

Research Paper :

Efficacy of different insecticides against larval and pupal stages of citrus leaf miner *Phyllocnistis citrella* Stainton

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SUMMARY

Citrus is a globally cultivated fruit crop. In India amongst the fruit crops, citrus occupies third position with respect to area and production. The experiment was conducted with Randomized Block Design with three replications and eight treatments. The observations were undertaken just before and 3, 7 and 14 days after the treatment, respectively. Two seasons data on per cent larval and pupal reduction of *P. citrella* during 05 and 06 were pooled and subjected to statistical analysis of variance.

Citrus is a globally cultivated fruit crop, which includes orange, sweet orange, acid lime and other related species of citrus. In India amongst the fruit crops, citrus occupies third position with respect to area and production. Among the citrus group, Nagpur mandarin (*Citrus reticulata*) is the world famous glorious fruit crop.

Recent years export business and the industrialization of oranges are also being accelerated. Commercial value of these fruits encourages through plantation programme and international marketing through export have increased the orange cultivation in Vidarbha, in the state and even in the other parts of the country. In India more than 250 insect species are reported on citrus. In Maharashtra state, 14 species are reported of which 8 species are of significant importance (Anonymous, 1994). Among these serious pest the citrus leaf miner (*P. citrella*) is one of the important pest of citrus all over the country. For control of leaf miner, farmers are totally depend upon the chemical control measures and the existing insecticides are not effective against this pest. Therefore, the experiment was undertaken to test new chemicals along with indigenous products against larval and pupal stages of the leaf miner.

MATERIALS AND METHODS

Field experiment for the management of citrus leaf miner was undertaken on Nagpur mandarin orchard at All India Co-ordinated

Research Project on Tropical Fruits, Central Research Station, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola (M.S.), during 2005 and 2006. The experiment was conducted with Randomized Block Design with three replications and eight treatments. The observations were undertaken just before and 3, 7 and 14 days after the treatment, respectively. Two seasons data on per cent larval and pupal reduction of *P. citrella* were pooled and subjected to statistical analysis of variance.

RESULTS AND DISCUSSION

The results obtained from the present investigation as well as relevant discussion have been summarized under following heads:

Efficacy of some insecticides against the larva of citrus leaf miner :

The data on per cent larval reduction are presented in Table 1. The pooled data revealed that all the treatments were significantly superior over untreated control in reducing the larval population. A treatment with imidacloprid 0.005% was most effective showing 81.45% larval reduction. However, fenvalerate 0.005% and acephate 0.1125% were next in order of efficacy.

On seventh day after the treatment, imidacloprid 0.005% recorded higher per cent of larval reduction (89.04%) which was at par with fenvalerate 0.005% which recorded

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