

Table 1. Leaf BI severity at different rice crop stages. Pathum Thani Rice Research Center, Thailand, 1986.

Observation	Disease severity (%)							
	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8
	<i>Wet season</i>							
45 DAS	0-0.05	1	2	3	5-8	10		
60 DAS	0-0.05	1	2	3	5	8-10	15-20	25-30
75 DAS	0-0.05	1	2-3	5	8-10	15	20	30
	<i>Dry season</i>							
45 DAS	0-0.05	1	2	3	5-8	10	15	
60 DAS	0-0.05	1	2	3	5-8	10	15	20-25
75 DAS	0-0.05	1	2	3	5-8	10	15	20-30

Table 2. Relationship between leaf BI severity and yield loss (\hat{y}), derived from pooled data of two seasons. Pathum Thani Rice Research Center, Thailand, 1986.

Predictor variable ^a	Regression function	F ^b	R ²
BLA 45 DAS	$\hat{y} = 31.18 + 18.54 \ln(x)$	121.2***	0.92
BLA 60 DAS	$\hat{y} = 9.38 + 2.99x$	116.3***	0.89
BLA 75 DAS	$\hat{y} = 0.06 + 3.08x$	355.1***	0.96

^aBLA 45 DAS = % leaf area infected at 45 days after sowing. ^b*** P < 0.001.

severity during the reproductive stage (75 DAS) was most closely related to yield loss. Based on the third function,

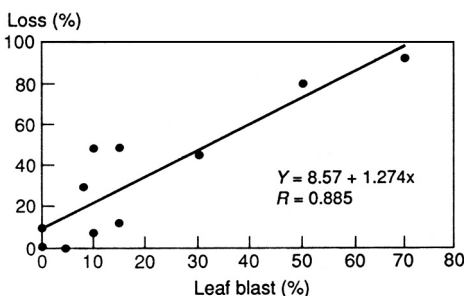
1% infected leaf area corresponds to 3% yield loss. □

Estimating yield loss to rice blast (BI) disease

A. Surin, P. Arunyanart, R. Dhitikiattipong, W. Rodjmahusdin, and S. Disthaporn, Rice Pathology Research Group, Plant Pathology and Microbiology Division, Bangkok, Thailand

Rice yield loss equivalents for leaf and neck BI found in earlier experiments had to be derived from multiple regression functions, because of mixed infection by several diseases. We conducted a field experiment to study the effect on yield of BI alone.

RD23 was direct sown 20 Aug 1986 at Pathum Thani Rice Research Center. A source of inoculum was provided near the experimental plot. Ten 0.5-m² plots were staked out in an area 800 m². Incidence and severity of rice BI was observed two times, at maximum tillering (60 d after sowing [DAS]) and 1 wk before harvest. Data were collected on percentage leaf area infected, number of tillers, number of panicles, number of



Linear regression between leaf BI percentage and percent yield loss at Pathum Thani Research Center, 1986 wet season.

panicles with neck BI, filled grain weight, and empty grain weight.

Sample plots showed 0-70% infected leaf area. Neck BI incidence was 11-35%. Leaf BI severity was not correlated with neck BI incidence ($r = 0.233$ ns).

Yield of the plot free of leaf or neck BI symptoms was used to calculate percentage yield loss in the other plots. Linear regression analysis resulted in a model to predict percentage yield loss from leaf BI severity (see figure). The regression accounts for 78% of the variability in yield loss. □

Reaction of four rice cultivars to grassy stunt virus (GSV) strain 2 under natural conditions

R. Devika, N. R. Bai, and C. A. Joseph, Rice Research Station, Kerala Agricultural University, Moncompu, India

During wet season 1988 (Jun-Jul to Oct-Nov), a severe outbreak of GSV in parts of Kuttanad, Kerala, caused severe damage to the rice crop. Serological tests at Directorate of Rice Research, Hyderabad, confirmed that the outbreak was caused by GSV strain 2. We evaluated MO 5, MO 6, KAU153-1, and KAU93 for resistance to this strain under three levels of fertilizer, in a split-plot design with three replications. Disease incidence was scored just before panicle initiation.

MO 5, MO 6, and KAU153-1 were moderately susceptible; KAU93 was susceptible (see table). □

Resistance of rice varieties to GSV strain 2. Kerala, India, 1988 wet season.

Cultivar	Parentage	GSV damage (0-9)
MO 5	IR11-1-66/Kochuvithu	5
MO 6	IR8/Karivennel	5
KAU153-1	IR1561/Ptb 33	4
KAU93	Jaya/Ptb 33	7

Control of blast (BI) in main field and nursery with some new fungicides

V. D. Naidu and G. V. Reddy, Andhra Pradesh Agricultural University, Agricultural Research Station, Nellore 524004, India

BI causes considerable yield losses in Nellore District under favorable weather conditions from Oct to Feb. We tested seven EC/WP and four granular fungicides to control leaf and neck BI in transplanted rice in wet seasons (Oct-Feb) 1985-86, using highly susceptible IR50.

Plots were laid out in a randomized block design with four replications.