

## Time of Release of Larval Parasitoid, *Cotesia plutellae* (Kurdjumov) on Parasitization of *Plutella xylostella* L. on Cabbage

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**Abstract :** *Cotesia plutellae* is a locally available larval parasitoid of diamondback moth, *Plutella xylostella*, which can be used to manage *P. xylostella* in the field in an integrated pest management strategy. A study was undertaken to find out the best time of releasing *C. plutellae* for effective management of *P. xylostella* using three release times; 2, 3 and 4 weeks after transplanting of cabbage in farmer's fields at Marassana in Kandy District, Sri Lanka, during Yala 2014 and 2015 seasons. Results revealed that the percentage mean values of parasitization in Yala 2015, was significantly high; 69.47 and 43.85, when introduced at 2 and 3 weeks after transplanting respectively and significantly low 23.31, when released at 4 weeks after transplanting. It is therefore evident that the parasitoid release should be done before 3 weeks, preferably at 2 weeks after transplanting of cabbage in the field. The highest percentage parasitism achieved was 83.90 at 2 weeks after transplanting in Yala 2015 and the lowest being 18.85 and 12.00% at 4 weeks after transplanting in Yala 2014 and 2015 respectively. Unparasitized larvae were able to maintain high *P. xylostella* populations up to harvest. Even though there is no yield advantage by using parasitoids for *P. xylostella* management, the cost incurred for insect pest management was greatly reduced compared to use of synthetic chemicals.

**Keywords :** cabbage, *Cotesia plutellae*, larval parasitoid, *Plutella xylostella*, time of release

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