

BIOLOGICAL EFFECTIVENESS OF NON CONVENTIONAL PRODUCTS AGAINST THRIPS ON AVOCADO (*PERSEA AMERICANA* MILL. CV. HASS) IN NUEVO SAN JUAN PARANGARICUTIRO, MICHOACAN, MEXICO

A-6

M. Valle-De la Paz¹, J. F. Solis-Aguilar², J. L. Morales-Garcia³ y R. M. Johansen-Naime⁴.

¹ MSc. In Vegetal Protection, Agricultural Parasitology Department, Universidad Autonoma Chapingo. 56230 Chapingo, Mexico State. Mexico. E. mail: mairelvalle@hotmail.com

² Agricultural Parasitology Department. Universidad Autónoma Chapingo. 56230 Chapingo, Edo. de Mexico. Mexico. E. mail: dirparas@chapingo.mx

³ INIFAP-Uruapan. 60150. Uruapan, Michoacan, Mexico. E. mail: jiluciano@prodigy.net.mx

⁴ Biology Institute, UNAM. A.P. 70-153 Mexico. 04510 (Coyoacan), F.D. E. mail: naime@ibiologia.unam.mx

Biological control has acquired great importance due to the urgent necessity to recover the harmony in our ecosystems. The objective of this work was to evaluate the biological effect of *Beauveria bassiana* (Mycotrol-ES[®]) (2 lt/ha), *Verticillium lecanii* (0.4 Kg/ha), *Saccharopolyspora spinosa* (Tracer[®]) (0.2 lt/ha) and Abamectina[®](0.2 lt/ha); oils such as Citrolina[®] (1.4 lt/ha) and petroleum paraffin oil (Saf-T-Side[®]) (0.8 lt/ha); products prepared from plant extracts such as Bio Crak[®] (2 lt/ha) and KillwalC[®] (2 lt/ha) and a control, as well as a product used locally, the Dimetoato[®] (1 lt/ha), for the control of thrips that affect avocado. The research was carried out at "La Cruces" orchard, in Nuevo San Juan Parangaricutiro, Michoacan State, Mexico, from March to September 2002. Each treatment was replicated 4 times and analyzed in a completely randomized block statistical design. The treatments were applied during six months. The first application was performed before flowering and the remaining after fruit formation. The applications were made monthly using a backpack sprayer. Although the statistical results did not show any significant differences, after the application of Abbott formula, the results showed that *Beauveria bassiana*, *Verticillium lecanii*, *Saccharopolyspora spinosa* and Bio Crak[®] were the most effective products, maintaining biological effectiveness values of 82, 71, 76 and 69% respectively. The Dimetoato 400 CE[®] produced a 91% effectiveness. During the last three evaluations, an increase in the effectiveness of these products, was observed. Although they do not reach the effectiveness of Dimetoato 400 CE[®], they have the advantage of being more environmentally friendly.