Research Paper :

Morphological characters responsible for resistance to leaf folder, *Cnaphalocrocis medinalis* Guenee (Pyraustidae: Lepidoptera) in traditional cultivars of rice

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SUMMARY

Twenty two traditional rice cultivars and five recommended cultivars were tested against the leaf folder, under field condition at Agricultural Research Station, Honnavile, Shimoga during *Kharif*, 2009. Resistance was assessed based on the percentage of damaged leaves following 0-9 scale as per the SES. 15 cultivars were resistant and recorded damage score of '1' indicating resistance to leaf folder. Seven cultivars were moderately resistant and remaining five cultivars were found to be moderately susceptible to leaf folder damage. Among the plant, the morphological characters studied, number of trichomes, number of tillers and leaf width, only number of trichomes and leaf width (cm) showed significant correlation with leaf folder infestation.

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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 of 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).

In recent years, the leaf folder, *Cnaphalocrocis medinalis* (Guenee) is becoming serious pest of rice. The caterpillar folds the leaves longitudinally into tubular structures and feed on green leaf tissues within the structure. Larval feedings result in white, transparent streaks. Heavy infestation affects the photosynthetic ability and reduction of yield (Fletcher 1914). Further, an identification and understanding of the mechanisms and bases of resistance in the host plant are the major steps to varietal resistance development. In the present study attempts have been made to assess the morphological characters responsible for the incidence of leaf folder on 22 traditional rice cultivars and evaluate them for resistance against leaf folder.