

Post bloom foliar potassium nitrate applications increased grapefruit size

In the Indian River area of Florida (USA), the effect of potassium sprays during the post-bloom and summer periods was studied, to determine if the size of grapefruit could be increased. 'Marsh' grapefruit trees were used in a randomized complete block design with 4 replications of each treatment. Equal ratios of K_2O of 12 kg K_2O /ha and 24 kg K_2O /ha were applied with 28 and 56 kg/ha KNO_3 , and with 38 and 76 kg/ha MKP, respectively. Two rates of MKP and two rates of KNO_3 were used in block A, whereas in block B single rates of MKP (76 kg/ha) and KNO_3 (56 kg/ha) were applied and compared with the non-sprayed control plots. Foliar sprays were applied post bloom on April 21 and May 19, and later on August 9 and September 14. Post-bloom foliar K applications to Florida grapefruit were shown to be effective in increasing average size of grapefruit. Both MKP and KNO_3 treatments statistically significantly increased the mean diameter of grapefruit compared to the control in both blocks, except the MKP-38 treatment in block A (Figure 1). Both the MKP-76 and KNO_3 -56 treatments in Block B had increased fruit enlargement compared to the control treatment at each measurement date. The fruit on trees sprayed with MKP and KNO_3 had increased 1.9-2.4 mm more than fruit from control trees by the time the November 28 MKP-76 measurements were taken. Around 40% of the foliar K-treated fruit increased 20 mm or more from August 4 to November 28, compared to 20% of the control treatment fruit.

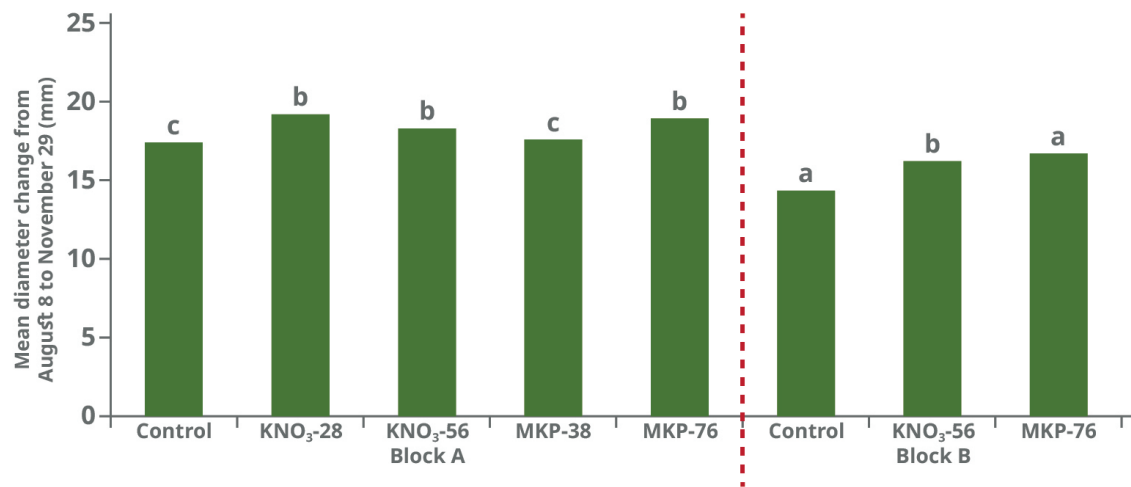
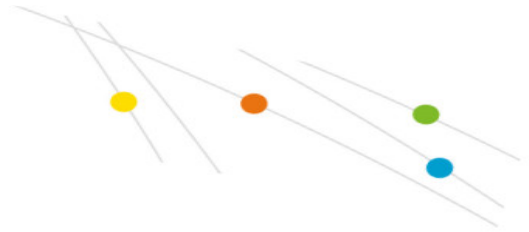


Figure 1. Effect of foliar sprays on the grapefruit size.