

Ranjini (MO 12): a high-yielding rice variety with blast and brown planthopper resistance

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Rice blast is one of the most serious diseases prevalent in Kuttanadu, the rice bowl of Kerala, a unique deltaic area, 0.5-2.0 m below MSL. Many popular high-yielding varieties of this locality lack blast resistance. A hybridization program was started at RRS, Moncompu, using locally accepted, high-yielding varieties, such as MO 5 and blast-resistant varieties such as Improved Sona. The breeding line KAU M 28-1-1 (IET13706) from the cross MO 5/Improved Sona performed well in yield trials and was released as Ranjini (MO 12) in 1966. It was for use in the three seasons of Kerala (virippu, April- May to August-September; mundakan, September-October to December-January; and punja, December-January to March- April).

It is a short-duration (115-120 days), dwarf (90-95 cm) variety with red kernel medium-bold grains, and resistant to blast and brown planthopper (BPH) *Nilaparvata lugens*. In yield trials, Ranjini consistently out-yielded local checks (Table 1). It also showed tolerance for gall midge, sheath blight, and sheath rot (Table 2).

Table 1. Yield performance of Ranjini. Kerala, India.

Trial	Grain yield (t/ ha)	
	Ranjini	Check ^a /
RRS, Moncompu (1990-92)		
(3 seasons)	4.5	3.1
Multilocation trials (MLT)		
(6 research stations, 1991)	3.2	2.7
MLT (cultivators' fields in		
five locations, 1992)	5.6	3.2
All India Coordinated Trials		
(IVT-IME, 1993)	4.5	4
Farm trials in five locations		
	4.7	3.8

^a/ Check variety was Asha at RRS, MLT, and farm trials; it was Retna for IVT-IME.

Table 2. Reaction of Ranjini to pests and diseases. RRS, Moncompu, Kerala, India. ^a/

Variety	Gall midge	BPH	Sheath blight	Sheath rot	Blast
Ranjini	1.2	1	1.6	2.3	0.8
MO 5 (Asha)	3.2	1.6	3	3.1	5

^a/ Scored by *Standard evaluation system for rice* (SES) on a scale of 0-9.

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