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Attitude of Farmers towards Groundnut Cultivation in Bikaner District of Rajasthan

Amit Kumar[1]*, L. S. Bareth[2], R. Ghaswa[3] and J. P. Yadav[4]

[1]Faculty of Agricultural Sciences, SGT, University, Gurugram, Haryana, India
[2]Swami Keshwanand Rajasthan Agricultural University Bikaner, Rajasthan, India
[3]Krishi Vigyan Kendra, Ratlam, Madhya Pradesh, India
[4]Sri Karan Narendra Agriculture University, Jobner, Jaipur, Rajasthan, India
*Corresponding author email id: amitexted2010@gmail.com

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ABSTRACT

The National Mission on Oilseed and Oil Palm (NMOOP) in India aims to increase oil seed and oil palm production and productivity by converting fallow lands to oilseed crops and diversifying regions away from low-yielding cereals. It plans to improve vegetable oil availability and reduce edible oil imports by increasing oilseed production and productivity from 29.79 million tons and 1122 kg/ha in the 12th plan period to 36.10 million tons and 1290 kg/ha by the end of 2019-20. The study, aimed to explore respondents' opinions towards groundnut cultivation was conducted on 80 beneficiary farmers of NMOOP and 80 non-beneficiaries. Groundnut growers, accounting for 11.24 percent, had a less favorable attitude toward groundnut cultivation whereas, 69.38 per cent of respondents fell into the moderately favorable category. It was noted that the both category of respondents had favorable attitude towards the interventions of groundnut cultivation.

INTRODUCTION

Agricultural extension aims to disseminate knowledge from the global knowledge base and from local research to farmers. Conceptually attitude is 'the degree of positive or negative affect associated with some psychological object' (Thurstone 1928). Attitude is important component of behavior as it plays significant role in forming the overt and covert behavior of a person which determines the success or failure of any endeavor. The world's most significant oilseed and supplementary food crop is groundnut (*Arachis hypogaea* L.). There is 18.9 million hectares of land and 17.8 million tons of production in the world. After China, India is the world's second-largest producer of groundnuts, accounting for around 16 per cent of global production. Groundnut is India's most important oilseed crop, and it contributes significantly to the country's vegetable oil shortfall. Oilseeds are the country's principal source of vegetable oils, which are mostly farmed under rainfed conditions over 26.4 million hectares with a total yield of 37.1 million MT. Increased seed replacement ratio with a focus on varietal replacement; increased irrigation coverage under oilseeds from 26 to 36 per cent; diversification of area from low yielding cereals crops to oilseeds crops; intercropping of oilseeds with cereals/ pulses/ sugarcane; and use of fallow land after paddy/potato cultivation are all part of the mission's strategy. The programme is being conducted in a mission mode, with all stakeholders actively participating. In light of this, the current study was done to investigate farmer attitudes regarding groundnut farming.

METHODOLOGY

The Likert type summated rating (Likert, 1932) approach was used to design the attitude scale since it is widely used for evaluating attitudes and is the most effective and efficient method for producing highly reliable scales. The study was carried out in the Bikaner district of Rajasthan chosen as it has the highest production of oilseeds (47.2 tons) among all districts in the state. The district of Bikaner is divided into six panchayat samities: Bikaner, Sri Dungargarh, Lunkaransar, Nokha, Khajuwala, and Kolayat. Two panchayat samities (Bikaner and Sri Dungargarh) were chosen based

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on their larger area and production of oilseed crops, and the NMOOP scheme was also implemented in these panchayat samities. In the Bikaner district, NMOOP initiatives focused mostly on two crops: mustard and groundnut. In the 2014-15 fiscal years, NMOOP activities were carried out in 4 villages in the selected two panchayat samities for groundnut crop. Two villages from each selected panchayat samiti were chosen at random for the study and four villages from two panchayat samities collaborated in the groundnut crop were chosen. For selection of beneficiary respondents, a comprehensive list of groundnut growers benefited under the National Mission on Oilseed and Oil Palm in 2014-15, was prepared separately with the help of the office of the Deputy Director of Agriculture (Extension) for the selected villages. From each village, 20 beneficiaries and an equal number of non-beneficiary farmers were selected randomly for groundnut crops making a total of 160 groundnut growers. For the groundnut crop, an attitude scale was created using Edwards' (1969) method of summated ratings. All feasible factors that differentiated between the farmers' positive and negative views regarding groundnut cultivation were gathered and included in the scale. The final scale featured a total of 14 items. Farmers' attitude was analyzed using mean score of the entire number of respondents for each item. With the use of mean and standard deviation calculations, respondents were divided into five categories: strongly agree, agree undecided, disagree, and strongly disagree.

RESULTS AND DISCUSSION

Table 1 reveals that 68.75 per cent of beneficiary and 70.00 per cent of non-beneficiary respondents had a moderately favorable attitude towards groundnut cultivation, whereas, 8.75 per cent of beneficiaries and 13.75 per cent of non-beneficiary respondents had a less favorable attitude towards groundnut cultivation. Likewise, 22.50 per cent and 16.25 per cent of beneficiary and non-beneficiary respondents expressed highly favorable attitudes towards groundnut cultivation respectively. Furthermore, 69.38 per cent from all respondents had a moderately favourable view toward groundnut cultivation. The study's findings are consistent with that of Kumar et al., (2018), who indicated that 61.77 per cent of respondents had a favorable opinion toward soybean cultivation, with 11.57 per cent expressing the most favorable attitude and 26.66 per cent possessing the least favorable attitude.

A mean percent score (MPS) was generated for each item and then sorted according to the MPS. Table 2 summarizes that the majority of beneficiary respondents strongly agreed with Groundnut recommendations properly give better yield," which scored highest with 86.25 MPS, followed by "Groundnut cultivation grown in a large area is profitable", "Groundnuts fetch good value for the produce", "Hybrid varieties of groundnut are superior in production", "Recommended production technique gives higher yield than traditional practices method", "A farmer can get a good price by grading his produce", "Groundnut cultivation is suitable for small and marginal farmers" and "Recommended practices need high skill" with 83.25, 82.75, 82.00, 79.50, 78.25, 74.75 and 74.00 MPS. This may be due to the fact that respondents possessed complete knowledge about the groundnut cultivation. Furthermore, the beneficiary respondents agreed with the attitude item "Groundnut gets markets relatively easier than others." The mean percent scores for all assertions varied from 52.50 to 86.25, indicating that respondents had a moderately favorable to extremely favorable attitude toward various claims about groundnut cultivation

Table 1. Attitude towards groundnut cultivation

S.No.	Category	Beneficiary (n=80) %	Non-beneficiary (n=80) %	Total (n=160) %
1.	Less favorable (<47 score)	8.75	13.75	11.24
2.	Moderately favorable (47 to 59 score)	68.75	70.00	69.38
3	Highly favorable (>59 score)	22.50	16.25	19.38

F = Frequency; % = percent; Mean=53.03; SD=6.14

Table 2. Attitude of beneficiary and non-beneficiary respondents towards groundnut cultivation

S.No.	Items	Beneficiary (n=80) MPS	Non-beneficiary (n=80) MPS	Overall (n=160) MPS
1.	Groundnut recommendations properly give better yield.	86.25	74.25	80.25
2.	Recommended groundnut practices are difficult to adopt. (-ve)	62.50	69.50	66.00
3.	Recommended practices needs high skill.	74.00	75.50	74.75
4.	Recommended production technique gives higher yield than traditional practices method.	79.50	72.50	76.00
5.	Illiterate farmers cannot adopt recommended practices. (-ve)	72.00	75.00	73.50
6.	Utilizing recommended production technique is a waste of money. (-ve)	57.25	50.00	53.63
7.	Recommended based production technique is a labour intensive job. (-ve)	64.25	67.50	65.88
8.	Groundnuts fetch good value for the produce.	82.75	80.00	81.38
9.	Groundnut gets markets relatively easier than other.	67.00	52.00	59.50
10.	Hybrid varieties of groundnut are more superior in production.	82.00	78.75	80.38
11.	Nutrient management in groundnut is unpredictable. (-ve)	68.25	69.75	69.00
12.	Groundnut cultivation is suitable for small and marginal farmer.	74.75	63.00	68.88
13.	Groundnut cultivation grown in a large area is profitable.	83.25	76.25	79.75
14.	A farmer can get good price by grading his produce.	78.25	75.25	76.75
	Overall	73.71	69.95	71.83

MPS =mean percent score

Table 3. Comparison of level of attitude between beneficiary and non-beneficiary respondents towards groundnut cultivation

S.No.	Statements	Beneficiary (n=80)		Non-beneficiary (n=80)		'Z' value
		Mean ±	S.D.	Mean ±	S.D.	
1.	Groundnut recommendations properly give better yield.	4.31	0.88	3.71	1.42	3.60**
2.	Recommended groundnut practices are difficult to adopt. (-ve)	3.13	1.52	3.48	1.24	1.78^{NS}
3.	Recommended practices needs high skill.	3.70	1.34	3.78	1.32	0.40^{NS}
4.	Recommended production technique gives higher yield than traditional practices method.	3.98	1.06	3.63	1.35	2.04*
5.	Illiterate farmers cannot adopt recommended practices. (-ve)	3.60	1.11	3.75	1.08	0.97^{NS}
6.	Utilizing recommended production technique is a waste of money.(-ve)	2.86	1.75	2.50	1.41	1.61^{NS}
7.	Recommended based production technique is a labour intensive job. (-ve)	3.21	1.32	3.38	1.48	0.82^{NS}
8.	Groundnuts fetch good value for the produce.	4.14	0.90	4.00	1.10	0.97^{NS}
9.	Groundnut gets markets relatively easier than other.	3.35	1.55	2.60	1.45	3.53**
10.	Hybrid varieties of groundnut are more superior in production.	4.10	1.06	3.94	1.08	1.07^{NS}
11.	Nutrient management in groundnut is unpredictable. (-ve)	3.41	1.38	3.49	1.30	0.40^{NS}
12.	Groundnut cultivation is suitable for small and marginal farmer.	3.74	1.33	3.15	1.53	2.90**
13.	Groundnut cultivation grown in a large area is profitable.	4.16	1.02	3.81	1.19	2.23*
14.	A farmer can get good price by grading his produce.	3.91	1.02	3.76	1.03	1.03^{NS}
	Overall	3.69	1.23	3.50	1.29	1.06^{NS}

practices. The majority of non-beneficiary respondents strongly agreed with the attitude statement "Groundnuts fetch good value for the produce," followed by "Hybrid varieties of groundnut are more superior in production", "Groundnut cultivation grown in a large area is profitable", "Recommended practices needs high skill", and "A farmer can get a good price by grading his produce" with 78.75, 76.25, 75.50, and 75.25 MPS, respectively. These assertions were strongly agreed upon, which might be attributed to respondents' extensive understanding of groundnut cultivation. According to the data, the non-beneficiary respondents agreed with the attitude statement "Groundnut cultivation is suitable for small and marginal farmers" with 63.00 MPS. It was also discovered that the majority of non-beneficiary respondents, to the extent of 52.00 MPS, strongly disagreed with the negative statement "Groundnut gets markets relatively easier than others." The overall level of attitude toward groundnut cultivation among beneficiary respondents was 73.71 MPS, whereas the level of attitude among non-beneficiary respondents was 69.95 MPS. There was difference in magnitude of Mean Percent Score of beneficiary and non-beneficiary respondents. The study's findings are consistent with those of Kumar et al., (2018). Thus, it can be concluded that respondents had a favorable attitude toward groundnut cultivation, but they still require some encouragement from the government or an organization to prepare favorable and supportive policies, as well as to strengthen and revitalize the existing extension system, responsible for technical know-how and other relevant details to farmers regarding interventions of groundnut cultivation in their respective area. It means that farmers are always thinking about how they can maximize their return from their fields, and NMOOP is the best alternative in front of the farming community, particularly in Rajasthan, where the majority of oilseed growers were interested in adopting interventions provided by NMOOP in order to earn more profit.

The data in Table 3 show that the calculated 'z' value was higher than the tabulated value at the 1 & 5 per cent level of significance in five groundnut cultivation items, namely "Groundnut recommendations properly give better yield", "Groundnut gets markets relatively easier than other", "Groundnut cultivation is suitable for small and marginal farmers", "Groundnut cultivation grown in a large area is profitable" and "Recommended production technique gives higher yield than traditional practices method". This revealed that beneficiary and non-beneficiary respondents had very different attitudes on five statements about groundnut cultivation. It indicates that beneficiary respondents had a more favorable attitude toward groundnut cultivation than non-beneficiary respondents in the five statements listed above. The value of the 'z' test was determined to be non-significant in the remaining nine assertions concerning groundnut cultivation. This indicates that there is no difference in the attitudes of both groups of groundnut growers.

The overall computed 'z' value for groundnut crops was (0.78 and 1.06) lower than the tabulated value, indicating a similarity in attitude between beneficiary and non-beneficiary farmers about groundnut cultivation practices. Further examination of the table reveals that the mean score of groundnut beneficiary farmers was (3.56 and 3.69) higher than that of non-beneficiary farmers (3.42 and 3.50), indicating that beneficiary farmers had a more favorable attitude toward groundnut cultivation than non-beneficiary farmers. This non-significant difference between beneficiary and non-beneficiary respondents suggests that the oilseed mission performed a non-significant but favorable impact in changing attitudes about various groundnut crop production technologies in the research area.

CONCLUSION

It was discovered that both (beneficiary as well as non-beneficiary) categories of respondents were favorable to groundnut cultivation interventions. Farmers were continuously trying to optimize their yield from their groundnut field. The Mission on Oilseed and Oil Palm proved to be the best alternative in front of the oilseed farming community, especially in Rajasthan, with a lot of big farmers, and the farmers were interested in adopting the interventions provided by the Mission on Oilseed and Oil Palm to earn more profit. It suggested that the oilseed mission under consideration was having a positive influence.

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