

Sheath blight (ShB) damage to seven rices

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ShB caused by *Rhizoctonia solani* Kuhn [*Thanetophorus cucumeris* (Frank) Donk.] causes major yield losses on the Godavari Delta in Andhra Pradesh.

We evaluated seven rices (see table) for ShB resistance in 1982-83 rabi. Rice was planted at 15- × 15-cm spacing in 3.00- × 4.05-m plots in a split-plot design with 3 replications. All treatments received 120-30-30 kg NPK/ha. Plants in the disease treatment were inoculated at panicle initiation with ShB-infected leaf bits.

Yield losses caused by ShB in 1982-83 rabi in Maruteru, India.

Variety	Percentage disease index	Filled grains (%)		Grain yield (t/ha)		Yield loss (%)
		Healthy	Diseased	Healthy	Diseased	
BPT1235	65	92	80	5.1	4.2	18
IET1444	46	92	87	6.0	5.4	10
IR50	61	92	71	6.9	4.2	39
IR36	72	86	71	7.8	5.3	33
RP4-14	52	84	75	6.0	5.1	15
MTU6182	43	89	76	5.7	4.5	21
RGL 2624	72	91	74	6.0	4.2	30
Mean	49	89	76	6.2	4.7	24
CD	V 15		2.8			
(P: 0.05%) H × D			1.7	4.4		
CV %	14.2		3.3	11.9		

RGL 2624 had highest percentage disease index (PDI) (see table). ShB caused significant yield losses in all varieties. Yield loss was highest in IR50, followed by IR36 and RGL 2624. Yield loss was primarily due to a significant reduction in filled grains.

PDI was correlated positively with yield loss ($r = 0.5606$) and negatively with percentage of filled grains ($r = -0.5236$), which was negatively correlated with percentage yield loss ($r = -0.5148$). \mathcal{S}

Reaction of IRRI and Tamil Nadu rices to yellowing syndrome

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Scattered leaf yellowing was noticed in rice in the Tamil Nadu delta zone in 1984 kuruvai (Jun-Jul to Sep-Oct). All local varieties, including ADT31, ADT36, and TKM9, were affected, but recovered greenness within 10 d when sprayed with 3% diammonium phosphate. Yield did not seem to be affected. Leaf yellowing was more severe in thaladi (Sep-Oct to Jan-Feb) and samba (Jul-Aug to Jan-Feb). IR20 yielded nothing. Ponni, White Ponni, and Paiyur 1 survived but yielded low.

Leaf yellowing seems to be caused by a complex set of factors and therefore is called yellowing syndrome.

We evaluated 18 medium- and 2 short-duration IRRI varieties and 14 long- and 7 medium-duration Tamil Nadu varieties for field reaction to yellowing syndrome in Sep-Oct 1984. Leaf yellowing incidence was 100% in susceptible lines and check variety IR20. Varieties were scored as follows: 0 = highly resistant, 1 = resistant, 3 =

moderately resistant, 5 = moderately susceptible, 7 = susceptible, and 9 = highly susceptible (100% yellowing, drying, and severe stunting).

Medium-duration IR32, IR34, IK42, IR54, and IR56 and short-duration IR36 and IR50 were resistant (score 1-3). Medium-duration IR25, 1K38, IK44, and IR45, and short-duration IR36 and IR50 were moderately susceptible (score 5). Medium-duration IR5, IR8, IR20, IR24, IR26, IR40, IR43, IR46, and IR48 were highly susceptible.

Long-duration ADT1, ADT2, ADT5,

ADT10, and ADT13 and medium-duration White Ponni were highly resistant (score 1). Long-duration ADT22, ADT25, and CR1009 (Ponmani or Savithiri), and medium-duration Paiyur 1 and Pondicherry 1 scored 3. Long-duration ADT6, ADT8, and ADT24, and medium-duration ADT35 and Co 43 were moderately susceptible. Long-duration ADT7, ADT11, and ADT21 and medium-duration Co 36 were highly susceptible (7-9). Unreleased medium-duration AD9408 scored 3-5. \mathcal{S}

Screening for resistance to bacterial blight (BB)

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BB caused by *Xanthomonas campestris* pv. *oryzae* is a major rice disease in Haryana. We evaluated 280 lines for BB resistance at Haryana Agricultural University RRS in 1983-84 kharif.

Each line was planted in two 5-m-long rows in 2 replications. Plants were inoculated 45 d after transplanting by cutting 5 cm of the upper leaves with a sickle dipped in inoculum prepared by

soaking small pieces of naturally infected leaves in water for 20 min. The *Standard evaluation system for rice* was used to score reaction.

Entries with a resistance score of 1 were BAM-10, BG90-2, W1263, IR2055-481-24-2, RP632-94-1-2-1-7, RP633-C, CR129-18, RP2151-173-1, RP2151-40-1, RP2151-4-21-1, RP2151-33-4, RP2151-33-2, RP2151-21-1, CR319-644, RP1575-143-823-1, RP2151-173-1-8, RP2151-224-4, RP2151-200, RP2151-40-1, IET4141, UPR82-1-7, M.S.S., Wase Aikoku 3, Kogyoku, and DV85.

Entries with a resistance score of 3 were Lastroval, Sigadis, T-201902, IET4135, AC1613, B459-PN-4-5-6-1,