

Effects of Oxytetracycline Trunk Injections after Two Consecutive Years of Injection

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OTC rate	Brix	Acid (%)	Brix/acid	Lbs solids/box	Boxes/acre	Lbs solids/acre
YEAR 1						
Non-injected	9.1 b	82 a	11.2 b	4.8 b	57 b	274 b
5,500 ppm	10.1 a	77 a	13.3 a	5.5 a	75 a	408 b
11,000 ppm	10.5 a	78 a	13.4 a	5.7 a	95 a	543 b
YEAR 2						
Non-injected	9.7 b	91 a	10.7 b	5.4 b	101 b	541 b
5,500 ppm	11.1 a	80 b	13.8 a	6.2 a	173 a	1066 a
11,000 ppm	11.3 a	79 b	14.5 a	6.2 a	223 a	1385 a

Different letters within columns indicate significant ($p < 0.05$) differences among means.



Summary: A field trial was conducted to determine the effects of two consecutive years of oxytetracycline (OTC) injections at the 5,500-ppm label rate (0.55 g OTC/tree) and the 11,000-ppm label rate (1.1 g OTC/tree). Trees were ‘Valencia’ on sour orange planted in 2013 in a commercial production site near Ft. Pierce. Year one injections occurred in May 2022 and trees were harvested in April 2023. Injected trees produced more fruit and fruits were larger and had a better juice quality compared to non-injected trees. Non-injected trees produced 57 boxes of fruit and 274 pounds solids per acre. Trees injected

at the low rate produced 75 boxes and 408 pounds solids per acre, and trees injected at the high rate produced 95 boxes and 543 pounds per acre. Year two injections occurred in May 2023 and trees were harvested in April 2024. Non-injected trees produced 101 boxes and 541 pounds solids per acre. Trees injected at the low rate produced 173 boxes and 1,066 pounds solids per acre, and trees injected at the high rate produced 223 boxes and 1,385 pounds solids per acre. In summary, injecting 0.55 g OTC/tree increased the pounds solids/acre by 49% in year one and by 98% in year two and injecting 1.1 g OTC/

tree increased the pounds solids/acre by 97% in year one and by 156% in year two. These results show that the beneficial effects of OTC may be compounded after two consecutive years of injections.

Take Home Message:

- Oxytetracycline injections consistently improve fruit yield, fruit size, and juice quality.
- Yield and juice quality were improved more when using a higher OTC rate.
- Oxytetracycline effects were intensified after two consecutive years of injection.

Funding:

