

AREVIEW

Bioecology and management strategy of diamond back moth (*Plutella xylostella* L.)

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ABSTRACT

Cauliflower crop suffers heavy damage caused by numerous insect pests such as crucifer Leaf webber, leaf caterpillar, diamondback moth, borer, semi-looper, flea beetle and tobacco caterpillar etc., which are of economic concern. Among these, DBM is the most serious pest of the cauliflower and cabbage in this area and in most parts of the world. This insect is known to vary to a great extent in respect of habitat and mode of feeding. Hence, the selection of an insecticide and mode of their application to control DBM larvae on different host crops also vary. Efficacy of various chemicals in controlling DBM on different host crops has been widely discussed by many workers in the past. The synthetic chemicals that were initially effective against DBM were found to fail after few continuous applications. Indiscriminate use of every synthetic insecticide for controlling DBM has led to development of resistance in this pest. It is because of this, it built physiological dominance of detoxifying the xenobiotics and the DBM has attained worldwide importance. Therefore, judicious use of these promising bio-rational insecticides as a component of DBM management strategy on various host crops will be of paramount significance.

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INTRODUCTION

Vegetables are the important source of proteins, carbohydrates, vitamins and minerals contributing a significant role in nutritionally balanced diet of predominantly vegetarian population of our country. Their importance as protective food and as suppliers of adequate quantities of most essential life saving materials like vitamins, dietary fibre and drugs is well known throughout the world. Besides their greater potential to enhance the nutrition, large scale farming of vegetables also increase the income of rural and urban population and provide greater employment opportunities. There is universal recognition that vegetable production, processing and marketing have significant contributions to one's national income.

India is second largest producer of vegetables in the world next only to China. The daily per capita consumption of

vegetables in India is only 135 g which is much less than the requirement of about 285 g for a balanced diet (Majeed and Nage Gowda, 1992).

Productivity of cruciferous crop :

More than 50 varieties of vegetable crops are grown in India of which cruciferous group of vegetable crops are most important in terms of nutritional and economic significance. Some of the important and extensively cultivated botanicals of this group in our country are, cabbage (*Brassica oleracea* L. var. *capitata*), cauliflower (*Brassica oleracea* L. var. *botrytis*), turnip (*Brassica rapa* L.), carrot (*Daucus carota* L.) and mustard (*Brassica campestris* L. var. *toria* and *Brassica campestris* L. var. *sarson*). Among all these cruciferous crops, the cabbage and cauliflower occupy the first position in terms of yield and export orientation and the availability of time has been considerably extended with the development of tropical