Insect pests of cabbage and cauliflower and their natural enemies in agro ecosystem of Kerala

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ABSTRACT: Pests and natural enemies occurring on cool season vegetable crops, cabbage and cauliflower, grown in hill tracts and the newly cultivated plains of Kerala were studied. Analysis of fauna showed that these crops were attacked by eleven pests. The occurrence of pierid butterfly, Appias lyncida Cramer on cruciferous crops is reported for the first time. Incidence of flea beetle, Phyllotreta chotanica Duv. noted during the seedling stage is the first report from these crops. The key pest affecting the crop grown in plains was the cut worm, Spodoptera litura (F.) and in the hilly tracts it was Diamond back moth (DBM) Plutella xylostella (L.). Damage in terms of yield loss by S. litura was 30 per cent in cabbage and cauliflower and that by P. xylostella was 38 per cent to heads and 26 per cent to curds. Two coccinellid predators, Chilomenes sexmaculata (F.) and Coccinella transversalis (F.) and the syrphid, Ischiodon scutellaris (F.) were identified from the colonies of aphid, Lipaphis erysimi (Kaltenbach). One parasitoid, Protapanteles sp. was identified from larvae of Plusia signata (F.). ©2014 Association for Advancement of Entomology

Key words: cabbage and cauliflower pests, incidence, extent of damage, Kerala, Spodoptera litura, Plutella xylostella, Appias lyncida, Phyllotreta chotanica

INTRODUCTION

Cabbage (Brassica oleracea L. var. capitata) and cauliflower (Brassica oleracea L. var. botrytis) are the two important cool season vegetables widely grown in all parts of India. In Kerala, cultivation of cabbage and cauliflower was earlier restricted to the cooler seasons in the hilly tracts. With the introduction of new tropical varieties it has become popular in the plains too. Being succulent, these crops are severely attacked by many pests. Bonnemaison (1965) reviewed the distribution of pests attacking crucifers all over the world and reported nearly 51