

RESEARCH ARTICLE

Bionomics and evaluation of different biocides against anar butterfly, *Virachola isocrates* (Fabricius) infesting pomegranate

■ J.B. BHUT*, P.K. BORAD AND H.A. GADHIYA

Department of Entomology, B.A. College of Agriculture, Anand Agricultural University, ANAND (GUJARAT) INDIA

ARTICLE INFO

Received : 20.05.2013
Revised : 22.07.2013
Accepted : 28.07.2013

Key Words :

Pomegranate, *Virachola isocrates*, Fruit borer, Bionomics Biocides

ABSTRACT

The present investigation was carried out in laboratory condition at Department of Entomology and field condition at Horticulture Farm, B.A. College of Agriculture, Anand Agricultural University, Anand during 2011-12. The female laid eggs on flowers, fruits and leaves singly. The freshly laid eggs were shiny white in colour. The length and breadth of eggs, first, second, third, fourth and fifth instar larvae were 0.49 ± 0.78 and 0.51 ± 0.08 mm, 1.56 ± 0.28 and 0.98 ± 0.08 , 6.95 ± 1.28 and 2.45 ± 1.01 , 12.4 ± 0.95 and 3.80 ± 0.53 , 17.4 ± 1.95 and 4.6 ± 0.52 , 22.5 ± 1.90 and 5.78 ± 1.20 mm, respectively. The duration of first, second, third, fourth, fifth, pre-pupal and pupal stages were 4.8 ± 1.10 , 5.8 ± 0.78 , 7.8 ± 0.65 , 6.3 ± 0.62 , 5.22 ± 1.02 , 2.4 ± 0.48 and 10.8 ± 2.20 days, respectively. The pre-ovipositor, oviposition and post oviposition period were 1.20 ± 0.42 , 3.5 ± 0.95 and 6.0 ± 0.79 days, respectively. Among the nine biocides evaluated against *V. isocrates* on pomegranate, neem oil @ 0.5 per cent, neem seed kernel extract @ 5 per cent and *Bacillus thuringiensis* @ 0.15 per cent were found more effective. The application cost of the respective biocides were 1670, 2420 and 3337 Rs./ha, respectively.

How to view point the article : Bhut, J.B., Borad, P.K. and Gadhiya, H.A. (2013). Bionomics and evaluation of different biocides against anar butterfly, *Virachola isocrates* (Fabricius) infesting pomegranate. *Internat. J. Plant Protec.*, **6**(2) : 338-343.

*Corresponding author:

Email: jignesh1315@gmail.com
