Technical Data Report

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Effects of Nutriplant™ AG on Production of Hamlin Oranges

Objective

The objective of this study was to determine the effects of Nutriplant AG on production of Hamlin oranges.

Materials and Methods

Field trials were conducted on orange (*Citrus sinensis* L. cv. Hamlin) at Citrus Research and Education Center, University of Florida in a commercial orchard in Wauchula, Florida, USA for three years. Treatments included 1) Control and 2) Nutriplant AG at 1,200 ml/ha (16 fl oz/acre). Trial began in early spring. Each block consisted of 4 trees with 8.5 m (28 ft) row spacing and 5.2 m (17 ft) between the trees. The experimental row was alternated by an untreated buffer row to minimize any cross contamination of treatments during foliar applications. The soil type was Pamona fine sand and pH was 6.6. Nutriplant AG was applied three times at beginning of bloom, fruit set and color change each year using Durand Wayland sprayer calibrated to apply 250 gal/acre of spray mix. The study design was completely randomized block with eight replications. Cultural practices followed local procedures and were the same for treated and untreated plots. Fruits were picked from two trees in each plot. Fruit yield was measured in number of boxes per plot and then expressed in the number of boxes per tree.

Results

Applications of Nutriplant AG at 1,200 ml/ha (16 fl oz/acre) to Hamlin oranges at beginning of bloom, fruit set, and color change improved yields by 1.1, 1.6, and 1.5 box/tree over control trees with an multiyear average of 1.4 box/tree (Table 1). Significantly higher yields were recorded with Nutriplant AG applications in the second year of conducting the experiment compared to the untreated control.

Table 1. Influence of Nutriplant AG on orange yields at University of Florida, USA.

Treatment	Yield of oranges (boxes/tree)		
	Year 1	Year 2	Year 3
Control	6.05	8.9 b*	7.5
Nutriplant AG at 1,200 ml/ha (16 fl oz/acre) at beginning of bloom, fruit set, and color change	7.15	10.5 a	9.0
Difference	1.1	1.6	1.5
Difference (%)	18.8	18.0	20.0

***** *Different letters indicate significant difference at P≤0.05.*

Conclusions

Compared to untreated control, Nutriplant AG applications at 1,200 ml/ha (16 fl oz/acre) at beginning of bloom, fruit set, and color change increased yields of Hamlin oranges by an average of 18.9%. Nutriplant AG application significantly improved yields of oranges by 18.0% over control in the second year.