KNOWLEDGE OF IMPROVED PRODUCTION TECHNOLOGIES OF PULSES BY THE FARMERS IN RAJSAMAND DISTRICT

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ABSTRACT

Majority of the farmers have substantial amount of knowledge about the harvesting and storage, irrigation management and application of rhizobium culture. While farmers had poor knowledge about plant protection measures, seed treatment and soil treatment in all selected pulse crops. It is further concluded that farmers had also good knowledge about high yielding varieties with regard to all selected crops except gram cultivation. Farmers had average knowledge about fertilizer application in all crops.

INTRODUCTION

The present investigation is an effort to know and understand the clear picture of pulses crop cultivation in Rajsamand District of agro climatic zone IV a of Rajasthan and pass it to the concern personnel, institutions and agencies to make them aware about the extent of knowledge of pulses production technology by the farmers. Knowledge is a body of understood information possessed by an individual. It is one of the important components of adoption behavior and even it has been considered by many authors as a pre-requisite for adoption. In order to increase the level of adoption, farmers must be made aware of the latest knowledge of the technologies. Considering the importance of knowledge in adoption of technologies, it was imperative to assess the level of knowledge of the farmers about the production technology of selected crops. The study would be of immense value to the planner, extension personnel and the scientists in developing sound agricultural innovations and communicating them in quickest possible manner.

RESEARCH METHODOLOGY

The present study was conducted in 15 villages from three purposely selected tehsils of the district because activities of RKVY were going on in these tehsils viz.Rajsamand, Relmagra & Khamnor. Five villages from list of adopted village of KVK, Rajsamand from each selected tehsil and 10 farmers from each selected village were drawn randomly.

Thus, the sample consisted of 150 respondents for the study. Three major crops viz. Gram, Green gram and Black gram were included in the study. Various suitable statistical tests were used in the data analysis.

RESULTS AND DISSCUSSION

A. Extent of knowledge of improved production technologies of selected crops by the farmers:

To get an overview of knowledge level, the respondents were classified under low, medium and high knowledge groups in each selected crops on the basis of calculated mean and standard deviation of the obtained knowledge score of the respondents.

Table 1: Distribution of respondents on the basis of their extent of knowledge

S.No.	Name of crop	Extent of knowledge	No.of farmer	Perc-entage
1.	Gram	Low (up to 35)	23	15.34
		Medium (36 to 53)	92	61.33
		High (above 53)	35	23.33
		Total	**150**	**100**
2.	Green gram	Low (up to 26)	24	16.00
		Medium (27 to 47)	98	65.33
		High (above 47)	28	18.67
		Total	**150**	**100**
3.	Black gram	Low (up to 30)	25	16.67
		Medium (31 to 51)	95	63.33
		High (above 51)	30	20.00
		Total	**150**	**100**

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Table-1 shows that 61.33 percent of total respondents were found in medium knowledge group, while 15.34 and 23.33 percent of farmers were found in low and high knowledge groups respectively about improved practices of gram cultivation.

In the green gram cultivation, data reveals that 65.33 percent of total respondents were found to be medium knowledge group, while 18.67 percent respondents were grouped under high knowledge group and 16.00 percent respondents were reported from the low knowledge group

Study of the table further reveals that 63.33 percent of total respondents were found in medium knowledge group, while 16.67 and 20.00 percent of farmers were in low and high knowledge group respectively in improved practices of black gram cultivation.

These findings are supported by the findings of Takate and Khot (1988) in which they revealed that more than half of the respondents had medium level of knowledge. Comparatively less number of farmers were observed in low and high level of knowledge group.

B. - Individual technology-wise extent of knowledge and knowledge gap of the selected crop

1. Gram cultivation

Table-2 reveals that respondents had maximum knowledge regarding irrigation management, harvesting and storage and use of rhizobium culture with 73.66, 73.33 and 67.25 mean percent score respectively. While maximum knowledge gap was observed in the high yielding varieties, fertilizer application and seed treatment by the farmers having 57.54, 55.86 and 54.25 mean percent score respective about gram cultivation.

The table further shows that technological knowledge was also required in the practice of soil treatment, weed management and plant protection measures exhibiting a knowledge gap of 53.0, 53.43 and 47.67 mean percent score respectively. Thus, from the above results, it can be concluded that in gram cultivation technology the knowledge gap existed from 26.34 to 57.54 percent.

Table 2: Extent of knowledge and knowledge gap of the farmers with regard to Gram cultivation practices: n = 150

S.No.	Improved practices	Extent of Knowle (dge MPS)	Knowl edge gap (MPS)
1.	High yielding varieties	42.46	57.54
2.	Soil treatment	47.00	53.00
3.	Application of rhizobium culture	67.25	32.75
4.	Seed treatment	45.75	54.25
5.	Fertilizer application	44.14	55.86
6.	Irrigation management	73.66	26.34
7.	Weed management	46.57	53.43
8.	Plant protection measures	52.33	47.67
9.	Harvesting and storage	73.33	26.67

MPS = Mean percent score

2. Green gram cultivation

Table-3 shows that farmers possessed maximum knowledge about high yielding varieties, harvesting and storage and irrigation management practices with 73.38, 73.33 and 71.33 mean percent score respectively. While the maximum knowledge gap was observed in practice of soil treatment, seed treatment and plant protection measures by the farmers having 53.0, 51.25 and 45.42 mean percent score respectively about green gram cultivation in the study area. The table also shows that the farmers had reasonably good knowledge about application of rhizobium culture, fertilizer application and weed management practice with 67.25, 62.14 and 58.57 mean percent score, which exhibited a technological knowledge gap of 32.75, 37.86 and 41.43 percent respectively.

Table 3: Extent of knowledge and knowledge gap of the farmers with regards to different green gram cultivation practices. n = 150

S.No.	Improved practices	Extent of Knowledge MPS)	Knowl edge gap (MPS)
1.	High yielding varieties	73.38	26.62
2.	Soil treatment	47.00	53.00

3.	Application of rhizobium culture	67.25	32.75
4.	Seed treatment	48.75	51.25
5.	Fertilizer application	62.14	37.86
6.	Irrigation management	71.33	28.67
7.	Weed management	58.57	41.43
8.	Plant protection measures	54.58	45.42
9.	Harvesting and storage	73.33	26.67

MPS = Mean percent score

Thus, from the above results, it can be concluded that among all the improved green gram production technologies, the technological knowledge gap existed from 26.62 to 53.0 percent.

3. Black gram cultivation

Observation of Table-4 reveals that maximum knowledge possessed by the farmers in practice of harvesting and storage, irrigation management and application of culture with 74.33, 73.33 and 70.88 mean percent score respectively. While maximum knowledge gap was observed in plant protection measures, seed treatment and soil treatment with MPS 59.83, 54.25 and 51.67 respectively about black gram cultivation.

Table 4: Extent of knowledge and knowledge gap of the farmers with regard to different black gram cultivation practices   n = 150

S.No.	Improved practices	Extent of Knowledge (MPS)	knowledge gap (MPS)
1.	High yielding varieties	68.00	32.00
2.	Soil treatment	48.33	51.67
3.	Application of rhizobium culture	70.88	29.12
4.	Seed treatment	45.75	54.25
5.	Fertilizer application	60.71	39.28
6.	Irrigation management	73.33	26.67
7.	Weed management	57.14	42.86
8.	Plant protection measures	40.17	59.83
9.	Harvesting and storage	74.33	25.67

MPS = Mean percent score

Table also shows that farmers had reasonably good knowledge about high yielding varieties (68.0%), fertilizer application (60.71%) and weed management (57.14%) but more technological knowledge is required to the farmers.

Thus from above results, it can be concluded that in black gram technologies, the knowledge gap existed from 25.67 to 59.83 percent.

The above findings of this study are in line with the findings of Dubey *et al* (1988), Pandey (1989), Chaudhary (1997) found that farmers had very poor knowledge regarding plant protection measures, soil treatment and seed treatment.

CONCLUSION

From the above results it could be concluded that majority of the farmers were in medium knowledge group followed by high and low group group respectively in all the selected crops

From the above findings, it could be concluded that majority of the farmers have substantial amount of knowledge about the harvesting and storage, irrigation management and application of rhizobium culture. While farmers had poor knowledge about plant protection measures, seed treatment and soil treatment in all selected crops. It is further concluded that farmers had also good knowledge about high yielding varieties with regard to all selected crops except gram cultivation. Farmers had average knowledge about fertilizer application in all crops.

Poor knowledge about plant protection measures, soil treatment and seed treatment in selected crops may be attributed to low literacy level and little participation in extension programme, poor contact with extension agencies, poor contact with progressive farmers in the village etc Soil treatment and seed treatment were not in the frame of reference of the farmers.

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