

Constraints Faced by the Farmers in Getting Agriculture Technology Information Under ATMA in Western Region of Rajasthan

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ABSTRACT

The present investigation was undertaken to know the constraints faced by farmers in getting agriculture technology information under Agriculture Technology Management Agency (ATMA). A study was undertaken in Western Rajasthan. The major constraints identified were 'Constraints in promotion of Agriculture and Allied fields', 'Marketing constraints', 'Ecological constraints', 'Socio-political constraints', and 'Technical constraints'. The results showed that 'Ground water level going down day by day', 'Lack of proper communication about marketing facility', 'Erratic rainfall hinders the acceptance of new varieties', 'Interferences by anti social elements in allocation of demonstration due to political reason', 'Lack of technology about post harvesting technology' were found to be the highest faced constraints by the respondents. The least constraints identified under these categories were 'Short supply of electricity for irrigation', 'Low price just after harvesting', 'Poor performance of technologies in drought condition discourage the farmers', 'Dominance of general caste in getting benefits under ATMA programme', 'Lack of technical knowledge about animal rearing' respectively. The finding of the study indicate that it is imperative to call for attention from government, policy makers, and planners to design effective policy/strategy that would ensure to measures overcome the constraints faced by the farmers in reaping the benefits of ATMA.

Key words: ATMA, constraints, information, communication

INTRODUCTION

Agriculture is the dominant sector of Indian economy. The progress of the nation is therefore, directly linked with advancement in agriculture. ATMA is considered as a dynamic instrument of introducing major changes in the Agricultural Research and Extension systems of the country, besides developing their capabilities to meet future challenges. The project was initiated by Ministry of Agriculture, Government of India with the financial assistance of World Bank. The ATMA scheme in Rajasthan was implemented in October 2005.

The aims of ATMA are to integrate extension programs across state-level departments, link research and extension activities in a district, and decentralize extension decision-making through participatory planning. The main function of ATMA is transfer of technology. In the implementation of programme in ATMA, farmers do get benefits but they have to face problems, because of which farmers cannot explore the benefits fully.

METHODOLOGY

The present study was undertaken in Bikaner district of Western Rajasthan. Under ATMA programme Bikaner district is divided into five blocks viz. Bikaner, Nokha,

Lunkaransar, Kolayat and Shri Dungargarh. Among of these, two blocks Bikaner and Nokha were selected for the study applying random sampling technique. Five Gram Panchayats from sixty, three Gram Panchayats of Bikaner block and fifty three Gram Panchayats of Nokha block were taken as sample and five villages were selected randomly each from Bikaner and Nokha block. Thus a total of ten villages were selected for the study. Hundred farmers were selected from selected ten villages on the basis of the probability proportionate to sample size for the study purpose.

Construction of tool to measure the constraints

An inventory of items which appeared to constitute constraints encountered by farmers was prepared. The responses about the constraints were graded into three categories namely strongly agree, agree and disagree with a score of 2, 1 and 0 respectively.

RESULTS AND DISCUSSION

General profile of farmers

Before coming to the main objective of this paper, *i.e.* analysis of problems, constraints faced by farmers, along with analysis on profile of the farmers, it may be needed to know some general information related to the constraints and useful for more understanding the constraints such as

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situations in age, education, family type, social participation, socio-economic status *etc.*

Table 1: Distribution of farmers according to their personal attributes

Personal A tributes	Respondent (100) Percentage	
Age		
Young (below 28 Years)	11.00	
Middle (28 to 46 Years)	74.00	
Old (above 46 Years)	15.00	
Education level		
Illiterate	30.00	
Primary	20.00	
Middle	25.00	
Secondary	9.00	
Sr. Secondary	8.00	
Graduate	8.00	
Family Type		
Nuclear	25.00	
Joint	75.00	
Social participation		
No member of any organization	65.00	
Member of any organization	35.00	
SES	Score	Percentage
Low Socio-economic status	(below 2.55)	17.00
Medium Socio-economic status	(between 2.55 to 3.33)	67.00
High Socio-economic status	(above 3.33)	16.00

Constraints faced by the farmers

The main constraints in promotion of Agriculture and Allied fields faced by the farmers in getting technology information under ATMA, were marketing constraints, Ecological constraints , Socio Political Constraints and Technical constraints .

1. Constraints in promotion of agriculture and allied fields

The data presented in Table 2 explains that the constraint like 'Ground water level going down day by day' was ranked first with 1.77 mean score. 'Distantly located being a major problem of transportation of agriculture goods' was ranked second with 1.75 mean score. Whereas the constraint 'Less number of plant protection equipment available for implementation of

new technology' and 'Short supply of electricity for irrigation' obtained seventh and eight ranks with 1.57 and 1.48 mean score, respectively.

Table 2: Constraints in promotion of Agriculture and Allied fields faced by the farmers in getting technology information under ATMA

n = 100

Constraints in promotion of Agriculture and Allied fields	SA	A	DA	T.S.	MS	RANK
Unavailability of improved seeds and other inputs in village itself	77	15	8	169	1.69	IV
Less number of plant protection equipment available for implementation of new technology	71	15	14	157	1.57	VII
Short supply of electricity for irrigation	63	22	15	148	1.48	VIII
Ground water level going down day by day	81	15	4	177	1.77	I
Low support prices for cereals crops	71	17	12	159	1.59	VI
Distantly located markets being a major problem of transportation of agriculture goods	82	11	7	175	1.75	II
Lack of interest group on the basis of commodities for input supply processing , packing and marketing	73	16	11	162	1.62	V
Less information given to protect the crops from natural calamities	75	22	3	172	1.72	III

From the result it can be inferred that the farmers were facing mostly lack of water because there was no proper planning for water harvesting in the area. The farmers were dependent only on rain water. The other reason was not getting electricity in proper time for the irrigation. The findings are supported with the findings of Kumar (2001), Balasubramani (2005), Deshmukh *et al.* (2007) and Singh *et al.* (2009).

2. Marketing constraints

Table 3 explains that the constraint 'Lack of proper communication about marketing facility' was ranked first with 1.79 mean score. 'Lack of storage facility' had second rank with 1.74 means score. The constraint 'Lack of knowledge about market price about a product/ crops' and 'Low price just after harvesting' had sixth and seventh rank with 1.53 and 1.43 mean score.

Table 3: Marketing constraints faced by the farmers in getting technology information under ATMA

n=100

Marketing constraints	SA	A	DA	T.S.	MS	RANK
Lack of storage facility	76	22	2	174	1.74	II
Lack of transport facility	74	21	5	169	1.69	III
Lack of knowledge about market price about a product/ crops	66	21	13	153	1.53	VI
Lack of proper communication about marketing facility	83	13	4	179	1.79	I
Poor return of quality product	74	15	11	163	1.63	IV
Difficult to sell produce in interior areas at appropriate rate	71	17	12	159	1.59	V
Low price just after harvesting	59	25	16	143	1.43	VII

It may be inferred that problem was faced by farmers because of lack of proper communication about marketing facility, they do not have marketing information like market price at time. The farmers do not have storage facility and thus are left with no choice than to sell their produce at low price. The finding are in line with Mahawer (1998), Meena (2001), Parhad *et al.* (2002), Badhala (2008) and Raj *et al.* (2010).

3. Ecological constraints

A perusal of data incorporated in Table 4 reveal that 'Erratic rainfall hinders the acceptance of new varieties' and 'Lack of regular information about weather forecast' statements were expressed as the most severe constraints faced by the farmers and were placed at first and second ranks with 1.78 and 1.74 mean score, respectively in the rank hierarchy of Ecological constraints. Similarly, 'Lack of locally suitable technologies' and 'Poor performance of technologies in drought condition discourage the farmers' were less severe constraints perceived by the farmers and ranked fifth and sixth with 1.45 and 1.41 mean score, respectively scored by them.

Table 4: Ecological constraints faced by the farmers in getting technology information under ATMA n=100

Ecological constraints	SA	A	DA	T.S.	MS	RANK
Erratic rainfall hinders the acceptance of new varieties	82	14	4	178	1.78	I
Lack of regular information about weather forecast	79	16	5	174	1.74	II
Lack of technologies to mitigate stress conditions	71	18	11	160	1.6	IV
Water logging condition discourage to take advanced technologies	77	18	5	172	1.72	III
Lack of locally suitable technologies	62	21	17	145	1.45	V
Poor performance of technologies in drought condition discourage the farmers	59	23	18	141	1.41	VI

The study showed that farmers face this problem due to incomplete information about weather condition and lack of technologies to protect their crops in adverse condition. So if farmers using the new technology due to one of the above reasons they do not get proper benefits. Farmers only depend on their own crops if there were failure of the crops at first time then they hesitate to use this technology again. The finding is in accordance with the findings of Intodia and Bareth (1999), Kumar (2001), Sharma and Sharma (2007), Bhadala (2008), Dhaka *et al.* (2010).

4. Socio - Political constraints

It could be observed from Table 5 that constraint like 'Interferences by anti social elements in allocation of demonstration due to political reasons' and 'Nepotism and favoritism benefits to known persons by the ATMA members' were the first and second important constraints perceived by the farmers with 1.71 and 1.67 mean score respectively, whereas 'Difficulty in carrying out new technology in village in the absence of general consensus' and 'Dominance of general caste in getting benefits under ATMA programme' obtained sixth and seventh rank with 1.5 and 1.44 mean score, respectively

Table 5: Socio - Political constraints faced by the farmers in getting technology information under ATMA n = 100

Socio-Political constraints	SA	A	DA	T.S.	MS	RANK
Interferences by anti social elements in allocation of demonstration	76	19	5	171	1.71	I
Difficulty in carrying out new technology in village in the absence of general consensus	70	10	20	150	1.5	VI
Nepotism and favoritism benefits to known persons by the ATMA members	76	15	9	167	1.67	II
Deep rooted casteism in the village becomes obstacles in programme implementation properly	68	18	14	154	1.54	V
Power toppling games due to various political reasons	74	15	11	163	1.63	III
Confusion among the farmers due to efforts by various departments	72	14	14	158	1.58	IV
Dominance of general caste in getting benefits under ATMA programme	63	18	19	144	1.44	VII

By this study it can be concluded that the elite farmers reap the benefits of new programme compared to other farmers who were not approachable & the other reason for this constraints was dominance of higher caste, thus lower caste could not take benefits as it meant to be.

5. Technical constraints

A perusal of data incorporated in table 6 reveal the 'Lack of technology for post harvesting handling of crops and 'Complex technology of chemical weed control', were expressed as the most severe constraints by the farmers which were placed at first and second ranks with 1.59 and 1.54 mean score, respectively in the rank hierarchy of technical constraints. Similarly, 'Bottom level extension functionaries are not competent about latest advancement in Agriculture' and 'Lack of technical knowledge about animal rearing' were less severe constraints perceived by the farmers ranked fourth and fifth with 1.41 and 1.31 mean score, respectively.

Table 6: Technical constraints faced by the farmers in getting technology information under ATMA n=100

Technical Constraints	SA	A	DA	T.S.	MS	RANK
Lack of technical know how about value addition	61	23	16	145	1.45	III
Complex technology of chemical weed control	64	26	10	154	1.54	II
Lack of technology for post harvest handling of GOPs	68	23	9	159	1.59	I
Bottom level extension functionaries are not competent about latest advancement in Agriculture	41	59	0	141	1.41	IV
Lack of technical knowledge about animal rearing	31	69	0	131	1.31	V

It may be concluded that the farmers lack technical know how about new technology. So they do not understand the technology properly and their interest is not developed in new technology and they do not adopted. The findings are in accordance of Mahawer (1998), Chaturvedi *et al.* (2000), Sharma and Sharma (2007), Bhadala (2008) and Singh and Varshney (2010).

6. Overall constraints faced by the farmers in under ATMA

To get an overview of the overall constraints faced by the farmers in ATMA, the overall score for each major head was summed up and the results have been presented in Table 7.

The data presented in Table 7 showed that the farmers expressed 'constraints in promotion of Agriculture and Allied fields' assigned ranks first with 1.64 mean score and 'Marketing constraints' was assigned second rank with 1.63 mean score in the problem hierarchy. These were followed by 'Ecological constraints' and 'Socio-political constraints' had third and fourth rank with 1.63 and 1.58 mean score respectively. Less severe constraints was 'Technical constraints' with 1.46 mean score.

Table 7: Overall constraints faced by the farmers getting technology information under ATMA n=100

Categories of Constraints	No. of constraints	Overall T.S	Overall M.S.	Overall Ranks
Socio – political	7	1107	1.58	IV
Constraints in promotion of agriculture and allied fields	8	1319	1.64	I
Technical constraints	5	730	1.46	V
Ecological constraints	6	970	1.62	III
Marketing constraints	7	1140	1.63	II

The main problem was related to the agriculture and allied sector because farmers were not educated. They do not understand the new technology resulting in incomplete information. The other main problem was related to marketing constraints *i.e.* if their market was situated very far they could not reach at the time. The farmers do not know about market price and do not have storage facility at village level, as a result they have to sell their product at low price. The present findings are in agreement with Deshmukh *et al.* (2007) and Bhadala (2008).

CONCLUSION

The findings of the study indicates that it is imperative to call for attention of policy makers, and planners to design effective policy/strategy that would ensure measures to overcome the constraints faced by the farmers in getting agriculture technology & information under ATMA. The present investigation was undertaken to know the constraints faced by farmers in getting agriculture technology information under ATMA. A study was undertaken for survey on 100 farmers in Western Rajasthan. The major constraints identified were 'Constraints in promotion of Agriculture and Allied fields', 'Marketing constraints', 'Ecological constraints', 'Socio-political constraints', and 'Technical constraints'. The results showed that 'Ground water level going down day by day', 'Lack of proper communication about marketing facility', 'Erratic rainfall hinders the acceptance of new varieties', 'Interferences by anti social elements in allocation of demonstration due to political reason', 'Lack of technology about post harvesting technology' were found to be the highest faced constraints by the respondents. The least constraints identified under these categories were 'Short supply of electricity for irrigation', 'Low price just after harvesting', 'Poor performance of technologies in drought condition discourage the farmers', 'Dominance of general caste in getting benefits under ATMA programme', 'Lack of technical knowledge about animal rearing' respectively. The finding of the study indicate that it is imperative to call for attention from government, policy makers, and planners to design effective policy/strategy that would ensure to overcome the constraints faced by the farmers in getting agriculture technology information under ATMA.

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