

Post Office Rootstock Trial, Haines City

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Post Office Rootstock Trial, Haines City - Description

In this trial with two selections of Vernia midseason orange scion, the primary purpose was to evaluate a series of best-performing rootstocks created in Argentina by Jose Luis Foguet and selected from among a series of trials conducted in Argentina [Table 1].

The Post Office trial also included two rootstock hybrids, PTM 1584 and PTM 1586 produced by Dr. Harry Ford, CREC, in an attempt to combine citrus and burrowing nematode tolerance into a single rootstock. Tree size and HLB tolerance were additional considerations, thus, Willits citrange was included as a comparison for smallish tree size.

Post Office Rootstock Trial, Haines City - Summary

- Location: Haines City, Polk County
- Scion: Vernia
- Rootstocks: 15 [12 + Swingle citrumelo, Carrizo citrange and Kinkoji]
- Date Planted: 2003
- Design:
 - Randomized complete-block
 - Replications: 6
 - Plot size: 2 trees for each scion/rootstock combination
 - Spacing: 15 x 23 ft. = 134 trees/acre
- Data:
 - 2015/16: Tree health, height ratings and yield [boxes/tree]
 - 2017/18 : Yield [boxes/tree]
 - 2018/19: Juice quality, yield [boxes/tree] and PS/acre
 - 3-year cumulative yield: 2015/16, 2017/18 and 2018/19 seasons
- Trial status: **INACTIVE** [Spring 2021]

Post Office Rootstock Trial, Haines City – Interpretive Summary as of June 2021:

Limited data were obtained from this trial after planting in 2003 with Vernia scion on rootstocks from Argentina and 3 Florida commercial standards in a design with 6 reps of 2-tree plots.

Tree ht. At age 12 years, the trees on the more vigorous rootstocks like rough lemon and Cleopatra mandarin hybrids were mostly 10 ft. tall while the smaller trees were <8 ft. tall like those of Willits citrange.

HLB. Visible leaf symptoms were present among all trees with little apparent effect on tree performance.

Yield. Yield was measured in only three seasons. When the 3-year cumulative yield was compared with tree height [Fig. 7, 8], the best performers were those on PTM 1584 and Sweet RL, i.e., they had relatively high yields despite tree size. The correlation of those two variables was 0.53 indicating that a relationship existed, but considerable variability was not accounted for by those two factors.

Juice quality. Fruit samples were collected in the 2018/19 season in February. Brix values ranged from 10-13 [Fig. 9] which were high values in comparison to other trials conducted during the HLB era.

PS/acre. When combining juice quality with yield, the top performing rootstocks in the 2018/19 season were PTM 1584, Kinkoji and the Argentine selection, 79 CL.

Post Office Rootstock Trial, Haines City – Interpretive Summary as of June 2021:

Rootstocks. Insufficient data are available to support any firm conclusions after 18 years, but the limited results suggest that no tested rootstocks should be considered poor performers. Some evidence is presented indicating that the smaller tree size of those on Willits citrange merit further evaluation of that rootstock as well as PTM 1584 which has done well in other trials. It is also noteworthy that selections of the old Florida rootstock, rough lemon, performed well.

Table 1. Post Office Rootstock Trial, Haines City – List of rootstocks: parentage and number of trees.

Rootstock abbrev.	Rootstock	Parentage	Number of Trees
Cairn	Cairn Rough lemon	[not a hybrid] Rough lemon	8
Car	Carrizo citrange	Washington navel orange x trifoliate orange	12
ClxTF	61AA-3 Cleo x TF	61AA-3 Cleopatra mandarin x trifoliate orange	13
GftxTF	75-AB MacCarty Gft x Trif 136	75-AB MacCarty Gft x Trif 136	11
Kinj	Kinkoji	Citrus obovoidea hort. ex I. Takah. RUTACEAE	12
MxTFL	Minneloa x Trif/ L22	Minneloa x Trif/ L22	15
MxTFP	Minneloa x Trif/ P22	Minneloa x Trif/ P22	9
PtM4	P.trif X Milam 1584	Poncirus trifoliata x Milam	11
PtM6	P.trif X Milam 1586	Poncirus trifoliata x Milam	8
RBOxTF	79-A Ruby Blood Orange x Barnes TF	79-A Ruby Blood Orange x Barnes TF	11
SROxTF	79-CL Seleccionada del Riachuelo x TF	79-CL Seleccionada del Riachuelo x TF	11
SwC	Swingle Citrumelo	Swingle citrumelo	9
SwtRL	Sweet Rough Lemon	Sweet Rough Lemon	8
VkxCl	81G Volk x Cleo	Volkamer lemon x Cleopatra mandarin	3
Will	Willits citrange	Ruby swt. x TF	12

Fig. 1. Post Office Rootstock Trial, Haines City – Tree height rating: mean + std. dev. [December 2012].

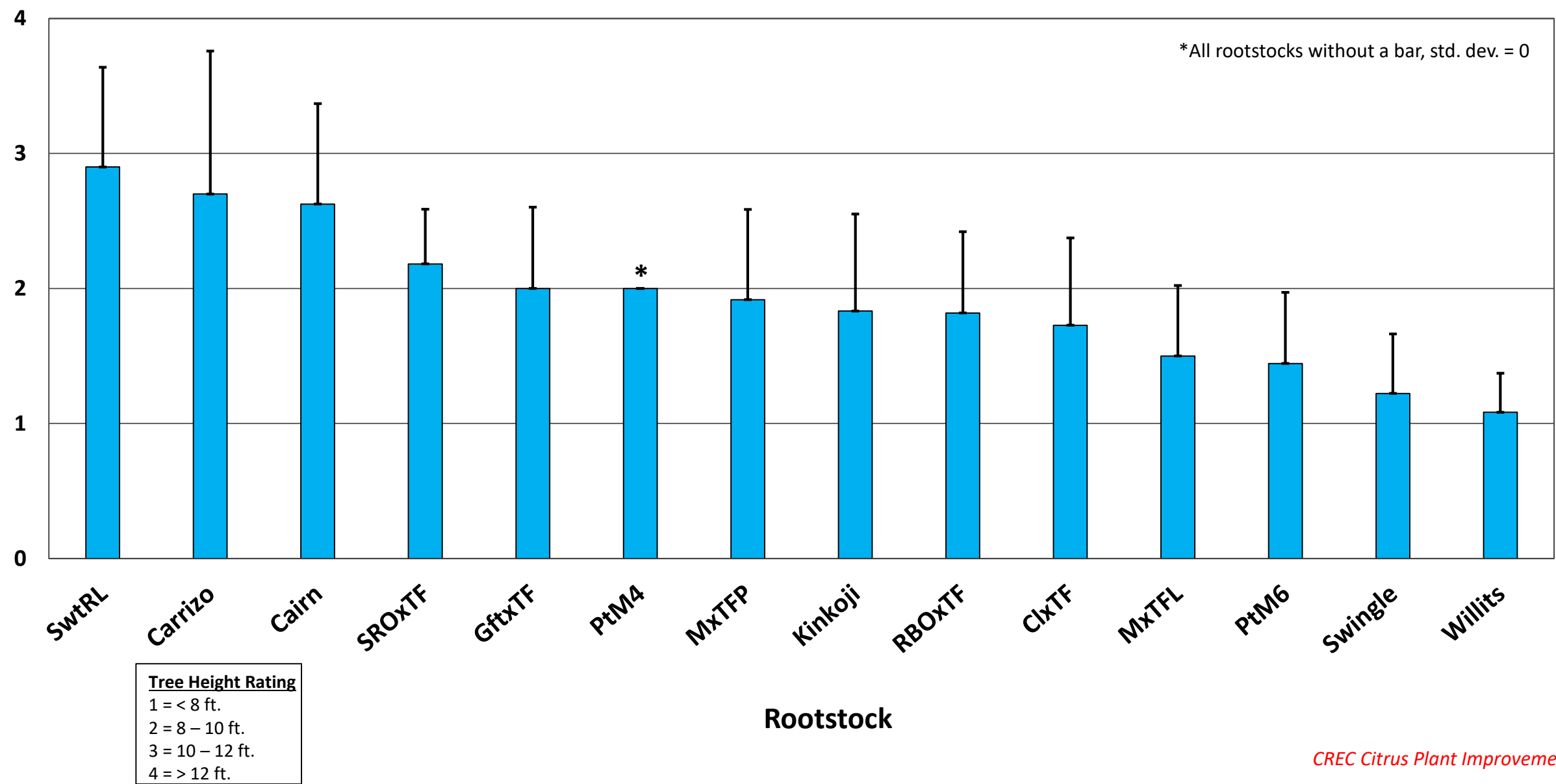


Fig. 2. Post Office Rootstock Trial, Haines City – Tree HLB rating: mean + std. dev. [December 2015].

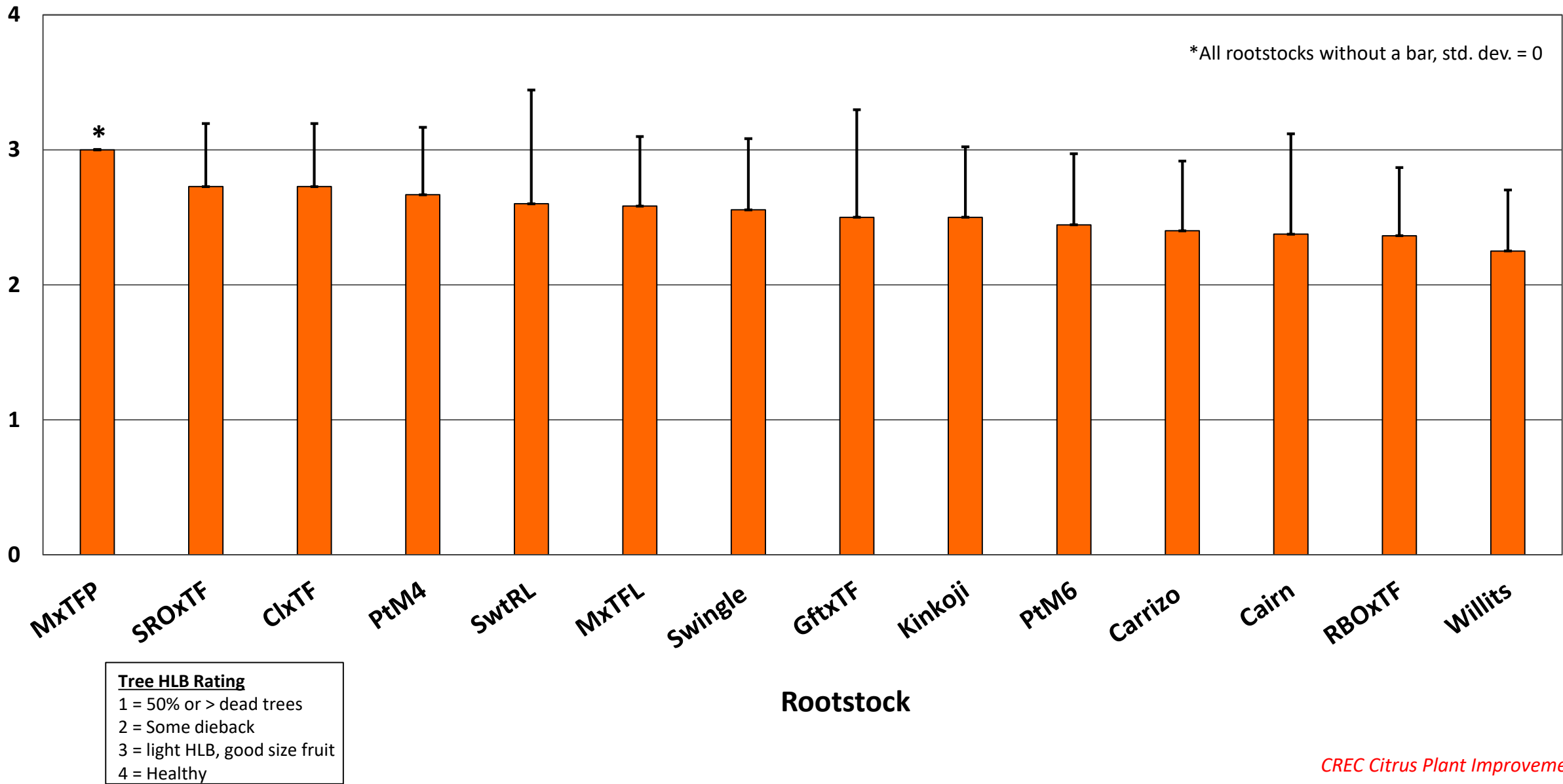


Fig. 3. Post Office Rootstock Trial, Haines City – Yield: mean + std. dev. [boxes/tree, December 2015].

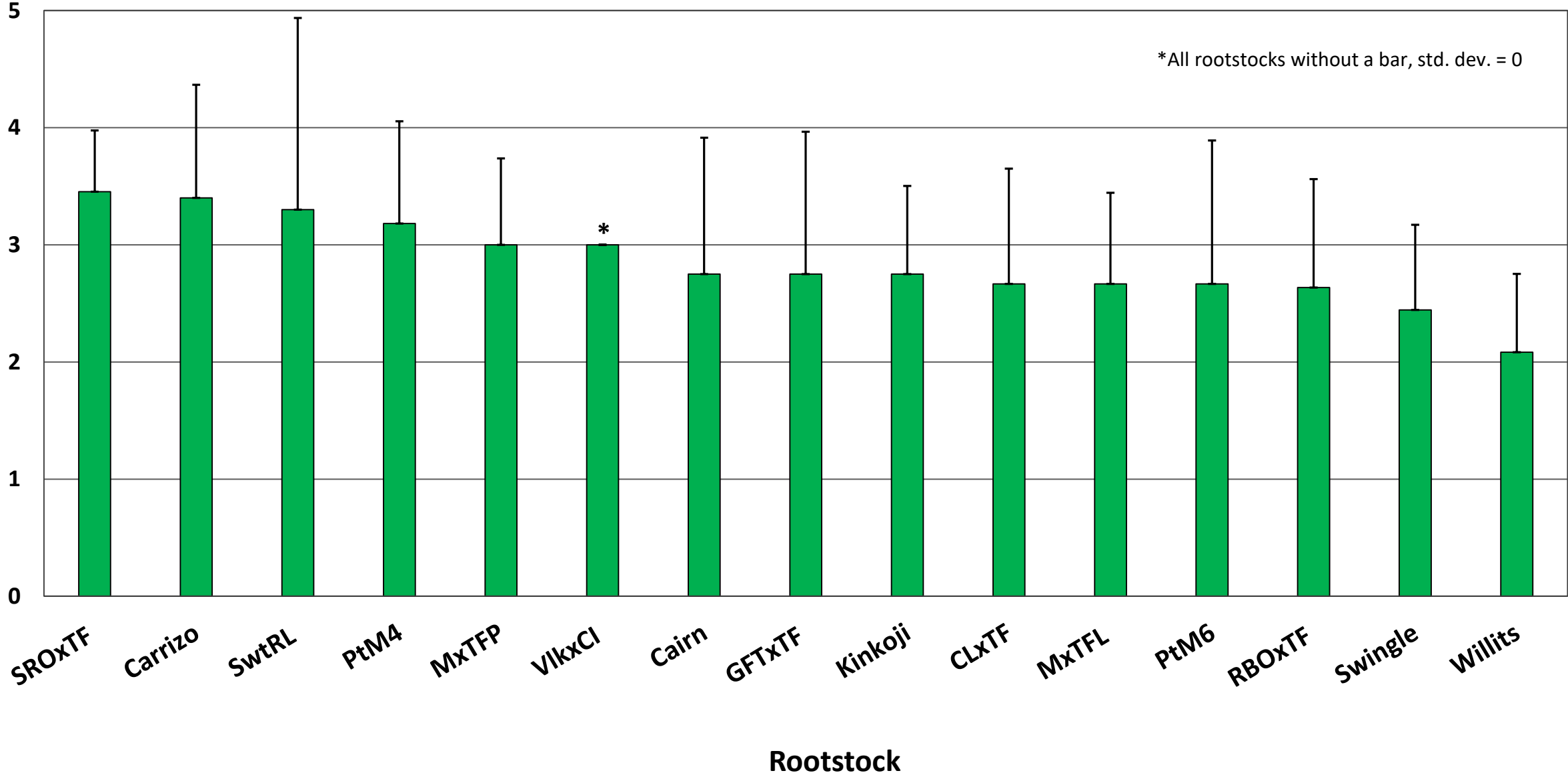


Fig. 4. Post Office Rootstock Trial, Haines City – Tree height rating vs. yield [boxes/tree; Dec 2015].

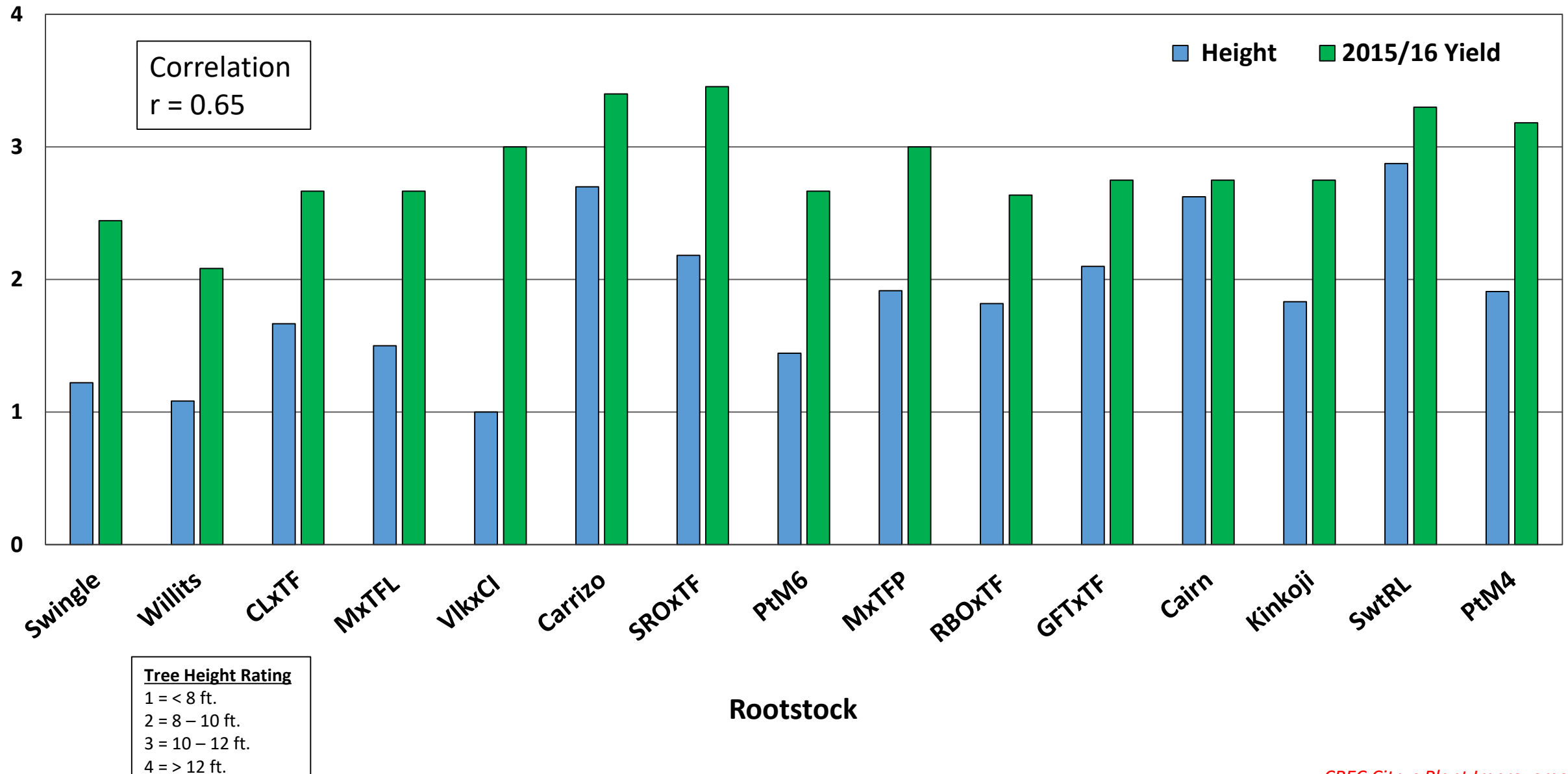


Fig. 5. Post Office Rootstock Trial, Haines City – Yield: mean + std. dev. [boxes/tree, January 2018].

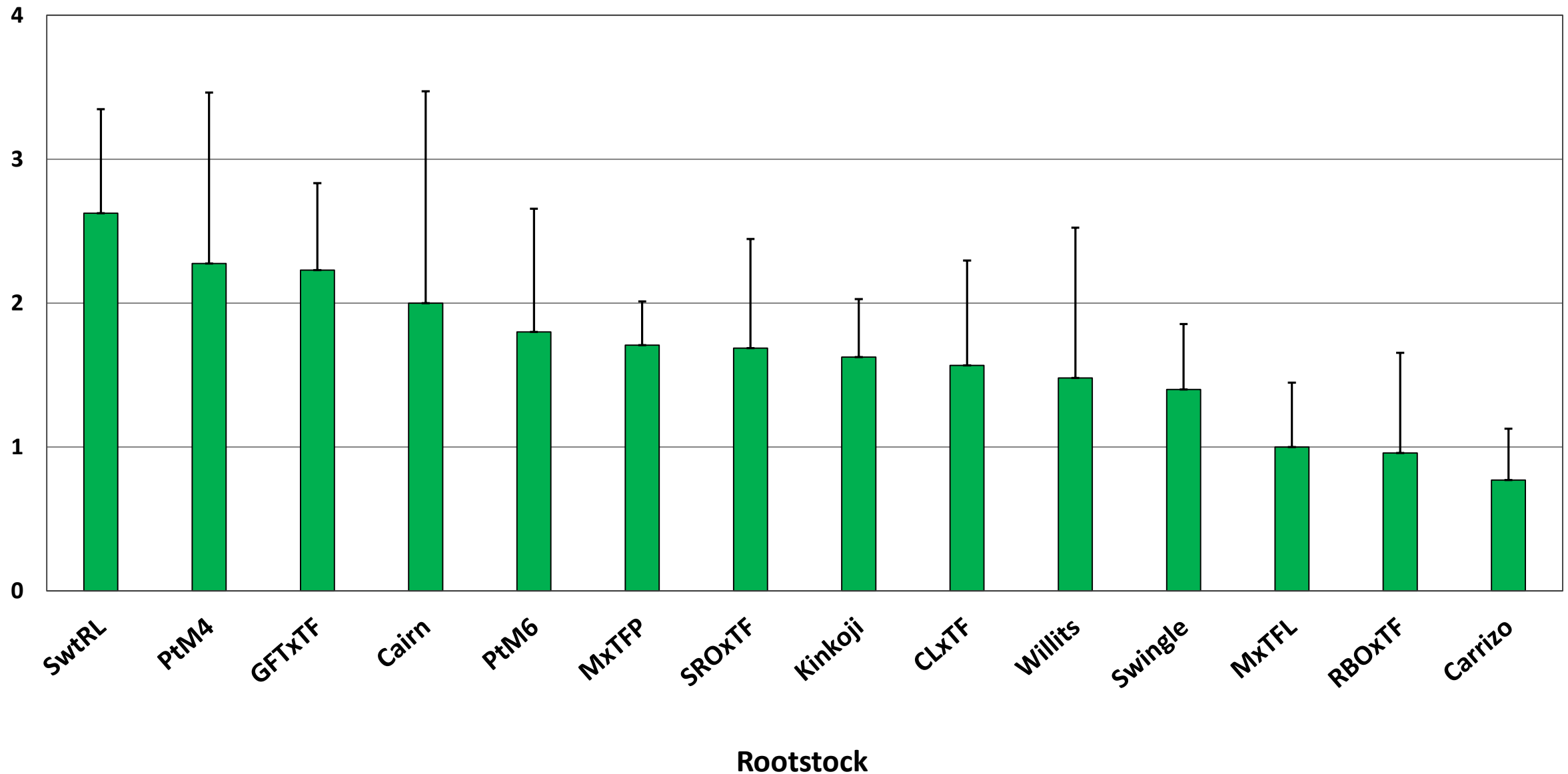


Fig. 6. Post Office Rootstock Trial, Haines City – Mean yield [boxes/tree, February 2019].

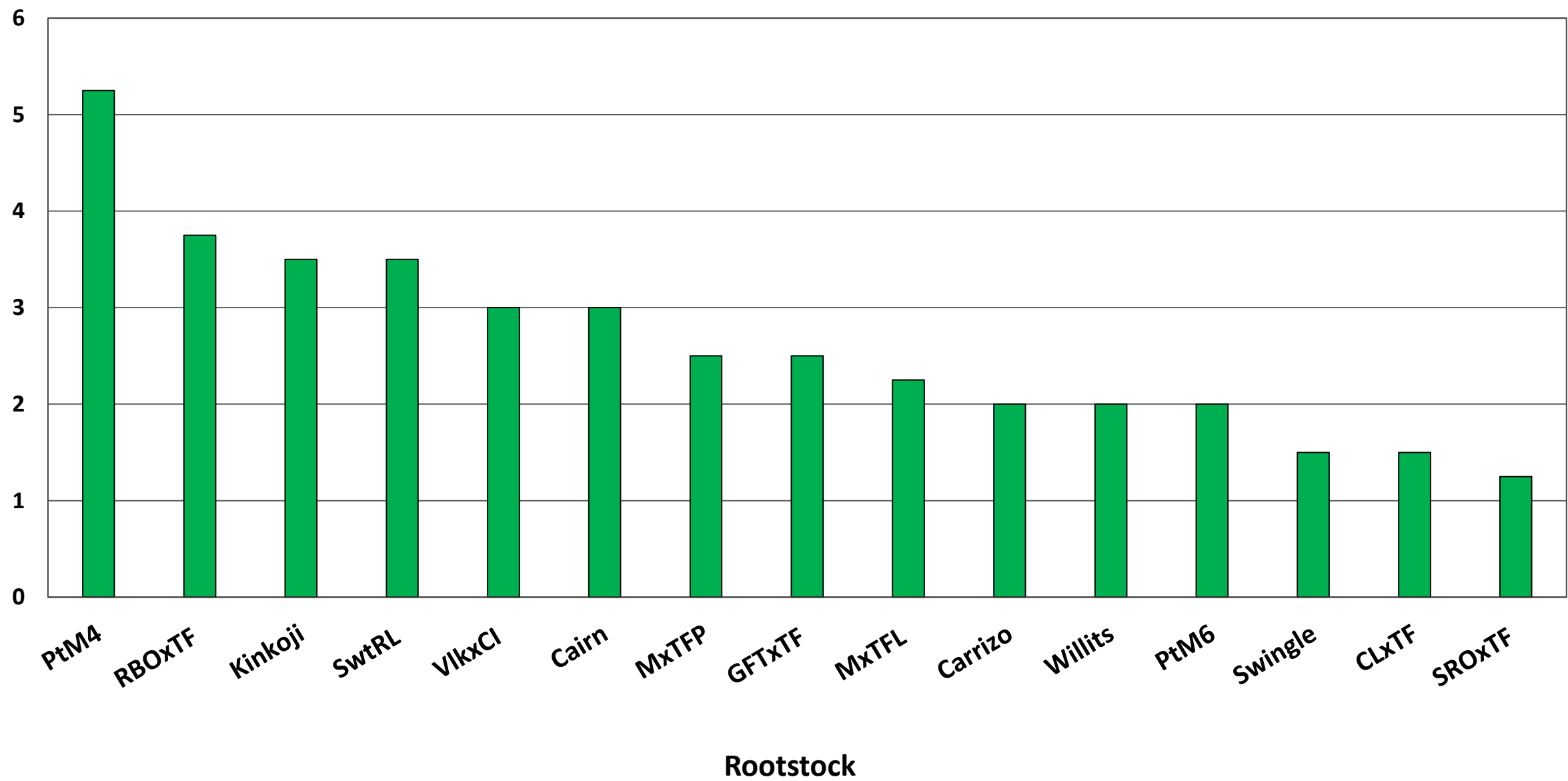


Fig. 7. Post Office Rootstock Trial, Haines City – Tree height rating [Dec 2015] vs. 3-yr cumulative yield [boxes/tree; 2015/16, 2017/18 & 2018/19].

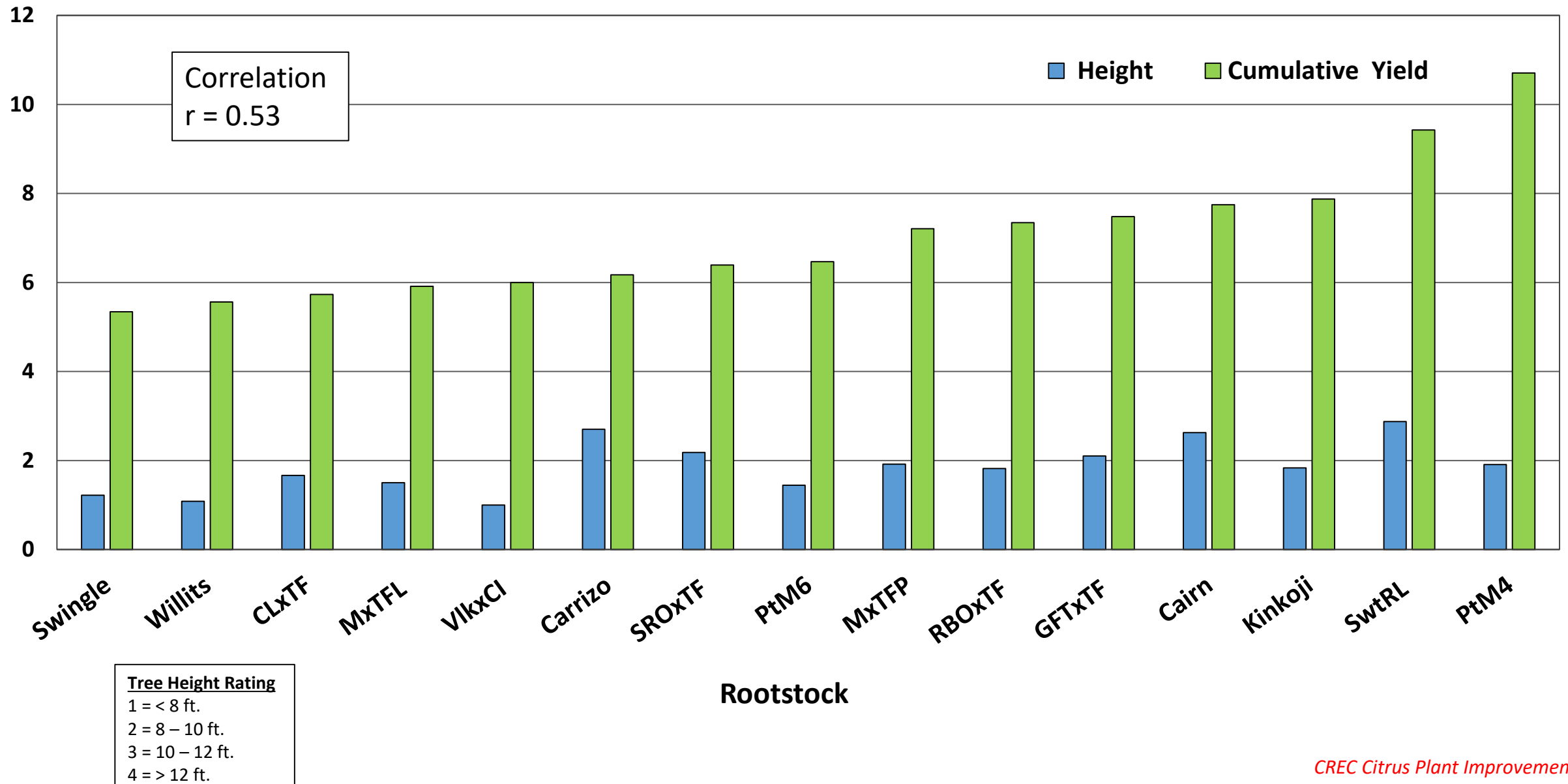


Fig. 8. Post Office Rootstock Trial, Haines City – Mean yield for the seasons 2015/16, 2017/18 and 2018/19 and 3-yr cumulative yield [boxes/tree]. Sorted by cumulative yield.

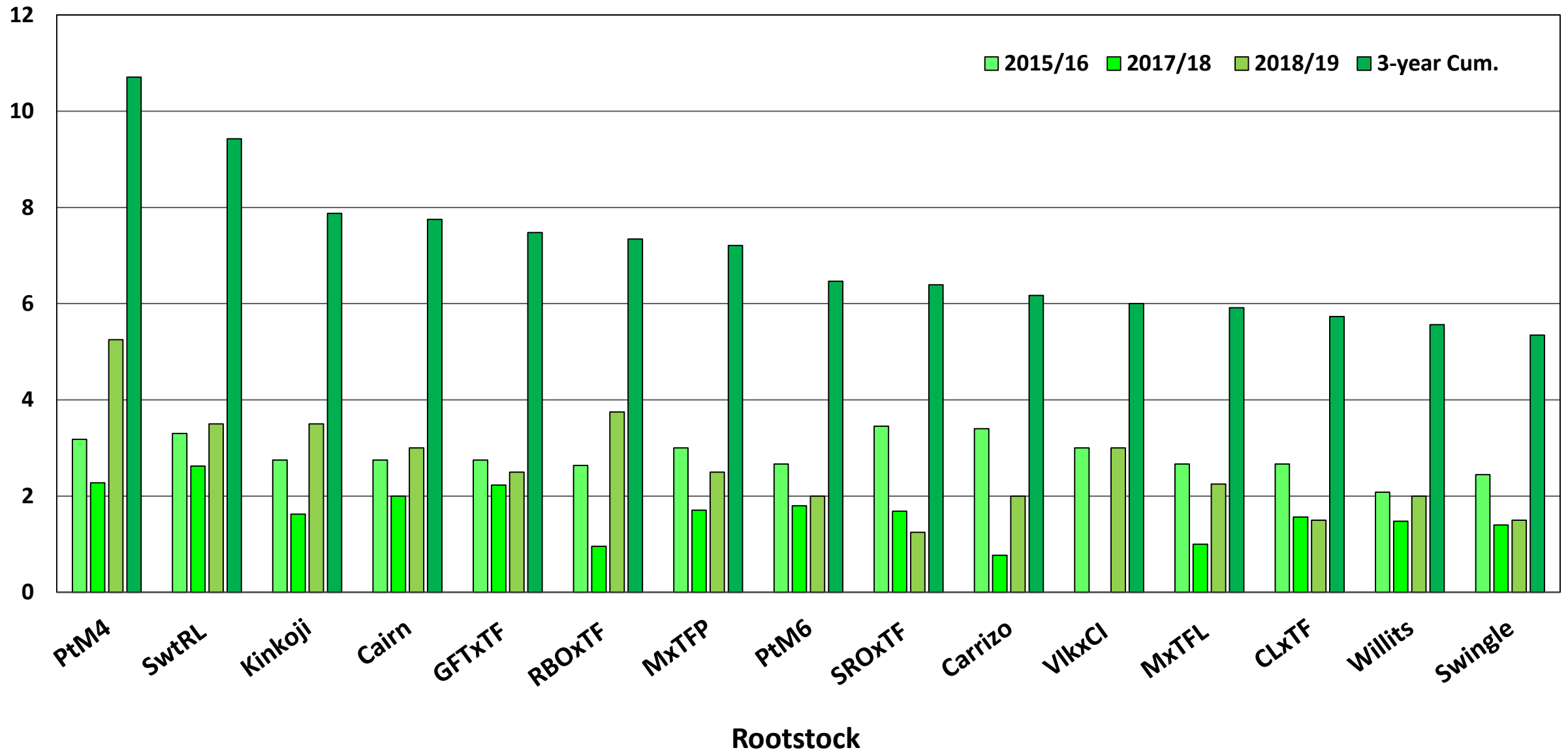


Fig. 9. Post Office Rootstock Trial, Haines City – juice Brix: mean + std. dev. [February 2019].

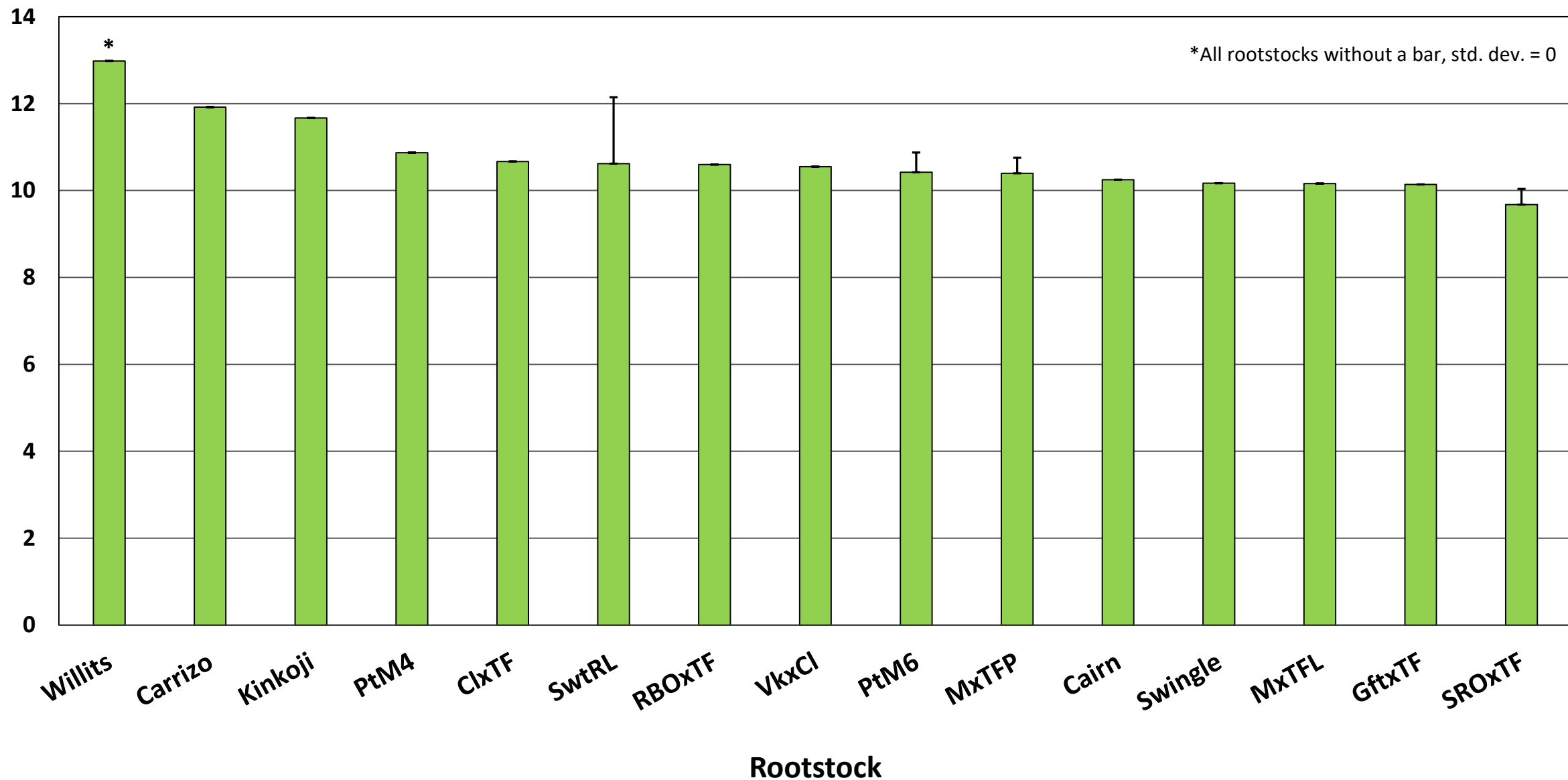


Fig. 10. Post Office Rootstock Trial, Haines City – juice Acid: mean + std. dev. [February 2019].

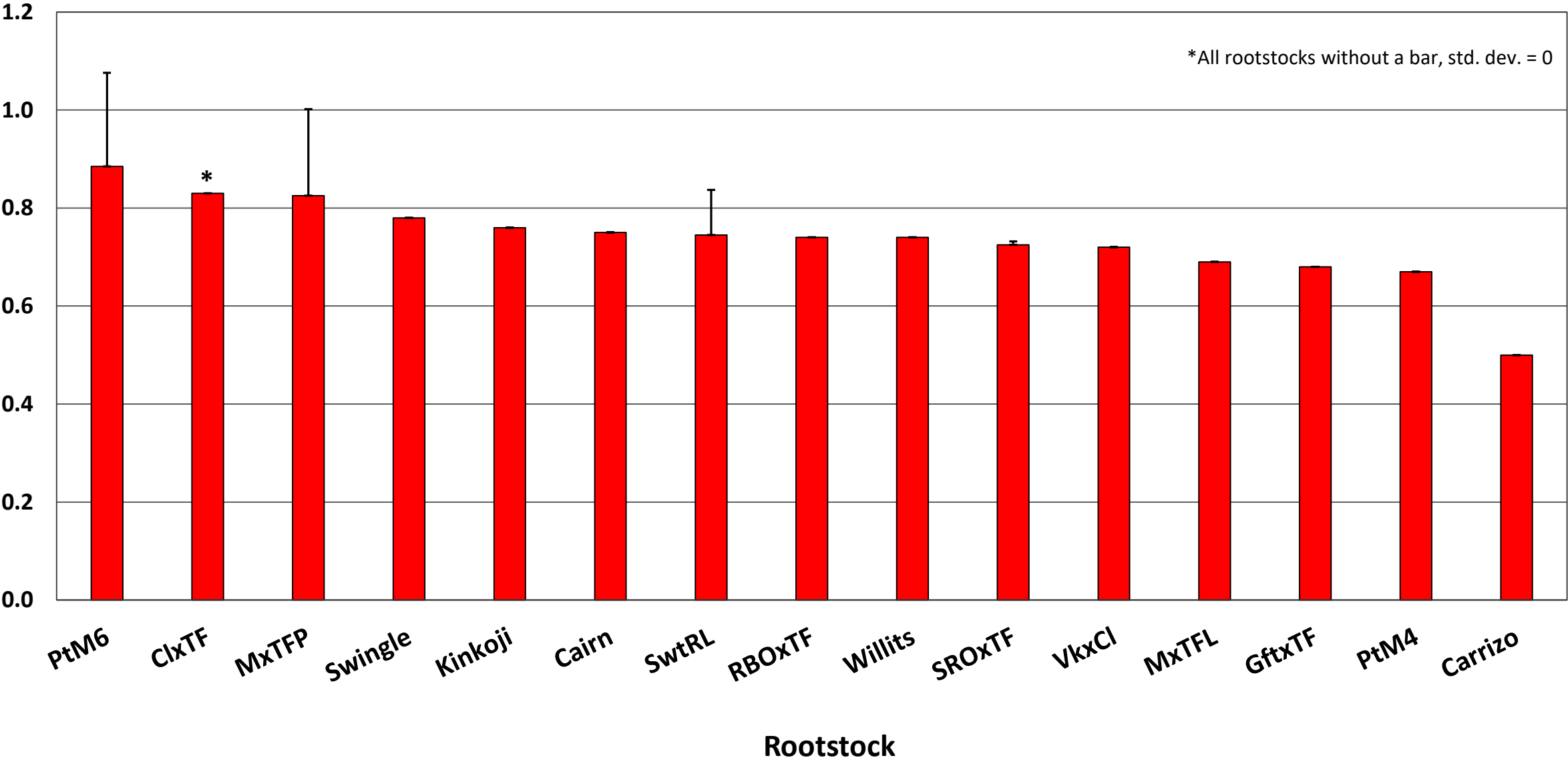


Fig. 11. Post Office Rootstock Trial, Haines City – juice Ratio: mean + std. dev. [February 2019].

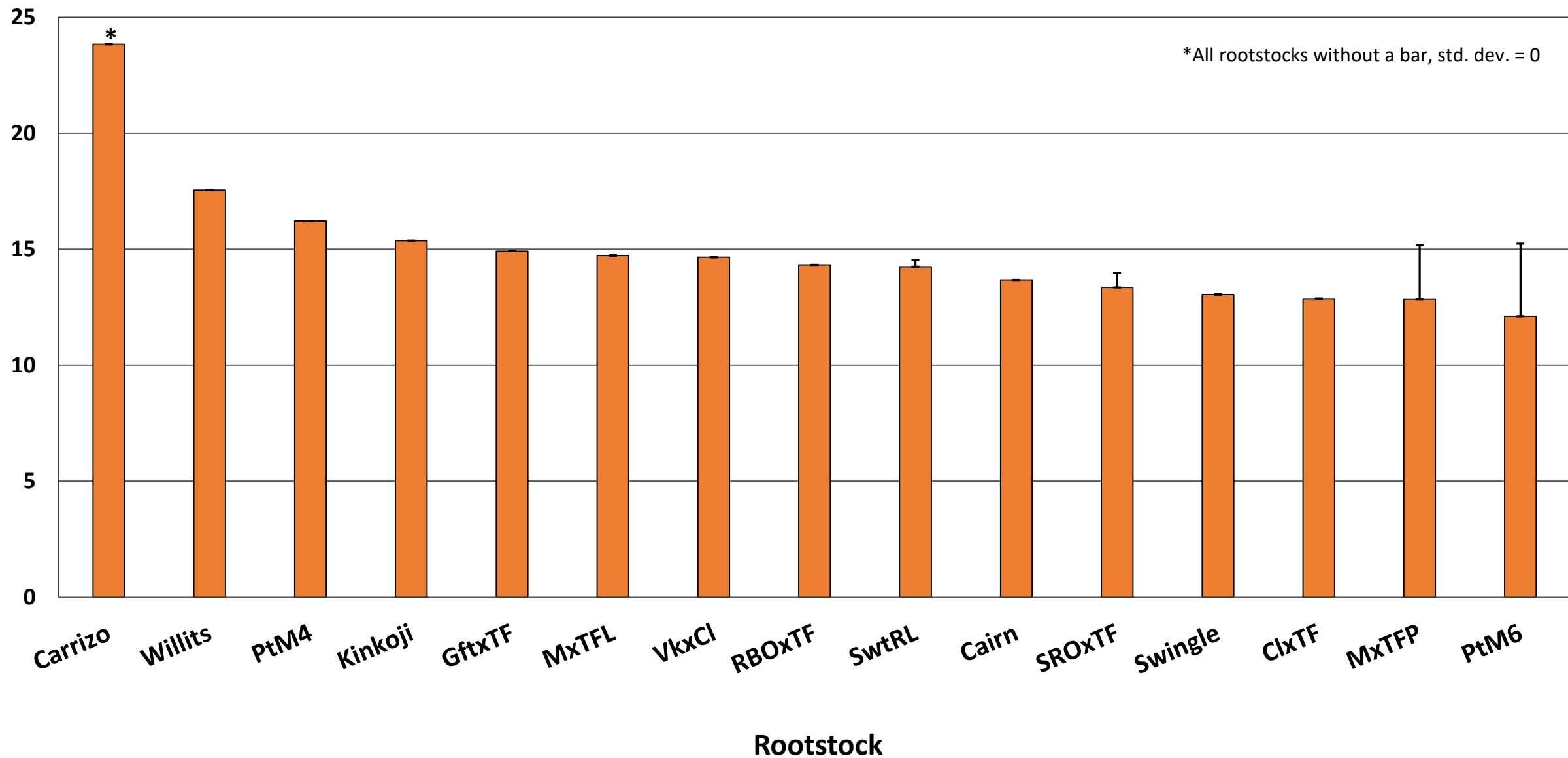


Fig. 12. Post Office Rootstock Trial, Haines City – PS/box: mean + std. dev. [February 2019].

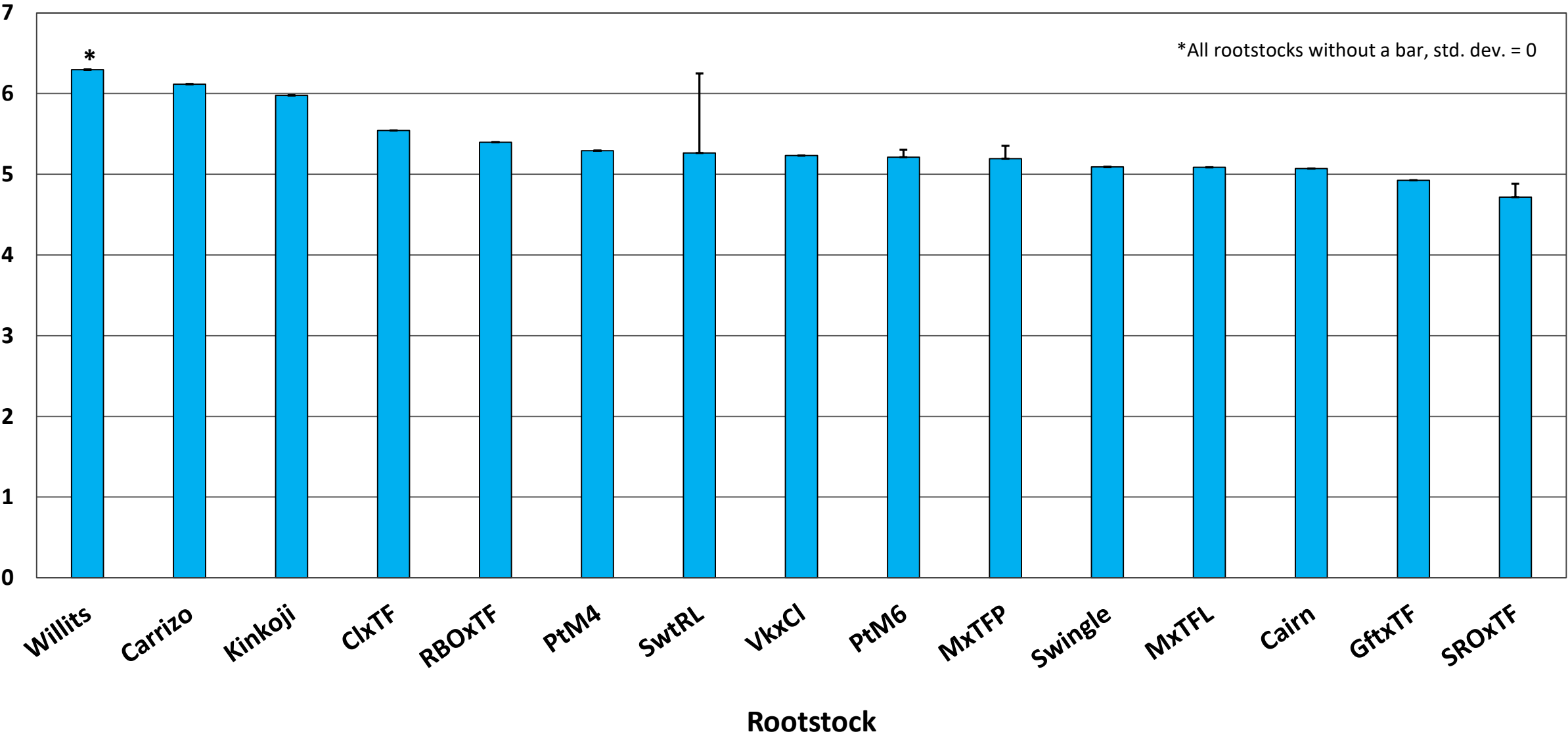


Fig. 13. Post Office Rootstock Trial, Haines City – juice Color: mean + std. dev.
[February 2019].

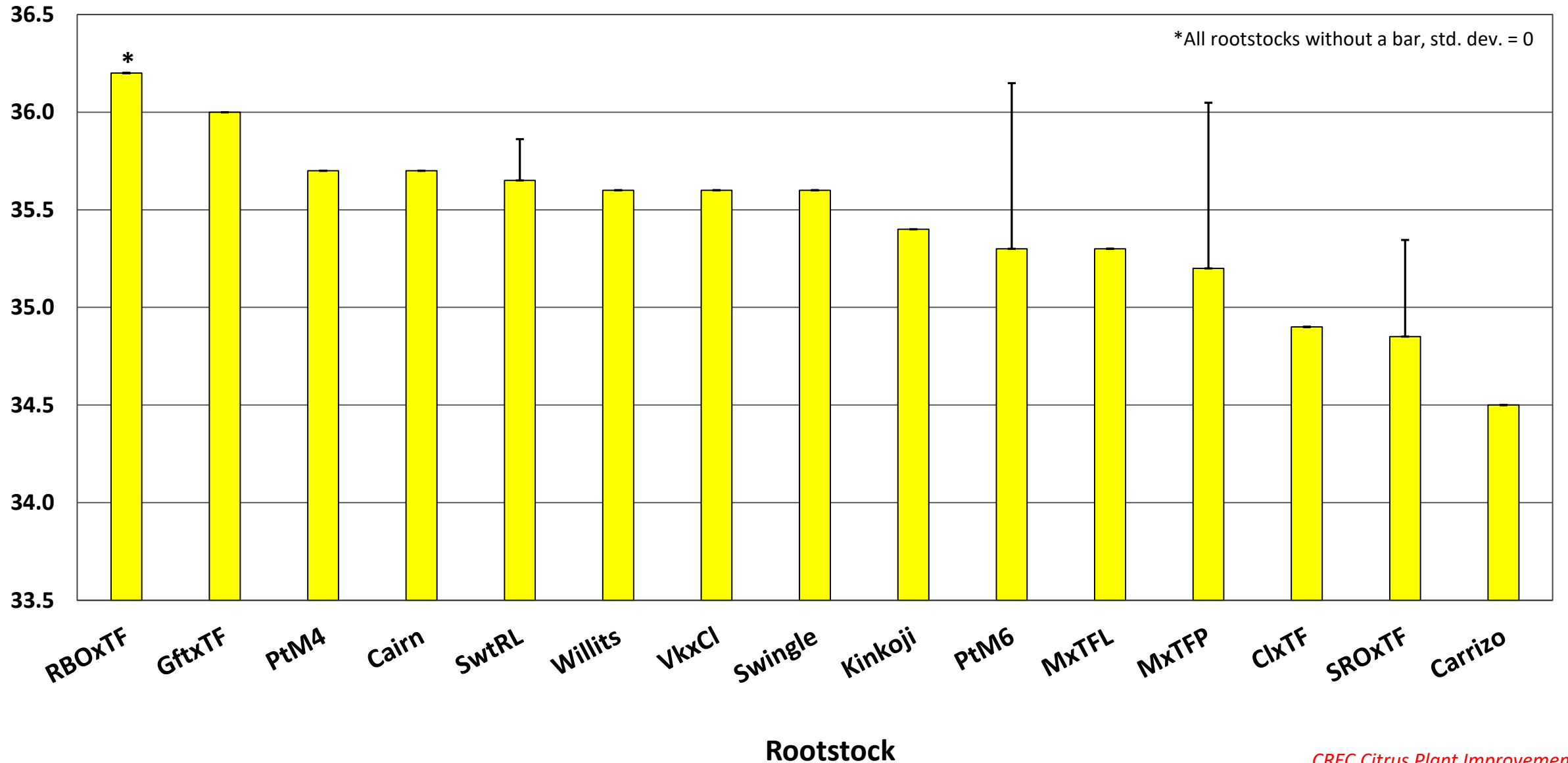


Fig. 14 Post Office Rootstock Trial, Haines City – Mean PS/acre [February 2019].

