

Research Paper :

# Evaluation of Different Insecticidal Schedules Against Diamond Back Moth on Cabbage

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## SUMMARY

The investigation was conducted on the farm of Entomology at College of Agriculture, Dapoli during 2004-2006. Ten treatment schedules were evaluated and replicated thrice. Each treatment comprised of total of 4 sprays. The studies revealed that, all the treatments were significantly superior over control. The insecticidal schedule (T<sub>7</sub>) comprising of 0.035 per cent ducord followed by 0.07 per cent polytrin-c, 0.03 per cent dipel 8L and 0.5 per cent nimbicidine was found to be most effective for the control of DBM than rest of the insecticidal treatment schedules. The overall mean larval population of DBM in different insecticidal treatment schedules varied from 21.27 to 56.60 as against 91.80 in an untreated control.

## Key words :

*Plutella*  
*xylastella*,  
Ducord,  
Polytrin-c,  
Cabbage

The cabbage (*Brassica oleracea* var. *capitata* L.) is one of the popular and economically important cruciferous vegetable crops grown extensively all over the country, particularly in winter season. This vegetable contains vitamins A, B and C, minerals, proteins, carbohydrates and dietary fibres (Chalfield, 1954). The total area under vegetable crops in India is 62.48 lakh hectares with annual production of 939.21 lakh tonnes of vegetables and productivity of 14.92 t/ha (Anonymous, 2003). The cabbage crop is attacked by the number of pests which are active particularly during winter season. Among them, Diamond back moth, *Plutella xylostella* L. is important one, which occurs almost all over the world and causes severe damage to the crop and estimated 52 per cent losses in the marketable yield due to the attack of this pest (Krishnakumar *et al.*, 1986).

Several synthetic insecticides have been used for the control of DBM which have created problems like insecticidal resistance, environmental pollution and secondary pest outbreaks. Therefore, botanicals, biopesticides, organophosphates, synthetic pyrethroids and neonicotinoid groups of insecticides were evaluated to find out the suitable treatment which will cause least damage to the environment.

## MATERIALS AND METHODS

The present investigation was carried out on Entomology Farm at College of Agriculture, Dapoli, Distt. Ratnagiri (M.S.) during the year 2004-2006. The experiment was carried out in Randomized Block Design with ten treatments and three replications. Details of treatments are given in Table 1. The first spraying was undertaken 15 days after transplanting and the further three sprays were given at an interval of 15 days thereafter. Pre-treatment observations were recorded 24 hours before spraying and post treatment observations were recorded on three leaves, each at top, middle and bottom on five randomly selected plants in each plot at 1<sup>st</sup>, 3<sup>rd</sup>, 5<sup>th</sup>, 10<sup>th</sup> and 15<sup>th</sup> days after each spraying. Data thus obtained were analysed statistically.

## RESULTS AND DISCUSSION

It can be inferred from the data presented in Table 2 that, all the treatments were significantly superior over control. The data recorded on lowest overall mean larval population of DBM was 21.27 per 15 leaves per five plants of insecticidal treatment schedule (T<sub>7</sub>) which was significantly lower than rest of the insecticidal treatment schedules. The overall mean larval population of DBM per 15 leaves/ five plants in different insecticidal treatment schedules varied from 21.27 to 56.60 as against

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