

**REARING OF DIAMONDBACK MOTH (*Plutella xylostella*) AND  
THE PARASITOID, *Cotesia plutellae* ON ARTIFICIAL DIETS**

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Diamondback moth (DBM), *Plutella xylostella* (L.) (Lepidoptera: Plutellidae), is a major pest of *Brassica* crops in many parts of Sri Lanka. The pest has its ability to develop resistance to many classes of insecticides and. *Cotesia plutellae* (Kurdjumov) is a larval parasitoid of DBM. Mass rearing of DBM in the laboratory using artificial diet is essential to have continuous supply of parasitoids. The experiment was conducted in the laboratory of Plant Quarantine Unit, Gannoruwa, Peradeniya using

2<sup>nd</sup> instar DBM larvae and Parasitoids. Three semi synthetic diets (D<sub>1</sub>, D<sub>23</sub>, D) were formulated by modifying the *Biever's* and *Boldt diet* and were compared with fresh cabbage leaves as the control. The results indicated that survival of larvae among treatments were not significantly different though the larval period was extended in all diets. Shorter larval period was shown by D<sub>1</sub> and control treatments. Larva to adult period was significantly lower in D<sub>1</sub>, D<sub>23</sub> and D diets compared to the control. Eggs laid per female were low in DBM larvae reared in artificial diets though it was higher in control. Mean pupal weight was significantly higher in control and there were no significant differences among the treatments. Overall results indicated that D<sub>1</sub> was better than other diets for rearing DBM. There were no significant differences in parasitization of the parasitoids. However, further improvement for these diets is needed to rear DBM and parasitoids in the laboratory.

**Key words:** *Biever's* and *Boldt diet*, Cabbage, *Cotesia plutellae*, Diamondback moth