

RELATIONSHIP WITH LEVEL OF KNOWLEDGE ABOUT MUNGBEAN PRODUCTION TECHNOLOGY AND PROFILE OF FLD AND NON-FLD FARMERS

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ABSTRACT

Mungbean (Vigna radiata L.) belongs to the family leguminaceae and sub-family papilionaceae. Banaskantha district has larger mungbean crop grown area. The lack of transfer of technology from research system to the client system is the main problem in increasing agricultural production in the developing world. The present rate of agricultural production can be doubled if; the available mungbean production technologies are brought to bear with production process and programme. Keeping this fact in view, the Government of India launched front line demonstration programmes for increasing crops production. It has played significant role in increasing the knowledge and adoption of recommended mungbean production technologies by the mungbean growers. So considering this, a study was conducted to know the relationship between level of knowledge about mungbean production technology and profile of FLD famers and non-farmers. The study was conducted in Danta taluka of Banaskantha district because a greater number of FLDs on mungbean crop were conducted in this taluka by KVK, Deesa. The study reveal that education, land holding, social participation, extension participation, sources of information, irrigation potentiality and cropping intensity of FLD respondents had positive and significant correlation with the level of knowledge about mungbean production technologies. While education, land holding, extension participation, irrigation potentiality and cropping intensity of non-FLD respondents had positive and significant correlation with the level of knowledge of farmers about mungbean production technology.

Keywords: knowledge, mungbean production technology, FLD and non-FLD farmers

INTRODUCTION

Pulses are very important for Indian agriculture in terms of enriching soil health, promoting long term sustainability to the cropping systems and providing nutritional security of country's ever growing population. Pulses are water saving crops and more than 92 per cent of the area under pulses is rainfed. Mungbean is protein rich staple food. It contains about 25 per cent protein which is almost three times that of cereals. In vegetarian diet in addition to fat (1.30 per cent), minerals (3.50 per cent) and carbohydrates (56.70 per cent), besides it provides vitamin 'A,' riboflavin and essential amino acids. It is easily digestible and in absences of milk, it is considered as excellent food. The total production of pulses in the India was 245.06 lakh tonnes from the area of 293.62 lakh hectares and productivity 841 kg/ha. The mungbean production was 20.1 lakh tonnes from the area of 42.6 lakh ha and productivity 472 kg/ha in the year 2017-18. In Gujarat, the total pulses production was 9.03 lakh tonnes from the area of 9.03 lakh hectares. The mungbean production among pulses was 0.88 lakh tonnes

from the area of 1.53 lakh hectares and productivity 435 kg/ha in Gujarat in the year 2017-18. In Banaskantha district, the mungbean crop is grown in a large area. The area and production of mungbean crop in Banaskantha district is occupying about 0.14 lakh ha area and production of over 0.064 lakh tonnes and productivity 602 kg/ha (Anonymous, 2017-18). Cultivation practices could not reach to the farmers or adopted by the farmers, therefore the existing gap between the potential yield and actual yield harvested by the farmers is wider. Similarly, all the farmers do not adopt all the recommended practices of cultivation with the same rate, speed and time due to several problems they have in adoption of recommended practices. Therefore, farmers should be trained in specific operational and technical know-how and skills embracing all phases of production for maximizing their economic returns. That could be done through demonstration technology. Keeping all these facts in mind the present research problem "Evaluation of front line demonstrations on mungbean production technology organized under NFSM by KVK, Deesa" was undertaken with the following objectives.

OBJECTIVES

- (1) To study the profile of FLD and non-FLD mungbean growers
- (2) To ascertain association between level of knowledge about mungbean production technology and profile of FLD farmers and non-FLD farmers

METHODOLOGY

Present study was conducted in Banaskantha district of Gujarat State. Among the 14 talukas, Danta taluka was selected for present investigation because a greater number of FLDs on mungbean crop were conducted in this taluka by KVK, Deesa, during last three years. A comprehensive list of FLD farmers was collected from the KVK, Deesa, during

last three years. Using random sampling method 70 FLD farmers were selected randomly and equal numbers non-FLD farmers were also selected randomly from same villages. Thus, total 140 respondents were selected for the study. Ex-post facto research design was used for this study. The data were collected by personal contact method with the help of structured interview schedule. The collected data were analyzed in order to make the findings meaningful.

RESULTS AND DISCUSSION

Profile of FLD and non-FLD mungbean growers

On the basis of review of literature and discussions with the experts, some important characters have been selected in the present study. The data of these characteristics were analyzed and presented in the table 1.

Table 1 : Distribution of the respondents according to their personal profile

(n = 140)

Sr. No.	Personal profile	Classification	FLD farmers (n-70)		Non-FLD farmers (n-70)	
			Frequency	Per cent	Frequency	Per cent
1	Age	Young age (up to 35 year)	14	20.00	12	17.15
		Middle age(36 to 50 year)	36	51.43	34	48.57
		Old age (above 50 year)	20	28.57	24	34.28
2	Education	Illiterate	03	04.29	09	12.86
		Functionally literate	05	10.00	15	21.42
		Primary school (Up to 7 th standard)	21	30.00	29	41.43
		Middle school (8 th to 10 th standard)	26	37.14	12	17.15
		High school (11 th to 12 th standard)	09	12.86	03	04.29
		Under graduation/post-graduation	04	05.71	02	02.85
3	Annual income	Low	08	11.43	12	17.15
		Medium	44	62.85	47	67.14
		High	18	25.72	11	15.71
4	Land holding	Marginal (up to 1.00 ha)	26	37.14	34	48.57
		Small (1.01 to 2.00 ha)	32	45.71	29	41.43
		Large (above 2.00 ha)	12	17.15	07	10.00
5	Social participation	No participation	18	25.71	28	40.00
		Membership in one organization	29	41.43	24	34.29
		Membership in more than one organization	16	22.86	13	18.57
		Membership with position holding	07	10.00	05	07.14
6	Extension participation	Low participation	13	18.57	23	32.85
		Medium participation	41	58.57	38	54.29
		High participation	16	22.86	9	12.86
7	Sources of information	Low	09	12.86	22	31.43
		Medium	41	58.57	37	52.86
		High	20	28.57	11	15.71
8	Irrigation potentiality	Well	41	58.57	45	64.29
		Canal	00	00.00	00	00.00
		Well + Canal	00	00.00	00	00.00
		Tube well/Bore well	21	30.00	18	25.71
		Check dam	08	11.43	07	10.00
9	Cropping intensity	Low	12	17.15	17	24.29
		Medium	49	70.00	47	67.14
		High	09	12.85	06	08.57

Table 1 indicate that, majority of FLD (80.00 per cent) and non-FLD (82.85 per cent) respondents were in middle to old age group. The probable reason might be that age of 35 to 50 years is considered to be an actively working age of the respondents and they were responsible for maintaining their families. Nearly two-third (67.14 per cent) of FLD respondents had primary to middle level of education. While in case of non-FLD respondent, 62.85 per cent were functionary literate to primary level of education. This might be due to the educational facilities up to middle education prevailing in the study area. Majority of FLD (88.57 per cent) and non-FLD (84.29 per cent) respondents had medium to high level of income because majority of the mungbean growers have secondary occupation of animal husbandry or business in the area of study. Greater majority of (82.85 per cent) of FLD respondents had small to large size of land holding. While in case of non-FLD respondent, 90.00 per cent were marginal to small size of land holding. This might be due to the fragmentation of land within the family. Whereas, nearly two-third FLD (67.14 per cent) respondents had membership in one organization, while in case of non-FLD respondents, majority (74.2 per cent) of them had no membership in one organization. The possible reason might be the most popular and service-oriented village organizations.

The data presented in Table 1 revealed that majority of the FLD respondents (81.43 per cent) had medium to high level of extension participation and 87.14 per cent of non-FLD respondents had low to medium level of extension participation. Majority of FLD respondents (87.14 per cent) use medium to high level of sources of information. While in case of non-FLD respondents, majority (84.29 per cent) of them use medium to low level of sources of information. Overwhelming (88.57 per cent) of the farmers had used well and tube well as irrigation source. While, 90.00 per cent of non-FLD farmers had well to tube well irrigation potentiality. Further, data reveal that majority of FLD (87.15 per cent) and non-FLD (91.43 per cent) respondents were in middle to low cropping intensity. This is because of the fact that climatic conditions, structure and soil texture were suitable for mungbean crop.

The similar findings have been reported by Kumbhani *et al.* (2018) and Gahaswa (2018).

Relationship between level of knowledge about mungbean production technology and profile of FLD farmers and non-FLD farmers

Relationship between profile of FLD and non-FLD farmers *viz.*: age, education, annual income, land holding, social participation, extension participation, sources of information, irrigation potentiality and cropping intensity

with level of knowledge about mungbean production technology were worked out with the help of correlation coefficient (r). The data are presented in table 2.

Table 2 : Relationship between level of knowledge of the respondents and their personal profile

(n = 140)

Sr. No.	Personal profile	'r' value	
		FLD farmers (n = 70)	Non-FLD farmers (n = 70)
X ₁	Age	-0.0463 ^{NS}	-0.0733 ^{NS}
X ₂	Education	0.2995*	0.2359*
X ₃	Annual income	0.1229 ^{NS}	0.1019 ^{NS}
X ₄	Land holding	0.2769*	0.2360*
X ₅	Social participation	0.2604*	0.1828 ^{NS}
X ₆	Extension participation	0.3175**	0.2882*
X ₇	Sources of information	0.2961*	0.2155 ^{NS}
X ₈	Irrigation potentiality	0.3387**	0.2992*
X ₉	Cropping intensity	0.3207**	0.2788*

* Significant at 5 per cent. ** Significant at 1 per cent. NS = Non significant.

Out of nine independent variable, In case of FLD respondents, independent variable *viz.*, extension participation (0.3175**) and irrigation potentiality (0.3387**), cropping intensity (0.3207**) had positive and highly significant. While education (0.2995*), land holding (0.2769*), social participation (0.2604*) and sources of information (0.2961*) had positive and significant correlation with the level of knowledge about mungbean production technologies. While, age had negative and non significant and annual income had positive and non significant correlation with the level of knowledge about mungbean production technologies. While, in case of non-FLD respondents, independent variable *viz.*, education (0.2359*), land holding (0.2360*), extension participation (0.2882*), irrigation potentiality (0.2992*) and cropping intensity (0.2788*) had positive and significant correlation with the level of knowledge of farmers about mungbean production technology. While, age had negative and non significant correlation. While, annual income, social participation and sources of information had positive and non significant correlation with the level of knowledge about mungbean production technologies.

This finding is found similar to the finding reported by Biradar *et al.*, (2013), Patoliya (2013), Dholariya (2014), Kakkad (2019) Poshia *et al.*, (2019), Bhimani *et al.*, (2020) and Sardhara *et al.* (2020).

CONCLUSION

From the above results it can be conclude that In case of FLD respondents extension participation, irrigation potentiality and cropping intensity had positive and highly significant correlation with the extent of adoption about mungbean production technology. While, In case of non-FLD respondents education, land holding, extension participation, irrigation potentiality and cropping intensity had positive and significant correlation with the extent of adoption about mungbean production technology. This infer that FLD farmers who have participated in various extension activities might have acquired higher knowledge and better understanding and ultimately, they might have known more about different mungbean production technologies than Non-FLD farmers.

POLICY IMPLICATION

Results related with the level of knowledge and extent of adoption shows that FLD and Non-FLD respondents had medium level of knowledge and extent of adoption. There is wide scope to increase in knowledge level and adoption rate. Specific extension strategies should be developed for conducting different extension programmes.

CONFLICT OF INTEREST

No conflict of interest among researchers.

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