عنوان مقاله:

Chemical control optimization of Trialeurodes vaporariorum (Homoptera: Aleyrodidae) in gerbera commercial greenhouses

محل انتشار:

Journal of Crop Protection, دوره 9, شماره 3 (سال: 1399)

تعداد صفحات اصل مقاله: 17

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خلاصه مقاله:

Whiteflies are becoming a very serious menace and have shown resistance to many synthetic insecticides since early ۱۹۸۰s. The greenhouse white fly, Trialeurodes vaporariorum (Westwood) is one of the most significant pests in many horticultural and greenhouse crops worldwide. Currently, it is controlled by chemical pesticides. In current study, the best conditions for chemical control of T. vaporariorum on gerbera applying Confidor®, Palizin® and Proteus® were investigated. The experiment was performed in a commercial greenhouse in Pakdasht, Tehran. The same size and not yet flowering gerbera plants in pots were selected for further analysis. Before the experiment, the numbers of nymph and adults were counted in order to evaluate application effect on their population. Each pot was covered by insect-proof net, separately. Selected factors included: the pesticide in three levels, pesticide dose in three levels (۰.۵, ۱ and ۱.۵ ml/l), application time in three levels (at ۸, ۱۲ and ۱۶ O'clock) and replications in a month in three levels (۲, ۴ and ۶ times). The experiment was conducted on the basis of Response Surface Method with central composite design to optimize the chemical control condition. Data were analyzed using Design Expert ۱۰ software. The mortality percentage model for adults was predicted. Based on the predicted model, the optimum conditions for controlling greenhouse whitefly in gerbera commercial greenhouses were obtained. Optimal conditions with the less replications, which was two, were predicted with the dose of ۰.۵ to ۰.۷ ml/l up to the time at ۱۰ or dose of ۱.۵ ml/l at the time ۱۶ using Proteus®.

کلمات کلیدی:

Gerbera, Confidor®, Palizin®, Proteus®, Trialeurodes vaporariorum