



Seasonal Incidence and biology of Shoot Borer *Chilo infuscatellus* on Sugarcane Snellen

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Abstract

Sugarcane is a major cash crop of India production of sugarcane is heavily decrease by the attack of insect pests in *Chilo induscatellus* maskell is one of the serious pest of sugarcane production in great quantity as well as in quality.

Distributed: It is mostly distributed in India, Sri Lanka, Bangladesh and Pakistan.

Keywords: egg, larva, pupa, adult

Introduction

Chilo induscatellus snellen is a major devostator pesty of sugarcane selected pest is a member of family- Crambidae, Crambidae comes under a largest order Lepidoptera of class Insecta *Chilo induscatellus* snellen showed complete metamorphosis with four developmental stages, egg, larva, pupa and adult during the life cycle study of this pest. In all life stages of the selected pest adults infected the sugarcane plants but the serious infection was caused by the larvae of this pest.

Most species of family- Alcurodidae are phytophagous and they have complete metamorphosis have four stages in their life.

1. Egg
2. Larva
3. Pupa
4. Adult

Host Plant

For study of infestation on plant in 20 shoot borer of sugarcane plants were selected from the field.

Insect Post of Sugarcane-

S.No.	Parts of plants	Damaging Insects
1	Stem	<i>Bissetia steniellus</i> <i>tryporyza nivella</i>
2	Leaves	Leaf cater piller, <i>Aleurolobus borodansis</i>

Aims and Objective

The following objective are considered to complete present dissertation-

1. Survey the plant of guence and sugarcane.
2. To study nature of damage by sugarcane butterfly.
3. Study the biology of *Chilo induscatellus* snellen.

Materials and methods

The following apparatus and glass wares were used during the I whole studies-

- Glass – wares
- Petri disk

Apparatus

- Stereomicroscope
- Camara lucida

Chemicals

- Ethyl alcohol
- Chloroform
- Folidol
- 10% BHC & Soil
- 0.1% Chloroden
- 10% Honey solution

Method

The morphological study of *Chilo induscatellus* snellen adults were collected from selected sugarcane fields a sugarcane fields in village, sabhapur of Dist.-Chitrakoot, a sugarcane field is village Barwara of district branch during the experimental year 2016. Then they were reared in rearing cages in laboratory for morphological study of selected insect in support of Anil Dwivedi and Ashish Mishra. Morphological observation of *Chilo induscatellus* snellen were recorded every four days from egg stage to adult stage in laboratory carefully with the help.

Results and Discussion

Research paper works “Seasonal incidence and biology of shoot borer *Chilo induscatellus* snellen on sugarcane”. in karwi was carried the during April to June at Karwi Chitrakoot (U.P.). The results obtained are presented under following subheads.

Life cycle

The number of generation of *Chilo induscatellus* snellen is dependence upon temperature near the equator the ten generation have been recorded. Five generation have been recorded in the ideal conditions of a laboratory a generation has been recorded to take place in just over 40 days. The average time for one generation of *Chilo induscatellus* snellen in mature. In the field ranges from 35 to 45 days.

Egg

Eggs were oval in shape, creamy, white colour, 1.2mm long and from 1.8 days and 1.0 mm wide in size. The Prothorax was evident but compressed and reduced. The mesothorax was the largest and most prominent segment of the thorax. Egg developmental time varies with temperature ranging from 1.8.



Fig 1

Larva

Full grown larva was yellow or creamy white in colour, 30mm in length, 45 breadth, the first instar are red with white bands and fifth instar bluish green and yellow wish sugarcane shoot borer, Fifth larval instares developmental time fpr larvae ranged from 8.5 days at 91.40F to 45.7 days at 55.40F temperature.



Fig 2

Pupa

Pupa was bright yellow in colour in colour 18-20mm in length. In our temperature dependent study, we found that pupal duration ranged from an average of 5.9days 91.40F to 29.5 days at 55.40F, when larvae were reared on Sugarcane.



Fig 3

Adults

Males were silvery white in colour 2.54 to 3.14 mm in length while females were crimson white in colour 2.24mm to 3.09 inch length. Antennae were filiform type. 11 segmented and 3.0mm long the time period from adult moth emergence until the female begins disposting eggs can vary from 9.7 days at 55.40F to 2.3 days at 91.40F.



Fig 4

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