



Saroj, an early maturing rice released in Bihar, India

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Early maturing rice varieties are predominantly grown in favorable uplands in rice-tobacco and rice-maize sequences. Attitudes of farmers about varieties have subtly changed. Farmers now prefer higher quality grain varieties, mainly as a result of food sufficiency. However, the choice is limited. A new variety, Prabhat, released a few years back with

long slender grains, became popular. However, being an early duration variety (100 d), Prabhat's ripening stage occurs during the rainy period. To develop high-yielding varieties with 115–120-d duration that will mature after cessation of rains and with superior grain quality, several crosses involving Type 3, a pureline selection from crosses using traditional Basmati rice as

one of the parents, were made and their progenies evaluated in 1995–96. RAU1400-5-7-9-B-1, derived from Gautam/Type 3 with 115-d duration and long slender grain, was found to be superior and was subsequently evaluated in a multilocation trial. Its yield ranged from 4.2 to 4.5 t ha⁻¹ in a state varietal trial (Table 1) and from 2.9 to 6.0 t ha⁻¹, with an average of 3.9 t ha⁻¹ (Table 2), in the all-India coordinated trial conducted across the country. The average yield of national check Sasyasree was 4.3 t ha⁻¹. The test entry RAU1400-5-7-9-B-1, however, was 10 d earlier than the check and has long slender grain, similar to that of Type 3 (length [L] 7.15 mm, breadth [B] 1.73 mm,

Table 1. Yield (t ha⁻¹) performance of Saroj (RAU1400-5-7-9-B-1) and check variety Saket 4 at different research stations, 1998-2001.

Year	Location	RAU 1400-5-7-9-B-1	Saket 4	CD at 5%	CV (%)
1998-99	Pusa	4.2	4.0	0.17	15.9
	Jhanjharpur	5.1	4.0	0.15	16.8
1999-2000	Pusa	4.4	4.3	1.90	18.2
	Jhanjharpur	5.1	4.0	1.56	16.8
2000-01	Pusa	4.5	3.7	2.70	15.3
	Jhanjharpur	4.3	3.8	1.90	18.8
Pooled mean		4.6	4.0	–	–

Table 2. Yield (t ha⁻¹) and maturity (d) of Saroj and check variety Sasyasree at different locations in the all-India coordinated trial, 2000 wet season.

Location	RAU1400-5-7-9-B-1		Shasyashree		CD at 5%	CV (%)
	Yield	Maturity	Yield	Maturity		
Kaul	4.7	130	5.5	150	0.40	4.0
Patna	3.5	115	4.4	158	0.15	20.7
Jabalpur	4.1	113	3.8	127	0.09	13.3
GER	3.5	117	5.2	134	0.06	8.0
Karijat	3.1	107	2.4	125	0.11	19.4
Nawagam	3.2	115	4.4	132	0.04	6.2
Directorate of Rice Research	3.9	120	3.1	130	0.08	12.9
Maruteru	2.9	109	3.0	119	0.14	21.2
Coimbatore	3.3	116	3.7	114	0.04	7.2
Mandla	4.7	119	5.4	119	0.08	17.7
Pondicherry	4.0	119	5.4	119	0.08	17.7
Pooled mean		3.9	116	4.3	126	

Table 3. Performance of Saroj in on-farm trials, 1999-2000.

Year	District	Sites (no.)	Yield range (t ha ⁻¹)		Av yield (t ha ⁻¹)	
			Saroj	Check	Saroj	Check
1999	Samastipur	10	4.5–5.3	3.4–4.3	4.8	3.6
2000	Samastipur	12	3.8–6.5	3.1–4.2	4.3	3.4
1999	Muzaffarpur	5	3.8–5.1	2.9–3.8	4.4	3.1
2000	Muzaffarpur	9	3.6–5.3	2.7–4.0	3.9	2.9
1999	Darbhanga	8	3.9–5.6	3.5–4.1	4.1	3.7
2000	Darbhanga	7	4.0–5.1	3.7–4.3	4.2	3.9

and L/B 4.15), and is consequently superior to Sasyasree. It has been named Saroj.

The performance of Saroj in on-farm trials in different districts in different years was exceedingly good, recording a yield as high as 6.5 t ha⁻¹ at one location (Table 3).

This variety outyielded checks Saket 4 and Pusa 2-21 at all locations. This is the first early maturing, semidwarf variety with high yield potential and excellent grain quality for the upland. It is expected to be popular.