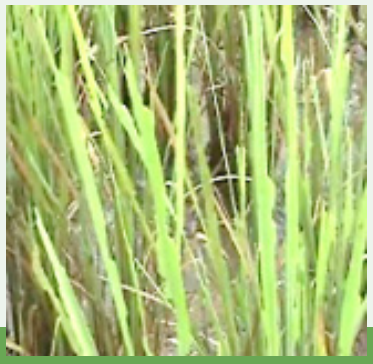
Management of Rice armyworm *(Mythimna separata)*



Severely affected rice crop

Caterpillar of Mythimna separata. (Photo by Rudra Narayan Borkakati)

Adult larvae

INTRODUCTION

It is an emerging pest of rice in Assam, also known as Northern/oriental armyworm or rice earhead cutting caterpillar. They are known us for their vigorous feeding habits and swift migration to long distances. It is a polyphagous pest which is nocturnal in nature. Apart from rice, it also infests crops like maize, ragi, wheat, sugarcane. Weeds, particularly belonging to the Poaceae family, can serve as an alternate host.

UNDERSTANDING THE BACKGROUND OF THE PEST

Warm temperatures for prolonged periods followed by heavy rain favour the outbreak of this pest. The infestation of this pest is seen after panicle initiation stage. This differs the pest from rice swarming caterpillar, that emerges normally during vegetative/ tillering stage. The adult females lay about 500-900 eggs that lasts for 2-7 days. Larval development is completed in 14-22 days. Pupation takes place in soil that lasts for about 15 days.

SYMPTOMS AND DIAGNOSIS PROCEDURE

The young caterpillar skeletonizes the leaf surfaces. The older larvae feed from the leaf margins leaving only the midrib, making the field appear as if it has been completely grazed by cattle.

ECONOMIC THRESHOLD LEVEL (ETL)

4-5 larvae per sq. meter.

MANAGEMENT MEASURES

- Crop rotation with pulses and oilseed crops.
- Clean cultivation and removal of crop residues and weeds
- Flooding of nursery bed.
- Using recommended dose of fertilizers in split dose (Urea:SSP:MOP=40:20:20 kg/ha)
- Collection and destruction of egg masses and larvae
- Installation of light traps @ 2-5 traps/ha to monitor adult activity
- Based on adult activity, release biocontrol agent, Trichogramma japonicum @ 50,000 to 1,00,000/ha at an interval of 15 days (4 to 6 release)
- Using physical barriers such as field bunds/ trenches as to prevent their movement from infested to uninfested fields.
- Spraying of *Azadiractin* 1 % @ 400 ml per acre.
- Spraying of Chlorantraniliprole 18.5 % SC @ 60 ml/acre

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