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IMPACT OF ATMA IN HIMACHAL PRADESH

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ABSTRACT

Agricultural Technology Management Agency (ATMA)- A flagship programme for agricultural extension reforms in India and is responsible for more effective and efficient dissemination of available agricultural technologies at district level. The study was conducted in Una district of Himachal Pradesh on a random sample of 120 respondents. It was revealed from the study that a majority of the respondents had medium level of participation (47.50%) and level of awareness (52.50%). About 53 percent respondents were found to have moderate satisfaction towards implementation of its extension activities. Similarly, a majority of them had medium level of knowledge (47.50%) and opinion on extension system. However, it was disappointing to note that overall, a majority of them still felt low impact of the ATMA activities. Therefore, there is dire need to increase capacity development of the farmers through conducting exposure visits, field demonstrations and wider spreading of dissemination of farm technologies to them etc.

Key words: Capacity development, Extension system, Knowledge, Field demonstrations

1. INTRODUCTION

The agricultural growth has powerful leverage effects on the rest of the economy by contributing to the three basic objectives of economic development of the country viz; Poverty alleviation, Output growth and Price stability (Agnihotri et al., 2018). Agricultural Technology Management Agency (ATMA) is a registered society responsible for more effective and efficient dissemination of available agricultural technologies at district level- A flagship programme for agricultural extension reforms in India. It has linkages with the extension-related activities of ICAR institutes including KVKs, research organisations, NGOs and the private sector associated with the agricultural development at the district and block level (Anonymous, 2010). The scheme promotes decentralized farmer-friendly extension system in the country. In Himachal Pradesh, The ATMA scheme is employing formal strategies to enhance agricultural development in the region with a focus on providing technical guidance and financial assistance to the farmers. Through its structural approach, ATMA scheme is paving ways for improved farming practices and economic growth in Himachal Pradesh by facilitating knowledge transfer, financial support, collaborative initiatives etc. in order to study the impact of ATMA scheme in Himachal Pradesh, the present study was undertaken with the following specific objectives:

1. To study the knowledge of the respondents about ATMA.
2. To assess the impact of ATMA on the target beneficiaries in selected parameters.
3. To measure the impact of ATMA on selected parameters through adoption of natural farming.

4. MATERIALS AND METHODS

The study was conducted in Una district of Himachal Pradesh. The sample was taken through multistage sampling technique. Out of five blocks in Una district, Bangana block was randomly selected. A total of 12 panchayats were selected randomly from the selected block and from each selected panchayat, one village was selected randomly. Thus, in all 12 villages were selected and from each selected village, 10 farmers were randomly selected. Thus, 120 respondents constituted the sample for the purpose of the present investigation. The data were collected with the help of well-structured and pre-tested interview schedule by personally interviewing the respondents. The level of impact of various ATMA activities was operationalized in terms of changes in cropping pattern, cropping intensity, adoption of new/improved farm technologies, increase in farm productivity and farm income and the extent to which their cultivable land benefitted. Similarly, the adoption of natural farming by the respondents through ATMA was operationalized in terms of cost of cultivation, crop yield, taste of produce and selling price of produce. The data were tabulated, analysed and interpreted by applying suitable statistical tests.

5. RESULTS AND DISCUSSION

The main findings of the study have been discussed as under:-

Respondents' awareness about ATMA:-

In order to know whether the respondents were aware about ATMA and its activities or not, the response has been depicted in Table 1.

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Table 1: Respondents' overall awareness about ATMA (n=120)

Category	Frequency	Percentage
Low awareness	26	21.67
Medium awareness	63	52.50
High awareness	31	25.83

It is evident from the data that a majority of the respondents (52.50%) had medium level of awareness followed by those who had high level of awareness (25.83%) and low level of awareness (21.67%) among the respondents.

The findings were found to be similar to the study of Babu et al. (2018) conducted in Andaman and Nicobar Islands and revealed that 70 percent of the respondents had medium level of awareness, 25 and 5 percent had low and high level of awareness about ATMA.

Respondents' participation in the activities of ATMA:-

The respondent farmers were asked to what extent they had participated in various activities of ATMA and results are presented in Table 2.

Table 2: Extent of participation in ATMA activities

Category	Frequency	Percentage
Low participation	38	31.67
Medium participation	57	47.50
High participation	25	20.83

It has been observed from data in Table 2 that about 50 percent of the respondents had medium level of participation in various activities organised by ATMA. Those who had low and high participation were found to be about 32 and 21 percent respectively.

Respondents' knowledge about various programmes/activities of ATMA:-

On probing whether the respondents had knowledge about various programmes/activities undertaking by ATMA for the farmers or not, the data are presented in Table 3.

Table 3: Level of knowledge about ATMA programmes/activities

Sr. No.	Different activities of ATMA	Respondents' knowledge					
		Low		Medium		High	
		F	Percentage	F	Percentage	F	Percentage
1	Programmes	33	27.50	51	42.50	36	30.00
2	Trainings	36	30.00	70	58.33	14	11.67
3	Demonstrations	46	38.33	49	40.83	25	20.83
4	Exposure visits	67	55.83	33	27.50	20	16.67

A perusal of the data clearly indicating that about 60 percent of the respondents had medium knowledge about the trainings organised by ATMA.

Those who had medium knowledge of the trainings were more or less the same. Those who had low knowledge about various programmes, trainings, demonstrations and exposure visits organised by ATMA were in the range of 27-56 percent.

These findings were in agreement with the findings of Shalini et al. (2020) who reported that about 78 percent of the respondents had medium level of knowledge about programmes organised by ATMA followed by knowledge about trainings (57%) and demonstration (28%).

However, in case of exposure visits, the results are in contrast to Shalini et al. (2020) who observed a significant majority of the respondents had medium level of knowledge about exposure visits in East Champaran district of Bihar.

Respondents' overall level of knowledge about various programmes/activities of ATMA:-

The overall knowledge of respondent farmers about various activities undertaken by ATMA has been displayed in Table 4.

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Table 4: Respondents' overall level of knowledge about ATMA

Category	Frequency	Percentage
Low knowledge	34	28.33
Medium knowledge	57	47.50
High knowledge	29	24.16

It has been observed from the data that overall about 48 percent of respondents had medium level of knowledge about various activities undertaken by ATMA.

Those who had high knowledge and low knowledge were found to be 24.16 and 28.33 percent respectively. These findings were in agreement with the findings of Shalini et al. (2020) who reported that majority of the beneficiaries (58.3%) had overall medium level of knowledge about various activities led by ATMA.

Respondents' perception on execution of extension activities:-

In order to determine the perception of respondents regarding implementation of various extension activities carried out by ATMA i.e. whether they were satisfied or not, the findings have been presented in Table 5.

Table 5: Perception on execution of extension activities

Category	Frequency	Percentage
Highly satisfied	16	13.33
Moderately satisfied	63	52.50
Less satisfied	41	34.17

As it is evident from Table 3 that about 53 percent of the respondents were moderately satisfied with the extension activities implemented by ATMA. It was disappointing to note that still there were 34.17 percent of the respondents who were less satisfied with the implementation of extension activities. Only 13.33 percent of the respondents were found to be highly satisfied.

These results were in consonance with those of Babu et al. (2018) who observed that a majority of the respondents (60%) were moderately satisfied on the execution of extension activities. Only about 10 percent of respondents were highly satisfied and the rest of them had low satisfaction.

Respondents' perception on convergence of different line departments:-

Whether the various line departments were converged so far as the implementation of various activities under ATMA are concerned, the results are presented in Table 6.

Table 6: Respondents' perception towards convergence of line departments

Category	Frequency	Percentage
Low perception	54	46.67
Medium perception	64	53.33
High perception	Nil	Nil

It is evident from the data that a majority of the respondents had medium perception towards convergence of line departments. Those who had low level of perception were found to be 47 percent. None of the respondents had high level of perception towards convergence of line departments.

The findings of the study were in contrast with those of Babu et al. (2018) who reported that a majority of the respondents (61.16%) perceived low convergence of line departments and rest of them perceived medium level of convergence of line departments.

Respondents' perception on impact of ATMA:-

It was enquired from the respondents that to which extent they perceived the changes in cropping pattern, cropping intensity, rise in farm productivity and farm income, adoption of new/improved farm technologies and the extent to which their cultivable land benefitted through various activities/programmes of ATMA, the results are presented in Table 7.

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Table 7: Respondents' response on extent of impact of ATMA

Sr. No.	Indicators	Extent of impact					
		Low		Medium		High	
		F	Percentage	F	Percentage	F	Percentage
1	Extent of cultivable land benefitted	62	51.67	58	48.33	-	-
2	Changes in cropping pattern	74	61.67	46	38.33	-	-
3	Increased cropping intensity	78	65.00	42	35.00	-	-
4	Adoption of new farm technologies	69	57.50	51	42.50	-	-
5	Rise in farm productivity	84	70.00	36	30.00	-	-
6	Rise in farm income	87	72.50	33	27.50	-	-

It is clear from the table that a majority of the respondents had low perception regarding the impact of ATMA in terms of increase in farm productivity, farm income, cropping intensity, changes in cropping pattern and adoption of new/improved farm technologies. No respondent had perceived the high impact of ATMA in terms of the above-mentioned aspects. The results were in agreement with those of Jangde et al. (2024) who observed a change in cropping patterns due to activities of ATMA in Chattisgarh State. The authors revealed that in Kharif season, the area under paddy decreased while the area under maize, pigeon pea, green gram and black gram increased with a similar pattern in the Rabi season and Zaid season. The authors further reported an overall increase in net returns and productivity of the farm.

Respondents' opinion towards extension system of ATMA:-

The respondents' opinion on various parameters namely Decentralized flexible decision-making system, Bottom-up planning, Extension services through women farmers, Promotion of natural farming, Implementation of innovative activities, Group approach and Farmers' empowerment were obtained, and the results are presented in Table 8.

Table 8: Respondents' opinion towards extension system of ATMA

Sr. No.	Indicators	Respondents' opinion towards extension system of ATMA					
		Low		Medium		High	
		F	Percentage	F	Percentage	F	Percentage
1	Decentralized flexible decision-making system	23	19.17	66	55.00	31	25.83
2	Bottom-up planning	44	36.67	55	45.83	21	17.50
3	Extension services through women farmers	24	20.00	51	42.50	45	37.50
4	Promotion of natural farming	25	20.83	60	50.00	35	29.17
5	Implementation of innovative activities	41	34.16	67	55.83	12	10.00
6	Group approach	29	24.17	58	48.33	33	27.50
7	Farmers' empowerment	28	23.33	78	65.00	14	11.66

The data revealed that a majority of respondents had medium level of opinion towards various extension activities of ATMA like Farmers' empowerment (65%) followed by Decentralized flexible decision-making system (55%), Implementation of innovative activities (55.83%) and Promotion of natural farming (50%). However, the respondents who had high level of opinion towards Extension services through women farmers were found to be 37.50 percent. The findings were in contrast to those of Babu et al. (2018) who revealed that a significant majority of the respondents had low level of opinion towards various extension activities of ATMA and none of the respondents perceived high level of opinion in the above-mentioned aspects.

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Respondents' perception regarding benefits gained through adoption of natural farming:-

The respondents were enquired whether they were benefitted in terms of cost of cultivation, crop yield, taste of produce and selling price of produce through the adoption of natural farming promoted through ATMA, the findings are presented in Table 9.

Table 9: Benefits perceived by respondents through adoption of natural farming

Sr. No.	Parameters	Perceived benefits		
		Decreased	Remained the same	Increased
1	Crop yield	19 (15.83)	24 (20.00)	77 (64.16)
2	Cost of cultivation	108 (90.00)	-	12 (10.00)
3	Taste of produce	-	6 (05.00)	114 (95.00)
4	Selling price of produce	29 (24.16)	26 (21.67)	65 (54.17)

Data in parentheses is percentage.

It is clear that a significant majority of the respondents (95%) had high perception about the Taste of produce through natural farming. Similarly, a majority of them had high perception on Crop yield and Selling price of produce due to the adoption of natural farming i.e. they could get good crop yield and remunerative prices of their produce. Similarly, a significant majority of them (90%) perceived that Cost of cultivation has decreased due to the adoption of natural farming practices by them. These findings were similar to the study of Kumar et al. (2023) who reported a significant increase in crop yield of about 7 percent and 148 percent in kharif and rabi season respectively under natural farming over conventional farming in Shimla district of Himachal Pradesh. Similarly, the cost of cultivation was less in kharif season while it was more in rabi season because of a greater number of intercrops under natural farming.

6. CONCLUSION

Thus, it was concluded from the study that a majority of the respondents had medium level of awareness, level of participation, knowledge about various activities of ATMA, perception towards convergence of line departments and level of opinion towards various extension activities of ATMA. The respondents were moderately satisfied about execution of extension activities implemented by ATMA. However, a significant majority of respondents had low perception regarding the impact of ATMA in terms of increase in farm productivity, farm income, cropping intensity, changes in cropping pattern and adoption of new/improved farm technologies. Therefore, the study suggested that farmers should be made aware about the various activities/programmes undertaken by ATMA through exposure visits, field demonstrations, trainings and rapidly disseminating improved farm technologies in order to improve the socio-economic status of the farmers.

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