



Research Article

## Screening of traditional rice cultivars against yellow stem borer, *Scirpophaga incertulas* Walker in Malnad tracts of Karnataka

■ SANGAMESHA HAKKALAPPAVAR<sup>1\*</sup>, MANJUNATH TATTIMANI<sup>2</sup>, C. S. DANARADDI<sup>3</sup>, SHILPA B. BIRADAR<sup>4</sup> AND MOHAN R. DANDAGI<sup>5</sup>

<sup>1</sup>Department of Agricultural Entomology, College of Agriculture, Naviley, SHIMOGA (KARNATAKA) INDIA

<sup>2</sup>Department of Agronomy, C.C.S. Haryana Agricultural University, HISAR (HARYANA)

<sup>3</sup>Department of Agricultural Entomology, University of Agricultural Sciences, DHARWAD (KARNATAKA) INDIA

<sup>4</sup>Department of English (Optional), Kuvempu University, SHIMOGA (KARNATAKA) INDIA

<sup>5</sup>Department of Seed Science and Technology, University of Agricultural Sciences, DHARWAD (KARNATAKA) INDIA

### ARTICLE INFO

#### Article Chronicle :

Received : 24.09.2011

Revised : 02.11.2012

Accepted : 24.01.2012

#### Key words :

Traditional cultivars,  
*Scirpophaga incertulas*,  
Resistance,  
Rice

### ABSTRACT

Twenty two traditional rice and five recommended cultivars were tested against the stem borer during tillering (dead heart) and flowering (white ear head) stage, under field condition at Agricultural Research Station, Honnavile, Shimoga during *Kharif* 2009. Resistance was assessed based on the percentage of dead hearts and white ears by following 0-9 scale as per the SES. None of the cultivar showed high level of resistance to dead heart. However, five cultivars had a damage score of '1', indicating a resistance to dead heart, while 16 cultivars were moderately resistance (score 3) and the rest six cultivars were moderately susceptible to dead heart and recorded damage score of '5'. Whereas, only one cultivar MTU-1001 was resistant to white ear head damage and recorded damage score of '1'. Seven cultivars were found to be moderately resistant recording damage score of '3'. Five cultivars were found to be moderately susceptible with damage score of '5', while 13 cultivars were susceptible to WEH with damage score of '7' and the cultivar Navalisale was highly susceptible to WEH and recorded damage score of '9'. Cultivars were more susceptible to white ear head than to dead hearts.

**How to view point the article :** Hakkalappanvar, Sangamesha, Tattimani, Manjunath, Danaraddi, C.S., Biradar, Shilpa B. and Dandagi, Mohan R. (2012). Screening of traditional rice cultivars against yellow stem borer, *Scirpophaga incertulas* Walker in Malnad tracts of Karnataka. *Internat. J. Plant Protec.*, 5(1) : 32-35.

\*Corresponding author:

## INTRODUCTION

Rice (*Oryza sativa* L.) is one of the important cereal crops of the world and forms the staple food for more than 65 per cent of the world population and known as king of cereals. Nearly 90 per cent of the area, production and consumption of rice are confined to South East Asian countries (Mathur *et al.*, 1999). It is essentially a crop of warm humid environment and grown mainly under assured rainfall or irrigation. Since mid sixties despite the cultivation of high yielding varieties the rice production and productivity has not made an impact due to the unholy triple alliance of insects, diseases and weeds. Therefore, the traditional rice cultivars are highly adapted to the regions and also have special uses and varying levels of resistance to biotic and abiotic stresses. However, traditional

rice cultivars are important reservoirs of valuable traits and need special attention for future conservation. It possesses valuable traits *viz.*, medicinal properties, nutrition, taste, aroma, tolerance to drought, submergence and other special uses. More than 50 per cent of rainfed rice in Karnataka is under traditional rice, thus sheltering a potential genetic diversity (Hanamaratti *et al.*, 2008).

Insect pests constitute the major yield limiting biotic stresses throughout the rice growing countries. About 300 species of insects have been reported to attack rice crop in India, out of which 20 have been found to be the major pests (Arora and Dhaliwal, 1996). Among the insect pests, stem borer (*Scirpophaga incertulas* Walker) is predominant in Malnad tracts of Karnataka. It attacks the rice plants from