B, Zn AND Cu NUTRITION IN HASS AVOCADO, AND ITS EFFECTS ON CROPPING

J. M. Hermoso[1], M. D. Torres[2] and J. M. Farré[2]

[1] Estación Exp. La Mayora, C. S. I. C. 29750 Algarrobo-Costa, Málaga, España.
E-mail: jmhermoso@eelm.csic.es
[2] IFAPA de Málaga. Cortijo de la Cruz 29140 Churriana, Málaga, España.

A trial on adult Hass/Topa Topa avocado was carried out in 1996-98; different B and Zn levels on leaves were established. B was applied with irrigation water and Zn and Cu by hand near the microsprinkler. In half of the treatments, B, Cu and Zn were applied in an acid medium. Leaf and root analysis have been partially published (Torres *et al*. 2003). The unfertilised trees had B and Zn contents below 25 ppm in spring grown leaves, which were sampled in autumn.

Contents were above 30 ppm in fertilised trees. Cu contents were in the range of 5-10 ppm in fertilised and unfertilised trees. In the 1999-2000 and 2001-2002 crops, differences between treatments were not consistent in number of fruits per tree, yield in kg per tree, potential yield (including fallen fruits) or tree efficiency (yield per cm^2 of trunk cross sectional area). Only B without acidification significantly increased mean fruit weight (14, 8 %) in 1999-2000. The increase was slight (5.3 %) and not significant in 2001-2002. B tree efficiency was 11.3 % under control in 1999-2000 and 14.4 % above in 2001-2002.

It can be concluded that, under experimental conditions, leaf Zn contents between 20 and 35 ppm have no effect on growth and tree efficiency. B will have to be further studied to confirm its positive effects.

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