

Research Note :

# Survival of Brown Plant Hopper (BPH) *Nilaparvata lugens* (Stal.) on Paddy Field Weeds

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*In vitro* study was carried out in the Glass house, Department of Entomology, College of Agriculture, Indira Gandhi Krishi Vishwavidyalaya, Raipur (C.G.) during 2006-2007 to assess the survival of brown plant hopper (BPH), *Nilaparvata lugens* (Stal.) both nymphs and mature adults on different paddy field weeds, wild rice (*Oryza nevara*) and rice check (TN 1). The study revealed that BPH nymphal and adults survival was zero on all weeds. On wild rice (*Oryza nevara*) there was prolonged nymphal development, slow growth and low survival as compared to the insects caged with susceptible check TN1.

Brown plant hopper (BPH), *Nilaparvata lugens* (Stal.) is one of the most important insect pests attacking rice crop all over the world including India. The insect inflicts damage through sucking plant sap by remaining at the basal portion of rice plant. As a result, the plant gets wilted and dries off. Under field conditions, the damage spreads in circular

spots. It is commonly believed that most delphacid plant hoppers feed, oviposit and develop primarily on monocots. *Nilaparvata lugens* has been reported on 4 families of plants and on over 20 genera of grasses in fact it is monophagous on *Oryza* and *Leersia* (formerly, *Oryza*). Brown plant hopper is a monophagous insect restricted to cultivated rice and its allied wild forms like *Oryza perenies* and *Oryza spontanea*.

The experiment was carried out in the Glass house, Department of Entomology, College of Agriculture, Indira Gandhi Krishi Vishwavidyalaya, Raipur (C.G.) during 2006-2007. The experimental material consisted seventeen paddy field weeds, collected from research farm of IGKV and farmers' fields near by college. Weeds were planted in plastic pots and trimmed two times for getting fresh tillers. Plants were kept confined separately by placing inverted long cylindrical plastic tubes with their openings tied up with cotton cloth by a rubber

**Key words :**

*Nilaparvata, Lugens, Paddy, Field weeds, Survival*

Table 1 : Survival of brown plant hopper on different weeds collected from paddy field							
Sr. No.	Weed name	Number of releases, 5-8 days age old insects			Number of releases adults		
		I phase	II phase	III phase	I phase	II phase	III phase
1.	<i>Oryza sativa</i>	√	√	√	√	√	√
2.	<i>Oryza nivara</i>	√	√	√	√	√	√
3.	<i>Cyprus difformes</i>	0	0	0	0	0	0
4.	<i>Scirpus</i> sp.	0	0	0	0	0	0
5.	<i>Cynotis axillaries</i>	0	0	0	0	0	0
6.	<i>Saccharam spontaneum</i>	0	0	0	0	0	0
7.	<i>Caesulia axilaris</i>	0	0	0	0	0	0
8.	<i>Echinochlova colonum</i>	0	0	0	0	0	0
9.	<i>Spleranthus acmela</i>	0	0	0	0	0	0
10.	<i>Agropyron repines</i>	0	0	0	0	0	0
11.	<i>Cynodon dactylon</i>	0	0	0	0	0	0
12.	<i>Dactylpium ezptium</i>	0	0	0	0	0	0
13.	<i>Ergastries</i> sp.	0	0	0	0	0	0
14.	<i>Sphearnthus indica</i>	0	0	0	0	0	0
15.	<i>Ludurigia actovalvis</i>	0	0	0	0	0	0
16.	<i>Alternanthera triandra</i>	0	0	0	0	0	0
17.	<i>Fimbristylis dichotomy</i>	0	0	0	0	0	0

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