Prabhat, a very early-maturing rice variety released in Bihar, India

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Very early-maturing rice varieties are needed before and after floods in northern Bihar, in the wet season, and for the irrigated summer crop harvested before the monsoon. These varieties are also suitable for upland conditions when rain is inadequate.

We began work in the early 1980s to breed suitable varieties after receiving some materials from IRRI. SBR34-69-1 (IR9201-30-1-3-1-3, derived from IR3033-521-1/IR2061-464-2//IR36) matched the desired duration. It was included in state varietal trials in summer and then in the wet season. It was marginally superior in yield to checks Pusa 2-21 and Pusa 33 across 11 environments in the summer (Table 1), though it matured nearly 2 wk earlier. It yielded significantly more than Sattari or Heera (75-80 d duration) during 1989-93 wet seasons.

SBR34-69-1 has droopy lower leaves, making a canopy over the ground that suppresses weed growth (Table 2).

SBR34-69-1 has been named Prabhat. It is semidwarf, matures in 85 d in wet season, and is resistant to bacterial blight. Its grains are long-bold. ■

Table 1. Yield performance of SBR34-69-1 at different sites in Bihar, India. 1984-93.

Year	Site	Yield (t/ha)			LSD (5%)	CV (%)
		SBR34-69-1	Check[a]			
		Summer				
1984	Patna	1.4	1.6		0.09	13.0
	Pusa	1.8	1.6		0.61	19.5
	Sabour	2.7	2.2		0.50	15.7
1988	Patna	5.0	4.0		0.71	17.5
	Pusa	2.5	2.2		0.43	19.2
1989	Patna	1.3	1.5		0.96	20.0
	Pusa	1.7	2.5		0.58	12.1
	Sabour	2.6	2.1		1.18	26.4
1990	Sabour	2.1	1.2		0.60	14.2
1991	Sabour	2.1	1.2		0.63	14.6
1992	Sabour	2.7	2.2		0.60	14.5
Pooled mean		2.3	1.8			
		Wet season				
1989	Pusa	3.4	2.7		0.88	21.9
	Sabour	2.5	1.9		0.43	11.7
	Dhangain	3.7	2.7		0.72	7.2
1990	Pusa	2.5	1.2		0.88	12.9
	Sabour	2.6	1.4		1.04	19.7
1991	Pusa	2.5	1.1		0.24	13.1
	Dhangain	4.1	2.2		0.78	15.4
1992	Pusa	2.4	1.8	0.9	0.42	10.4
	Sabour	2.0	1.2		1.08	11.1
	Dhangain	3.3	2.5	0.6	0.56	12.6
1993	Pusa	4.0	1.8	2.3	0.61	15.5
	Patna	3.8	2.3	0.5	ns[b]	
	Sabour	1.6	1.1	0.5	0.85	16.8
	Bikramganj	5.0	4.3	1.7	1.39	17.1
Pooled mean		3.1	2.1	1.7		

[a]Pusa 2-21 or Pusa 33 for summer. Sattari (1st column) or Heera (2nd column) for wet season. [b]ns = not significant.

Table 2. Weed-suppressing ability of SBR34-69-1 in variety × weed interaction trial at Sabour, India. 1994.

Culture	Weed dry weight (g/m2)	
	Set I (July)	Set II (August)
SBR34-69-1	4.6	8.7
SBR36-70-1	9.5	32.0
ES29-3-3	13.9	21.2
ES21-2-3	13.2	18.5
ES28-3-1	12.2	19.2
ES1-1-2	12.1	15.7
CV (%)	20.1	17.0
LSD(5%)	4.7	3.3

Zhefu No. 7, a mutant indica rice variety of short duration for central and eastern China

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Short-duration varieties are preferred for use in the early season (Apr-Jul) in the double-cropped area of central and eastern China. From 1986 to 1991, about 1.2-1.3 million ha of this area were planted each year to the leading short-duration variety, Zhefu 802. Zhefu No. 7 was released in July 1994 as an alternative to Zhefu 802. Both have similar yield potential and growth duration, but Zhefu No. 7 has superior grain quality and blast resistance. Zhefu No. 7 was bred by mutation induction in which seeds of medium-duration variety Erjiufong were exposed to a 30,000 rad dose of ^{60}Co gamma rays. Erjiufong, once a popular variety, was highly susceptible to cold and low K content in the soil, which restricted its cultivation. Zhefu No. 7, however, has a 4-5 d shorter growth duration and superior tolerance for cold and low K compared with Erjiufong, making it more adaptive to double-cropped areas. Some differences in morphoagronomic characters exist between Zhefu No. 7 and Erjiufong (Table 1).

Table 1. Yield and morphoagronomic characters of Zhefu No. 7 and its parent Erjiufong at Yuhang, Zhejiang Province, China. 1990.

Variety	Yield (t/ha)	Plant height (cm)	Panicle length (cm)	Grains/ panicle (no.)	Spikelet fertility (%)	1,000-grain weight (g)
Zhefu No. 7	5.7	77.0	19.5	93.7	88.5	22.3
Erjiufong	5.6	80.8	20.2	103.6	88.0	22.2