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Knowledge level of beneficiary and non-beneficiary farmers of front line demonstrations regarding improved production technology of chickpea

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Abstract
Chickpea is one of the most important pulse crops of Gujarat state. In Gujarat, Saurashtra region is one of the most remarkable regions for chickpea cultivation and production. Bhavnagar district of Saurashtra region is very good producer district. Chickpea is a major Rabi pulse crop specially grown in Saurashtra region Gujarat where Krishi Vigyan Kendra scientists are motivating the farmers to enhance their knowledge level regarding Chickpea production technology. It was found that FLD beneficiary farmers (chickpea) were having good knowledge about Seed and Sowing (80.16%), Plant protection (including weed) (76.25%), Crop Nutrient (75.00%), Soil preparation (74.79%), Harvesting (72.00%), Market (68.13%), storage (64.30%) practices where as non-beneficiary farmers were reported less knowledge i.e. 74.58, 72.74, 70.78, 69.34, 67.00, 66.25and 58.75 per cent with regard to Soil preparation, Plant protection (including weed), Seed and Sowing, Crop Nutrient, harvesting, Market 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 chickpea.

Keywords: FLD; Beneficiary and non-beneficiary, Knowledge, chickpea

Introduction
The area under the cultivation of chickpea is increasing every year as it is one of the most important pulse crops of India due to its qualitative as well as quantitative importance. It is one of the most important legume crops of Gujarat state. In Gujarat, Saurashtra region is one of the most remarkable regions for chickpea cultivation and production. Among various districts of Saurashtra region, Junagadh is very good producer district. Generally, the yield of production of chickpea is mainly depends upon chickpea growers' level of knowledge as well as their adoption of recommended chickpea production technology. Though, knowledge is the main aspect behind the adoption of production technology. Hence, it was high time to measure the level of knowledge of the chickpea growers about recommended production technology. To measure the knowledge level of beneficiary and non-beneficiary farmers of front line demonstrations regarding improved production technology of chickpea.

Methodology
Front 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 situation. Hence, it was felt to know the impact of latest package of practices of chickpea 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 chickpea growers to bring about change in their knowledge which helped the farmers in enhancing the chickpea production. Therefore, a study entitled "Impact of Front Line Demonstrations on Knowledge level of Beneficiary Farmers of Bhavnagar District about Production Technology of Chickpea" was under taken with specific objective: To measure the knowledge level of beneficiary and non-beneficiary farmers of front line demonstrations regarding improved production technology of chickpea.
Out of 10 talukas in Bhavnagar district, 4 Taluka namely Vallabhipur, Gariyadhgar, Sihor and Palitana were selected purposively for the study due to favorable area of production for researcher.

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Thus, 80 beneficiary and 80 non – beneficiary chickpea growers selected for the study purpose from 6 villages. The package of practices namely, soil preparation, plant protection (including weed), seed and sowing, crop nutrient, harvesting, market and storage practices of chickpea recommended by JAU for the Saurashtra region was considered as improved chickpea production technology and included in knowledge test to measure the knowledge level of chickpea growers. Each Selected practice was further divided in to several questions to find out the existing knowledge level of respondents about chickpea 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 74.

The responses obtained from the respondents were counted and converted in to mean percent score. The knowledge index for each respondent was calculated by using the following formula.
Where,

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

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 46 to 66. The respondents were grouped in the three categories, using mean (56.63) And standard deviation (4.30).Respondents who scored below 52.32 were grouped under low knowledge level, there respondents who scored 52.32 to 60.93 were considered under medium knowledge level and those who obtained score above 60.93 knowledge score were Categorized under high knowledge level about improved chickpea production technology.

The data in Table 1 reveals that majority of Beneficiary farmers (51.25%) had medium knowledge, whereas 18.75 percent and 30.00 percent beneficiary Farmers were having low and high knowledge level about improved chickpea production technology, respectively. Similarly, the minimum and maximum score obtained by non-beneficiary farmers were 43 and 63.There respondents were grouped in to three categories Using mean (52.83) and standard deviation (4.81) Respondents who secured below 48.01 knowledge Scores were grouped in to low knowledge level, the Farmers who scored between 48.01 to 57.64 were grouped under medium knowledge level and those who secured above 57.64 knowledge scores were categorized under high knowledge level.

Table 1: Knowledge level of beneficiary farmers about recommended cultivation practices of chickpea

N=80

S. No	Knowledge level	No. of respondent	Per cent
1	Low (score blow 52.32)	15	18.75
2	Medium (score between 52.32 to 60.93)	41	51.25
3	High (score above 60.93)	24	30.00
	Total	80	100

Mean -56.63, SD- 4.30

Table 2. Knowledge level of non- beneficiary farmers about recommended cultivation practices of chickpea

N=80

S. No	Knowledge level	No. of respondent	Per cent
1	Low (score blow 48.01)	22	27.50
2	Medium (score between 48.01 to 57.64)	45	56.25
3	High (score above 57.64)	13	16.25
	Total	80	100

Mean -52.83, SD- 4.81

The data in Table 2 indicate that the majority of non-beneficiary farmers (56.25%) had medium Knowledge level, whereas 27.50 and 16.25 percent non beneficiary farmers were having low and high Knowledge level about improved chickpea production technology.

Table 3: Practice wise Knowledge level of beneficiary and non- beneficiary farmers about recommended cultivation practices of chickpea

S. No	Improved practices	Beneficiary (N-80)		Non- Beneficiary (N-80)	
		MPS	RANK	MPS	RANK
1	Soil preparation	74.79	IV	74.58	I
2	Seed and Sowing	80.16	I	70.78	III
3	Crop Nutrient	75.00	III	69.34	IV
4	Plant protection (including weed)	76.25	II	72.74	II
5	Harvesting	72.00	V	67.00	V
6	Storage	64.30	VII	58.75	VII
7	Market	68.13	VI	66.25	VI

Practice wise knowledge level of beneficiary and non-beneficiary farmers with regards to improved chickpea production technology was also measured in terms of MPS. The total numbers of 8 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 Seed and Sowing, Plant protection (including weed), Crop Nutrient, Soil preparation, Harvesting, Market, storage Were found to be 80.16, 76.25, 75.00, 74.79, 72.00, 68.13 and 64.30 MPS, and ranks were assigned I, II, III, IV, V, VI and VII respectively. Table 3 reveals that non-beneficiary farmer 74.58, 72.74, 70.78, 69.34, 67.00, 66.25 and 58.75 MPS with regard to soil preparation, plant protection (including weed), seed and sowing, crop nutrient, harvesting, market and storage practices, and ranks were assigned in descending order from I to VII, respectively

Conclusion
It was found that majority of beneficiary (51.25 percent) farmers were having medium knowledge level, whereas (18.75 and 30.00 percent) farmers were having low and high knowledge level about improved chickpea production technology, respectively. In case of non-beneficiary farmers majority of their respondents (56.25%) had medium knowledge level whereas (27.50%) and 16.25 percent farmers were having low and high knowledge level about improved chickpea production technology, respectively. According to practice wise, it was also found that both type of respondents (beneficiary and non-beneficiary) possessed maximum knowledge regarding seed and sowing and soil preparation (80.16 and 74.58) and plant protection (including weed) (76.25 and 72.74) of chickpea crop, respectively. Similarly the least knowledge was possessed regarding storage (68.13 and 66.25), respectively.

References
1. Singh N, Sharma, F.L. Impact of FLD on gain in knowledge about mustard production technology among farmers of Bharatpur district. Indn. Res. J Extn. Edu. 2005;5(1):18-20.
2. Choudhary S, Yadav JP. Knowledge Level of Beneficiary and Non-Beneficiary Farmers about Improved Mung bean Production Technology. Indian Res. J Ext. Edu. 2012, 12(2).
3. Tankodara KD, Lakhalani MM, Gohil GR. Chickpea Growers' Knowledge about Chickpea Production Technology in Junagadh District of Gujarat State, India. Int. J Curr. Microbial. App. Sci. 2020;9(5):1796-1799.