



Research Article

Biology of leaf web worm, *Nausinoe geometralis* (Guenee) on jasmine under laboratory conditions

■ D.K. GAJERA¹, K. A. PATEL², R.S. PATEL¹, N.R. TOKE^{1*} AND K.S. PATIL¹

¹Department of Entomology, N.M. College of Agriculture, Navsari Agricultural University, NAVSARI (GUJARAT) INDIA

²Department of Entomology, Main Sorghum Research Station, N.A.U., SURAT (GUJARAT) INDIA

ARTICLE INFO

Article Chronicle :

Received : 19.12.2011

Revised : 22.12.2011

Accepted : 04.03.2012

Key words :

Leaf-web worm,
Nausinoe geometralis,
Biology

*Corresponding author: tokenatu@gmail.com;
tokenatu@yahoo.com

ABSTRACT

Biology of leaf web worm, *Nausinoe geometralis* (Guenee) was studied under laboratory at 24.03 ± 1.75 °C and the average relative humidity was 53.9 ± 3.04 per cent during November-December 2006. Average larval period was 9.98 ± 0.84 days and pupal period was 7.84 ± 0.37 days. Adult period was 3.88 ± 0.83 days for male and 6.16 ± 0.37 days for female. The total life cycle was completed in 26.62 ± 2.57 days for male and 28.90 ± 2.11 days for female. The pre-oviposition, oviposition and post-oviposition periods were 1.60 ± 0.50 , 3.44 ± 0.051 and 1.12 ± 0.33 days, respectively. The female laid average 52.35 ± 25.33 eggs during its life span. The sex ratio (female: male) was recorded 1: 0.94 in laboratory.

How to view point the article : Gajera, D.K., Patel, K.A., Patel, R.S., Toke, N.R. and Patil, K.S. (2012). Biology of leaf web worm, *Nausinoe geometralis* (Guenee) on jasmine under laboratory conditions. *Internat. J. Plant Protec.*, 5(1) : 120-123.

INTRODUCTION

Jasmine plant is attacked by a number of insect pests like leaf webworm, bud worm, gallery worm, tinged bug, thrips, green plant hopper, jasmine bug, leaf roller, blossom midge and non insect pest like red spider mite and cyclamen mite. Among them, Jasmine leaf web worm, *Nausinoe geometralis* (Guenee) (Lepidoptera : Pyralidae) is a serious pest of Arabian jasmine (*Jasminum sambac* Ait.) in India (David, 1958). The caterpillars web the leaves and nibble to make holes in the leaves which are quite often reduced to mere veins. The severely attacked bush present 'burnt appearance' because the damaged and dried leaves remain entrapped in the web. This results in reduced vitality of plant which tells upon the growth of the bush and consequently production of flower buds/flowers reduction in the subsequent year.

MATERIALS AND METHODS

The study on biology of leaf web worm, *Nausinoe geometralis* was carried out in the laboratory of the Department of Entomology, N.M. College of Agriculture, Navsari Agricultural University, Navsari at 24.03 ± 1.75 °C and average relative humidity 53.9 ± 3.04 per cent during November

December 2006.

Maintenance of culture:

The initial culture of jasmine leaf web worm was raised by collecting large number of larvae from the field of jasmine crop from Horticulture farm, ASPEE College of Horticulture and Forestry, N.A.U., Navsari. The larvae were kept in a plastic culture bottle having 20.00 cm height and 16.00 cm diameter containing jasmine leaves. Rearing bottle was cleaned everyday.

Rearing technique:

In the laboratory, larvae were reared separately on jasmine in transparent plastic tubes having 2.50 cm diameter and 7.50 cm length. The open end of plastic tubes was covered with the perforated lids to facilitate aeration. Jasmine leaves were provided as food daily till pre-pupal stage. At the time of pre-pupal stage, 1/3 part of each plastic tube was filled with leaves to facilitate pupation. The pupae formed were transferred to jars for emergence of the adults.

To rear the adults, newly emerged male and female moths were transferred in a glass jar (23 cm diameter x 10 cm height). Tender shoots of jasmine plant having leaves on them were