

## Two different reactions of Rathu Heenati to the brown planthopper in Indonesia

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The reactions of the variety Rathu Heenati to brown planthopper were checked seven times in the greenhouse and once in the paddy field at Sukamandi over a period of 3 years (see table).

Rathu Heenati gave two different reactions; one strain was resistant (scores, 0.2–0.9) in the greenhouse and the other was susceptible (8.6–8.9). Thus, scientists using Rathu Heenati as a resistant check should ensure that the seed is from the correct accession. ■

## Reaction scores of Rathu Heenati to brown planthopper at Sukamandi, Indonesia, 1975–78.

Source	Time of check	Av score <sup>a</sup>	Tested in <sup>b</sup>
1st IRBPHN <sup>c</sup>	May 1975	8.9	GH
Breeding Dep., CRIA, Sukamandi	Jun 1976	0.4	GH
2d IRBPHN <sup>c</sup>	Dec 1976	8.5	GH
IRRI (acc. no. 11730)	Mar 1977	0.4	GH
3d IRBPHN <sup>c</sup>	Oct 1977	0.2	GH
Breeding Dep., CRIA, Sukamandi <sup>d</sup>	Jan 1978	8.5	GH
Breeding Dep., CRIA, Sukamandi <sup>d</sup>	Jan 1978	6.1	F
4th IRBPHN <sup>c</sup>	Dec 1978	0.9	GH

<sup>a</sup>1976 Standard Evaluation System for Rice (SES): 1 = little to no damage; 9 = plants dead.

<sup>b</sup>GH = greenhouse, F = field.

<sup>c</sup>International Rice Brown Planthopper Nursery.

<sup>d</sup>Seeds obtained from the same source.

paddy cultivars were grown at the Main Rice Research Station, GAU, Nawagam. From 75 to 100 plants were randomly selected from the plots and the percentage of leaves damaged by leaf miner was determined.

No cultivar was resistant (see table). Plant infestation ranged from 38 to 91%. On the basis of percentage of plants infested, early maturing cultivars were less susceptible than medium- and late-maturing rices. The trend was similar for leaf infestation, which ranged from 1.4 to 3.6% (except in Mochi Rice, which has few leaves). Medium- and late-maturing rices, except Salt Culture, also had higher infestation.

Although late-maturing varieties seemed more susceptible to leaf miner than early ones, results of studies conducted in 1976 by Upadhyay and associates did not reveal a correlation between crop maturity and leaf miner infestation level. ■

## Susceptibility of rice cultivars to paddy leaf miner

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The paddy leaf miner *Cerodontha oryzivora* sp. is a minor nursery pest that damages the anterior tips of leaves. But as agroecosystems change, it could become

a major pest.

The maggot remains concealed and feeds on the internal leaf contents, leaving the epidermis intact. The damaged area appears papery with a maggot or pupa inside the infested streak.

An intensive survey was made in the 1978 monsoon season to gain basic information on leaf miner attack on different paddy cultivars. Seventeen

## Mass rearing of the rice gall midge in the greenhouse in Indonesia

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The rice gall midge *Orseolia oryzae* has been reared in the greenhouse at Bogor, Indonesia, since 1974. The rearing procedure is based on the biology of the

## Relative susceptibility of paddy cultivars to paddy leaf miner. Gujarat, India, 1978 kharif.

Cultivar	Plants observed (no.)	Plants infested (%)	Leaves observed (no.)	Leaves infested (%)
<i>Early-maturing</i>				
Shukhvel 20	72	45.8	2697	1.6
118-1-5	77	63.6	2403	3.6
GAUR1	82	59.8	3319	2.2
GTC	75	45.3	1741	2.2
Mochi Rice	96	61.5	748	11.2
GR3	79	38.0	2891	1.4
Ratna	80	53.8	3259	1.6
<i>Medium-maturing</i>				
GAUR10	81	66.7	1954	3.6
GR11	82	58.5	1411	4.1
<i>Late-maturing</i>				
Jaya	75	90.7	1986	7.4
N19	85	77.6	1265	8.2
Salt Culture	94	52.1	2206	2.6
Pankhali 203	80	80.0	1366	6.1
J208	80	68.8	1606	4.1
Kamod 118	76	90.8	1449	8.1
Mahsuri	82	61.0	2521	2.3
GAUR100	86	53.5	1400	4.1

## Number of gall midge adults collected per month in the greenhouse. Bogor, Indonesia, 1975–78.

Month	Gall midge adults (thousand)			
	1975	1976	1977	1978
Jan.	1.3	2.8	13.3	30.2
Feb	2.1	2.6	11.1	25.9
Mar	3.9	4.1	10.9	26.4
Apr	7.0	5.1	10.3	21.8
May	4.3	3.4	12.6	26.3
Jun	7.1	4.3	19.8	23.8
Jul	5.7	5.0	26.4	25.6
Aug	7.6	5.4	34.7	28.6
Sep	2.8	10.4	22.8	23.7
Oct	4.5	12.3	24.9	25.0
Nov	3.2	10.7	18.1	20.2
Dec	2.7	12.4	22.0	17.6
Av	4.4	6.5	18.9	24.6
Sex ratio (female: male):				
	1.7:1	1.4:1	1.4:1	1.4:1