

## **KNOWLEDGE LEVEL OF FARMERS ABOUT RECOMMENDED CULTIVATION PRACTICES OF MUNGBEAN IN NAGOUR DISTRICT OF RAJASTHAN**

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### **ABSTRACT**

The various legume crops grown in India mungbean occupies an important place because of its excellent protein quality and high digestibility due to low flatulence. This quantum jump in production of this crop can meet the expectations of the policy makers and nutritional planners. To find out the knowledge level of farmers about recommended cultivation practices of mungbean in the study area. The present study was carried out in Nagaur district of Rajasthan. The Nagaur district consists of 10 tehsils. Out of which two tehsils namely Degana and Makrana were selected by randomly. Among these, 3-villages from Degana tehsil and 2-villages from Makrana tehsil were selected by simple random sampling technique and a sample of 120 respondents was selected from these villages by using simple random sampling with proportion by SRS to the size of sample in the selected villages. An interview schedule was developed consisting of measuring devices of knowledge level. The assessment of farmer's knowledge devoted of two categories e.i. small and marginal farmers. The study indicated the marginal farmers 66.67 per cent having medium knowledge, whereas, 18.33 per cent having low knowledge and remaining 15.00 per cent possessed high knowledge and the small farmers 78.33 per cent having medium knowledge, whereas, 10.00 per cent having low knowledge and remaining 11.67 per cent possessed high knowledge about recommended cultivation practices of mungbean.

### **INTRODUCTION**

The various legume crops grown in India mungbean occupies an important place because of its excellent protein quality and high digestibility due to low flatulence. Mungbean is the main source of quality protein and amino acids for predominately vegetarian population of India next to calorie deficiency. The most serious problem affecting the health of human being is the deficiency of food proteins, which if not corrected in time, may have serious implications, particularly on growing ones. Mungbean is used to prepare food products at both the industrial and household levels and supplement the nutritional deficiency to a considerable extent. The grains (whole or split) are used as dal or to make flour. The straw and husk are used as fodder for cattle. The germinated grains are also used as sprouts. Unlike other pulses, it does not produce heaviness or flatulence. In India greengram (mungbean) occupies 3.0 million ha and contributes to 1.3 million tonnes in pulse production. In Rajasthan mungbean is grown

over 799463 hectare with the production of 129950 tonnes (According to Vital Agriculture Statistic, 2005-06). Nagaur district lies in the II-A agro-climatic zone of Rajasthan which has 233661 hectare area under mungbean cultivation and produce 46758 tonnes, which is nearly 20.10 per cent of total mungbean production in Rajasthan (2005-06). The present study was carried out with specific objective "To find out the knowledge level of farmers about recommended cultivation practices of mungbean in the study area".

### **RESEARCH METHODOLOGY**

The present study was carried out in Nagaur district of Rajasthan. The Nagaur district consists of 10 tehsils. Out of which two tehsils namely Degana and Makrana were selected by simple random sampling technique. Among these, 3-villages from Degana tehsil and 2-villages from Makrana tehsil were selected by simple random sampling technique. Thus, total five villages viz., Gusali, Chui, Rawant Jaswantpura and Asarwa were selected for the

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present investigation. List of the mungbean growers, having mungbean in at least one beegha, of all the five selected villages were prepared with the help of patwaries of concerned villages. Listed respondent were categorised as the marginal farmers (a farmer with less then 1 ha of land holding) and small farmers (a farmer with 1 to 2 ha of land holding). Finally 10-15% respondents of each category from each selected village were selected in proportion by SRS such that the sample size is least 120. An interview schedule was developed consisting of measuring devices of knowledge level. Ten major package of practices of mungbean production cultivation practices were included in knowledge test. Each selected practices was further divided into several questions to find out the existing knowledge of respondents about mungbean production cultivation practices. One score was assigned to each correct answer. The respondents knowing the correct answer score one marked while others not knowing the subject matter obtained zero marks. Therefore, the possible maximum knowledge score one could obtain was 70. The responses obtained from the respondents were counted and converted into mean per cent score (Appendix-II). The knowledge index for each respondents was calculated by using the following formula:

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

Where,

KI = Knowledge

K = Knowledge score obtained per practices

P = Possible maximum score per practices

The mean and standard deviation of all these respondents knowledge scores were computed for classifying the knowledge in different categories. Based on the mean knowledge score and standard deviation. The farmers were categorized under three knowledge level categories, namely low, medium and high knowledge level as follows :

Low knowledge level= Score below (mean knowledge – SD)

Medium knowledge level = Score from

(mean knowledge-SD) to (mean+SD)

High knowledge level = Score above (mean knowledge + SD)

## RESULTS AND DISCUSSION

This section is devoted to assess knowledge of small and marginal farmers about improved practices of mungbean cultivation.

To get an over view of the knowledge level, the farmers about recommended cultivation practices of mungbean were grouped into (i) low (ii) medium (iii) high knowledge on the basis of calculated mean and standard deviation of the obtained knowledge scores by the respondents.

### Overall knowledge level of marginal farmers about recommended cultivation practices of mungbean

The data in table 1 reveal that 41 respondents (66.67 per cent) fall in medium knowledge groups, whereas, 10 respondents (18.33 per cent) were found in low knowledge and remaining 9 respondents (15.00 per cent) possessed high knowledge about recommended cultivation practices of mungbean.

**Table 1: knowledge level of recommended cultivation practices of mungbean by the marginal farmers n = 60**

S. No.	knowledge age categories	Number of respondents	Per cent
1	Low (Score below 30.56)	10	18.33
2	Medium (Score from 30.56 to 40.00)	41	66.67
3	High (Score above 40.00)	9	15.00
		X = 35.28,	s = 4.72

Adoption of marginal farmers towards recommended technology of mungbean cultivation is directly or indirectly related to knowledge of mungbean growers. Hence it was considered necessary to assess the knowledge of the marginal farmers about mungbean cultivation while the knowledge about the technology had influence on the decision making about its adoption. With this view in mind the knowledge test was applied to the farmers to know their knowledge about mungbean cultivation.

From the findings it was clear that the majority of the farmers (81.67 per cent) had medium to high knowledge about recommended technology of mungbean cultivation, because most of the farmers were literate due to which they may read literature regarding recommended technology of mungbean cultivation. Most of farmers were using source of information and hence were gaining more knowledge. Also they participating more in social organizations due to which they might gain more knowledge by discussing to the farmers group leaders about recommended technology of mungbean cultivation. The few number of marginal farmers having low knowledge (15 per cent) might be attributed due to the fear among the marginal farmers about innovation.

The findings of the study are in conformity with the findings of Jangid (2001) and Geengar (2006).

#### **Practicewise knowledge of marginal farmers about recommended cultivation practices of mungbean**

The knowledge of marginal farmers with regard to improved cultivation practices of mungbean was assessed. As many as ten practices were included in the knowledge schedule to assess the knowledge of respondents as given in table 2.

**Table 2: Practicewise knowledge of marginal farmers about recommended cultivation practices of mungbean**  
n = 60

S.No.	Package of practices	MPS	Rank
1.	Soil and field preparation	49.54	V
2.	High yielding varieties	71.11	III
3.	Seed treatment	41.25	VII
4.	Sowing of seed	60.74	IV
5.	Spacing	74.17	I
6.	Fertilizer application	73.54	II
7.	Weed management	34.26	IX
8.	Plant protection measures	38.47	VIII
9.	Harvesting	46.25	VI
10.	Storage	34.00	X

The table 2 show that marginal farmers had maximum knowledge about spacing practice in mungbean (MPS 74.17), while minimum knowledge

was about storage (MPS 34.00). The table further indicate that the marginal farmers knowledge about fertilizer application, use high yielding varieties, sowing of seed, soil and field preparation, harvesting, seed treatment, plant protection measures and weed management were found to be with MPS 73.54, 71.11, 60.74, 49.54, 46.25, 41.25, 38.47 and 34.26, respectively.

From the findings it was also evident that all the marginal farmers were having knowledge about recommended 'spacing. This might be due to the fact that majority of the marginal farmers were literate and hence may knowledge the recommended 'spacing' by reading the related literature and also they remain in contact with the neighbours, friends etc. Hence they may discuss about the 'spacing' with the fellow marginal farmers. Hence, they had good knowledge about the 'spacing' of mungbean. So, it is not much difficult for them and they have more knowledge about this aspect.

The marginal farmers had low knowledge about 'Seed treatment', "Plant protection measures", "Weed management" and "Storage". This might be due to the reason that the marginal farmers might not understand about the instruction written on the containers of chemicals because of its complex language. They might also not get proper technical guidance about these aspects. It might also be due to less contacts of marginal farmers with plant protection specialists.

The findings of the study are conformity with the findings of Chouhan (1995) and Singh and Sharma (2005).

#### **Overall knowledge level of small farmers about recommended cultivation practices of mungbean**

The data in table 3 that 47 respondents (78.33 per cent) were found in medium knowledge groups, whereas, 6 respondents (10.00 per cent) were in low knowledge group and remaining 7 respondents (11.67 per cent) possessed high knowledge about the recommended cultivation practices of mungbean.

**Table 3: Knowledge level of recommended cultivation practices of mungbean by the small farmers**  
n = 60

S.No.	knowledge age categories	Number of respondents	Per cent
1	Low (Score below 31.94)	6	10.00
2	Medium (Score from 31.94 to 41.92)	47	78.33
3	High (Score above 41.92)	7	11.67
X = 36.43,		s = 4.49	

Adoption of small farmers towards recommended technology of mungbean cultivation is directly or indirectly related to knowledge of mungbean growers. Hence it was considered necessary to assess the knowledge of the small farmers about mungbean cultivation while the knowledge about the technology had influence on the decision making about its adoption. With this view in mind the knowledge test was applied to the farmers to know their knowledge about mungbean cultivation.

From the findings it was clear that majority of the farmers (90.00 per cent) had medium to high knowledge about recommended technology of mungbean cultivation, because most of the farmers were literate due to which they may read literature regarding recommended technology of mungbean cultivation. Most of farmers were using source of information and hence were gaining more knowledge. Also they participating more in social organization due to which they might gain more knowledge by discussing to the farmers group leaders about recommended technology of mungbean cultivation. The few number of small farmers having low knowledge (10 per cent) might be attributed due to the fear among the small farmers about innovation.

The findings of the study are in conformity with the findings of Bareth (1991) and Choudhary (1999).

**Practicewise knowledge of small farmers about recommended cultivation practices of mungbean**

The knowledge of small farmers with regard to improved cultivation practices of mungbean was

assessed. As many as ten practices were included in the knowledge schedule to assess the knowledge of respondents as given in table 4.

**Table 4: Practicewise knowledge of small farmers about recommended cultivation practices of mungbean**  
n = 60

S.No.	Package of practices	MPS	Rank
1.	Soil and field preparation	50.90	V
2.	High yielding varieties	68.05	III
3.	Seed treatment	40.00	IX
4.	Sowing of seed	63.15	IV
5.	Spacing	77.50	I
6.	Fertilizer application	71.49	II
7.	Weed management	41.87	VIII
8.	Plant protection measures	42.78	VII
9.	Harvesting	48.75	VI
10.	Storage	35.33	X

The table 4 shows that small farmers had maximum knowledge about spacing practice in mungbean (MPS 77.50), while minimum knowledge was about storage (MPS 35.33). The table further indicate that the small farmers knowledge about fertilizer application, use of high yielding varieties, sowing of seed, soil and field preparation, harvesting, plant protection measures, weed management and seed treatment were found to be with MPS 71.49, 68.05, 63.15, 50.90, 48.75, 42.78, 41.87 and 40.00, respectively.

From the findings it was also evident that all the farmers were having knowledge about recommended “spacing”. This might be due to the fact that majority of the small farmers were literate and hence may have knowledge about the recommended “spacing” by reading the related literature and also they remain in contact with the neighbours, friends etc. Hence they may discuss about the “spacing” with the fellow small farmers. Hence they had good knowledge about the spacing of mungbean. So it is not much difficult for them and they have more knowledge about this aspect.

The farmers had low knowledge about “Plant protection measures”, “Seed treatment”, “Weed management” and “Storage”. This might be due to the

reason that the farmers might not understand about the instructions written on the container of chemicals because of its complex language. They might also not get proper technical guidance. They might also not get proper technical guidance about these aspects. It might also be due to less contact of farmers with plant protection specialists.

The findings of the study are in conformity with the findings of Chouhan (1995) and Singh and Sharma (2005).

## CONCLUSION

Majority of the farmers (marginal and small) had fallen in medium category knowledge about recommended cultivation practices of mungbean. It was observed that both marginal and small farmers possessed maximum knowledge regarding "Spacing" (74.17 MPS) and (77.50 MPS) of mungbean crop, respectively marginal and small farmers possessed less knowledge regarding "Storage" aspects (34.00 MPS) and (35.33 MPS).

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