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Constraints in Extension Service Delivery Perceived by ATMA Beneficiary Farmers of Chhattisgarh

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ABSTRACT
The present study was conducted purposively in Chhattisgarh state, with a view to evaluate constraints faced by Agricultural Technology Management Agency (ATMA) beneficiary farmers in the extension service delivery. Chhattisgarh comprises of three agro-climatic zones, out of that one district were selected randomly from each agro-climatic zones. From each selected districts, 40 ATMA beneficiary farmers were selected randomly which constitute a total sample size of 120. A list of constraints were classified into five categories namely Infrastructural, technical, socio-economic, organizational and other constraints measured with the help of a 3 points continuum scale as most serious (3), serious (2) and least serious (1). Data was collected through pretested semi-structured interview schedule. The result showed that low mobility in rural areas (2.38), less training opportunity on improved technology (2.51), lack of education (2.40), lack of timely advice and guidance (2.41) and climatic risk and uncertainty (2.15) were reported with respective total weighted mean scores (TWMS). The finding of the study indicate that it is essential to call for attention from government, policy maker, 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, Extension, Service delivery, Chhattisgarh.*

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INTRODUCTION

Agricultural Technology Management Agency (ATMA) was introduced as a pilot basis (1998-2003) in 28 districts (DAC) [1]. Subsequently a positive feedback from the pilot implementation (IIM) [2], the ATMA model was scaled up across 251 rural districts in 2005 and throughout the country in 2007 (Reddy and Swanson) [3]. In June 2010, revised guidelines for ATMA were issued in order to incorporate the lessons learnt from the implementation (DAC) [4]. ATMA has been provided financial and operational flexibilities so that the extension agenda moves on the demand driven lines in a given agro-ecological situation. This block level extension apparatus has been re-organized accordingly by establishing farm information and advisory centers (FIACs). This provides an inter-disciplinary advisory mechanism at this level. The farm advisory committees (FACs) consisting of the farmers in turn would provide their suggestions and feedback to these centers for making the extension programmes farmer accountable. However, several operational and organizational challenges continue to confront the ATMA as a system of extension. The ATMA faces severe capacity and institutional constraints. Yet, ATMA is seen as the key intervention for reforming the extension system in India. However, an

understanding of the discrepancy between the intended guidelines, actual achievement and perceived constraints in extension service delivery is still lacking. Such information is the first step towards the analysis of the impact of the program. Keeping this in view the present study was under taken to analyze constraints perceived by ATMA beneficiaries on extension service delivery.

MATERIALS AND METHODS

The study was purposively carried out in the Chhattisgarh state, comprising of three agro-climatic zones (Chhattisgarh Plains, Bastar Plateau and Northern Hill Regions). From each agro- climatic zone one district (Durg, Bastar and Sarguja) was selected randomly. Out of the each selected districts, 40 ATMA beneficiary farmers were selected through random sampling technique to constitute a total sample size of the study comprised of 120 (3* 40 nos.). The constraints faced by ATMA beneficiaries' differ from individual to individual depending upon their socio-economic status, communication behavior, livelihood requirement, scopes and opportunities of marketing etc. The constraints were classified into five categories namely infrastructural, technical, socio-economic, organizational and other constraints measured with the help of a 3 points continuum scale as most serious (3), serious (2) and least serious (1) and accordingly each respondent were given score as per their preference to various constraints and mean weighted score was worked out for each statement under above mentioned three categories. The index values of observations were measured with the help of mean score figure. The data were collected through personal interview method using a pretested semi-structured interview schedule. The statistical analysis was done by following the statistical tools like frequency, percentage, mean and rank analysis.

RESULTS AND DISCUSSION

Infrastructural Constraints*:* Good infrastructure is an essential ingredient for successful completion of extension activity. Directly or indirectly, it helps farmers to diversify into different activities so that vulnerability can be reduced and outcomes can be achieved. In Table 1 revealed that infrastructural constraints under study were presented that low mobility in rural areas (2.38) emerged as the most important constraints that hinder the extension service delivery in rural areas followed by lack of resource at village level (2.23), poor communication facilities (2.11) also one of the severe constraints perceived by the respondents that restrict ATMA personnel from effective extension service delivery. The finding suggested that besides creating facilities for training to enhance service delivery, the constraints commonly agreed upon by the farmers need to be taken special care. The constraints as observed in this study were also reported by Kumbhare and Singh, [5].

Technical constraints: Table 1 reveals that less training opportunity on improved technology was expressed as most serious by the farmers with 2.51 TWMS, followed by costly inputs/technologies ranked second with 2.40 TWMS. The third important constraint faced by the respondents was complex technologies. The problems, which were given less importance by the farmers, were incompatible technologies and non availability of trained labour as these problems was less serious in the study area. The problems relating to training opportunity and complex technologies among farmers might have been due to deprived education, awareness and extension system in study area. The findings are in conformity with the findings of Pannu, *et al.*, [6] and Chouhan *et al.,* [7] for analysis of constraints faced by the farmers in getting agriculture technology information under ATMA in western region of Rajasthan

Socio-economic constraints: Major constraint faced by the farmers in their socio-economic category was lack of education having TWMS 2.40, followed by poor economic condition of family with TWMS 2.38. Small and dispersed land holding, lower social participation and lack of risk bearing capacity were considered as moderately serious constraints having TWMS between 2.08 to 2.20, while lack of knowledge and awareness on improved technology and lack of change agent were considered as least serious having TWMS 1.94 and 1.66 respectively. Similar finding also reported by Singh, *et al.,* [8] for constraints in adoption of soybean production technology and Yadav, *et al.*, [9] for identification of constraints in livestock management practices.

Organizational constraints: Table 1 reveals that lack of timely advice and guidance and lack of effective supervision and monitoring, expressed as most serious by the farmers with TWMS 2.41 and 2.30 respectively. Low credibility of extension personnel, lack of motivation and feedback, and biased attitude of extension personnel were considered as moderately serious constraints having TWMS between 2.09 to 2.03, while lack of linkage with service provider, less exposure visits and non availability of quality inputs were considered as least serious having TWMS 1.88 and 1.65 respectively. Similar finding also reported by Samantaray *et al.,* [10] in Orissa among vegetable production.

Others Constraints: Constraints as mentioned in this category were also very important for effective extension service delivery and for overall development of the farmers. The other constraints according to their priority were climatic risk and uncertainty (2.15), political hindrance (2.09) and seasonal attacks of diseases (1.98). Saha and Bahal [11] are also reported similar types of findings in their study of constraints impeding livelihood diversification of farmers in West Bengal. Yet very few farmers were taking up these constraints as opportunities because of lack of ability to visualize and potentiality to mobilize resources to utilize these opportunities.

Table 1: - Distribution of respondents based on perceived constrains in extension service delivery

	Constrains (N=120)	**M.S**	**S**	**L.S.**	**N.S.**	**TWS**	**TWMS**	**Index**	**Rank**
	Infrastructural constraints								
1	Lack of marketing and storage facilities	58 (48.33)	30 (25.00)	17 (14.17)	15 (12.50)	251	2.09	69.72	**IV**
2	Poor communication facilities	52 (43.33)	32 (26.67)	33 (27.50)	3 (2.50)	253	2.11	70.28	**III**
3	Poor transport facilities	44 (36.67)	50 (41.67)	15 (12.50)	11 (9.17)	247	2.06	68.61	**V**
4	Lack of resource at village level	60 (50.00)	33 (27.50)	22 (18.33)	5 (4.17)	268	2.23	74.44	**II**
5	Low mobility in rural areas	72 (60.00)	27 (22.50)	15 (12.50)	6 (5.00)	285	2.38	79.17	**I**
	Technical constraints								
1	Non availability of trained labour	37 (30.83)	51 (42.50)	24 (20.00)	8 (6.67)	237	1.98	65.83	**V**
2	Incompatible technologies	36 (30.00)	58 (48.33)	14 (12.50)	11 (9.17)	239	1.99	66.39	**IV**
3	Costly inputs/technologies	65 (54.17)	39 (32.50)	15 (12.50)	1 (0.83)	288	2.40	80.00	**II**
4	Complex technologies	48 (40.00)	55 (45.83)	10 (8.33)	7 (5.83)	264	2.20	73.33	**III**
5	Less training opportunity on improved technology	75 (62.50)	34 (28.33)	8 (6.67)	3 (2.50)	301	2.51	83.61	**I**
	Socio- Economic constraints								
1	Small and dispersed land holding	64 (53.33)	32 (26.67)	15 (12.50)	9 (7.50)	271	2.26	75.28	**III**
2	Lower social participation	57 (47.50)	35 (29.17)	23 (19.17)	5 (4.17)	264	2.20	73.33	**IV**
3	Lack of education	69 (57.50)	30 (25.00)	21 (17.50)	0 (0.00)	288	2.40	80.00	**I**
4	Lack of knowledge and awareness on improved technology	32 (26.67)	52 (43.33)	33 (27.50)	3 (2.50)	233	1.94	64.72	**VI**
5	Lack of change agents	28 (23.33)	31 (25.83)	53 (44.17)	8 (6.67)	199	1.66	55.28	**VII**
6	Lack of risk bearing capacity	45 (37.50)	47 (39.17)	21 (17.50)	7 (5.83)	250	2.08	69.44	**V**
7	Poor economic condition of family	59 (49.17)	47 (39.17)	14 (11.67)	0 (0.00)	285	2.38	79.17	**II**

	Organizational constrains								
1	Low credibility of extension personnel	55 (45.83)	31 (25.83)	24 (20.00)	10 (8.33)	251	2.09	69.72	**III**
2	Biased attitude of extension personnel	58 (48.33)	24 (20.00)	21 (17.50)	17 (14.17)	243	2.03	67.50	**V**
3	Lack of linkage with service provider	40 (33.33)	33 (27.50)	39 (32.50)	8 (6.67)	225	1.88	62.50	**VI**
4	Lack of effective supervision and monitoring	62 (51.67)	38 (31.67)	14 (11.67)	6 (5.00)	276	2.30	76.67	**II**
5	Non availability of quality inputs	35 (29.17)	27 (22.50)	39 (32.50)	19 (15.83)	198	1.65	55.00	**VIII**
6	Lack of timely advice and guidance	73 (60.83)	26 (21.67)	18 (15.00)	3 (2.50)	289	2.41	80.28	**I**
7	Lack of motivation and feedback	51 (42.50)	35 (29.17)	23 (19.17)	11 (9.17)	246	2.05	68.33	**IV**
8	Less exposure visits	30 (25.00)	55 (45.83)	12 (10.00)	23 (19.17)	212	1.77	58.89	**VII**
	Other constrains								
1	Political hindrance	45 (37.50)	51 (42.50)	14 (11.67)	10 (8.33)	251	2.09	69.72	**II**
2	Seasonal attack of diseases	42 (35.00)	40 (33.33)	32 (26.67)	6 (5.00)	238	1.98	66.11	**III**
3	Climatic risk and uncertainty	49 (40.83)	47 (39.17)	17 (14.17)	7 (5.83)	258	2.15	71.67	**I**
4	Redtapism	15 (12.50)	37 (30.83)	48 (40.00)	20 (16.67)	167	1.39	46.39	**V**
5	Insufficient coverage of success stories	35 (29.17)	26 (21.67)	36 (30.00)	23 (19.17)	193	1.61	53.61	**IV**

M.S. –Most Serious, *S* – Serious, *L.S.* – Least Serious, *N.C.* - Not Serious, *TWS* – Total Weighted Score, *TWMS*- Total Weighted Mean Score. Figures in parenthesis indicate percentages
Index = (TWMS (Total Weighted Mean Score) / 3) *100, where, 3 is the maximum attainable score for each statement.

CONCLUSION

Despite these constraints ATMA has huge potential to expand the service delivery in Chhattisgarh. Constraints can be use for the researchers and policy makers to plan and modify the research and extension programmes and for the officials of the state department of agriculture so as to eliminate and can play an important role in improving the knowledge and awareness of the farmers in service delivery for their benefits and reversing their negative mind-set toward improved practices. Further, to overcome these constraints extension workers should act more as a collaborator, consultant, and facilitator in dissemination of the knowledge by the use of different mass media, field visits and demonstrations for effective extension service delivery.

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