

## RELATIONSHIP OF FARMERS PROFILE WITH UTILIZATION OF FEEDBACK MECHANISM OF AGRICULTURAL EXTENSION SERVICES

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### ABSTRACT

*Ex-post facto research design was followed for carrying out the study in the state of Gujarat. Sample comprised of 150 farmers selected randomly from thirty randomly selected villages of five districts in Saurashtra region of Gujarat which was a purposive selection. Age, Education, Experience, Farm size, Training received, Extension contact, Socio-political participation, Time, Access to get/give feedback, Feedback during crisis, Reporting, Transport facilities, Job commitment, Role awareness, Motivation, Extension service orientation, Participation behavior in a group, Extension teaching methods, Communication media used, Ability to give feedback, and Level of interaction were the profile characteristics of farmers studied under independent variables in the study. Utilisation of Feedback Mechanism of Agricultural Extension Services was the dependent variable selected for the study. The findings revealed that farmers were middle aged, possessed secondary education, medium farming experience, medium training received, low extension contact, small farmers, low socio political participation, low time, high access to get /give feedback, low feedback during crisis, medium reporting, low transport facilities, high job commitment, low role awareness, low achievement motivation, high extension service orientation, low participation behavior in group, low use of extension teaching methods, medium communication media used, medium ability and medium level of interaction. respectively. The profile characteristics like education, experience, training undergone, reporting, participation behaviour in group, extension teaching methods, communication media used, farm size, ability to give feedback, level of interaction were positively significant with extent of utilisation in feedback mechanism. Hence, above variables should be taken into consideration for recommendation to policy makers to improve the effective utilization of feedback mechanism in Agricultural Extension Services.*

**Keywords:** agricultural extension services, feedback mechanism

### INTRODUCTION

Feedback through effective feedback mechanism increases the functional linkage between the clientele, technologies and the development agencies. Hence, the feedback mechanism ought to be used at all level of extension organizations, so that clienteles' perception and their views could be reached to the planners, policy makers and researchers for the sustainability of the technology in the long run. So far very few efforts were made in this regards. Therefore, it is essential to analyze the factors and suggest strategies to the stakeholders of feedback mechanism for its effective functioning and use in Agricultural Extension Activities.

An attempt has been made to study the relationship between profile characteristics of farmers and utilization of feedback mechanism of Agricultural Extension Services in order to formulate a strategy in effective delivery of services to enable effective utilisation by farmers, thus it

serves as ready – reckoner for policy makers to put forth the strategy into implementation and thus uplifting the farming community to get better returns in the long run.

### OBJECTIVE

To know the relationship of farmers profile with utilization of feedback mechanism of agricultural extension services

### METHODOLOGY

Ex-post facto research design was followed for carrying out the study in the state of Gujarat. Sample comprised of 150 farmers selected randomly from thirty randomly selected villages of five districts in Saurashtra region of Gujarat which was a purposive selection. Age, Education, Experience, Farm size, Training received, Extension contact, Socio-political participation, Time, Access to get/give feedback, Feedback during crisis, Reporting, Transport

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facilities, Job commitment, Role awareness, Motivation, Extension service orientation, Participation behavior in a group, Extension teaching methods, Communication media used, Ability to give feedback, and Level of interaction were the profile characteristics of farmers studied under independent variables in the study. Utilisation of Feedback Mechanism of Agricultural Extension Services was the dependent variable selected for the study. Relevant scales and schedules have been used to study these independent variables. The utilization of utilization of feedback mechanism of Agricultural Extension Services by farmers which was measured with an index developed was related with these profile characteristics using coefficient of correlation.

### RESULTS & DISCUSSION

**Table 1: Distribution of respondents based on their profile characteristics n=150**

Sr. No.	Category	Frequency	Percent
1	<b>Age</b>		
	Young	57	38.00
	Middle	72	48.00
	Old	21	14.00
2	<b>Education</b>		
	Illiterate (unable to read and write)	48	32.00
	Up to primary level (up to 7 <sup>th</sup> Std.)	22	14.67
	Secondary level (8 <sup>th</sup> to 10 <sup>th</sup> Std.)	60	40.00
	Higher education (above 10 <sup>th</sup> Std.)	20	13.33
3	<b>Experience</b>		
	Low	48	32.00
	Medium	79	52.67
	High	23	15.33
4	<b>Training received</b>		
	Low	87	58.00
	Medium	43	28.67
	High	20	13.33
5	<b>Extension Contact</b>		
	Low	34	22.67
	Medium	104	69.33
	High	12	08.00
6	<b>Farm size</b>		
	Small size of land holding (up to 2 ha)	52	34.67
	Medium size of land holding (2.1 to 5 ha)	68	45.33
	Large size of land holding (above 5 ha)	30	20.00

7	<b>Socio political participation</b>		
	low time	105	70.00
	Medium time	35	23.33
	High time	10	06.67
8	<b>Preferred time for giving feedback</b>		
	Low	28	23.33
	Medium	55	45.84
	High	37	30.83
9	<b>Access to get/give feedback</b>		
	Low	38	25.33
	Medium	67	44.67
	High	45	30.00
10	<b>Feedback during crisis</b>		
	Low	32	21.33
	Medium	103	68.67
	High	15	10.00
11	<b>Reporting</b>		
	Low	95	63.33
	Medium	40	26.67
	High	15	10.00
12	<b>Transport facilities</b>		
	Low	90	60.00
	Medium	49	32.67
	High	11	7.33
13	<b>Job commitment</b>		
	Low	10	6.67
	Medium	51	34.00
	High	89	59.33
14	<b>Role awareness</b>		
	Low	54	36.00
	Medium	50	33.33
	High	46	30.67
15	<b>Achievement motivation</b>		
	Low	98	65.33
	Medium	40	26.67
	High	12	08.00
16	<b>Extension service orientation</b>		
	Low	36	24.00
	Medium	89	59.33
	High	25	16.67
17	<b>Participation behavior in group</b>		
	Low	98	65.33
	Medium	34	22.67
	High	18	12.00
18	<b>Extension teaching methods</b>		
	Low	63	42.00
	Medium	77	51.33
	High	10	06.67
19	<b>Communication media used</b>		
	Low	55	36.67
	Medium	65	43.33
	High	30	20.00

20	<b>Ability to give feedback</b>		
	Low	58	38.67
	Medium	77	51.33
	High	15	10.00
21	<b>Level of Interaction</b>		
	Low	65	43.33
	Medium	72	48.00
	High	13	8.67
22	<b>Overall extent of feedback mechanism in agricultural extension services</b>		
	Low	85	56.67
	Medium	42	28.00
	High	23	15.33

### Age

Age is the natural phenomena going on in the life of every individual human being. The age plays a crucial role in the behaviour of every individual. The farmers were categorized into middle aged (48.00%), followed by young aged (38.00%) and old aged (14.00%). The results were in accordance with Jagannadharaju (1997), Sambireddy(1997) and Prasanna (2013).

### Education

Education is a process of bringing desirable changes in knowledge, skill and attitude of an individual. It improvises people to be ready for change by changing attitude and providing more skill and knowledge. Formal education is also helpful to the any person to equip them to face difficulties and challenges in a better way. The farmers were categorized as secondary education (40.00%), followed by illiterate (32.00%), primary education (14.67%), higher education (13.33%). the results were in accordance with Jagannadharaju (1997) and Prasanna (2013).

### Experience

Farmers were under medium experience (52.67%), followed by low experience (32.00%) and high experience (15.33%). the results were in accordance with Jagannadharaju (1997), Sridhar (2001) and Prasanna (2013) and in contrast with Sambireddy (1997) and Veerendranath (2000).

### Training undergone

The farmers were under low training received (58.00%), followed by medium training received (28.67%) and high training received (13.33%). the results were in accordance to the results of Sambireddy (1997) and Prasanna (2013) and results were in contrast to the results of Ramprasad (2004) and Sarada (2004).

### Extension Contact

Keeping close contact with extension service providers and participation in various extension activities helps an individual to learn more about the technology. Active involvement of the farmers in various extension activities plays an important role in developing knowledge and skill. majority of the farmers were falling under medium extension contact (69.33%), followed by low extension contact (22.67%) and high extension contact (8.0%). In case of farmers the results were contrast with the results of Ramprasad (2004), Gopinath (2005) and Prasanna (2013).

### Farm size

Farm size has been considered as one of the factors that determine the economic and social status. Size of farm attributes in maintaining family and socio-economic development. Majority of the farmers were falling under medium farmers (45.33%), followed by small farmers (34.67%), and big farmers (20.00%). The results were in accordance to the results of Sarada (2004) and contrast with results of Ramprasad (2004) Prasanna (2013).

### Socio political participation

Social participation denotes the extent to which an individual is actively involved in the affairs of the community. Membership in any social organizations provide platform to exchange their views and feelings. Participation in different social activities definitely influences one's way of thinking, acting and behaving. It is believed that more social participation influences one's response in communication resulting in greater feedback. Majority of the farmers were under low socio political participation (70.00%), followed by medium socio political participation (24.67%) and had high socio political participation (5.33%). The results of farmers were in contrast with the results of Jagannadharaju (1997), Ramprasad (2004)and Prasanna (2013).

### Preferred time for giving feedback

Farmers were categorized as under low time (70.00%), medium time (23.33%) and high time (6.67 %). The results of farmers were in contrast to the results of Prasanna (2013).

### Access to get/give feedback

Majority of the farmers were falling under medium access to get /give feedback (44.67%) followed by high access to get /give feedback (30.00%) and low access to get / give feedback (25.33%). From the above results it could be concluded that majority of the respondents had medium to high access to feedback. This indicates the willingness of

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respondents to give feedback and be available at their work station readily to their clientele. The probable reason for this might be the good rapport with each other. The study also revealed that the respondents had high feedback giving ability too.

### **Feedback during crisis**

Majority of the farmers were falling under medium feedback during crisis (68.67%), followed by low feedback during crisis (21.33%) and high feedback during crisis (10.00%). It could be concluded that farmers belonged to low category of giving feedback during crisis. The reason for this may be due to the fact that committees lead by scientists are constituted during crisis and are given responsibility to provide timely and accurate information (feedback) and to get first-hand information from the field. During crisis farmer may not be in a position to access any body and lack of transport facilities may be the reason for low level of feedback during crisis by the farmers.

### **Reporting**

Majority of the farmers were falling under low reporting (63.33%), followed by medium reporting (26.67%) and high reporting (20.00%). The results were in contrast to the results with Sambireddy (1997) and Prasanna (2013) in case farmers and extension personnel.

### **Transport facilities**

Majority of the farmers were grouped under low transport facilities (60.00%), followed by medium transport facilities (32.67%) and high transport facilities (7.33%). The results were in contrast with the results of Ingale (1984) and Prasanna (2013).

### **Job commitment**

Majority of the farmers were falling under high job commitment (59.33%), followed by medium job commitment (34.00%) and low job commitment (6.67%).

### **Role awareness**

The farmers were distributed equally under low role awareness (36.00%), followed by medium role awareness (33.33%) and high role awareness equally (30.67%). The results were in accordance to the results of Ramprasad (2004) and Prasanna (2013) and in contrast with Sarada (2004).

### **Achievement Motivation**

It is defined as a value associated with the respondents, which drives them to excel in their occupation and related fields to reach a sense of personal accomplishment. farmers

were falling under low achievement motivation (65.33%), followed by medium achievement motivation (26.67%) and low achievement motivation (8.00%). In case of farmers the results were in contrast to the results of Mrutyumjayam (1987), Anandrao (1992) and Gopinath (2005). The results were in accordance with Prasanna (2013).

### **Extension service orientation**

Majority of the farmers were distributed equally under low role awareness (36.00%), followed by medium role awareness (33.33%) and high role awareness equally (30.67%). The results were in contrast with Prasanna (2013).

### **Participation behavior in group**

Majority of the farmers were falling under low participation behavior in a group (65.33%), followed by medium participation behavior in a group (22.67%) and low participation behavior in a group (12.00%). It is clearly evident from the above results that all the respondents i.e. research scientists, extension personnel and farmers had medium to low level of participation in group. The probable reason for this may be because of the fact that they participate in different extension activities as participant but may not be actively involved in conducting and leading different group activities.

### **Extension teaching methods**

Majority of the farmers were falling under medium use (51.33%), followed by low use (42.00%) and high use (6.67%). It is clearly seen from the results that all the respondents exhibited a trend of high to medium use of extension teaching methods in discharging their duties. This trend may be because the technology generation, transfer, refinement and further dissemination and utilisation occurs in cyclic pattern involving the three important stakeholders i.e. researcher, extension personnel and farmer constantly interacting, giving and receiving feedback from time to time.

### **Communication media used**

Farmers were falling under medium communication media used (43.33%), followed by low communication media used (36.67%) and high communication media used (20.50%). Regarding farmers the results were in contrast with Veerendranath (2000) and Prassana (2013) and were in accordance with results of Chatterjee (2000), Ramprasad (2004) and Prassana (2013).

### **Ability to give feedback**

Majority of the farmers were falling under medium ability (51.33%) followed by low ability (38.67%) and high

ability (10.00%). The farmers the ultimate users of technology never mind to give any feedback based on the technology performance. This might be the reason for farmers medium ability to give feedback.

**Level of Interaction**

Farmers were falling under medium level of interaction (48.00%), followed by low level of interaction (43.33%) and high level of interaction (8.67%). In case of farmers results were not in accordance to Sarada (2004) and Prassana (2013). The results presented above reveal a trend of medium level of interaction. Farmers regularly interact with gross root level AEO’s for technical information. Probably this might be the reason for medium level of interaction. However capacity building is required to be taken up to improve the interaction, coordination and strengthen the extension system, R-E-F linkage for effective utilization of feedback in Agricultural Extension Services.

**Extent of utilization by respondents of feedback mechanism in Agricultural Extension Services**

It could be indicated from the Table.2 that more than half of the farmers had low utilization (52.00%) followed by medium (28.00%) and high utilization (26.00%) of feedback mechanism in Agricultural Extension Services.

**Table.2: Distribution of respondents based on their extent of utilization in feedback mechanism in Agricultural Extension Services n=150**

Sr. No.	Category	Respondents	
		Frequency	Percent
1	Low Utilization	78	52.00
2	Medium Utilization	42	28.00
3	High Utilization	36	26.00

These results were in accordance with Reddy (1984). It is evident from the results that the level of utilization of feedback mechanism was low for farmers. The probable reason for this might be as the scientists and extension personnel take a lead role in conducting various activities of feedback mechanism and support general extension activities their extent of utilization was medium.

**Relationship of profile characteristics of farmers with utilisation of services**

Results of relationship between the independent variables and the extent of utilisation of feedback mechanism by the respondents have been presented in the Table 3.

The correlation values presented in Table 3 revealed that variables like education, training received, reporting, extension teaching methods, ability to give feedback and communication media used were positively significant with utilisation of feedback mechanism at 0.01 level of probability. The variables like experience, farm size, and level of interaction were positive significant at 0.05 level of probability with the utilisation of feedback mechanism by farmers. Hence null hypothesis was rejected by accepting the empirical hypothesis.

**Table 3 : Relationship between the selected independent variables and participation in and utilisation of feedback mechanism by the respondents**

n=150

Sr. No.	Independent Variables	Coefficient of Correlation
X <sub>1</sub>	Age	-0.142
X <sub>2</sub>	Education	0.671**
X <sub>3</sub>	Experience	0.381*
X <sub>4</sub>	Farm size	0.349*
X <sub>5</sub>	Training received	0.738**
X <sub>6</sub>	Extension contact	0.203
X <sub>7</sub>	Socio-political participation	0.216
X <sub>8</sub>	Time	0.269
X <sub>9</sub>	Access to get/give feedback	0.243
X <sub>10</sub>	Feedback during crisis	0.263
X <sub>11</sub>	Reporting	0.558**
X <sub>12</sub>	Transport facilities	0.044
X <sub>13</sub>	Job commitment	0.107
X <sub>14</sub>	Role awareness	0.269
X <sub>15</sub>	Motivation	-0.079
X <sub>16</sub>	Personality type	0.288
X <sub>17</sub>	Extension service orientation	0.197
X <sub>18</sub>	Participation behavior in a group	0.423*
X <sub>19</sub>	Extension teaching methods	0.759**
X <sub>20</sub>	Communication media used	0.062
X <sub>21</sub>	Ability to give feedback	0.681**
X <sub>22</sub>	Level of interaction	0.470*

\*--Significant at 5% level of probability, \*\*-- Significant at 1 % level of probability

The positive and significant relationship between education, training received, reporting, extension teaching methods, ability to give feedback and communication media used were due to: education increases self confidence and communication skills, this might be the reason that utilisation of feedback increases with increase in education.

There was positive and significant relation was observed between experience and utilisation of feedback mechanism at 0.05 level of probability and reason for this might be that more is the experience in farming more will be the knowledge and

wisdom resulting in significant positive correlation analysis.

In case of training undergone there was positive and significant relation was observed between experience and utilisation of feedback mechanism at 0.01 level of probability. It might be due to the fact that training helps in fine tuning up the abilities to give/ get feedback by the farmers and utilization of feedback mechanism.

There was positive and significant relation observed between farm size and utilisation of feedback mechanism observed at 0.05 level of probability and the reason might be small farmers are involved in their regular farm activities and cannot afford to participate in various activities of feedback mechanism and thus less utilisation of feedback mechanism.

There was positive significant relation observed between reporting and utilisation of feedback mechanism at 0.01 level of probability. The reason for this might be that reporting is a form of giving feedback about results in refinement of technology thus helps in more utilisation of feedback mechanism.

There was positive and significant relation observed between extension teaching methods and utilisation of feedback mechanism at 0.01 level of probability. The reason for this might be that there was more use of extension teaching methods by all the respondents during implementation of various extension activities through existing feedback mechanism and thus more would be the utilisation.

Farmers had positive and significant relation was observed between ability to give feedback and utilisation of feedback mechanism at 0.01 level of probability and the reason might be that the research scientists are the inventors of technology and the farmers are the ultimate users of that technology which compelled them to respond more proactively. Furthermore the farmers have more ability to give the feedback even it is negative and feel free to give feedback without any feeling of pressure.

There was positive and significant relation observed between level of interaction and utilisation of feedback mechanism for research scientist at 0.05 level of probability. The probable reason might be generally research scientists work within the research station, extension personnel work with in their work place while farmer in his field with little or no interaction with others. When there is small improvement in level of interaction with other stakeholders it has resulted in increased participation and utilisation of feedback mechanism.

## CONCLUSION

The farmers were middle aged, possessed secondary education and medium farming experience with medium training undergone. Their utilization of extension teaching methods was low and communication media and level of interaction was medium having medium ability to give feedback. The extent of utilization in feedback mechanism by the respondents indicated low participation by farmers. The variables like education, experience, training undergone, extension teaching methods, communication media used, farm size and level of interaction were positively significant with extent of participation and utilisation in feedback mechanism.

Documenting the feedback given at various level by concerned stakeholders, improve the extension contacts by utilizing the existing ICTs like mobile telephony (SMS), networking of farmers groups and specific need based trainings for effective getting/giving feedback, farmers organisations /groups may be initiated and strengthened to improve the effective utilization of feedback mechanism in Agricultural Extension Services..

## REFERENCES

- Gopinath, M. 2005. Knowledge and adoption of Bengalgram farmers in Kurnool district of Andhra Pradesh. M.Sc. (Ag.) Thesis (Unpublished). Acharya N.G. Ranga Agricultural University, Hyderabad, India.
- Ingale, N.S.1987. Critical analysis of communication system in the state department of Agriculture, Andhra Pradesh. Ph.D Thesis (Unpublished). Acharya N.G. Ranga Agricultural University, Hyderabad, India.
- Jagannadharaju, D.1997. A critical analysis of Agricultural Technology and information management system. Ph.D Thesis (Unpublished). Acharya N.G. Ranga Agricultural University, Hyderabad, India.
- Lakshmi Prasanna, Ch. 2013. A study on feedback mechanism in agricultural technology management MSc. (Agri.) Thesis (Unpublished). Acharya N.G. Ranga Agril. University, Rajendranagar, Hyderabad.
- Mrutyumjayam, N.1987. A critical analysis of farm telecast programmes - an Experimental study. Ph.D Thesis (Unpublished). Andhra Pradesh Agriculture University, Hyderabad, India.
- Ramprasad, D. 2004. Participation of partners in Agricultural research extension and farmers linkage mechanisms in Krishna-Godavari Zone of Andhra Pradesh. Ph.D. Thesis (Unpublished). Acharya N.G. Ranga Agricultural University, Hyderabad, India.

- Reddy, K.G. Pandarinatha.1984. Analysis of information flow and communication linkages in transfer of dairy management practices a system India.
- Sambireddy, R.1997. Information management behaviour (IMB-An analysis of sugarcane research, Extension and client system. Ph.D Thesis (Unpublished). Andhra Pradesh Agriculture University, Hyderabad, India.
- Sarada, O. 2004. Perception on communication and feedback effectiveness among Researchers, Extensionists and Farmers. Ph.D Thesis (Unpublished). Acharya N.G. Ranga Agricultural University, Hyderabad, India.
- Veerendranath, G. 2000. A critical study on flow utilization and source credibility of agricultural information among rainfed castor growing farmers of Nalgonda district of Andhra Pradesh. Ph. D. Thesis (Unpublished). Acharya N.G. Ranga Agricultural University, Hyderabad, India.
- Soni, Arti N., Pandya, C.D. and Soni, D.N. (2016). Impact of Front Line Demonstration on Feeding of low cost high protein rich food (POSHAK AAHAR) to malnourished rural tribal children. *Guj. J. Ext. Edu.*, 27(1): 79-81