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Agricultural Entomology

Title:

Toxicity effect of two new acaricides, Cyflumetofen (Danisaraba[®] SC20%) and Envidor[®] speed (SC%24), with several common botanical pesticides on *Tetranychus urticae* Koch (Acari: Tetranychidae)

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Abstractr

Integrated pest management is a comprehensive solution for combining different tools for proper pest control. *Tetranychus urticae* (Acari: Tetranychidae) is one of the most important and economical pests of crops and due to its high reproduction with rapid growth and emergence, it causes economic losses. This mite acts as a host on more than 150 plant species and causes damage. Evaluation of the efficacy of new chemical pesticides recommended for pests has always been of interest. Therefore, in this study, the lethal effect of processed plant extract of red pepper (Tandaxir), and chemical acaricides of Dani Saraba ® SC20% and Envidora Speed® (SC% 24) as well as the repellent property index Insecticidal soap containing processed coconut oil extract, peppermint and eucalyptus (Palizine) extract and herbal pesticide, under controlled conditions, on adult *Tetranychus urticae* mites at 27 ± 2 ° C, 50 ± 5 % relative humidity and 16 h light and 8 h dark periods were examined. The results showed that the mortality rate of the two spotted tested mite in the 24 hours after treatment increased significantly with increasing the concentration of pesticides. LC₅₀ values in the lethal effect of Tandaxir and Palizine herbicides and two chemical insecticides of Envidor® Speed and Dani saraba were equal to 5396.6, 3131.9, 1086.6 and 954.1 PPM, respectively. After 24 hours, it was found that among the two plant pesticides studied, Palizine had the most lethal effect; Also, Danisarba chemical acaricide showed the highest lethal effect among the two chemical acaricides.

Keywords: Biopesticide, Envidor® speed, Cyflumetofen, two-spotted spider mite, IPM