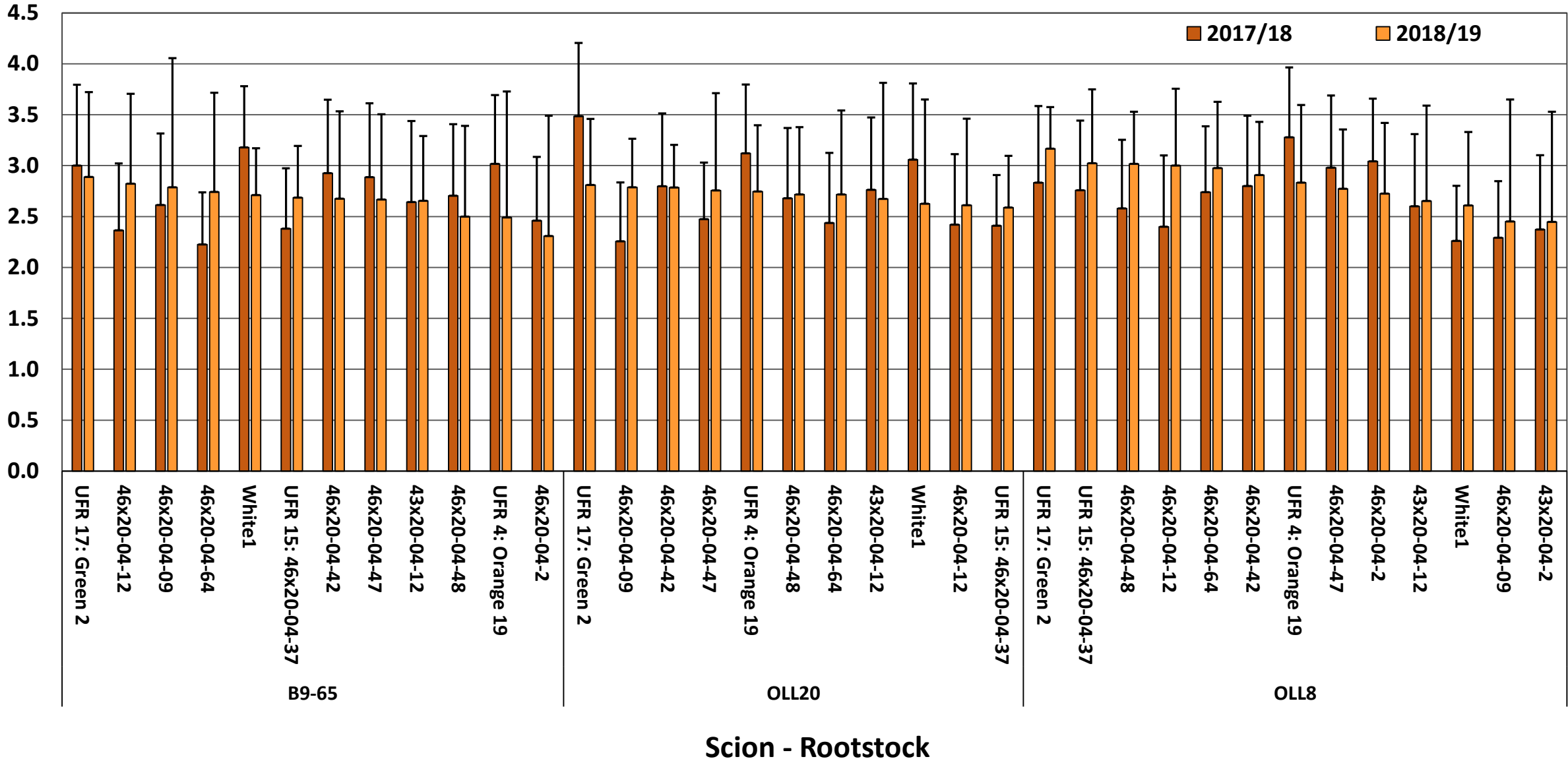
Fig. 4. SW Flatwoods Sweet Orange rootstock trial – Tree size rating*: mean + std. dev. for seasons 2017/18 [Nov./17] & 2018/19 [Nov./18].



*For rating legend, see slide #4

Scion - Rootstock

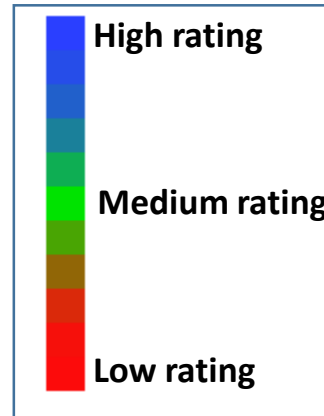
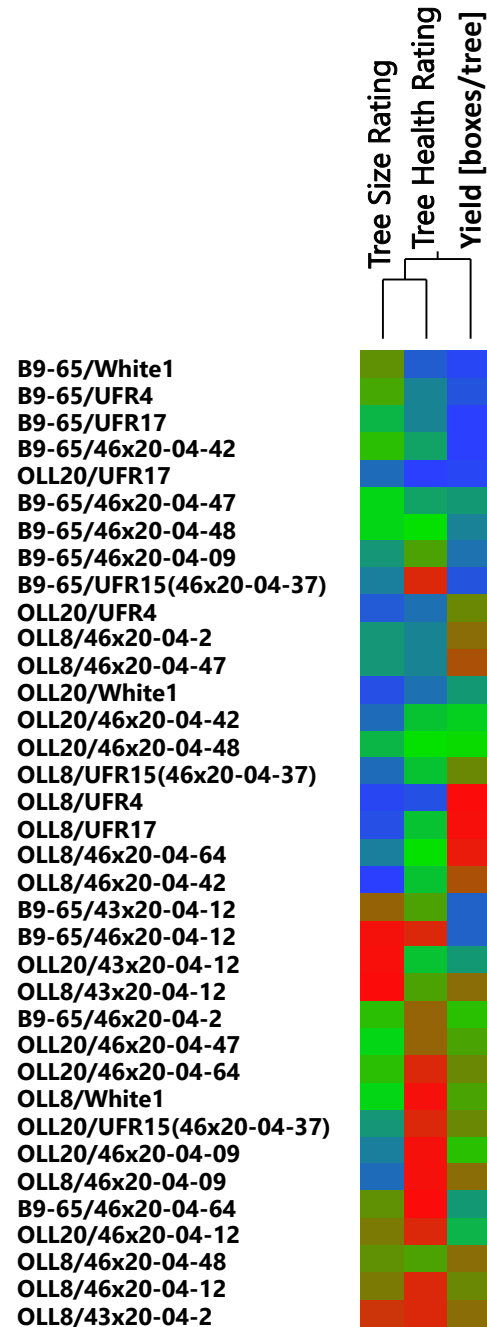
Fig. 5. SW Flatwoods Sweet Orange rootstock trial – HLB rating*: mean + std. dev. for seasons 2017/18 & 2018/19 [Nov./18].



*For rating legend, see slide #4

Fig. 6. SW Flatwoods Sweet Orange Rootstock Trial – Heat Map: Tree size rating, tree health rating and yield

Data collected from 3 year old trees [Nov./17]



Heat Map Interpretation

Color coding is used to better visualize the rating for tree size, tree health and yield for sweet orange on each of the rootstocks in this trial. A high (Best) rating is in blue and low (Worst) rating is in red. The other colors represent the values between high and low according to the color scale.