

INFLUENCE OF TIME OF SOWING, YIELD AND QUALITY OF SEED IN
CLUSTER BEANS (*Cyamopsis tetrasonaloba* (L.) Tanb) var.
Pusanavbhagar

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The monthly sowing experiment conducted at Agricultural Research Station, Bhavanisagar with cv. Pusa navbhagar Cluster bean taking periodical sowings from the month of February 1986 to January 1987 closely indicated that the optimum time of sowing for maximum yield of quality seed was during the month of July. The findings were supported by the significant increase in number of pods/cluster, No. of seeds/pod, more recovery of large size seeds/seed yield and quality.

Guar, a major kharif legume of dry areas covers more area in and around Tamil Nadu. Of late it has assumed great importance as a cash crop because of its extensive use as cattle feed and guar gum industries. Information on seed technological aspects of this crop is very scanty and hence studies were taken up to standardise seed production technology in this crop.

MATERIALS AND METHODS

Monthly sowing experiment was laid out with cluster bean cultivars (Pusa navbhagar) from February 1986 to January 1987 for 12 months in three replicates at Agricultural Research Station, Bhavanisagar. The recommended spacing and other cultural practices were adopted. Observations like 50% flowering, No. of pods/cluster, No. of seeds per pod, pod and seed yield, percentage of seed recovery, germination and vigour were recorded and all data were statistically analysed following completely randomised design.

RESULTS AND DISCUSSION

Flowering was earlier in crops sown in the month of February-March-May-June-July and August than other months. Number of pods per cluster was significantly more in July sowing crop followed by August than the other months of sowing. Kanwar Singh, *et al.* (1979) reported similar results. Regarding number of seeds per pod, crop sown from the month of July to October recorded significantly higher value than the rest of the sowings. Pod and seed yield were significantly higher in crops sown in the month of June and July followed by August than the rest of the sowings. Kanwar Singh *et al.* (1979) and Sharma *et al.* (1979) also recorded higher pod and seed yield in crops sown in the month of July. The percentage of shelling was also found significantly more (58.5 per cent) in the July sown crop followed by May sown than the rest of sowings.

The very important contributing factor for higher seed yield in July

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Table : 1. 50 percent flowering and yield parameters

Months of sowing	Days to 50% flowering	No. of pods per cluster	No. of seeds per pod	Pod yield per ha (kg)	Seed yield per ha (kg)	Shelling per centage	Percentage recovery		
							9/64" R	11/64" R	
February'86	32.3	16.20	10.8	1710	756	55.3	33.67	56.61	10.32
March	32.5	16.33	11.0	1720	774	55.0	34.01	57.11	8.88
April	32.6	16.60	10.67	1740	780	55.17	33.90	50.05	16.05
May	33.0	15.60	9.5	1710	720	57.6	29.29	55.55	15.15
June	32.5	16.30	10.8	1920	860	55.21	37.11	39.72	23.17
July	32.5	18.50	11.8	2012	912	58.47	41.44	41.89	16.67
August	31.8	17.50	11.0	1790	826	56.85	38.14	51.57	10.29
September	32.0	16.00	11.2	1760	792	55.0	31.76	51.46	20.76
October	31.8	16.87	10.8	1740	788	54.71	29.06	68.14	10.44
November	30.5	15.50	11.0	1750	796	54.5	30.19	51.67	22.14
December	31.3	15.86	9.50	1640	672	57.02	33.33	50.25	16.41
January'87	32.0	15.67	10.50	1680	680	57.2	33.54	50.72	21.63
SED	1.93	0.31	0.53	17.3	11.25	0.54	1.82	1.93	1.77
CD	1.02**	0.62**	1.04**	34.2**	22.2	1.06**	1.2**	3.88**	3.55**

Table : 2 Seed germination and vigour parameters :

Month of sowing	Seed germination percentage	Drymatter production (cm)	Vigour Index value	Seedling length (cm)	
				Root	Shoot
February'86	92.5	0.278	26.487	11.21	14.95
March	92.8	0.278	26.548	11.39	15.50
April	94.8	0.280	27.664	11.46	14.96
May	92.2	0.270	24.894	10.26	13.46
June	95.5	0.294	28.777	11.64	14.47
July	97.8	0.298	29.864	11.87	15.32
August	95.0	0.293	28.635	11.78	15.04
September	95.4	0.285	27.649	10.84	14.28
October	94.9	0.286	27.765	11.71	15.18
November	95.1	0.283	25.460	10.58	14.16
December	92.5	0.269	26.398	10.95	14.00
January'87	92.8	0.275	26.246	11.18	14.65
SEM±	0.55	0.002	1.12	0.71	0.86
CD	1.88**	0.004**	2.203**	1.40**	1.70**

sowing crop was the percentage recovery of large size seeds to an extent of 41.4 percent than other sowings. The percentage of immature and ill filled were found significantly more in June-September-November and January sown crop than the rest of the sowings. The seed quality evaluation revealed that the initial viability and vigour in the form of percentage germination, root and shoot length, dry matter production and vigour index values were significantly higher in seeds obtained from the crop sown in July. Based on the above results it is clearly evident that the month of July is the ideal time for

taking cluster bean sowings in this tract to harvest maximum yield of quality seeds.

REFERENCES

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