

Damage Pattern of Cabbage Flea beetle, *Phyllotreta cruciferae* (Goeze) (Coleoptera: Chrysomelidae) and its Associated Hosts of Crops and Weeds

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Abstract

Among the insect pests of Brassicaceae crops flea beetle, *Phyllotreta cruciferae* (Coleoptera: Chrysomelidae) has been emerged as a serious pest in Jaffna district of Sri Lanka and inflicted severe damage in the seedling stage of cabbage. The damage incurred by adult *P. cruciferae* was significantly high (71.4%) in the seedlings of cabbage. However, other Brassicaceae crops also prone to the damage of flea beetle. The extent of damage in cauliflower, radish, mustard and leafy cabbage was 52.6, 62.5, 60.7, and 35.6%, respectively. The flea beetles have a wider host range extended to the families Brassicaceae, Capparidaceae, Amaranthaceae, Asteraceae, Convulvulaceae, Chenopodiaceae, Solanaceae, Fabaceae and Euphorbiaceae, of which Capparidaceae was the most preferred alternate host next to Brassicaceae. Monocot weeds were not preferred over dicots by the adult beetles of *P. cruciferae*. However, it was extended in dicot weeds. *Gynandropis pentaphylla* and *Cleome biscoa*, dicot weeds of Capparidaceae, served as a food source for the beetles in fields. *G. pentaphylla* provided a unique breeding site for the beetles, thus favouring the survival and development of *P. cruciferae* in fields. Non – Brassica crops such as *Beta vulgaricus*, *Alternanthera sessilis*, *Ipomoe aquatic*, *Amaranthus* sp. and *Crotalaria juncia* were also preferred by the beetles. *Crotalaria juncia* (Fabaceae) had a role in the establishment of beetles and favoured the beetle's survival in the field. Weeds played a key role in the development of *P. cruciferae*. Hence, it is advisable for better and timely management of weeds for the sustainable crop cultivation.