

## Monitoring of species composition of rice stem borers

H. Kalita\*

*Regional Agricultural Research Station, Assam Agricultural University, Titabar-785630, Assam*

### ABSTRACT

*The species composition of stem borers prevalent in Assam during wet season 2004 and 2005 was studied. The results revealed that all the species of stem borers are prevalent in this region. Amongst the species, yellow stem borer (34 - 40 % in 2004 & 22.54-77.41 % in 2005) and white stem borer (39 - 43 % in 2004 and 18.27 - 67.64 % in 2005) showed consistently higher population over the other species at all the three stages of the crop growth.*

*Key words: Stem borer, species composition, rice, Assam*

Stem borers are the major insect pests associated with rice cultivation in Assam and they may cause yield loss from 3-95 % (Senapati and Panda, 1998). There are five different species of stem borers found in rice crop. Each of the species produces dead heart at vegetative stage and white ear head when they attack after panicle initiation stage. It is very difficult to determine the species by observing the damage symptoms caused by these insects. Therefore, the present investigation was undertaken to identify and monitor the different species of stem borers prevalent in this region.

The experiment was conducted during wet seasons of 2004 and 2005 by taking rice variety Jaya in 500 sq. m area. Package of Practices of wet season crops of Assam (Anon., 1997) was followed to raise a good crop. One hundred hills were selected randomly

covering the entire experimental plot at tillering and maximum tillering stages for dead hearts and at heading stage for white ear heads during the crop season. Each affected tiller was dissected to identify the stem borer species based on the characteristics of larva / pupa or adults emerging from the pupae after rearing in the laboratory.

It was observed from the study that all the species of stem borers were prevalent in this region. Amongst the species, yellow stem borer and white stem borer were found to be dominant over the other species. Yellow stem borer (34.00 - 40.00 % in 2004 and 22.54 - 77.41 % in 2005) and white stem borer (39.00 - 43.00 % in 2004 and 18.27 - 67.64 % in 2005) showed consistently higher population at all the stages of crop growth (Table 1). It was clear from the study that the

**Table 1. Studies on stem borer species composition**

Crop stage	Per cent population of different species of stem borers									
	Wet season 2004					Wet season 2005				
	Yellow stem borer	White stem borer	Striped borer	Dark headed borer	Pink borer	Yellow stem borer	White stem borer	Striped borer	Dark headed borer	Pink borer
Tillering	36.00	43.00	7.00	11.00	3.00	26.13	65.90	7.95	0.00	0.00
Maximum tillering	34.00	42.00	9.00	10.00	5.00	22.54	67.64	9.80	0.00	0.00
Heading	40.00	39.00	8.00	9.00	4.00	77.41	18.27	4.30	0.00	0.00

*Present Address: <sup>1</sup>ICAR Research Complex for NEH Region, Sikkim Centre, Tadong, Gangtok-737 102*

population of white stem borer was more at tillering stage (43.00% in 2004 and 67.64% in 2005) and maximum tillering stages (42.00 % in 2004 and 67.64 % in 2005) in comparison to other species while yellow stem borer population was dominant at heading stage (40.00% in 2004 and 77.41% in 2005) over the other species. Striped borer population ranged from 7.00 - 9.00 % in 2004 and 4.30 - 9.80 % in 2005. Dark headed stem borer (9.00 - 11.00 %) and pink borer (3.00 - 5.00 %) population was observed only in 2004.

## REFERENCES

- Anonymous (1997). Package of Practices for wet season crops, Department of Agriculture and Assam Agricultural University, Assam
- Senapati B and Panda SK 1998. Rice stem borers. In : Insect Pests of Cereals and Their Management (Prakash A and Rao J Eds.), Applied Zoologists Research Association (AZRA) 1: 2-18