

IIHR 61-B, A HIGH YIELDING VEGETABLE TYPE OF COWPEA

Cowpea is the most popular pulse cum vegetable. The cultivation of vegetable cowpea is mostly confined to the homesteads and its commercial cultivation is restricted to summer rice fallows. At present, high yielding vegetable type cowpea varieties are not available. The present study was conducted at RARS, Pattambi during summer seasons from 1983 to 1987 with the aim of identifying a high yielding vegetable type cowpea for cultivation in summer rice fallows.

Thirty three long podded type of cowpea from the germplasm at RARS, Pattambi were evaluated for yield and ancillary characters during summer 1984 in rice fallows. Twelve varieties based on higher green pod yield were selected from this and a preliminary yield trial was conducted during summer 1985. Seven varieties with pod length above 20 cm were selected for preliminary yield trial for 1985 and 1987. The experiment was laid out in randomised block design with three replications. The varieties tested were IIHR 61-B, 5269, Pusa Barsathy, Mayyanad Local, Kolencherry 13, Kongad and Manjeri Black. The trials were conducted adopting cultivation practices as per the package of practices recommendations of the Kerala Agricultural University (Anon., 1983). Observations were recorded on number of days for 50% flowering, length of the pods, number of grains per pod and green pod yield.

The number of days required for 50% flowering was only 41 days in IIHR 61-B. This was significantly superior to all other varieties even at 1% level (Table 1). The pod length was also satisfactory

coming under long podded group with an average of 23.9 cm which was on par with the national check Pusa Barsathy. Eventhough, the number of grains per pod was lower (10.7) in IIHR 61-B, the highly fleshy nature of pod makes it suitable for vegetable purpose. The mean green pod yield recorded in IIHR 61-B was very high (15.8 t/ha) which was significantly far superior to all other varieties. The superiority in the high yielding nature is more pronounced from the fact that it is significantly superior to the national check which itself is significantly superior to all other varieties statistically (Table 2). The early flowering character, the long podded fleshy nature of the pods and the very high yielding nature of the variety IIHR 61-B make it ideal for recommendation for cultivation in summer rice fallows.

To test the performance of the variety IIHR 61-B at different locations and to compare the green pod yield of IIHR 61-B with that of PTB-1 (Kanakamony) the popular dual purpose cowpea in Kerala, three separate trials were conducted at the Kelappaji College of Agricultural Engineering & Technology Farm, Tavanur in Malappuram District, a farmers field at Ozhhalapathy, a dry farming area in Palakkad District and at the Regional Agricultural Research Station, Pattambi during 1988-89. The yield data are presented in Table 3. It was found that IIHR 61-B was the high yielder in all the centres. The results of the farm trial also confirmed the high yielding nature of the variety.

The seeds of the variety IIHR 61-B were received from the Indian Institute of Horticultural Research, Bangalore.

Table 1. Performance of cowpea varieties during summer season

Varieties	50% flowering (days)				Pod length (cm)				Grains/pod			
	1985	1986	1987	Mean	1985	1986	1987	Mean	1985	1986	1987	Mean
IIHR 61-B	42	42	40	41	25.0	23.1	23.6	23.9	8.4	13.1	10.5	10.7
5269	49	49	48	49	23.0	25.6	25.3	24.6	15.0	16.1	15.5	15.5
Pusa Barsathy	45	45	48	46	24.9	22.1	22.1	23.0	14.0	12.6	12.7	13.1
Mayyanad Local	44	44	80	46	23.1	19.7	20.8	21.2	15.0	12.7	11.4	13.0
Kolenchery 13	46	46	46	46	23.1	19.9	18.4	20.5	14.6	12.7	11.0	12.8
Kongad	49	49	52	50	28.4	24.6	26.7	26.6	16.3	17.1	14.9	16.1
Manjeri Black	49	49	50	49	33.7	22.9	25.2	27.3	13.9	15.0	15.3	14.7
CD (0.05)			2.8				3.9				2.2	
CD (0.01)			3.9				5.4				3.6	

Table 2. Green pod yield (t/ha) of cowpea varieties during summer

Varieties	1985	1986	1987	Mean
IIHR 61-B	11.8	15.6	20.0	15.8
5269	6.6	13.4	10.1	10.0
Pusa Barsathy	9.0	14.9	14.1	12.7
Mayyanad Local	7.0	8.9	10.6	8.9
Kolenchery 13	5.8	10.4	8.8	8.3
Kongad	5.9	9.3	10.3	8.5
Manjeri black	7.5	10.5	10.5	9.5
CD (0.05)	1.1	3.8	2.2	2.6

Table 3. Comparative yield trial of IIHR 61-B with PTB-1

Locations	Green pod yield (t/ha)	
	IIHR 61-B	PTB-1
KCAET Farm, Tavanur	16.0	6.0
Ozhalapathy	5.1	2.2
RARS, Pattambi	7.6	5.1

The plant is bushy, showing trailing tendency during kharif. The average height of the plant ranges from 60-70 cm. The leaves are trifoliolate with ovate leaflets. Flower colour is violet. The average number of days required for 50% flowering ranges from 40 to 42 days. The pod length is about 20 to 25 cm with 10 to 12 grains/pod. A single pod weighs about 20 to 25 g. The 100 seed weight of the variety ranges from 9-12 g. The seed colour is light brown with dark brown lengthwise linear markings. The variety IIHR 61-B is a high yielding vegetable type cowpea. Further evaluation on multilocation basis is required before large scale adoption.

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