Flagship Project for Bangladesh Rice Research Institute

In Bangladesh rice is life. It provides 70% of an average citizen's total calorie intake and accounts for nearly 18% of the Gross Domestic Product (GDP). The rice sector is by far the most important provider of rural employment and demand for rice continues to rise. However, there are major constraints to increasing rice production. As there are no opportunities for increasing production by expanding the cropped area, there is a need to increase the productivity of the areas currently cultivated. One of the constraints to increasing productivity is the insect pest, rice hispa, which occurs in all low-lying rice-growing areas and feeds and mines rice leaves causing up to 65% yield losses. Its behaviour is not well understood and this has so far prevented its effective control.

Project trained BRRI scientists conducting host feeding trials

Project R7891 brings together different organisations to unravel the mysteries that underlie rice hispa outbreaks and the socioeconomic factors that limit control options available to resource-poor farmers. The quality of the research process has been such that the Director of Research at the Bangladesh Rice Research Institute (BRRI) described the project as 'a flagship project for BRRI'.

BRRI scientist undergoing training in identification of natural enemies

Studying the ecology of the insect in the field has been a crucial component of this project. Natural enemies have, for example, been identified as important causes of rice hispa mortality in south and central rice-growing areas. However, in non-outbreak situations, abiotic factors (such as low relative humidity) seem to decrease hispa survival of hispa in the field. In conducting this research, BRRI, the lead partner, has embraced new techniques in ecological methodology and thus built capacity through training. Currently the implications of the research outputs for IPM policy and interventions for rice pest control are under discussion with the Government and NGOs.

R7891: Ecology and management of rice hispa (*Dicladispa armigera*) in Bangladesh
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