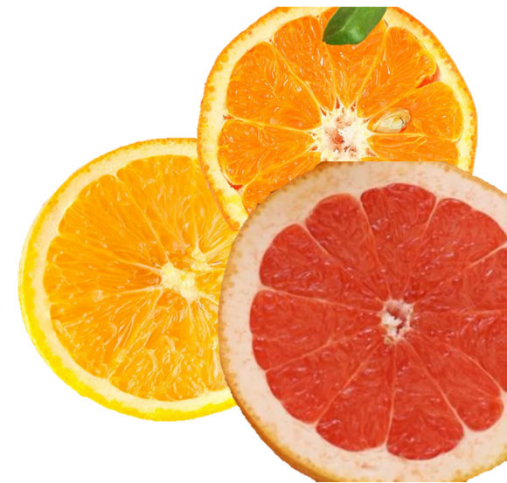


# Performance of Grapefruit Scion/Rootstock Combinations in IRREC Millennium Block

Mark Ritenour  
[ritenour@ufl.edu](mailto:ritenour@ufl.edu)



# Acknowledgements

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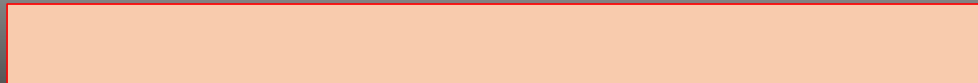


# Evaluate potential HLB tolerant rootstock/scion combinations in large grower driven field trials

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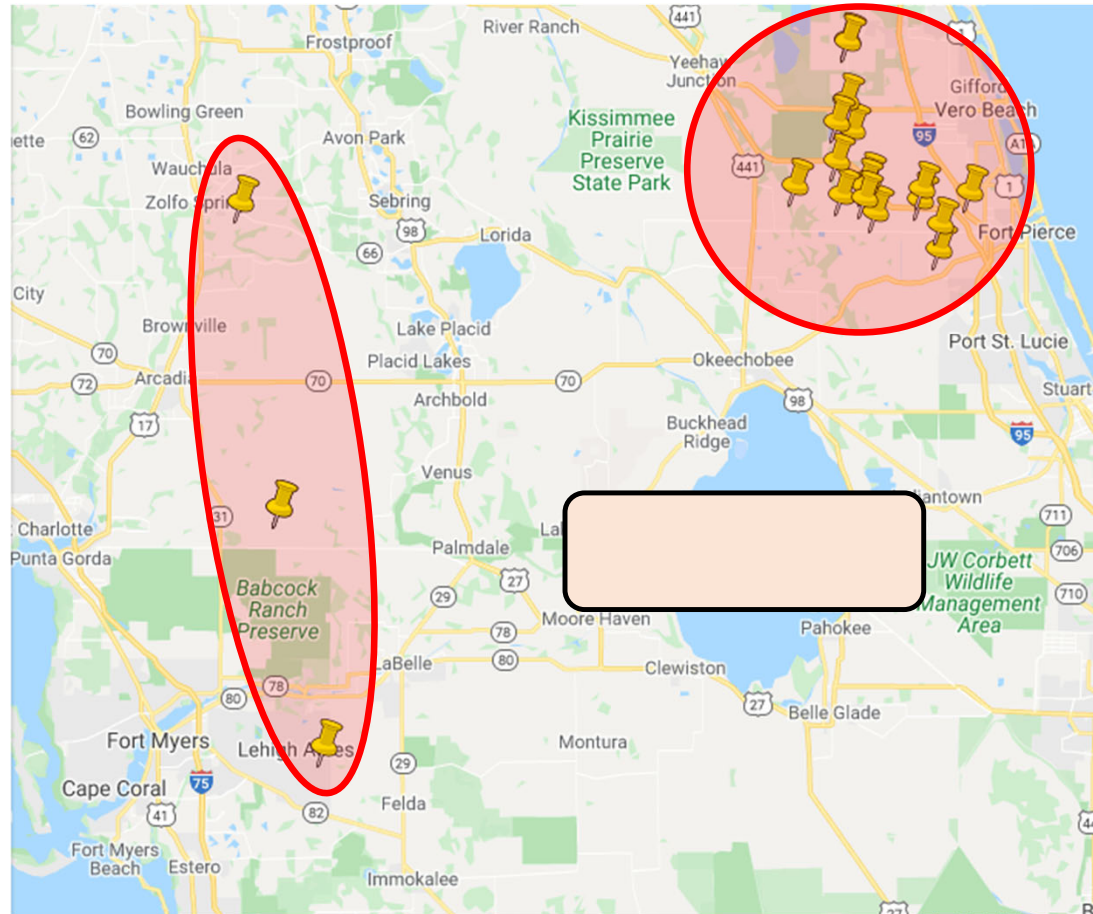
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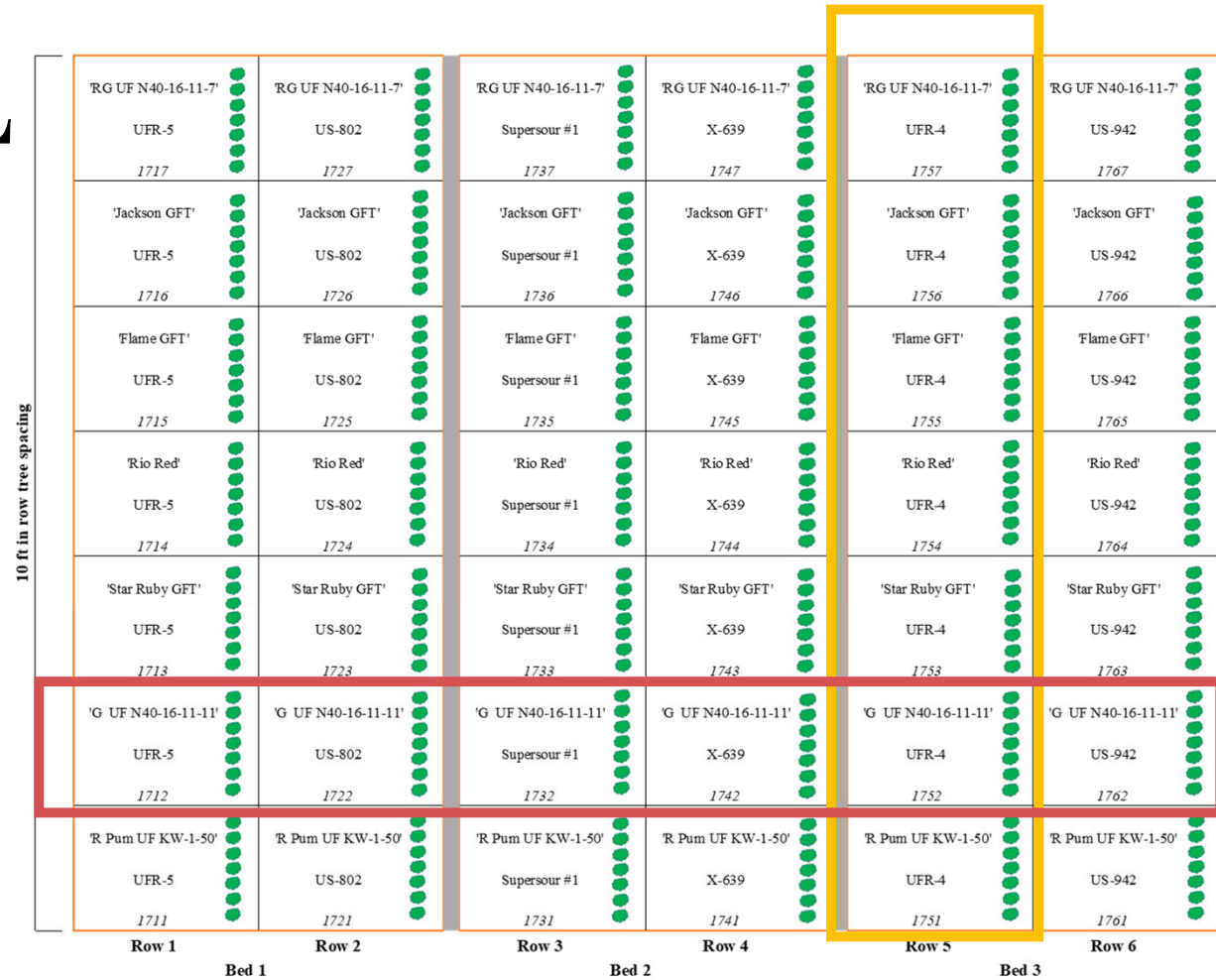


# VARIETY TRIAL – LOCATIONS

- MAC - GF -VT Site locations
- Individual styles
- Arapaho Groves - Block 33
- Blue Goose - Block 16
- Estes Citrus - Blocks 19/36
- Glenn Lingle Rev Tr - Block 20
- Ken Scott Groves - Blocks 21...
- Happy Food, LLC - Block 35
- Hunt Bros., Inc. - Block 23
- Indian River Exchange Packer...
- Indian River Exchange Packer...
- McKenna & Associates Citru...
- MCL Properties, Inc. - Block 27
- Packers of Indian River, Ltd. - ...
- Southern Gardens - Block 32
- Patrick Fruit Company, LLC - ...
- Premier Citrus - Blocks 30/4...
- Scott Groves, Inc. - Block 31
- Scott Groves - Blocks 43/44
- Sun Ag LLC - Block 34/45
- Blue Goose - Block 17
- Brant Schirard - Block #28
- Rusty Banack - Blocks 15 + 1...



# VARIETY TRIAL BLOCK SETUP

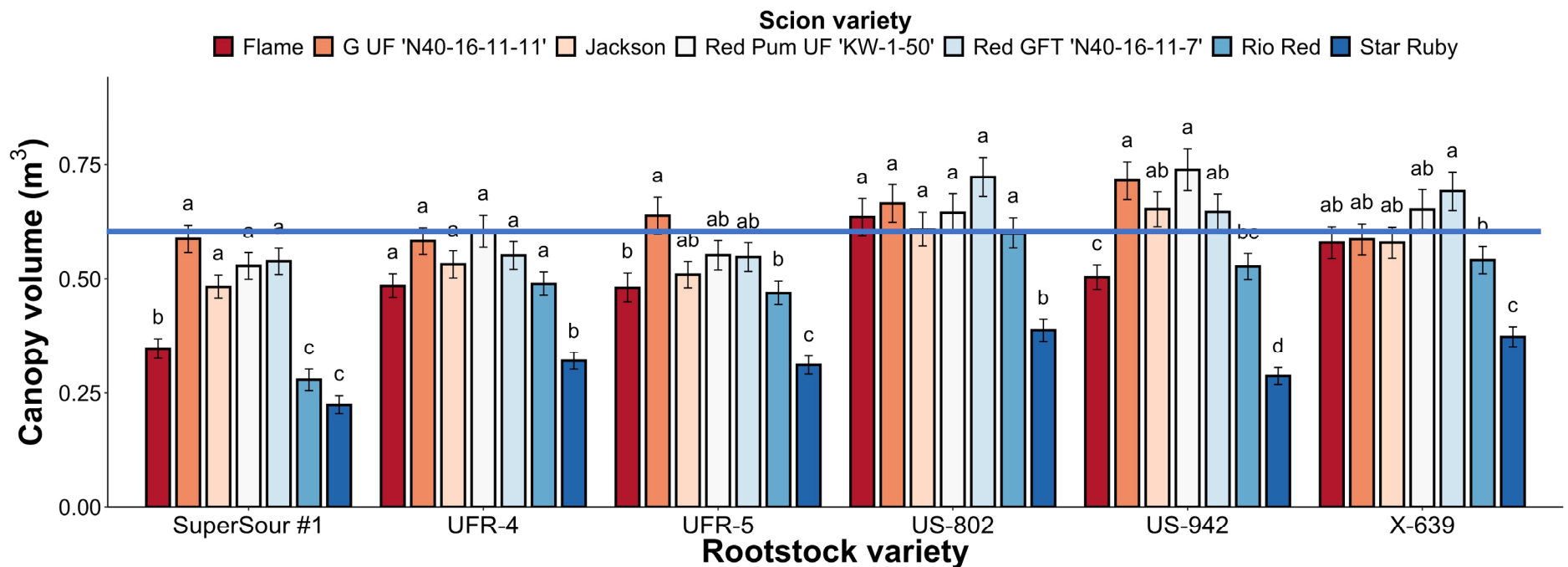


Scion	7 scions
Rootstock	6 rootstocks
Plot ID	Minimum of 7 trees per plot



# VARIETY TRIAL – RESULTS

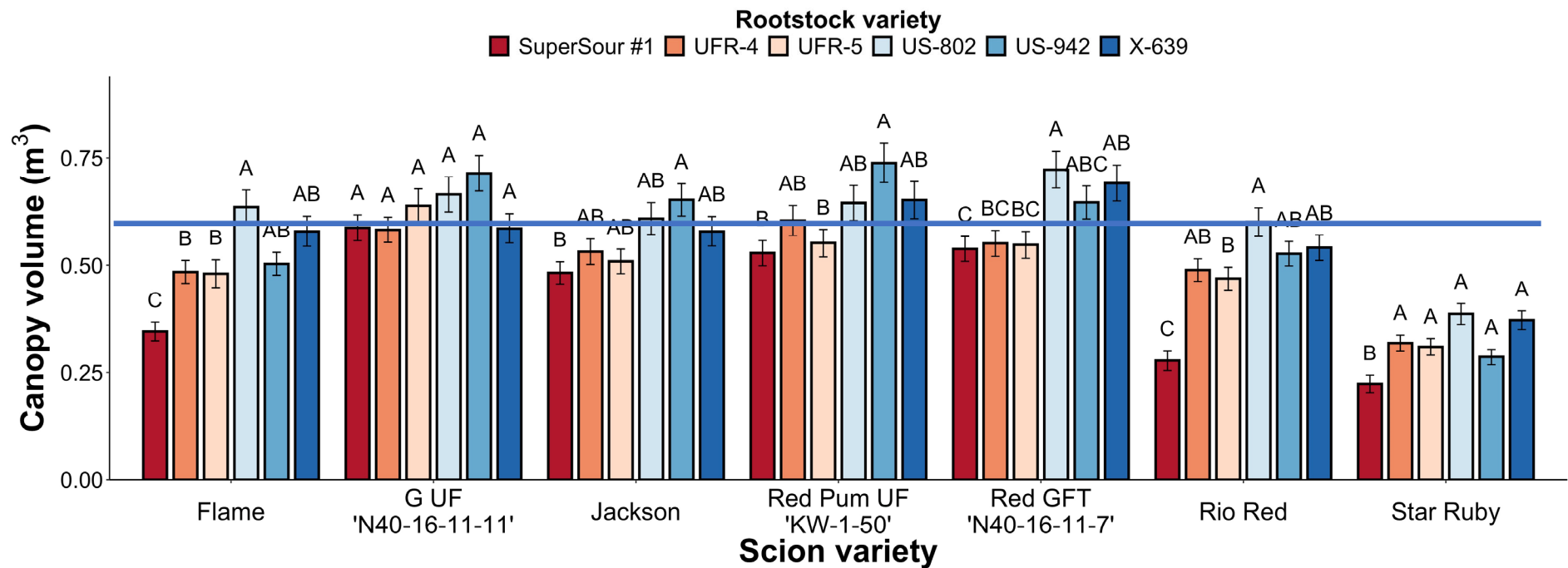
## Canopy volume within Rootstock variety



Bars with error bars represent (estimated marginal) means  $\pm$  standard error. Means not sharing any letter are significantly different by the Bonferroni-test at the 5% level of significance.

# VARIETY TRIAL – RESULTS

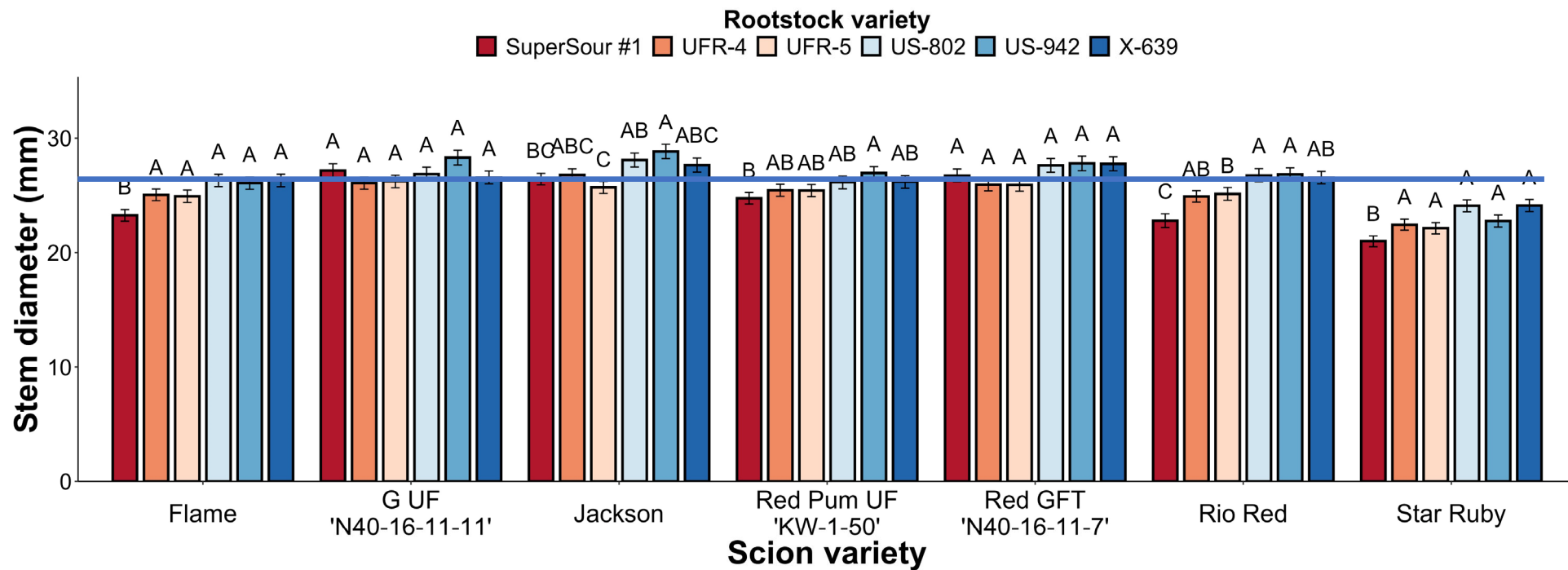
## Canopy volume within Scion variety



Bars with error bars represent (estimated marginal) means  $\pm$  standard error. Means not sharing any letter are significantly different by the Bonferroni-test at the 5% level of significance.

# VARIETY TRIAL – RESULTS

## Stem diameter within Scion variety

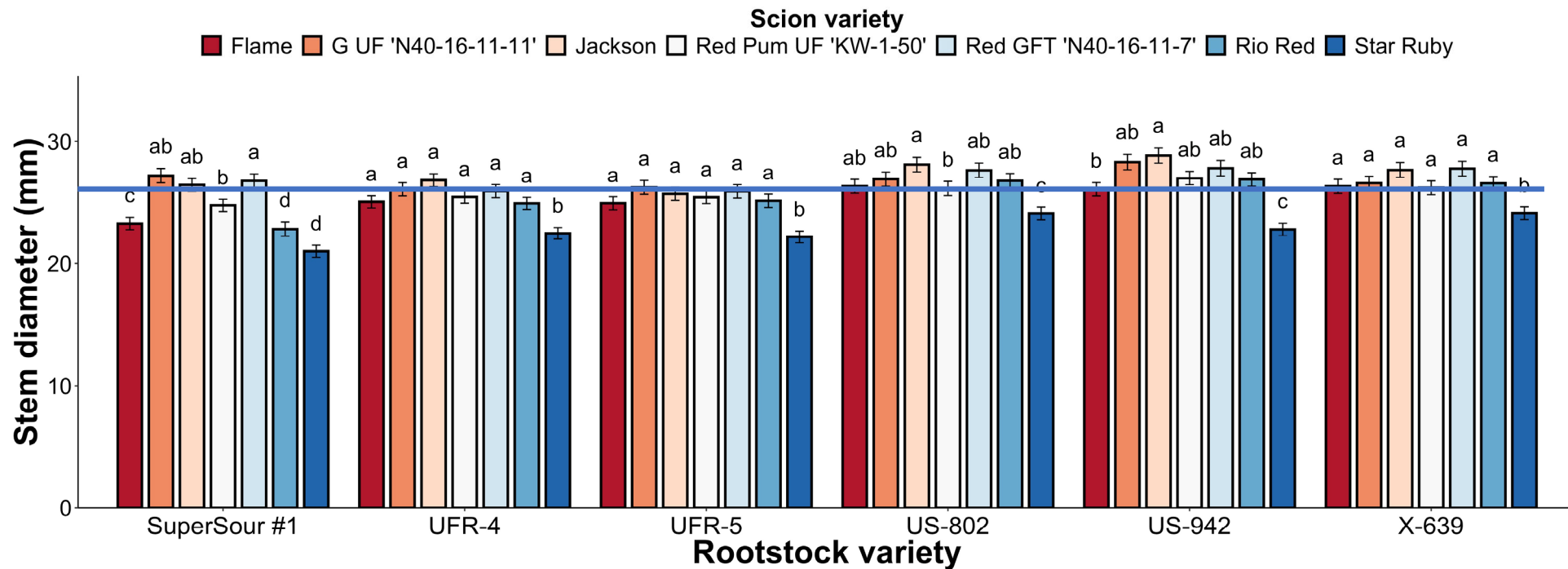


Bars with error bars represent means  $\pm$  standard error. Means not sharing any letter are significantly different by the Bonferroni-test at the 5% level of significance.



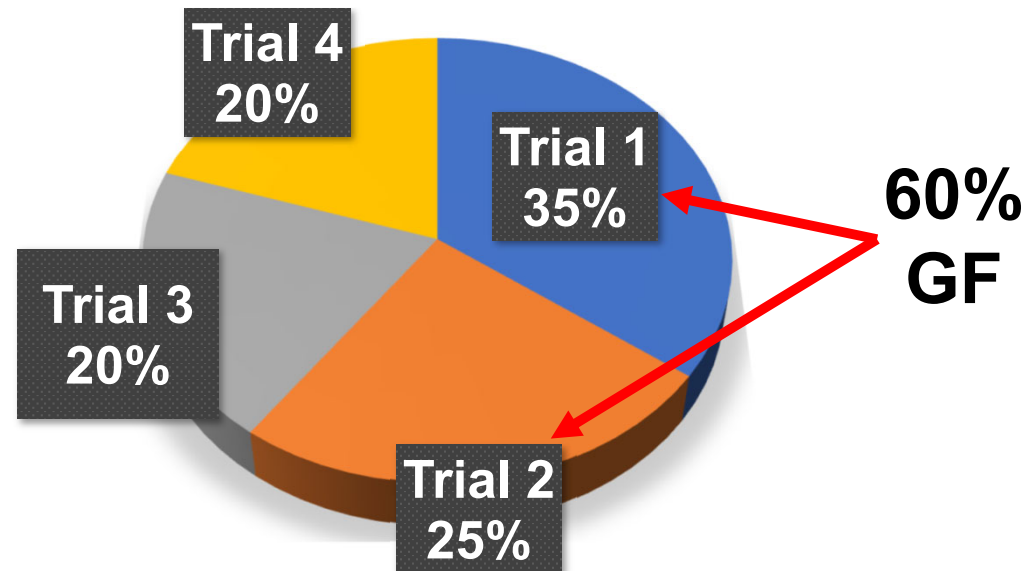
# VARIETY TRIAL – RESULTS

## Stem diameter within Rootstock variety



Bars with error bars represent means  $\pm$  standard error. Means not sharing any letter are significantly different by the Bonferroni-test at the 5% level of significance.

# The Millennium Block



# Scion and Rootstock Keys



## Trial 1: Grapefruit scions and rootstocks

Scion	ID
'US 6-16-172' Pummelo hybrid	A
'US 4-4-1'	B
'US 1-83-179'	C
'UF N40-16-11-11'	D
'Jackson'	E
'US HoneyCoat'	F
'UF 5-1-99-2' Pummelette	G
'UF 914'	H
'US 6-17-16'	I
'US 6-17-48' Pummelo hybrid	J
'Ray Ruby'	K
'UF N11-29'	M
'UF N40-16-11-15'	N
'UF N40-16-11-3'	O
'UF N40-16-11-7'	P
'US Seedless Surprise'	Q
'Star Ruby'	R
'Summer Gold'	S
Rootstock	ID
Sour orange	1
US-942	2
X-639	3



## Trial 2: 'Ray Ruby' and rootstocks

Scion	ID
'Ray Ruby'	B
Rootstock	ID
2247×2075-02-26	1
2247×6070-02-2	2
46×20-04-42	3
46×20-04-6	4
A+VolkxOrange 19-11-8	5
C-146	6
C-22	7
C-54	8
C-57	9
Cleopatra mandarin	10
Kuharske citrange	11
Orange 16	12
Sour orange	13
Sun Chu Sha mandarin	14
UFR-1	15
UFR-15	21
UFR-16	22
UFR-17	23
UFR-4	24
UFR-5	25

Rootstock	ID
UFR-7	26
UFR-8	27
UFR-9	28
US-1283	30
US-802	32
US-812	33
US-897	34
US-942	35
WGFT+50-7	36
Cunnigham	37
X-639	38



# Trial 1 Fruit Quality

Scion	Brix	TA	Ratio
Pummelo Hyb UF 914	8.5 a	0.68 efg	12.7 cd
US FTP 4-4-1	8.2 ab	0.82 bcd	11.6 de
Pummelo Hyb US 6-16-172	8.1 abc	0.46 i	19.2 a
Pummelo Hyb US 6-17-48	7.9 bcd	0.58 ghi	14.2 bc
Gft Hyb US 1-83-179	7.9 bcd	1.05 a	8.5 fgh
Jackson Gft	7.7 cde	0.88 bcd	9.1 fgh
Pummelette UF 5-1-99-2	7.6 de	0.74 def	10.3 ef
Honeycoat US 1-26-51	7.5 de	0.64 fgh	12.1 de
Pummelo Hyb US 6-17-16	7.5 de	0.52 hi	14.8 b
Gft UF N40-16-11-11	7.2 e	0.79 cde	9.6 fg
Star Ruby Gft	6.7 f	0.94 ab	7.7 gh
Red Gft UF N40-16-11-3	6.7 f	0.82 bcd	8.3 fgh
Red Gft UF N40-16-11-15	6.7 f	0.89 bc	7.6 gh
Ray Ruby Gft	6.7 f	0.86 bcd	7.9 gh
Red Gft UF N40-16-11-7	6.6 f	0.90 bc	7.5 gh
Red Gft UF N11-29	6.5 f	0.93 abc	7.2 h
Summer Gold Gft UF N2-28	6.5 f	0.92 abc	7.1 h
Seedless Surprise	6.4 f	0.79 cde	8.8 fgh

# Trial 2 Fruit Quality

Rootstock	Total fruit yield (kg)		Good fruit yield (%)		Good fruit yield (kg)	
A+VolkxOrange 19-11-8	54.40	a	65.40	ab	36.41	a
WGFT+50-7	49.38	ab	72.17	a	33.42	abc
UFR-15	46.12	ab	66.40	ab	34.50	ab
UFR-4	45.46	ab	41.83	bcdefg	20.84	abcde
US-1283	42.07	ab	60.50	abc	25.92	abcde
US-802	42.05	ab	22.17	efg	12.71	abcde
US-812	41.40	ab	18.80	fg	10.23	bcde
Kuharske citrange	39.09	ab	33.67	cdefg	16.23	abcde
2247×2075-02-26	38.51	ab	54.50	abc	23.33	abcde
Sour orange	38.21	ab	50.00	abcde	27.10	abcde
UFR-16	36.80	ab	76.33	a	28.31	abcd
2247×6070-02-2	34.96	ab	73.67	a	25.36	abcde
UFR-5	33.18	ab	40.67	bcdefg	16.35	abcde
Cunnigham	32.73	ab	38.67	bcdefg	13.96	abcde
UFR-17	32.69	ab	39.83	bcdefg	15.09	abcde
46×20-04-6	31.84	ab	72.33	a	22.49	abcde
C-54	29.28	ab	53.67	abc	18.47	abcde
US-942	28.89	ab	53.00	abcd	21.21	abcde
X-639	27.01	ab	38.50	bcdefg	11.07	bcde
Orange 16	26.85	ab	36.33	bcdefg	9.62	cde
C-57	23.68	ab	48.50	abcdef	10.91	bcde
46×20-04-42	23.61	ab	59.83	abc	14.01	abcde
UFR-1	20.73	ab	23.17	defg	5.31	de
C-22	17.82	b	16.67	g	3.42	e
US-897	17.09	b	56.00	abc	10.68	bcde

# Trial 2 Fruit Quality

Rootstock	Brix	Titrateable Acid	Ratio
2247×6070-02-2	7.9 a	1.05 a	7.6 abcde
US-812	7.2 ab	0.86 bcdef	8.4 abc
US-942	7.0 bc	0.94 abc	7.5 abcde
Sour orange	7.0 bc	0.89 bcdef	7.9 abcde
WGFT+50-7	7.0 bcd	0.86 bcdef	8.1 abcd
UFR-5	7.0 bcd	0.91 bcde	7.7 abcde
C-22	6.9 bcd	0.81 ef	8.5 ab
UFR-17	6.9 bcd	0.90 bcdef	7.6 abcde
UFR-1	6.9 bcd	0.90 bcdef	7.6 abcde
46×20-04-6	6.8 bcde	0.79 f	8.8 a
46×20-04-42	6.8 bcde	0.91 bcde	7.7 abcde
X-639	6.7 bcde	0.91 bcde	7.4 bcde
C-54	6.7 bcde	0.83 cdef	8.1 abcde
Cunnigham	6.7 bcde	0.85 bcdef	8.0 abcde
2247×2075-02-26	6.7 bcde	0.89 bcdef	7.5 abcde
US-1283	6.7 bcde	0.82 def	8.2 abcd
UFR-4	6.5 bcde	0.92 abcd	7.2 cde
Kuharske citrange	6.5 bcde	0.85 cdef	7.7 abcde
Orange 16	6.5 bcde	0.96 ab	6.8 e
US-802	6.5 bcde	0.83 def	7.8 abcde
UFR-16	6.5 bcde	0.89 bcdef	7.3 bcde
US-897	6.4 bcde	0.92 abcd	7.0 de
UFR-15	6.4 cde	0.82 def	7.8 abcde
C-57	6.2 de	0.87 bcdef	7.2 bcde
A+VolkxOrange 19-11-8	6.1 e	0.84 cdef	7.2 bcde

## Grower Survey on HLB Tolerant Hybrids



Thank  
You

[ritenour@ufl.edu](mailto:ritenour@ufl.edu)

**Consent and Information about the Survey:** The University of Florida and the USDA/ARS have created a survey for citrus growers. This survey is going to ask questions about your thoughts and opinions on new citrus hybrids and the possibility that they may contribute to the Florida citrus juice industry. It also covers questions about other citrus qualities. This will give us information guiding implementation of HLB tolerant hybrids in the Florida citrus industry. This survey will take approximately 5 minutes to fill out and is 100% anonymous. The results of this survey will be published and will be accessible from a University of Florida, IFAS, Citrus Horticulture Lab website.