

occurrence on rice glumes in India.

The fungus produces hyaline, caenocytic mycelium. Conidiophores are short and simple. Conidia are dark and 5-celled, with hyaline and pointed-end

cells having 2–3 hyaline apical appendages. Size of conidia is 30–35 × 7–10 µm with appendages 20–35 µm long.

During pathogenicity tests, mycelial

bits of the fungus were prepared from 7-d-old culture and sprayed on rice grain at different stages. The milk stage was found to be most susceptible to fungal infection (see table). □

Effect of grain spotting on rice quality

V.S. T. Murty, B.S. Chandrakar, A. K. Singh, and R. K. Misra, J. N. Agricultural University Campus, Bilaspur (M.P.), India

Grain spotting is caused by several microorganisms (*Trichoconis* spp., *Helminthosporium oryzae*, *Pyricularia oryzae*, *Aspergillus* spp., *Alternaria padwickii*, *Curvularia* spp., etc.).

Symptoms (distinct black dots, sometimes brown blackish blotches) vary with the degree of infection.

We sampled grain lots of 21 varieties and measured grain spotting incidence.

Twenty-five healthy and 25 infected seeds of each variety were selected at random, dehusked, and the husk and grain weighed.

Ten healthy and 10 infected seeds were dehusked and the grains placed in 15- × 1-cm test tubes with 10 ml water each tube. Grain volume was measured. The tubes were placed in a 500-ml beaker with 200 ml water, heated for 30

Loss to grain spotting, Bilaspur, India.

Variety	Infection (%)	Loss (g) in husk weight	Difference in 1000-grain weight (g)	Cooking expansion difference (ml)
Jaya	6.2	0.26	1.79	0.12
Ratna	7.3	0.18	3.27	0.12
Bd 200	3.4	0.11	2.01	0.00
R-35-2752	9.1	0.51	0.78	2.19
BPT1235	6.2	0.31	4.33	1.95
Surekha	4.6	0.21	1.80	0.48
RP9-4	5.4	0.12	2.84	0.24
Saket-4	5.8	0.30	3.62	1.09
IR36	10.3	0.30	0.26	0.73
Chatrri	10.4	0.53	0.07	1.09
Mahsuri	1.6	0.11	3.44	0.36
IET4094	5.2	0.28	5.96	1.09
R-2384	11.7	0.06	3.94	0.36
Phalguna	4.1	0.13	3.75	0.45
Pankaj	4.0	0.10	2.09	0.00
Kranti	6.9	0.17	0.20	0.61
Pusa	7.3	0.11	3.99	0.61
IET3273	11.5	0.39	0.65	0.36
Jagriti	4.7	0.27	1.70	0.24
Garima	4.5	0.12	1.86	0.36
Patel 85	4.8	0.21	2.73	0.73

min, and grain volume after cooking measured.

All varieties showed grain spotting (see table). Infected seeds weighed less

than healthy seeds. Infected husk also weighed less. Healthy grains expanded more than spotted grains with cooking. □

Distribution of rice seedling damping-off in Bangladesh

M. M. Rahman, A. H. Mondal, and S.A. Miah, Bangladesh Rice Research Institute (BRRI), Joydebpur, Dhaka, Bangladesh

Rice seedling damping-off caused by *Achlya* sp. was first identified in Bangladesh in 1978. The disease is soil borne and is disseminated through both soil and water. The pathogen affects seeds or young seedlings during the winter (Nov–Feb). The fungus forms a gray/ brown/ black-colored tangled mass of hyphae covering the surface of the infected seeds.

During 1978, severe seed or seedling damage occurred in the seedbed at the BRRI farm. Almost all rice varieties or

Severity of rice seedling damping-off in 11 districts of Bangladesh, winter, 1987.

District	Seedbeds affected (%)	Severity (0-9 scale ^a)
Bogra	30	5–7
Comilla	25	5–7
Chittagong	25	5–7
Dinajpur	40	5–7
Gazipur	30	5–9
Jamalpur	70	5–9
Mymensingh	30	5–7
Pabna	30	5–7
Rajshahi	40	3–5
Rangpur	60	3–9
Tangail	20	3–5

^a 0 = no incidence, 3 = 11–20% damage, 4 = 21–30% damage, 5 = 31–40% damage, 6 = 41–50% damage, 7 = 51–60% damage, 8 = 61–70% damage, and 9 = 81–100% damage.

lines sown were affected, with up to 80% seed or seedling mortality.

We surveyed the distribution and intensity of the disease in different districts during Jan 1987. The disease was prevalent in all 11 districts visited, with damage as high as 70% in seedbeds kept submerged during and after sowing (see table). □

Relationship between tungro transmission by individual *Nephotettix virescens*, mode of feeding, and life span

G. Dahal and H. Hibino, Plant Pathology Department, IRRI

A green leafhopper (GLH) *Nephotettix virescens* colony collected from