



Comparative uptake of trace elements in vines and olive trees over calcareous soils in western La Mancha

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Grapevine (*Vitis vinifera* L.) and olive-tree (*Olea europea* L.) are very important cultures in Castilla-La Mancha for its extension and contribution to the regional economy. This study was carried out in the municipality of Carrión de Calatrava (Ciudad Real) where the variability of soils of different geological origin, with different evolutions giving a great diversity of soils.

The metabolism of trace elements in plants has been extensively studied although each soil-plant system must be investigated, especially since small variations in composition can lead to marked differences. It can be stated that the composition of the plant reflects the environment where it is cultivated and the products of the plant (leaves, fruits, juices, etc. . .) will be influenced by the composition of the soil.

The main aim of the work was to compare the uptake of 24 trace elements in grapevine and olive-tree cultivated in the same soil. Samples from surface soils and plant material (leaf) have been analyzed by X-ray fluorescence, obtaining trace elements in mg/kg.

It can be concluded that the leaves of grapevines in the studied plots have shown content in elements:

- Similar to the olive-tree in case of: Co, Ga, Y, Ta, Th, U y Nd.
- Over to the olive-tree in: Sc, V, Cr, Ni, Rb, Sr, Zr, Nb, Ba, La, Ce, Hf y W.
- Below to the olive-tree in: Cu, Zn, Cs y Pb.

Keywords: woody culture soils, mineral nutrition, X-ray fluorescence.