

RESEARCH ARTICLE

Influence of temperature on egg hatching and development time of brown plant hopper

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ABSTRACT

Temperature is probably the most important environmental factor influencing the insect behaviour, distribution, development, survival and reproduction. Climate change, especially temperature increase, will affect insect physiology, behaviour, and development as well as species distribution and abundance, evidenced by changes in the number of generations a year, increasing survival rates in winter, and the earlier appearance of some insects. An investigation was taken up to understand the effect of different constant temperatures (28.3°C, 30.6°C, 32.7°C, 34.3°C and 36°C) on the egg hatching and development time of brown plant hopper (BPH). The results revealed that the temperature above 32.7°C was detrimental for the oviposition by BPH females. Eggs hatching also decreased drastically with increase in temperatures. The development time taken by different stages of BPH varied significantly at different temperatures. Development time taken by different stages decreased considerably when the temperature increased. Longevity of the male and female adults also decreased with increasing temperature.

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