

Seasonal Incidence and Biology of Top Borer Tryporyza on Sugarcane Nivella

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ABSTRACT:

Sugarcane is a major cash crop of India. Production of sugarcane is heavily decreased by the attack of insect pests in India. Tryporyza novella is one of the serious pests of sugarcane production in great quantity as well as in quality.

Distributed

It is mostly distributed in India, Sri Lanka, Bangladesh.

INTRODUCTION

Tryporyza novella is a major devastator pest of sugarcane. Selected pest is a member of family Pyralidae. Pyralidae comes under a largest order Lepidoptera of class Hexapoda. T. nivella 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 Pyralidae are phytophagous and they have complete metamorphosis. They have four stages in their life: 1-egg, 2-larva, 3-pupa, 4-Adult.

HOST PLANT

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

Insect pest of Brinjal

S.No	Parts of plants	Damaging Insects
1	Stem	Jewel beetle, stem weevil
2	Leaves	Aphids, Leaf miner

Aims and Objective

The following objectives are considered to complete present dissertation---

- 1- Survey the plant of guinea and sugarcane.
- 2- To study nature of damage by sugarcane butterfly.
- 3- Study the biology of tryporyza novella.

MATERIALS AND METHODS

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

Glass-wares

Pertri disk

APPARATUS

Stereomicroscope

Camara lucida

CHEMICALES

Ethyl alcohol

Chlaroform

Glycerin

10% Honey solution

METHOD

The morphological study of *T. novella*, adults were collected from selected sugarcane fields a sugarcane field in village, Gopalpur of district- chitrkoot ,a sugarcane field in village sangrampur of district branch during the experimental year 2015. Then they were reared in rearing cages in laboratory for morphological study of selected insect in support of preeti and priyanka. Morphological observation of *T. novella* were recorded every two dwys from egg stage to adult stage in laboratory cariagly with the help.

RESULT AND DISCUSSION

Research paper work “seasonal incidence and biology of top borer tryponryza on sugarcane” in atarra was carred the during may to june at atarra banda . the result obtained are peresnted under following subheads

Life Cycle

The number of generation of tryponryza is dependen upon temperature near the equator the ten generation have been recorded. Five generation have ben recorded in the ideal conditions of a laboratory a generation has been recorded to take place in just over 30 days . the average time for one generation of tryponryza novella in mature. In the field ranges from 20 to 30 days.

Egg

Eggs were oval in shape, white in colour, 1.2mm long and from 1.8 days and 1.0 wide in size. The prothorax was eviedent 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



Larva

Full grown larva was creamy white or yellow in colour, 28mm in length, 45 breadth, the first instar are red with white bands and fifth instar bluish green and yellow wish sugarcane top borer. six larval insters developmental time fpr larvae ranged from 15.5 days at 91.4°F to 65.7 days at 55.4°F temperature.



Pupa

Pupa was bright yellow in colour 16-18 mm in length. in our temperature dependent study, we found that pupal duration ranged from an average of 5.9 days 91.4°F to 29.5 days at 55.4°F, when larvae were reared on sugarcane.



Adult

Males were silvery white in colour 2.54 to 3.14 mm in length while females were crimson white in colour, 2.24 mm to 3.09 in 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 55.4°F to 2.3 days at 91.4°F.



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