

Only 43 cultures (26 fine and 17 coarse) at Jalalabad and 21 cultures (11 fine and 10 coarse) at Baghlan matured normally. Others did not ear at all or were very late and recorded very high sterility.

IRRI fine-grain cultures yielded 4% to 395% more at Jalalabad and from 2.4% to 112.3% more at Baghlan. The three highest-yielding cultures at Jalalabad were IR1628-632-1, IR1529-680-3-2, and IR1721-11-6-8-3-2 (Table 1). At Baghlan they were IR1561-228-3-3, IR1561-238-2, and IR1561-152-1. IR1561-228-3-3 and IR1561-238-2 yielded an average of more than 6 t/ha at both sites. Promising fine-grained cultures are being evaluated for qualities similar to those of local varieties.

IRRI coarse-grained cultures yielded from 47.28% to 163.5% more at Jalalabad and from 15.14% to 63.6% more at Baghlan (Table 2). Three cultures, IR747B₂-4-2-1-1, IR934-10-1-2-2, and

Table 2. Performance of the best coarse-grained IRRI cultures in varietal trials at Jalalabad and Baghlan, Afghanistan.

Culture	Yield (t/ha)	Increase	
		t/ha	%
<i>Jalalabad</i>			
IR747 B ₂ -4-2-1-1	6.2	2.3	59.4
Local variety	3.9		
IR934-10-1-2-2	8.4	4.4	107.4
Local variety	4.0		
IR934-239-1-3-2	8.4	5.2	163.5
Local variety	3.2		
<i>Baghlan</i>			
IR747 B ₂ -4-2-1-1	7.2	2.8	63.6
Local variety	4.4		
IR934-10-1-2-2	6.8	2.2	48.1
Local variety	4.6		
IR934-239-1-3-2	6.1	1.5	34.0
Local variety	4.6		

IR934-239-1-3-2, yielded an average of more than 6 t/ha at both sites. Promising coarse-grained varieties are being tested in demonstration plots in farmers' fields. ■

Low input variety BIET1107 for rainfed lowland areas of Bihar, India

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The average fertilizer consumption of a rice crop in Bihar is high — about 4 kg N/ha. A number of factors, including the economic condition of the farmers, are responsible.

Table 1. Average yield of BIET1107 under low input irrigated conditions at 5 sites in Bihar, India, 1976-80.

Entry	Av yield (t/ha)				
	Patna	Bikram ganj	Sabour	Pusa	K anke
BIET1107	4.7	4.2	4.0	2.4	2.5
BR34	3.2	2.8	3.4	2.2	2.3
Mahsuri	4.5	3.5	4.2	2.1	2.7
BR8	3.2	2.6	3.3	2.6	2.5

Table 2. Grain quality characters of BIET1107 and check varieties in Bihar, India.

Entry	Grain length (mm)	Length-breadth ratio	Hulling (%)	Head rice recovery (%)	Protein (%)	Cooking quality
BIET1107	5.1	2.6	73.4	63.3	7.0	Good
BR34	6.0	2.9	72.4	59.2	9.1	Good
Mahsuri	5.3	2.7	74.5	65.2	8.7	Good
BR8	6.8	3.0	71.2	58.2	7.2	Good

Agronomic characteristics

Angle of leaf attachment in rice varieties

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The angle a rice leaf blade makes at its base (collar) is influenced largely by leaf length. The wider the angle, the more the spread of leaves for light interception, especially in the lower leaves. This defect has largely been corrected in semidwarf lines where leaves are shorter than in tall varieties and form closer angles at the base. But overlapping still occurs in the lower leaves. In the ideal plant type, interception of light would be low. One way to achieve this is to develop rice plant types with minimum leaf attachment angles.

Lalnakanda is a tall variety with long leaves and acute leaf attachment angles. A study compared some selected tall (BR34, BR8, BR9) and semidwarf (Jaya, Sita, Pusa 2-21, RD1, and IR8) varieties and Lalnakanda. Varieties were grown at 20- × 20-cm spacing with 80-40-20 kg NPK/ha. Four leaves were

t/ha of BR34, 2.2 t/ha of Mahsuri, and 1.8 t/ha of BR8. BIET1107 is also recommended as a substitute for varieties such as BR8, BR34, and Mahsuri in rainfed areas of medium lowlands. Beginning in 1978, BIET1107 showed its superiority over existing varieties in more than 815 minikit demonstrations in farmers' fields.

BIET1107 has intermediate height (135 cm) and good tillering ability. Its resistance to bacterial blight is moderate but better than that of Mahsuri. Grains are medium slender with quality comparable to Mahsuri's (Table 2), making BIET1107 acceptable to farmers and consumers. ■