

Varietal Evaluation of French Bean (*Phaseolus vulgaris* L.) at Mid-hills of Arunachal Pradesh

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Introduction

French bean synonyms common bean, bush bean, kidney bean, snap bean, haricot bean and navy bean (*Phaseolus vulgaris* L.) commonly known as rajmash in India, is an important legume. Its dry seed contains 21.1 per cent protein, 69.9 per cent carbohydrates, 1.7 per cent fat, 381 mg calcium, 425 mg phosphorous and 12.4 mg iron per 100 g of edible part (Ali and Kushwaha 1987).

Gupta et al (1996) observed that french bean responded upto 120 kg N/ha and there were 57.2% increase in yield over control. The hilly areas of Bangladesh, where the soil is light in texture and comparatively low temperature prevails during the winter season with less rainfall has been found suitable for french bean cultivation (Mozumdar et al. 2003). French bean is gaining popularity in the north eastern states, particularly as a vegetable crop. The present experiment was taken to identify suitable location specific variety.

The experiment was conducted at research farm of the ICAR Research Complex for NEH Region, Arunachal Pradesh centre, Basar during *Kharif* seasons of 2004 and 2005. The experiment comprised of six french bean varieties (Selection-9, Pusa Himlata, Contender, Kentucky Wonder, Anupam and Pusa Parvati) tested in randomized block design with four replications. The pod yields were recorded at different harvesting time for vegetable purpose as and when found suitable and finally the data of different harvests were added up to get the total yield. For pod characteristics randomly ten pods were taken from each plot and the mean was calculated. The crop was grown following standard package of practices cultivation studied from the data recorded on the inputs requirement, average production and their prevailing market prices.

Results and discussions

The pod length was highest (16.35 cm) in the vari-

ety selection-9, which was at par with Contender (15.86 cm). Mean pod circumference was highest in the variety Anupam (0.88 cm) which was at par with Contender (0.87 cm), Pusa Parvati (0.81 cm) and Selection-9 (0.79 cm). The days to first harvest varied from 50 days in case of variety Selection-9 to 59 days in case of variety Kentucky Wonder. Highest mean pod yield of 747.92 g/m² was observed in the variety Contender, whereas the variety Kentucky Wonder produced the lowest pod yield of 96.77 g/m². The number of pod/m² was also highest (111.97) in the variety Contender and lowest in the variety Kentucky Wonder (16.35/m²). The number of seeds/pod was highest (7.77) in Kentucky Wonder, which was significantly superior over all other varieties studied (Table 1).

References

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Table 1: Performance of french bean varieties at Arunachal Pradesh

Variety	Days to first harvest	Mean pod yield g/m ²	No. of Pod/m ²	No. of seeds/pod	Mean pod length (cm)	Mean pod circumference (cm)
Selection-9	50	489.00	90.33	6.15	16.35	0.79
Pusa Himlata	52	302.08	57.60	6.13	11.68	0.73
Contender	53	747.92	111.97	5.58	15.86	0.87
Kentuky Wonder	59	96.77	16.35	7.77	14.97	0.68
Anupam	53	377.50	77.33	6.60	13.54	0.88
Pusa Parvati	52	461.58	98.53	5.58	14.24	0.81
SEm±	-	85.69	10.94	0.22	0.47	0.05
CD (0.05)	-	270.21	34.49	0.66	1.40	0.15
CV (%)	-	25.98	25.14	6.95	6.45	4.09