Abstract

A colombian isolate of Lecanicillium lecanii formulated as dispersible granules WG, has shown high efficiency to control Bemisia tabaci in cotton and eggplant crops. Considering that, the objetive of this work was to determine the in vitro compatibility of biopesticide based on L. lecanii with agrochemicals (insecticides and fungicides) that are most frequently used in tobacco and eggplant crops. In vitro compatibility of L. lecanii with agrochemicals was determinated by germination (%) and Colony Forming Units (CFU) in the presence of pesticides and also estimating the inhibitory concentration 10 (IC10). Each agrochemical was evaluated at the recommended dose, a half and a quarter of it. For the three doses tested (Benomyl®, Vitavax®, Ridomil® and Manzate®) were not compatible with L. lecanii, because these inhibited germination and Colony Forming Units of the fungus. Confidor® did not inhibit viability compared to control treatment, and it was considered compatible with the biopesticide. When the recommended dose (Oportune®, Actara®, Match® and Malathion®)was used, the germination of the L. lecanii was lower than 80%, then these products were classified as non-compatible with the biopesticide based on L. lecanii. The only agrochemical that was compatible in vitro with L. lecanii was Confidor®. However, is necesary to evaluate the in vivo effect of agrochemicals commonly used by farmers on L. lecanii, in order to develop and establish integrated management strategies for the control of the whitefly Bemisia tabaci.

Keywords

Entomopathogen, Bemisia tabaci, fungicide, insecticide.