



Plant growth regulators for avocado canopy management and fruit drop reduction in subtropical environment

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Introduction & Objectives



- There is scarce technical information on PGR's use on Brazilian avocado varieties.
- Among the PGR's currently applied in avocados the triazols paclobutrazol and uniconazole and more recently, the trinexapac-ethyl and prohexadione-Ca are mostly utilized.
- Other PGR's may induce different responses depending on the application conditions.
- This project attempts to evaluate the effects of PGR's on avocado regrowth control and fruit drop reduction through applications at different phenological states.

Materials and Methods

- Three trials were conducted on non-irrigated avocado orchards of 'Fortuna', 'Quintal' and 'Margarida' varieties on commercial orchards in São Paulo State, Brazil.
- Growth control after pruning was assessed on four regrowths of the 'Fortuna' avocado, on 3 dates: prior to treatment application and after 15 and 30 days of treatment application.
- Fruit abscission was assessed from fruit set till harvest in the 'Quintal' and 'Margarida' varieties, by bi-weekly counts of fruits fallen into 4 wooden boxes under the tree canopy.



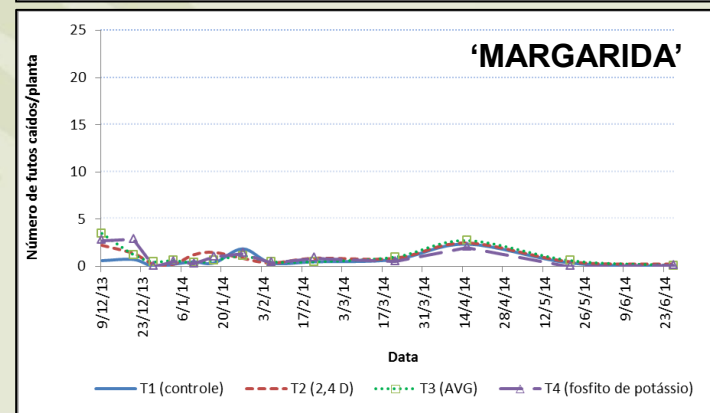
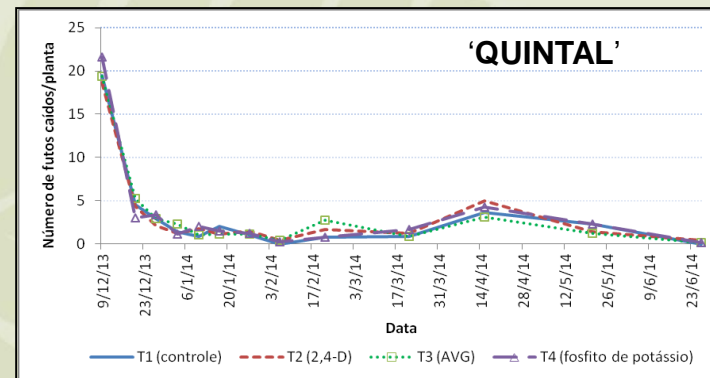
Results

Trial 1. Growth control after pruning

Table 1. Mean length (cm) of pruning regrowths in 'Fortuna' avocado branches pruned in October 2013 as influenced by different treatments on three dates (0, 15 and 29 days after treatment application). Timburí, São Paulo/Brazil, 2013/14.

Treatment	Date			Difference 10/1/14 – 9/12/13
	09/12/2013	27/12/2013	10/01/2014	
	0 DDA	15 DDA	29 DDA	
T1 (control)	45,31 a	76,03 a	91,81 a	46,50 a
T2 (1% Cultar - foliar spray)	48,19 a	79,53 a	95,77 a	47,58 a
T3 (1% Sunny - foliar spray)	49,88 a	76,63 a	95,56 a	42,69 a
T4 (1200 ppm Viviful)	49,28 a	73,15 a	87,32 a	38,04 a
T5 (4 L/ha Cultar in the soil)	49,13 a	79,66 a	94,38 a	45,25 a
T6 (4 L/ha Sunny in the soil)	48,16 a	82,06 a	98,04 a	49,88 a
T7 (4 L/ha Viviful in the soil)	47,43 a	72,97 a	91,84 a	44,41 a
CV (%)	15,11	13,16	14,27	22,24
Valor p	0,9087	0,4889	0,783	0,1873

Trials 2 & 3. Effect on fruit abscission



Conclusions

- In 'Fortuna' avocados, the applied PGR's did not affect the length of pruning regrowths at any of the evaluated dates.
- Fruit abscission was larger in the 'Quintal' variety, regardless the applied PGR treatment.
- More data will be collected to better assess PGR's effects on fruit abscission for each variety.



→ **'QUINTAL'
AVOCADO**



'MARGARIDA' →
AVOCADO

Thank You

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