



RESEARCH ARTICLE :

Effect of temperature on life cycle of entomopathogenic nematode, *Heterorhabditis indica* Poinar

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ARTICLE CHRONICLE :

Received :

12.07.2017;

Accepted :

25.07.2017

KEY WORDS :

Temperature on life cycle,
Entomopathogenic nematode,
Heterorhabditis indica, Poinar

SUMMARY : Experiment was conducted to study the effect of temperature on infection of host insect and time taken for emergence of IJs of *H. indica* from the cadavers of host insect (*Galleria mellonella*) under controlled laboratory conditions. The results indicated that the mean time taken by the nematode to cause infection in the host insect was significantly less at three temperatures, viz., 30°C, room temperature (25-28°C) and ambient atmospheric temperature (23-34°C) which ranged from 24-30 hours. At 20°C temperature, the infection occurred after 44 hrs of inoculation, indicating the maximum time required for *H. indica* to cause infection. At test temperatures of 10°C and 40°C nematode did not cause the infection to the host insect due to lethal high and lethal low temperature effects. From the results it was evident that at ambient atmospheric temperature (23-34°C), the mean time taken for emergence of IJs was 226 hrs (9.42 days). While, the mean time taken for emergence at 30°C and room temperature (25-28°C) were 236 hrs (9.83 days) and 246 hrs (10.25 days), respectively. The mean time taken for emergence at 20°C, was 286 hrs (11.92 days) and all the above treatments were significantly on par with each other.

How to cite this article : Paschapur, Amit. U., Vijayalakshmi, K., Sunanda, B. S. and Pawar, Vinod (2017). Effect of temperature on life cycle of entomopathogenic nematode, *Heterorhabditis Indica* Poinar. *Agric. Update*, 12(TECHSEAR-2) : 578-582; DOI: 10.15740/HAS/AU/12.TECHSEAR(2)2017/578-582.

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