

3-3-18. Effect of Parasitism by the Braconid wasp *Cotesia plutellae* on Diamondback moth, *Plutella xylostella*

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Cotesia plutellae is natural enemy of the diamondback moth (DBM), *Plutella xylostella*. Pupa periods of *C. plutellae*, endoparasitoid of *P. xylostella* larva, were 6.5, 5.7 and 3.0 days at 20, 25 and 30°C, respectively. The adults longevities were 8.3, 18.0, and 25.7 days at the three different constant temperatures. Parasitization by *C. plutellae* caused a decrease in food consumption and pupation in host larvae. Analysis of hemolymph plasma using SDS-PAGE and spectrophotometry showed that in terminal stage 4th instar host larvae, the titer of storage protein was reduced relative to the levels of this protein detected in nonparasitized 4th instar larvae of the same age. In host larvae parasitized by *C. plutellae*, melanization, nodule formation, and lysozyme activity were all affected. The melanization response of plasma was assayed by phenoloxidase (PO) activity test. PO activity and nodule formation were reduced in plasma of parasitized larvae.