

BIOLOGY AND MANAGEMENT OF SAPOTA BARK EATING CATERPILLAR, *INDARBELA TETRAONIS*

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ABSTRACT : In an experiment on biology of Sapota bark eating caterpillar *Indarbela tetraonis* Moore during 2012-13 at College of Horticulture, Bidar. Eggs were 0.67 to 0.73 mm long and 0.42 to 0.46 mm wide. Eggs hatched in 7 to 11 days. Full grown larvae were 37 to 43 mm long and 6 to 8 mm wide. Larval duration was 274 to 298 days. Pupae were 11 to 15 mm long and 4 to 6 mm wide and the pupal period was 21 to 26 days. Adult male had wing span of 11 to 13 mm length and width of 20 to 24 mm and lived for 4 to 6 days. Female adult had wing span of 12 to 14 mm and width of 25 to 27 mm and lived for 4 to 6 days. Among the 8 chemicals evaluated Rynaxypyr 25 SC registered 100 percent control of the pest and highest yield (14.85 t/ha and 15.00 t/ha during 2013 and 2014, respectively).

Key words : Biology, Sapota bark eating caterpillar, management, morphometry, yield.

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INTRODUCTION

Sapota (*Manilkara achras* Mill), is one of the major fruit crop grown in India (Kulkarni *et al*, 2007). It is a good source of sugar which ranges between 12 and 14 per cent (Bosc and Mitra, 1990). Sapota is mainly valued for its sweet and delicious fruits of humid tropical and subtropical regions. The fruit have appreciable amount of protein, fat, fibers, calcium, phosphorous, iron, and Vitamin C. (Shanmugavelu and Srinivasan, 1973). Sapota is grown in an area of 1.63 lakh hectares with production of 14.26 lakh tones and 8.7 tonnes per hectares productivity (Anonymous, 2017).

Like many other crops sapota is affected by several pests and other factors which result in the reduction of yield. As many as 25 insect pests have been reported to attack sapota tree in India (Abhishek, 2011). Further, insect pests are known to affect the quality and yield of sapota, of which bark eating caterpillar, *Indarbela tetraonis* Moore is now-a-days becoming one of the serious production constraint.

Since the insect lives in concealed tunnels and comes out only to feed on the bark further, it takes several months to complete the life cycle, no holistic information is available regarding its biology and management, except

the few stray reports. Hence, an investigation was undertaken to generate the data and document the results regarding the biology and management of the pest.

MATERIALS AND METHODS

A study was undertaken on the biology and management of Sapota bark eating caterpillar in an experimental plot of 96 Sapota trees (10 years old) planted at 7.5 m × 7.5 m spacing.

Biology of Sapota bark eating caterpillar

To study the biology, infested trees with score 2 and above were selected and were tagged. *In situ* or field observation were made on the live tunnels in each infested tree by cutting the branches, at weekly interval during 2012-13. The presence of the larva inside the tunnel was ascertained by the presence of the sleeve (a path, roofed with the silk and fragments of bark from shelter tunnel to the place where larva feeds). Besides, to confirm the observations made in the field, the infested branches were collected from the field and efforts were made to rear the insect in cages measuring 3ft × 3ft × 3ft under the laboratory conditions. To keep the branches fresh for longer period the floor of the cages were spread with 8cm thick layer of moist sieved sand.

(i) Morphometric features: A standard ocular