

## عنوان مقاله:

Effects of short-term heat shock of eggs on the development and fecundity of *Plutella xylostella* (L.) (Lepidoptera: Plutellidae)

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## خلاصه مقاله:

It has been hypothesized that the survival, development, fecundity and population of insects are affected significantly by high temperatures. The diamondback moth, *Plutella xylostella* (L.) (Lepidoptera: Plutellidae), is a serious and economically important pest of cruciferous crops throughout the world. In this research, the adult longevity and fecundity of *P. xylostella* were studied in laboratory conditions. After applying heat shock stress, (۳۰, ۳۵ and ۴۰ °C) for ۲, ۴, ۶ and ۸h, the experiments were conducted at  $25 \pm 1$  °C,  $65 \pm 5\%$  RH, and a photoperiod of ۱۶:۸ (L: D)h on *Brassica napus*. The developmental time of immature stages were significantly affected by heat shock temperatures (۳۰ to ۴۰ °C) compared to the ۲۵ °C (control), but the developmental time of larvae did not differ significantly at ۴۰ °C. The pupal development time differed significantly at heat shock temperatures, which was longest ( $6.13 \pm 0.05$  days) at ۳۰ °C for ۲h. Heat shock temperature also had significant impact on adult longevity and fecundity of diamondback moth. The longest adult longevity for females and males was determined to be  $14.47 \pm 1.04$  and  $11.04 \pm 0.95$  days respectively at ۳۵ °C for ۲h. The fecundity of females fluctuated significantly with increasing temperature stress. Our findings provide useful information on the potential of this insect in response to environmental temperature changes.

## کلمات کلیدی:

*Plutella xylostella*, fecundity, longevity, heat shock temperature

## لینک ثابت مقاله در پایگاه سیویلیکا:

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