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Participation of agricultural technology management agency beneficiaries about different activities of ATMA

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Abstract
Agriculture has a vital place in the economic development of the country as it provides 58.20 per cent of work force contributes to 19.90 per cent of the GDP in 2020-2021. During last five decades, the country has witnessed spectacular progress in agricultural total food production. It is testimony to resilience of Indian agriculture and the manifestation of the hard work of farmers, extension workers, scientists and administrators. The strong agricultural research and education system coupled with appropriate extension support have helped in achieving the food sufficiency to meet the increasing food demands despite growing population. The goal of sustainable agriculture envisages focused strategy towards adopting a regionally differentiated approach, development and transfer of appropriate technologies, improvements of input use efficiency, incentives for agriculture, risk management and entrepreneurship developments. In the present research study was conducted in Puducherry and karaikal region of Puducherry Union Territory. A sample size of 120 ATMA beneficiary respondents were selected based on random sampling method. Data were collected from the respondents personally by using pre-tested and structured interview schedule. Simple percentage was used for analyzing and interpreting the data. The data revealed that the different activities of ATMA programme nearly three- fourth (74.17 per cent) of the respondents participated more in commodity interest group meetings, followed by demonstration programme (65.00 per cent), training programme (57.50 per cent). This might be due to the fact that everyone has the common purpose of improving their standard of living, the beneficiaries have feeling of responsibility and involve themselves to the fullest in the ATMA activities this might have resulted in the regular frequency of participation.

Keywords: participation, agricultural technology management agency, beneficiaries and different activities

Introduction

Indian agriculture began by 9000 BC as a result of the early cultivation of plants and domestication of crops and animals. Agriculture began independently in different parts of the globe and included a diverse range of taxa. Agriculture has been driven and defined by greatly different climate, culture and technologies. India is the seventh largest country in the world by area (Anonymous, 2018) [1], with 58.00 per cent population earning livelihood in agriculture and contributed 19.90 per cent to country's GDP (Anonymous, 2021) [2]. India's cultivated land area is of 159.70 million hectares out of total land area of 328.70 million hectares. So, agriculture is a very important part of our country's economy as well as it is the only sector that can ensure growth with equity.

For the development of agriculture, a number of programmes through a series of innovative measures have been planned and executed to bring science and technology at the door step of farmers. Of course, as a result of these, Indian agriculture has made spectacular progress and significant increase has been achieved especially in sugarcane, cotton, oilseeds and cereals. The successive five year plans have given agriculture a pride of place in the national economy. In spite of rapid growth in the field of agriculture, India may face a food crisis reminiscent of 1960 in the near future as the population growth in the country has not shown any sign of deceleration and the growth of agricultural production has already indicated a diminishing marginal return. The cumulative result of both foresaid trends may be disastrous for the future economy. The achievement of green revolution has so far been limited to food crops. Real green revolution could have been a reality only if it satisfied the multiple needs of the rural community and would have been based on a stable ecosystem. The green revolution has generally by passed vast rainfed areas causing agro-ecological and social disparities.

New technologies are arriving in the agricultural sector frequently. Due to lack of awareness of farmers about these technologies, there is a prime need for extension in Indian agriculture. The important work of agricultural extension is in transferring relevant knowledge and information to farmers as well as in translating policy to farmers. The strong agricultural research and education systems coupled with appropriate extension support have helped in achieving the food sufficiency to meet the increasing food demands despite of growing population.

India has come a long way from the situation 'living from ship to mouth' to 'food self-sufficiency'. Agriculture plays a vital role in the development of the country. There are many technologies and practices evolved in agriculture for increasing the production and improving the status of farmers (Kumar *et al*., 2020) [4]. "The concept of ATMA

envisages paradigm shift from 'top down' to 'bottom up' in planning and implementation of agricultural development programmes". The key functions of ATMA programme are decentralized decision making at the district level by way of developing strategic research and extension plan (SREP) and its implementation, involvement of all stakeholders in the development process and identification of problems, opportunities, preferences and priorities of farming community. The strategic plan covers the diversification farming systems, intensification of existing farming system and improvement of income and productivity etc., it can receive fund directly from GOI/ States, membership fees, beneficiaries contribution etc., "It is going to be increasingly responsible for all the technology dissemination activities at the district level". It could be linkage with different line departments, research organizations, NGOs and other agencies associated with agricultural development in the district. Jain (2017) reported that (65.83 per cent) of the ATMA beneficiaries had partial participation in project scheme, followed by (20.00 per cent) and (14.17 per cent) of beneficiaries had complete and no participation, respectively.

Materials and Methods

This study was carried out in Puducherry and Karaikal region of Puducherry Union Territory. The sample size of one hundred and twenty ATMA beneficiary respondents were selected based on the random sampling technique. For measuring the participation of respondent in the ATMA, 11 major activities were selected viz. programme scheme, training, demonstration, visit, kisan mela etc., The responses of beneficiaries regarding their participation in selected ATMA activities were collected on a three continuum scale namely "More", "Moderate" and "Never" were done as 3, 2 and 1 respectively. Participation index was worked out by using the maximum obtainable score for each respondent by using the following formula:

$$\text{P.I.} = \frac{O}{S} \text{ X } 100$$

Where,
PI = Participation index of respondent
O = Total obtained score by respondent
S = Total obtainable score

On the basis of participation index beneficiary respondents were categorized in to more, moderate and never. Data on participation level theof respondents were collected with the help of interview schedule method. "The collected data were analysed with the help of" SPSS software. Simple percentage analysis was employed to determine the overall participation of the ATMA beneficiary respondents on recommended paddy cultivation technologies.

Results and Discussion

The results on the participation of beneficiary respondents in the various activities of ATMA programme are presented under two dimensions of activities viz., extent of participation of different ATMA activities and participation of various subject matter of training programme under ATMA are presented in Table 1.

Participation of beneficiaries about different activities of ATMA

The results on the extent of participation of ATMA beneficiaries about different ATMA activities are presented in Table 1.

Table 1: Distribution of respondents according to their extent of participation of different ATMA activities

S. No.	Participation	Level of participation					
		More		Moderate		Never	
		No.	%	No.	%	No.	%
1	commodity interest group meeting	89	74.17	23	19.17	8	6.67
2	Training programme	69	57.50	46	38.33	5	4.17
3	Exposure visit programme	15	12.50	46	38.33	59	49.17
4	Demonstration programme	78	65.00	30	25.00	12	10.00
5	Kisan mela	23	19.17	61	50.83	36	30.00
6	Farmers & scientist interaction programme	58	48.33	34	28.33	28	23.33
7	Participated in prize distribution programme	12	10.00	44	36.66	64	53.33
8	Farmers field school	28	23.33	36	30.00	56	46.67

The results in table 1 exhibited that among the different activities of ATMA programme nearly three- fourth (74.17 per cent) of the respondents participated more in commodity interest group meetings, followed by demonstration programme (65.00 per cent), training programme (57.50 per cent), farmers & scientist interaction programme (48.33 per cent), farmers field school (23.33 per cent), kisan mela (19.17 per cent), exposure visit programme (12.50 per cent) and participated in prize distribution programme (10.00 per cent). This shows that most of the respondents were regularly attended the CIG meetings, demonstration programme and training programme. This might be due to the fact that everyone has the common purpose of improving their standard of living, the beneficiaries have feeling of responsibility and involve themselves to the fullest in the ATMA activities this might have resulted in the regular frequency of participation. This finding of the study was in agreement with the findings of Sharma (2017) who also reported similar result in his study on participation of farmers about different activities of Agricultural Technology Management Agency (ATMA) in Tribal Districts of Madhya Pradesh, India.

As regard to moderate level of participation around half (50.83 per cent) of the respondents were participated in kisan mela followed by training programme and exposure visit programme (38.33 per cent), farmers & scientist interaction programme (48.33 per cent), exposure visit programme (38.33 per cent), participated in prize distribution programme (36.66 per cent), farmers field school (30.00 per cent), demonstration programme (25.00 per cent) and commodity interest group meetings (19.17 per cent). This finding reveals that majority of the respondents were moderate level of participation of different activities of ATMA programme. This finding of the study was in agreement with the findings of Parthasarathi (2020).

In case of never participation category more than half (53.33 per cent) of the respondents were not participated prize distribution programme followed by exposure visit programme (49.17 per cent), farmers field school (46.67 per cent), kisan mela (30.00 per cent), farmers & scientist interaction programme (23.33 per cent), demonstration programme (10.00 per cent), commodity interest group meetings (6.67 per cent) and training programmes (4.17 per cent). This finding reveals that majority of the respondents were never participated in the prize distribution programme, exposure visit programme and farmers field school. This might be due to that prize distribution programme mostly conducted in district head quarter and only few farmers

were selected for exposure visit programme may be the probable reason for never participation.

Participation of various subject matter of training programme under ATMA

The results on various subject matter of training programme along with extent of participation is given in Table 2 and it explains the distribution of respondents according to their participation of various subject matter of training programme under ATMA.

Table 2: Distribution of respondents according to their participation of various subject matter of training programme under ATMA

S. No.	Training Programme	Number	Percent
1	Establishment of community nursery	65	54.17
2	SRI technology	90	75.00
3	Drum seeded rice	73	60.83
4	Growing of azolla, BGA	42	35.00
5	Integrated pest management	84	70.00
6	Integrated disease management	73	60.83
7	Integrated nutrient management	72	60.00
8	Soil testing	57	47.50
9	Preparation of organic inputs (Pancha kavya, leaf extracts, etc.,	45	37.50
10	Commercial vegetable cultivation	68	56.66
11	Vermi compost preparation	64	53.33
12	Mushroom production	37	30.83
13	Bee keeping	24	20.00
14	Floriculture	39	32.50
15	Animal husbandry and dairy	39	32.50
16	Aromatic and medicinal plant cultivation	26	21.66

It is inferred that around three-fourth (75.00 per cent) of the respondents were participated SRI technology training (73.33 per cent) followed by integrated pest management training (70.00 per cent), drum seeded rice (60.83 per cent), integrated disease management (60.83 per cent) and integrated nutrient management (60.00 per cent). More than half (56.66 per cent) of the respondents were participated in commercial vegetable cultivation training followed by establishment of community nursery (54.17 per cent) vermi compost preparation (53.33 per cent) and soil testing (47.50per cent). The possible reasons for more level of participation might be due to the interest of the farmers and concern about environmental pollution due to training offered by the state department of agriculture.

Nearly two-fifth (37.50 per cent) of the respondents were participated in preparation of organic inputs training (Pancha kavya, leaf extracts, etc., followed by growing of azolla and BGA (35.00 per cent), (35.00 per cent), animal husbandry and dairy (32.50 per cent), floriculture (20.83 per cent), mushroom production (30.83 per cent), aromatic and medicinal plant cultivation (21.66 per cent) and bee keeping (20.00 per cent). The reason for low level of participation may be due to lack of understanding of new technologies, poor interest shown by the respondents for attending the training, urgency due to various socio-economic conditions of the respondents may be the probable reason foe low level of participation.

Conclusion

The results exhibited that among the different activities of ATMA programme nearly three- fourth (74.17 per cent) of the respondents participated more in commodity interest group meetings, followed by demonstration programme (65.00 per cent), training programme (57.50 per cent). This might be due to the fact that everyone has the common purpose of improving their standard of living, the beneficiaries have feeling of responsibility and involve themselves to the fullest in the ATMA activities this might have resulted in the regular frequency of participation. Regarding never participation might be due to that prize distribution programme mostly conducted in district head quarter and only few farmers were selected for exposure visit programme may be the probable reason for never participation.

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