

A Study on the Method of Sowing of Rice Fallow Blackgram (*Vigna mungo* (L) Hepper.)

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A field study on the methods of sowing of rice fallow blackgram showed that dibbling the seeds in lines immediately after harvest of rice gave 16 per cent increased grain yield over broadcasting the seeds in rice stubbles without any land preparation. Alachlor at 1.0 kg ai/ha was not effective in controlling the weeds.

Blackgram is widely grown in rice fallows in cauvery delta of Tamil Nadu. But showing the crop and obtaining a good plant stand have been the main problems for the farmers. Subramanian (1978) reported that blackgram dibbled immediately after the harvest of rice in the stubbles recorded higher yield. This study was taken up to find out the relative advantage of different methods of sowing rice fallow blackgram.

MATERIAL AND METHODS

A field experiment was conducted at the Tamil Nadu Agricultural University in summer and *Kharif* seasons of 1978, in a split plot design replicated four times. Two methods of sowing viz., broadcasting the seeds in rice stubbles and dibbling the seeds in lines after the harvest of rice and two levels of alachlor were allotted to main plots. Five levels of foliar spray of 3 per cent diammonium phosphate were taken in the sub-plots.

A harvested Paddy field, previously spaced 20 × 10 cm, was taken up for this study. The experiment was carried out immediately after the harvest of rice. Dibbling of seed was done with a spacing of 20 cm between rows and 10 cm between plants. Broadcasting was done with the same quantity of seeds by weight as used for dibbling. To test the efficacy of alachlor at 1.0 kg ai/ha for weed control, it was sprayed as pre-emergence application in the harvested Paddy field, the day after dibbling blackgram. A control plot without herbicide was maintained for comparison.

RESULTS AND DISCUSSION

There was significant difference in plant population between the two methods of sowing with dibbling germination was 99 per cent and 96 per cent in summer and *Kharif* seasons, respectively, while in broadcasting, only 85 and 86 per cent germination was seen in summer and *Kharif* seasons respectively.

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TABLE. Response of CO 4, Blackgram to method of Planting and pre-emergence application of alachlor under rice fallow conditions.

	Methods of Planting				Alachlor (kg ai/ha)			
	Broad-casting	Dibbling.	SE	C (p = 0.05)	O	I	SE	CD (p = 0.05)
Summer — 1978								
Plant population (percentage to 20 × 10 spacing)	85	99	3.5	11	93	92	3.5	N. S.
Number of pods per plant	17.43	17.90	0.26	N. S.	17.54	17.79	0.26	N. S.
Plant height (cm)	26.9	28.3	0.42	1.34	27.5	27.7	0.42	N. S.
Drymatter (kg/ha) production	3256	3970	51.7	165	3491	3556	51.7	N. S.
Grain yield (kg/ha)	987	1147	25	81	1059	1074	25	N. S.
Kharif 1978								
Plant population	86	96	2.4	7.0	91	91	2.4	N. S.
Number of pods per plant	10.69	11.33	0.27	N. S.	10.98	11.04	0.27	N. S.
Plant height (cm)	20.0	20.5	0.24	N. S.	20.3	20.2	0.24	N. S.
Drymatter (Kg/ha)	1962	2050	26.3	84	2002	2010	26.3	N. S.
Grain yield (Kg/ha)	496	516	14	N. S.	505	507	14	N. S.

Alachlor application has no effect on the population of blackgram. Number of pods per plant was affected neither by methods of sowing nor by alachlor application while plant height was slightly increased by dibbling the seeds in stubbles in summer.

Dibbling the seed was better in both the seasons. Due to higher plant density obtained in dibbling a seed yield of 1147 and 516 kg/ha was recorded in the summer and Kharif seasons respectively, while in broadcasting the yield was only 987 and 496 kg/ha. Grain yield with dibbling was 16 and 14 per cent higher than with broadcasting in the summer and Kharif seasons

respectively. Dibbling the seeds in line gave a net return of Rs. 3,394/ha compared to Rs. 2797/ha obtained with broadcasting the seeds immediately after the harvest of rice. There was not much variation in the income due to herbicide treatment. The possible reasons for increased grain yield in dibbling was uniform germination and even stand of crop with higher number of population. Ojehomon and Bamiduro (1971) found that the increase in plant density resulted in higher yield of blackgram. Alachlor had no effect on grain yield of blackgram, since at the dose tried its efficacy for weed control was not good.

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