

**ORGANIC MATTER AND MICROORGANISMS EVALUATION ON SOILS FROM AVOCADO  
(*Persea americana* Mill) ORCHARDS IN URUAPAN, MICHOACÁN**

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Avocado national production in Mexico is lead by the state of Michoacan with 85.85 % of the total production. In this Mexican state, 5,535 ha of avocado orchards are currently under organic management. However, studies on soil dynamics in these orchards are as poor as in those conventionally managed. The aim of this work was to evaluate the content of organic matter and Colony-Forming Unit (CFU) during two cycles of production as well as to quantify the presence, abundance and diversity of Arbuscular Mycorrhizal (Fungi AMF). In order to accomplish such objectives, samples were taken every three months from November 2003 and during two consecutive years of production. Eight soil samplings were conducted, determining organic matter and CFU, and spore number of 10 AMF species through four samplings. Mean organic matter on soil from organic management was 7.75 % (medium level), higher than mean organic matter found on soil from orchards under conventional management (3.77 %; low level). While CFU was 19.5 times higher in conventionally managed soils ( $564 \times 10^6$  CFU), as compared to soil under organic management ( $29 \times 10^6$  CFU). Mean AMF spores in organic managed soils were 62 % higher than in soils under conventional conditions. *Glomus constrictum* and *G. geosporum* were the most abundant species, with a mean of 408 and 323 spores, respectively. In contrast, *Scutelospora verrucosa* and *Gigaspora sp 1* were the least abundant, with a mean of 4 and 9 spores, respectively. Shannon Wiener diversity index (H) for AMF spores showed a mean of 2.3242, indicating high diversity among AMF species. H values for spore diversity among the two types of orchard management showed no differences. Nonetheless, while comparing soil from three different consecutive sampling dates, H index on October 2005 outstands with 2.6645. Lower H index were obtained for species *G. constrictum* (1.7737) and *Gigaspora sp 1* (1.2934).