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Research Article

Knowledge level of beneficiary and non-beneficiary farmers of gram production technology

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SUMMARY : Krishi Vigyan Kendra, Pratapgarh has conducted 88 front line demonstrations on gram in 35.2 ha. area under real farming situations in 2012 in the farmer's fields of six adopted villages (Avleshwar, Basad, Dalmu, Dhamotar, Manohargarh and Kherot) of Pratapgarh (Raj). All the 6 villages where FLDs were conducted by KVKs were included in the study. The total sample size was 176 consisting of 88 beneficiary and 88 non-beneficiary farmer's. Gram is called chickpea or gram in South Asia and Garbanzo bean in most of the developed world. Gram is a major pulse crop in India, gram is widely appreciated as health food. It is a protein-rich supplement to cereal-based diets, especially to the poor in developing countries, where people are vegetarians or cannot afford animal protein. There was significant difference in existing knowledge of beneficiary and non- beneficiary farmers except to harvesting with respect to gram production technology.

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KEY WORDS :
Beneficiary, Non-beneficiary, Gram production technology, Knowledge level

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BACKGROUND AND OBJECTIVES

Gram is called chickpea or gram in South Asia and Garbanzo bean in most of the developed world. Gram is a major pulse crop in India, gram is widely appreciated as health food. It is a protein-rich supplement to cereal-based diets, especially to the poor in developing countries, where people are vegetarians or cannot afford animal protein. It offers the most practical means of eradicating protein malnutrition among vegetarian children and nursing mothers. It has a very important role in human diet in our country. The latest concept in this series is front line demonstration the new concept of field demonstration evolved by the ICAR with the inception of the Technology Mission on Pulses and Oilseed in 1986. The field demonstrations conducted under the close supervision of the scientists of the national agricultural research system is called front line demonstration because the technologies are being demonstrated for the first time by the scientists themselves before, it is fed into the main system of the state department of agriculture.

RESOURCES AND METHODS

Krishi Vigyan Kendra, Pratapgarh has conducted 88 front line demonstrations on gram in 35.2 ha. area under real farming situations in 2012 in the farmer's fields of six adopted villages (Avleshwar, Basad, Dalmu, Dhamotar, Manohargarh and Kherot) of Pratapgarh (Rajasthan). The area under each demonstration was 0.4ha (1acre). Before conducting front line demonstrations a list of farmers was prepared from group meeting and specific skill training was imparted to the selected farmers regarding different aspects of cultivation etc. all the 6 villages where FLDs were conducted by KVKs were included in the study. The total sample size was 176 consisting of 88 beneficiary and 88 non-beneficiary farmer's.

OBSERVATIONS AND ANALYSIS

The results of the present study as well as relevant discussions have been presented under following sub heads:

Knowledge level of beneficiary and non-beneficiary farmers with respect to package of practices wise of gram production technology:

The knowledge level of beneficiary and non-beneficiary farmers with regard to package of practices of gram production technology were measured in terms of mean per cent score. As many as 10 packages of practices of gram production technology were included in the study to assess the knowledge level.

The data in Table 1 show that beneficiary farmers possessed high knowledge about manure and fertilizer application with 93.86 MPS; hence, it was ranked first. The second highest knowledge of the beneficiary farmers was towards "storage" with 88.63 MPS was rank second. This was followed by time of sowing, seed treatment, harvesting and seed rate and recommended spacing which were ranked third, fourth, fifth and sixth with, 87.88, 85.98, 85.80 and 84.94 MPS, respectively.

The table further, shows that, the practices like selection of land and field preparation and high yielding varieties were moderately known by the beneficiary farmers to the extent of MPS 82.19 and 75.85. Thus, ranked seventh and eighth, respectively.

Further, it was noticeably found that beneficiary farmers had least knowledge towards practices of great concern like plant protection measures and irrigation management with 75.57 and 64.77 MPS and stood ninth and tenth ranked in position, respectively.

In case of non-beneficiary farmers, they possessed high knowledge about harvesting with 84.09 MPS, hence, it was ranked first. The second highest knowledge of the non-beneficiary farmers was towards time of sowing with 75.38 MPS, respectively. This was followed by regarding "storage",

Table 1:Knowledge level of beneficiary and non-beneficiary farmers regarding package of practices wise of gram production technology (n=176)

Sr. No	Package of practices	Beneficiary farmers (n=88)		Non-beneficiary farmers (n=88)	
		MPS	Rank	MPS	Rank
1.	Selection of land and field preparation	82.19	7	68.94	5
2.	High yielding varieties	75.85	8	63.07	6
3.	Time of sowing	87.88	3	75.38	2
4.	Seed rate and recommended spacing	84.94	6	56.53	8
5.	Seed treatment	85.98	4	57.20	7
6.	Manure and fertilizer application	93.86	1	72.04	4
7.	Irrigation management	64.77	10	49.43	9
8.	Plant protection measures	75.57	9	44.44	10
9.	Harvesting	85.80	5	84.09	1
10.	Storage	88.63	2	72.72	3
	Overall	82.55		64.38	

r_s=0.70** t= 2.7

Table 2 : Comparison between knowledge level of beneficiary and non-beneficiary farmers regarding gram production technology (n=176)

Sr. No.	Package of practices	Beneficiary farmers (n=88)		Non-beneficiary farmers (n=88)		'Z' value
		Mean ±	S.D.	Mean ±	S.D.	
1.	Selection of land and field preparation	1.45	0.71	1.21	0.74	2.09**
2.	High yielding varieties	1.78	0.78	1.48	0.88	2.28**
3.	Time of sowing	1.55	0.55	1.33	0.44	2.79**
4.	Seed rate and recommended spacing	1.99	0.86	1.33	1.12	4.18**
5.	Seed treatment	3.03	1.51	2.01	2.15	3.47**
6.	Manure and fertilizer	14.10	1.93	6.34	4.17	15.11**
7.	Irrigation management	0.76	0.46	0.58	0.19	3.23**
8.	Plant protection measures	7.98	5.04	4.69	5.54	3.93**
9.	Harvesting	1.01	0.57	0.99	0.49	0.24
10.	Storage	0.52	0.32	0.43	0.45	1.46*

* and ** indicate significance of values at P=0.05 and 0.01, respectively

manure and fertilizer application, selection of land and field preparation and high yielding varieties which were ranked third, fourth, fifth and sixth with MPS 72.72, 72.04, 68.94 and 63.07, respectively.

The table further, shows that, the practices like seed treatment and seed rate and recommended spacing were moderately known by the non-beneficiary farmers to the extent of MPS 57.20 and 56.53. Thus, ranked seventh and eighth, respectively. In use of irrigation management and plant protection measures they possessed least knowledge with 49.43 and 44.44. MPS were ranked ninth and tenth in positions, respectively.

An effort was also made to find out the rank correlation between knowledge level of both categories *i.e.*, beneficiary and non-beneficiary farmers with regard to gram production technology.

The value of rank order correlation (r_s) was 0.70 which showed positive correlation between beneficiary farmers knowledge level and non-beneficiary farmers knowledge level, the significance of r_s was tested by 't' test and it was observed that 't' calculated value (2.7) was higher than its table value. This leads to conclusion that there was correlation in ranking of knowledge possessed by beneficiary and non-beneficiary farmers with respect to gram production technology. Though there is significant correlation in between ranking of beneficiary and non- beneficiary farmers because similar trends of knowledge level between beneficiary and non-beneficiary farmers.

These findings are in confirmation with the findings of Chander *et al.* (2009) and Badhala *et al.* (2012).

Comparison between knowledge level of beneficiary and non-beneficiary farmers with respect to gram production technology:

The data related to knowledge level of both beneficiary and non-beneficiary farmers incorporated in Table 2 show that calculated 'Z' value was higher than the tabulated value at 5 per cent level of significance in 9 packages of practices except harvesting with respect to gram production technology. Thus, rejection of Null hypothesis and acceptance of alternative hypothesis leading to conclusion that there was significant difference in knowledge level of beneficiary and non-beneficiary farmers with regard to 9 package of practices of gram production technology. In other words, there was significant difference between the knowledge level of beneficiary and non-beneficiary farmers regarding gram production technology.

The higher knowledge level of gram production technology among the beneficiary farmers in comparison to non-beneficiary farmers, may because of the FLDs were conducted on the field of beneficiary farmers by the K.V.K., Pratapgarh. They were also provided necessary guidance and training by the SMSs of K.V.K., Pratapgarh. Whereas, the FLDs were not-conducted on non-beneficiary farmer's field and they may be not provided any type of guidance and training by the SMSs and as such were deprived of technical knowledge. This might have resulted in higher knowledge level of beneficiary farmers than that of non-beneficiary farmers.

These findings are in line with the findings of Chander *et al.* (2009) and Badhala *et al.* (2012).

Conclusion:

- There was significant difference in existing knowledge of beneficiary and non- beneficiary farmers except to harvesting with respect to gram production technology.
- Similar trends of knowledge level was found between beneficiary and non-beneficiary farmers.

Recommendation:

- It is recommended that availability of seed and fertilizers at a required time be assured in the area. The responsibility of assuring the critical production inputs may be entrusted to cooperative societies, NGOs, input dealers of the area concern and over and above the research institution eg. Agricultural Research Station, Banswara.
- In view of the findings, it is suggested that subject matter specialist of K.V.K., should visit the field more frequently and assure that the adoption of all the practices (as a package) at the farmers' field.

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