

SCREENING OF BLACK GRAM CULTIVARS AGAINST POWDERY MILDEW
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Powdery mildew caused by *Erysiphe polygoni* DC is an important disease of black gram [*Vigna mungo* (L.) Hepper] causing considerable loss to the crop. During the year 1980-81 a severe outbreak of this disease was observed in many fields around Kalyani. Varietal differences in black gram has been demonstrated by Vidyasekaran and Arjunan (1976) and Sivaprakasham *et al.* (1976) in Tamilnadu. The present investigation was undertaken to screen several cultivars against the disease under natural conditions at Kalyani.

Forty cultivars obtained from Pulse and Oilseed Research Station, Government of West Bengal, Berhampore (Murshidabad) through Dr. P. K. Das, Reader, Department of Genetics and Plant Breeding, Bidhan Chandra Krishi Viswa Vidyalaya were sown in the last week of December, 1980. Each cultivar was sown in 5m x 1m plots in randomised block design spacing between line to line being 30 cm. Three replications were maintained. The occurrence of the disease was severe in the late January on three week old plants and onwards. The disease rating was made according to the following scale based on the leaf area affected :

- 0=Immune ; no powdery appearance (0%)
- 1=Highly resistant, obscure powdery appearance (1% to below 10%)
- 2=Resistant (10% to below 20%)
- 3=Moderately resistant (20% to below 40%)
- 4=Moderately susceptible (40% to 60%)
- 5=Susceptible (60% to below 90%)
- 6=Highly susceptible (90% to 100%)

The results presented in Table 1 showed that none of the cultivars showed high degree of resistance. Moderate resistance was exhibited by five cultivars—T 16, TL-25, LU 487, Ph 63 and LU 525 only. Eleven cultivars—B 76, NP 7, IC-10-70-3, BR-68, Krishnanagar-3, LU-275, B 102, T 56, BR 61, NO 48 and Sel-18 were moderately susceptible. Five cultivars—LU 288, KC 148, Khural local, Balurghat local and No. 41 were highly susceptible.

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Table 1. Sensitivity of cultivars of black gram to powdery mildew under field condition (average of three replicates)

Infection Scale	Range of disease Intensity (%)	Cultivars
6 (Highly susceptible)	90-100	LU 288, KC 148, Khural local, Balurghat local, No 41.
5 (Susceptible)	60- 90	Mash 1-1, KC 162, Khargone, LU 292, Nepal 1, Nepal 3, LU 272, Ph-6, LU 241, 353/4, KC 16, Nepal 2, KC 91, Cholamil local, Midnapore, LU 236, T 9, KC 158, L 24,
4 (Moderately susceptible)	40- 60	B 76, NP 7, IC-10-70-3, BR 68, Krishnagar 3, LU-275, B 102, T 56, BR 61, NO 48, Sel 18
3 (Moderately resistant)	20- 40	T 16, TL 25, LU 487, Ph 63, LU 525,
2 (Resistant)	10- 20	—
1 (Highly resistant)	1- 10	—
0 (Immune)	0- 1	—

The authors are grateful to Dr. K. Sengupta, Joint Director of Agriculture (Pulse and Oilseed), Government of West Bengal for supplying the cultivars.

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