

ATTITUDE OF TRIBAL AND NON-TRIBAL FARMERS TOWARDS THE BALANCED USE OF CHEMICAL FERTILIZERS

S. N. Ojha¹, S. D. Dhakar² and L. S. Bareth³

INTRODUCTION

Population of India is increasing at an alarming rate, which germinates many problems. Among them, poverty and ignorance are the root causes of many problems relating to change and development in rural areas. The expectation from the agricultural sector under the constraint of land availability for agricultural use has to be met largely through increasing productivity per unit of land. Looking to shortage of green manure and use of land through out the year, it became necessary to use chemical fertilizer to maintain the soil fertility level. Researches have shown that only by use of balanced fertilizer, the yield of crop can be increased up to 35 per cent. For the adoption of the any agricultural technology, the attitude and awareness are pre conditional factors for any action. Attitude of an individual play an important role in determining the behaviour with respect to a particular psychological object. Keeping this in view the present study was under taken with the following specific objectives:

1. To study the effect of personal attributes of tribal and non tribal farmers on gain and retention of knowledge about the balanced use of fertilizer in major crops of the area.
2. To study the attitude of tribal and non-tribal farmers towards the balanced use of fertilizers in major crops of the area.²

3. To find out the relationship between attitude towards the message gain and retention of knowledge by tribal and non-tribal farmers.

METHODOLOGY

Experimental research design was used to know the gain and retention of knowledge of balanced use of fertilizer in major crops of the area by the tribal and non-tribal farmers. The tribal and non-tribal farmer respondents were selected from the Jhadol and Asind panchayat samities of Rajasthan, respectively. From these panchayat samities; eight villages each were randomly selected, making a total of 16 villages. From each village, 70 to 80 farmers were selected randomly on which specially designed knowledge test was administered. On the basis of the scores obtained, a homogeneous group of 30 farmers were identified from each village, making a total of 480 sample size. Among these, 240 tribal and 240 were non-tribal farmers. To study the effectiveness of traditional media in terms of gain and retention of knowledge the traditional media like Pad, Kavad & Puppet and their combination viz; Pad + Kavad, Pad + Puppet, Kavad + Puppet & Pad + Kavad + Puppet were selected for the study. The lecture method was identified for its comparison with the traditional media and their combinations.

After consultation with subject matter specialists and extension personnel the knowledge regarding balanced use of fertilizer in major crops of the area was

¹ Associate Prof. Exn. KVK, Dungarpur (Raj.)

² Associate Prof. KVK, Bhilwara (Raj.)

³ Associate Prof. Agri. College, Bikaner (Raj.)

identified as message for the study. Finally, 35 items with respect to fertilizer use were included in knowledge test. The reliability of these items was ascertained with the split halves method. The knowledge test administered to the tribal and non-tribal farmers thrice, (i) prior to the exposure, in order to determine initial exposure, (ii) after imparting learning through the selected media in order to determine the gain in knowledge and (iii) finally after 15 days of teaching, to know the retention of knowledge.

To find out the effect of age, education and socio-economic status on gain in and retention of knowledge with respect to use of fertilizers in major crops; analysis of variance ('F' test) was applied. For the attribute of age, the respondents were grouped as younger (below 24 years), middle aged (24 to 46 years) and older (above 46 years). Similarly, respondents were grouped on the basis of their level of education as illiterate, can read & write only and educated. In case of socio-economic status, the participants were grouped as lower (up to 16 score), medium (17 to 27 score) and higher socio-economic status (above 27 score). The data were collected by personal interview method.

RESULTS AND DISCUSSIONS

Table 1 indicates that out of the four, three personal attributes viz. age, education and socio-economic status had significant effect in both gain and retention of knowledge of

tribal and non-tribal respondents about the balanced use of fertilizer in major crops. There was no effect of family type of respondents in gain as well as retention of knowledge.

Data also show that educational level of the non-tribal farmers effected highest in retention of knowledge among all respondents followed by retention of knowledge of tribal farmers and gain in knowledge of non-tribal farmers. Level of education and socio-economic status were also highly significant with gain in knowledge and retention of knowledge of tribal and non-tribal farmers.

Efforts were also made to determine the farmers attitude towards the balanced use of fertilizers in major crops. An attitude scale on the line of 'Likert's method of summated rating' was developed and administered to the respondents of the study. The view expressed by the participants are presented in Table No. 2.

The table 2 reveals that the attitude of both the tribal and non-tribal farmers was favourable for balanced fertilizer use in major crops. The table also indicates that the tribal farmers were most convinced about the benefit of the use of fertilizer in different crops in rainfed agriculture as this statement ranked I by tribal farmers whereas III by non-tribal farmers. Under irrigational condition use of fertilizer increase the crop productivity ranked I by non-tribal and IV by tribal respondents. Both the tribal and

Table 1 : Effect of personal attributed towards gain and retention of knowledge about the balanced use of fertilizer in major crops.

Personal attributes	Tribal farmers		Non-tribal farmers	
	Knowledge gain (F Value)	Retention of knowledge (F value)	Knowledge gain (F Value)	Retention of knowledge (F value)
Age	3.096	3.799*	3.46*	3.213*
Education	9.368**	10.79**	10.92**	12.88**
Socio-Economic	4.149*	3.315*	3.157*	5.541**

* Significant at 5 per cent level of significance

** Significant at 1 per cent level of significance

Table 2 : Mean scores and their relative ranks on various statements of attitude of tribal and non-tribal farmers towards fertilizer use in major crops.

S. No.	Attitudinal Statement	Tribal		Non-Tribal	
		M.S.	Rank	M.S.	Rank
1.	Use of fertilizer deteriorates soil fertility	4.191	11	4.471	9
2.	The soil does not become compact due to fertilizer	4.408	7	4.643	6
3.	Crop productivity increases by the use of fertilizer under irrigated conditions.	4.429	4	4.901	1
4.	The investment on fertilizers is very high	4.506	2	4.881	2
5.	Crop productivity varies under different methods of fertilizer application.	4.319	8	4.621	7
6.	Fertilizer use in crops grown for food grains is harmful for human health.	4.221	10	4.209	11
7.	Use of fertilizer in rainfed agriculture increases the yield of crops.	4.679	1	4.776	3
8.	Crop requires more irrigation if they are fertilized.	4.419	5	4.498	8
9.	Use of fertilizers is desirable as they give quick result in comparison to manures.	4.416	6	4.711	4
10.	Special techniques are needed for applicaiton of fertilizers	4.307	9	4.211	10
11.	Use of fertilizers does not lead to soil acidity.	3.009	14	2.817	15
12.	The water holding capacity of the soil increases on account of fertilizer use.	2.702	15	3.112	14
13.	Farmers are always fear to use fertilizers because the crop production is dependent on rainfall.	4.489	3	4.707	5
14.	The germinability of the seeds goes down with the use of fertilizers.	3.398	13	4.167	13
15.	Application of fertilizers does not increase the susceptibility of crops to insects and diseases.	4.008	12	4.198	12
	Overall attitude of farmers	4.10		4.33	

non-tribal respondents reported that investment on fertilizers in very high.

The respondents are always in fear about the use of fertilizer as rainfall reaming always uncertain. In other words, it can be safely said that agriculture is the gamble of monsoon and ranked III in tribal farmers and V in non-tribal farmers. The respondents reported that fertilizer application give quick results that the manures ranked IV in non-tribal and VI in tribal farmers. The respondents replied that fertilizer application does not deteriorates the quality

of soil ranked VI by non-tribal and ranked VII by tribal farmers.

Respondents of both the category showed less favourable attitude as chemical fertilizer does not increase water holding capacity of the soil and also increases soil acidity.

It is evident from table 3 that the relationship between attitude towards the message i.e. balanced use of chemical fertilizer with gained and retention of knowledge was highly significant and positive. This indicates that over all outlook of the respondents on fertilizer application in major crops had a

Table 3 : Correlation coefficient between attitude towards the message with gain and retention of knowledge by the respondents

Category of Respondents	Calculated 'r' value	
	Gain in knowledge	Retention of knowledge
Tribals	0.496**	0.406**
Non-tribals	0.698**	0.598**

** Highly significant.

remarkable impact on their gain and retention of knowledge. The table also depicts that more favourable was the attitude of the farmers leads to higher the gain in knowledge as well as retention of knowledge. On the contrast, respondents with less favourable opinion towards the message could gain and retain the knowledge to lesser extent.

CONCLUSION

On the basis of findings of the study the following inferences are drawn :

- ◆ All the selected personal attributes except type of family have significant effect in both gained and retention of knowledge among tribal and non-tribal farmers about the use of fertilizer in major crops. Out of three personal attributes, level of education attributed highest in gain and retention of knowledge for both tribal and non-tribal respondents.
- ◆ In general tribal and non-tribal farmers had positive attitude towards the use of Chemical fertilizer. Further tribal

respondents had more favourable attitude about use of fertilizer in rainfed agriculture increase the crop production at desired level and ranked I whereas, non-tribal respondents had positive attitude about the statement that under irrigation condition, use of fertilizer increases the crop production. Tribal and non-tribal farmers also reported that investment on fertilizer is very high hence it is not possible to purchase the required fertilizer for all crops.

- ◆ The message i.e. balanced use of fertilizer in major crops had highly significant impact in both the categories of farmers i.e. tribal and non-tribal regarding gain and retention of knowledge.

REFERENCES

- Chauhan, V. L. and Ravi, G. C. 1984. "Attitude of tribal and non-tribal farmers towards adult literacy and improved agricultural practices" *Ind. Jr. Adult Edu.* Vol. 45, No. 3.
- Tripathi, S. L., Dubey, V. K. and Srivastava, G. C. 1970. "Attitude of Gram Sevak towards community Development Programme" *Ind. Jr. Extn. Edu.* 6 (1 & 2). pp. 79.