

MACRO AND MICROELEMENT CONTENT IN LEAVES, A-44 FLOWERS AND FRUITS OF AVOCADO "HASS" IN THE REGION OF URUAPAN MICHOACÁN

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Avocado fertilization is important to obtain a good yield of this crop. In Michoacán, the most important avocado producing state in México, this agricultural practice consumes from 15 to 30% of total investment. To elaborate a nutritional program, technicians carry out soil and foliar analyses to recommend the amount and type of fertilizer to use, although it is also important to establish when the plant demands a higher amount of each nutritional element. The aim of this work was to know the macro and micronutrient concentrations in leaves, flowers and fruits of avocado cv Hass, in the different phenological stages, to establish its requirements and to determine the optimum application time. The experiment was performed in a commercial avocado orchard, cv Hass, 25 years old, watered by microsprinkling and fertilized conventionally. A completely randomized distribution was used, with four replications and four trees per experimental unit. Samples were taken monthly (January to December 2002) and the content of N, P, K, Ca, Mg, S, Fe and B in leaves, flowers and fruits was determined.

When the requirements among the three structures studied (leaves, flowers and fruits) are compared, the results show that flowers are highly demanding of primary elements, mainly P, but also B and S. K and B concentrations in flowers and fruits were higher than those observed in leaves and Mg, Ca, Fe and S were more required in leaves, followed by flowers and fruits. Phosphorus was homogenously required by fruits and leaves along all the developmental stages. However, flowers and leaves demand of potassium was higher than leaf requirement, although a similar behavior was observed in both structures. On the other hand, the concentrations of N, P, K, S, B and Ca increased in the three structures, but mainly in flowers and fruits, from September to February, coinciding with flowering and the first stages of fruit development. Ca, Mg and K concentrations raised in the months of higher rainfalls. S concentration was influenced by the applications of sulphurous pesticides and B concentration also increased in response to fertilization with this element.