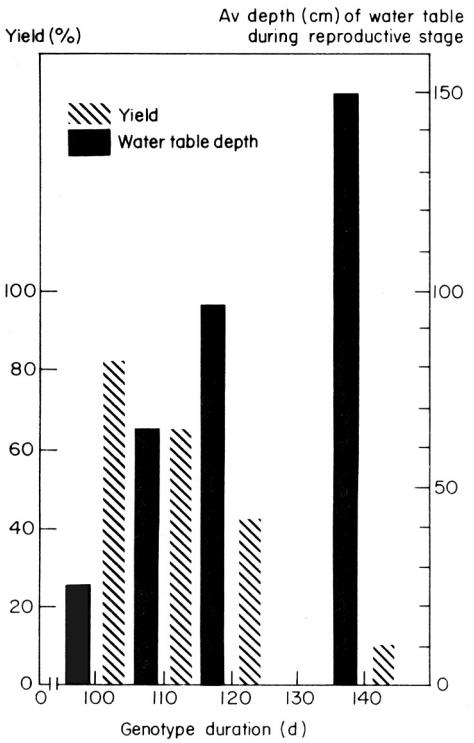

2. Effect of subsurface water level on rainfed rice, Raipur, India.

was less susceptible to drought than Mahsuri. It had less leaf rolling and high root density.

Figure 2 shows the role of subsurface water in rainfed culture. The groundwater level fell during the cropping season. Longer duration rices suffered more drought stress and yields declined. Subsoil moisture (30-80 cm deep) was particularly important to medium and late duration varieties in semiwet season (see table).

Effect of subsoil moisture on 6 rice genotypes, Raipur, India.

	Poorva	MW10	IR36	Usha	Safri 17	Mahsuri
			Grain yield [a] *(t/ha)*			
Wet	2.5	3.5	2.8	3.0	2.7	3.1
Semiwet	2.0	3.5	1.8	1.3	1.0	0.3
Mean	2.3	3.5	2.3	2.2	1.9	1.7
			Reduction (%) in yield			
	18	0	35	57	62	91
			Subsoil moisture contribution (%)			
	21	32	41	57	61	
[a] CD at 5%	Season 0.4		Genotypes 0.3		Interaction 0.4	

The International Rice Research Newsletter (IRRN) invites all scientists to contribute concise summaries of significant rice research for publication. Contributions should be limited to one or two pages and no more than two short tables, figures, or photographs Contributions are subject to editing and abridgment to meet space limitations. Authors will be identified by name, title, and research organization.

Genetic Evaluation and Utilization

DISEASE RESISTANCE

Scented rices with stem rot (SR) and bacterial blight (BB) resistance

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SR, caused by *Sclerotium oryzae,* and BB, caused by *Xanthomonas campestris* pv. *oryzae,* reduce rice yields in Haryana. We evaluated 68 scented rices for their reaction to these diseases at HAURRS in 1983-84 and 1984-85.

To screen for BB resistance, each entry was planted in 2-m rows at 20- × 15-cm spacing. Plants were clip-inoculated with a BB suspension 21 d after transplanting (DT) for kresek and 45 DT for leaf blight and rated for resistance using the *Standard evaluation system for rice.*

SR screening was in field and laboratory. In the laboratory, cut stem pieces were wound-inoculated with a small piece of agar-cultured *S. oryzae* Inoculated stems were kept standing in a test tube rack in a tray with 2.5 cm of water. They were covered with plastic bags to maintain high humidity and were incubated at 28-30°C. Lesion length was measured 10 d after inoculation. Entries with lesions less than 10 mm long were considered resistant; those with 10-30 mm lesions, moderately resistant; and those with lesions more than 30 mm long, susceptible.

HKR220 was resistant to SR in laboratory tests in both seasons. HKR216 and HKR219 were resistant in the field. Pak basmati and RPSC 136 were SK resistant in all tests. They are a good source of SR resistance for breeding purposes.

Pak basmati also was moderately resistant at the kresek phase of BB. RP2144-108-5-3-2 and NDR 601 also had moderate resistance to kresek. However, none of the materials were resistant to both BB phases.

Rice seedling resistance to brown spot (BS)

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We tested 15 rice varieties for seedling resistance to isolates of *Bipolaris oryzae* the BS fungus. In the greenhouse, 23-d-old seedlings were artificially inoculated with 3 isolates using a spore concentration of 3×10^4 spores/ml. Disease was measured on the 3d fully expanded leaf as lesion number per cm^2 and lesion size (mm^2), and percent diseased leaf area was calculated.