

## Knowledge Level of Beneficiary and Non-Beneficiary Farmers about Improved Mungbean Production Technology

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### ABSTRACT

*Mungbean is a major kharif pulse crop specially grown in western Rajasthan where Krishi Vigyan Kendra scientists are motivating the farmers to enhance their knowledge level regarding mungbean production technology. It was found that FLD beneficiary farmers (mung bean) were having good knowledge about high yielding varieties (83.44%), plant protection measures (76.22%), organic manure and fertilizers management (70.30%), sowing of seed and spacing (67.33%), soil and field preparation (64.12%), seed treatment (60.89%), harvesting (55.93%), weed management (40.66%), storage (35.11%) practices where as non-beneficiary farmers were reported less knowledge i.e. 67.00, 58.66, 51.27, 49.16, 44.26, 39.75, 39.46, 28.85 and 25.18 per cent with regard to high yield varieties, plant protection measures, organic manure and fertilizers management, sowing of seed and spacing, harvesting, soil and field preparation, seed treatment, weed management and storage practices, It was suggested that farmers participation in extension activities like training, demonstration, exhibition, agricultural quiz programmes and farmers fair etc, may be increased so that they may learn new things related to improved production technology of mungbean.*

**Key Words:** FLD; Beneficiary and non-beneficiary; Knowledge; Mungbean;

**F**ront Line demonstration incepted by the ICAR is an important method to test the newly released crop production and protection technologies and management practices at the farmers field under different agro-climatic regions and farming situations. The FLD programme had completed 20 years'. Hence, it was felt to know the impact of latest package of practices of mungbean which were demonstrated at farmers field with close supervision of scientist. Keeping in view the importance of the study, it was considered worthwhile to find out how much this programme had helped the mungbean growers to bring about change in their knowledge which helped the farmers in enhancing the mungbean production. Therefore, a study entitled "Impact of Front Line Demonstrations on Adoption of Mungbean Production Technology by the Farmers of Nagaur district, Rajasthan" was undertaken with specific objective: To measure and compare the knowledge level of beneficiary and non-beneficiary farmers of front line demonstrations regarding improved mung bean production technology.

### METHODOLOGY

The study was conducted in Nagaur district of Rajasthan as having highest area (246687 ha) and production (130487 tonnes) of mung bean in comparison to all other districts of Rajasthan (Vital Statistics, Department of Agriculture, GOR, 2008-09). Seventy five mungbean growers from 12 villages of four panchayat samities namely Nagaur, Degana, Didwana and Merta (where KVK Nagaur had conducted FLD during last five years i.e. from 2006 to 2010) were selected as beneficiary farmers. Similarly 75 mung bean growers from twelve another villages of nearby area of FLD resembled similar socio-economic status but not benefited by KVK Nagaur were also selected randomly and named as non-beneficiaries. The package of practices namely, Soil and field preparation, High yielding varieties, Sowing of seed and spacing, seed treatment, organic manure and fertilizer management, weed management, plant protection measures, harvesting and storage of mung beans recommended

by Zonal Research and Extension Advisory Committee (ZREAC) for the agro-climatic zone-IIA was considered as improved mung bean production technology and included in knowledge test to measure the knowledge level of mung bean growers. Each selected practice was further divided into several questions to find out the existing knowledge level of respondents about mungbean production technology. One score was assigned to each correct answer while zero score to each incorrect answer. Therefore, the minimum and maximum possible knowledge score one could obtain on knowledge test was 0 and 87. The responses obtained from the respondents were counted and converted into mean per cent score. The knowledge index for each respondent was calculated by using the following formula.

$$KI = \frac{K}{P} \times 100$$

Where,

- KI = Knowledge index
- K = Knowledge score obtained
- P = Possible maximum score

Based on the mean knowledge score and standard deviation the farmers were categorized under three knowledge level categories which are as follows:

- Low knowledge level = Score below (mean – SD)
- Medium knowledge = Scores from (mean–SD) to (mean+SD)
- High knowledge level = Scores above (mean + SD)

## RESULTS AND DISCUSSION

It was revealed that the beneficiary farmers of Front Line Demonstration programme secured knowledge score between 43 to 71. The respondents were grouped in the three categories, using mean (53.41) and standard deviation (6.24). Respondents who scored below 47.17 were grouped under low knowledge level, the respondents who scored 47.17 to 59.65 were considered under medium knowledge level and those who obtained score above 59.65 knowledge score were categorized under high knowledge level about improved mungbean production technology.

The data in Table 1 reveals that majority of beneficiary farmers (57.33%) had medium knowledge, whereas 17.33 per cent and 25.33 per cent beneficiary farmers were having low and high knowledge level about improved mungbean production technology, respectively. Similarly, the minimum and maximum score

obtained by non-beneficiary farmers were 34 and 45. The respondents were grouped into three categories using mean (40.27) and standard deviation (3.17). Respondents who secured below 37.10 knowledge scores were grouped into low knowledge level, the farmers who scored between 37.10 to 43.44 were grouped under medium knowledge level and those who secured above 43.44 knowledge scores were categorized under high knowledge level.

**Table 1. Knowledge level of beneficiary farmers about improved mungbean production technology (N = 75)**

S.No.	Knowledge level	No.	%
1.	Low (Scores below 47.17)	13	17.33
2.	Medium (Scores between 47.17 to 59.65)	43	57.33
3.	High (Scores above 59.65)	19	25.33
	Total	75	100

$\bar{X}$  = 53.41 (Scores),  $\sigma$  = 6.24 (Scores)

The data in Table 2 indicate that the majority of non-beneficiary farmers (57.33%) had medium knowledge level, whereas 15 and 17 per cent non-beneficiary farmers were having low and high knowledge level about improved mungbean production technology. Practicewise knowledge level of beneficiary and non-beneficiary farmers with regards to improved mungbean production technology was also measured in terms of MPS. The total numbers of 9 practices were included to assess the knowledge level of respondents as given in Table 3 which indicate that knowledge of beneficiary farmers regarding other aspects like high yielding varieties, plant protection measures, organic manure and fertilizers management, sowing of seed and spacing, Soil and field preparation, seed treatment, harvesting, weed management, storage were found to be 83.44, 76.22, 70.30, 67.33, 64.12, 55.93, 54.93, 40.66 and 35.11 MPS, and ranks were assigned I, II, III, IV, V, VI, VII, VIII and IX, respectively.

**Table 2. Knowledge level of non-beneficiary farmers about improved mungbean production technology (N = 75)**

S.No.	Knowledge level	No.	%
1.	Low (Scores below 47.17)	15	20.00
2.	Medium (Scores between 47.17 to 59.65)	43	57.33
3.	High (Scores above 59.65)	17	22.66
	Total	75	100

$\bar{X}$  = 40.27 (Scores),  $\sigma$  = 3.17 (Scores)

Table 3 reveals that non-beneficiary farmers 67.00, 58.66, 51.27, 49.16, 44.26, 39.75, 39.46, 28.85

and 25.18 MPS of knowledge were reported with regard to high yield varieties, plant protection measures, organic manure and fertilizers management, sowing of seed and spacing, harvesting, soil and field preparation, seed treatment, weed management and storage practices, and ranks were assigned in descending order from I to IX, respectively.

**Table 3 Practicewise knowledge level of beneficiary and non-beneficiary farmers about improved mungbean production technology**

S. No.	Package of practice	Beneficiary (N <sub>1</sub> -75)		Non-beneficiary (N <sub>2</sub> -75)	
		MPS	Rank	MPS	Rank
1	Soil and field preparation	64.12	V	39.75	VI
2	High yielding varieties	83.44	I	67.00	I
3	Sowing of seed and spacing	67.33	IV	49.16	IV
4	Seed treatment	55.93	VI	39.46	VII
5	Organic manure and fertilizer management	70.30	III	51.27	III
6	Weed management	40.66	VIII	28.85	VIII
7	Plant protection measures	76.22	II	58.66	II
8	Harvesting	54.93	VII	44.26	V
9	Storage	35.11	IX	25.18	IX
	Overall	60.89		44.84	

The knowledge level of beneficiary and non-beneficiary farmers regarding improved mungbean production technology was also compared and conclusion were drawn on the basis of formulated null hypothesis. The data related to knowledge level of both beneficiary and non-beneficiary respondents

incorporated in Table 4 show that calculated 'Z' value was higher than the tabulated value at 1 per cent level of significance in all the nine package of practices of mungbean production technology. This leads to conclusion that there is a significant difference in knowledge level of beneficiary and non-beneficiary respondents regarding to all nine practices of mungbean cultivation. The higher knowledge level of improved mungbean production technology among the beneficiary in comparison of non-beneficiary respondents, might be due to the reason that the FLDs were conducted on the fields of beneficiary farmers only by the KVK, Nagaur and they have also been provided necessary guidance, literature and training by the KVK scientists and SMS of ARSS, Nagaur. Whereas, the FLDs were not conducted on the field of non-beneficiary farmers might have not been provided any type of guidance and training by the SMSs.

This might have resulted in higher level of knowledge of beneficiary farmers in comparison to non-beneficiary farmers. These findings are also supported by the findings of *Kubde et al (1999)* and contradict with the findings of *Singh and Sharma (2005)*.

#### CONCLUSION

It was found that majority of beneficiary (57.33 per cent) farmers were having medium knowledge level, whereas (17.33 and 25.33 per cent) farmers were having low and high knowledge level about improved mungbean production technology, respectively. In case

**Table 4. Comparison of knowledge level between beneficiary and non-beneficiary farmers regarding improved mungbean production technology.**

S. No.	Package of practices	Beneficiary (N <sub>1</sub> -75)		Non-beneficiary (N <sub>2</sub> -75)		'Z' Value
		Mean	SD	Mean	SD	
1	Soil and field preparation	705	1.49	5.09	0.93	9.59**
2	High yielding varieties	10.01	0.88	8.09	1.03	12.40**
3	Sowing of seed and spacing	5.41	1.26	3.93	0.79	8.62**
4	Seed treatment	2.91	0.95	1.97	0.85	6.39**
5	Organic manure and fertilizer management	7.93	1.61	5.64	1.18	9.94**
6	Weed management	5.89	1.78	4.04	1.02	7.81**
7	Plant protection measures	9.12	1.65	7.04	1.54	7.98**
8	Harvesting	2.80	0.84	2.21	0.38	5.54**
9	Storage	3.33	1.23	2.27	0.88	5.91**
	Overall	6.05	1.29	4.47	0.95	8.54**

\*\* Significant at 0.01 level of probability

of non-beneficiary farmers majority of the respondents (57.33 %) had medium knowledge level whereas (20.00 %) and 26.66 per cent farmers were having low and high knowledge level about improved mungbean production technology, respectively. According to practice wise, it was also found that both type of respondents (beneficiary and non-beneficiary) possessed

maximum knowledge regarding high yielding varieties (83.44 and 67.00) and plant protection measures (76.22 and 58.66) of mungbean crop, respectively. Similarly the least knowledge was possessed regarding storage (35.11 and 25.18), respectively.

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## REFERENCES

1. Anonymous. (2008-09). Vital Agriculture Statistics, Department of Agriculture, Pant Krishi Bhawan, Jaipur.
2. Kubde, V.R.; Tekale, V.S. and Bhople, R.S. (1999). Knowledge and adoption of soybean production technology by farmers. *Maha. J. Extn. Edu.*, **XVIII**: 185-188.
3. Singh, N. and Sharma, F.L. (2005). Impact of FLD on gain in knowledge about mustard production technology among farmers of Bharatpur district. *Indn. Res. J. Extn. Edu.*, **5**(1):18-20.

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