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Consequences of ATMA Project and Related Constraints and Suggestions In Anand District of Gujarat In India

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ABSTRACT

ATMA is a society of key stakeholders involved in agricultural activities for sustainable agricultural development in the district. It is a focal point for integrating research and extension activities and decentralizing day-to-day management of the public Agricultural Technology System (ATS). It is a registered society responsible for technology dissemination at the district level. As a society, it would be able to receive and expend project funds, entering into contracts and agreements and maintaining revolving accounts that can be used to collect fees and thereby recovering operating cost.

Key words: Knowledge, Relationship, ATMA, Maize.

INTRODUCTION

The ATMA at district level would be increasingly responsible for all the technology dissemination activities at the district level. It would have linkages with all the line departments, research organizations, non-governmental organizations (NGOs) and agencies associated with agricultural development in the district. Research and extension units within the project districts such as zonal research stations (ZRS) or substations, krishivigyan Kendra (KVK) and the key line departments of agriculture, animal husbandry, horticulture and fisheries etc.

Farmer Interest Groups (FIGs) are a new model of learning and innovation for farmers despite the remarkable benefits that farmers have gained by joining these groups, their sustainability is a major concern of extension bodies, relevant organizations and farmers. Examine the roles of extension officers in supporting farmers to set up and run their interest groups. Inspite of the challenges that each group faced during the development phase, these groups shared factors that contributed to success. There can be 10-20 members in one group.

Maize is the third largest cultivated crop in India after Rice and Wheat. Kharif maize contributes to over 80 percent of the maize output in the country. About twelve states in India produce maize in significant areas and the yield levels range from 650 kg per hectare to 1650 kg. Maize in India is slowly expanding its presence due to incessant promotion by private companies and animal feed market, to the extent that it is now contributing close to 7% of the national foodgrain basket.

Keeping in the view the significance of the socio-techno-economic changes, present investigation attempts to study the consequences of ATMA project on maize growers.

MATERIALS AND METHODS

The present investigation was undertaken in Dahod district which comes under the jurisdiction of Anand Agricultural University, Anand, Gujarat. This

district is comprised of eight talukas. Out of these, three talukas namely Dahod, Zalod and Limkheda was purposively selected for the study as they have maximum number of farmer interest groups (FIGs) than other talukas. Total 8 FIGS were randomly selected from eight village of each taluka. Thus total 24 FIGs were selected from 24 villages. From each FIGs of village, five farmers were randomly selected. Hence, total 120 farmers were selected and were interviewed with a structural pre-tested Gujarati version interview schedule with an aim to study the socio-personal, economic, psychological and communicational characteristics of the maize growers and their relationship with their socio-techno-economic changes. Analysis was done on the basis of 120 maize growers.

The independent variables undertaken in this study like age, education, social participation, size of land holding, occupation, economic motivation, scientific orientation, market intelligence, innovativeness, knowledge of maize cultivation technology, mass media exposure and extension participation were measured with the help of suitable scale and procedures with due modification.

Table. 1: Distribution of the maize growers according to their knowledge regarding to maize cultivation technology n = 120

Sr. No.	Knowledge	Number	Percent
1.	Low (below 23.47 score)	22	18.33
2.	Medium (between 23.47 to 33.61 score)	74	61.67
3.	High (above 33.61 score)	24	20.00
Total		120	100.00

Mean= 20.04; S.D. = 3.57

Table. 2: Relationship between the profile of maize growers and their socio-techno-economic changes. n = 120

Sr. No.	Independent Variables	Correlation-Coefficient ('r' value)
1	Age	-0.1294 NS
2	Education	0.2590**
3	Social participation	0.2424**
4	Occupation	0.2029**
5	Size of land holding	0.1864*
6	Economic motivation	0.3188**
7	Scientific orientation	0.3536**
8	Market intelligence	0.3002**
9	Innovativeness	0.2289**
10	Knowledge regarding to maize cultivation technology	0.2079**
11	Mass media exposure	0.2847**
12	Extension participation	0.2272**

NS = non-significant at 0.05 level, * = significant at 0.05 level, ** = significant at 0.01 level

The data were collected with the help of structural interview schedule. The collected data were classified, tabulated and analyzed in order to make the findings meaningful. The statistical measures such as percentage, mean score, standard deviation and co-efficient of correlation were used.

RESULTS AND DISCUSSION

Knowledge regarding to maize cultivation technology

On the basis of collected information regarding to knowledge of maize cultivation technology, the respondents were categorized into three groups as shown in Table 1

It is clear from Table 1 that more than half (61.67 per cent) of the maize growers had medium level of knowledge of maize cultivation technology followed by 20.00 per cent had high level of knowledge and 18.33 per cent maize growers had low level of knowledge of maize cultivation

technology. This finding in line with the finding supported by Patel (2005) and Darandale (2010)

Relationship of socio-techno-economic changes of maize growers and their profile

In order to determine the relationship between the personal, social and economic characteristics of the maize growers with their socio-techno-economic changes.Itcould be observed from the table that out of the 12 variables,one variable age had a negative and non-significant correlation with their socio-techno-economic changesand rest eleven variables had positive and significant relationship with their socio-techno-economic changes.This was determined and tested with help of Karl Pearson's coefficient correlation test and results obtained is presented in Table 2.

As seen from the Table 3 major constraints faced by maize growers are high cost of farm inputs (95.00 per cent), high cost of chemical fertilizers (90.83 per cent), unavailability of plant protection appliances (85.83 per cent), lack of technical guidance from village level workers(68.33 per cent), low market price of agricultural produce (60.00 per cent), inadequate and untimely supply of agricultural

Table. 3: Constraints faced by maize growers in adoption of maize cultivation technology crop n = 120

Sr. No.	Constraints	Number	Per cent	Rank
1	High cost of farm inputs	110	91.61**	I
2	High cost of chemical fertilizers	103	85.83**	II
3	Unavailability of plant protection appliance	91	75.83**	III
4	Lack of technical guidance from village level workers	82	68.33**	IV
5	Low market price of agricultural produce	72	60.00**	V
6	Inadequate and untimely supply of agricultural inputs	65	54.16**	VI
7	Late maturity of varieties	60	50.00*	VII
8	Residual effect of herbicide in field	58	48.33*	VIII
9	Information not available in time	45	37.50*	IX
10	Lack of awareness of high yielding varieties	25	20.83*	XI
11	Market facility is not available nearby village	24	20.00*	XII

** More important, * Less important

Table. 4: Suggestions offered by maize growers to overcome problem faced by them, n = 120

Sr. No.	Suggestions	No.	Percent	Rank
1.	Supply of production inputs at subsidize rate	108	90.00**	I
2.	Recommended agricultural technology for maize crop should be disseminated by village level workers in time	102	85.00**	II
3	Establish village information centre or kiosk in each village	78	65.00**	III
4	Short duration variety should be available	65	54.16**	IV
5	Easy availability of plant protection appliances	58	48.33*	V
6	Agricultural inputs should be available in time	52	43.33*	VI
7	Training should be given for improved maize cultivation technology	49	40.83*	VII
8.	Seed of hybrid maize should be purchased every year	25	20.83*	IX
9.	Market facility should be available at village level	20	16.67*	X

** More important, * Less important

inputs (54.16 per cent) which are more important constraints. Less important constraints faced by maize growers likewise, late maturity of varieties (50.00 per cent), residual effect of herbicide in field (48.33 per cent), information not available in time (37.50 per cent), lack of awareness of high yielding varieties (20.83 per cent) and market facility is not available nearby village (20.00 per cent).

Suggestions offered by the maize growers to overcome problems faced by them

An attempt was also made to ascertain suggestions from maize growers to overcome various constraints faced by them adoption of maize cultivation technology. The respondents were requested to offer their valuable suggestion against difficulties faced by them in maize cultivation.

Valuable suggestions given by maize growers are presented in Table 4. It can be concluded from the Table 4 that the maize growers suggested supply of production inputs at subsidize rate (90.00 per cent), recommended agricultural technology for maize crop should be disseminated by village level workers in time (85.00 per cent), establish village information centre or kiosk in each village (65.00 per cent), short duration variety should be available (54.16 per cent), easy availability of plant protection appliances (48.33 per cent), agricultural inputs should be available in time (43.33 per cent), training should be given for improved maize cultivation technology (40.83 per cent), seed of hybrid maize should be purchased every year (20.83 per cent) and market facility should be available at village level (16.67).

CONCLUSIONS

It is therefore concluded that great majority (81.67 per cent) maize growers had medium to high level of knowledge regarding to maize cultivation technology. The probable reasons for this type of finding might be due to their good education level, medium to high level of mass media exposure and medium level of extension participation. It means this may be due to positive impact of ATMA project on farmer interest groups (FIGs) of maize growers.

The independent variables like education, social participation, size of land holding, occupation, economic motivation, scientific orientation, market intelligence, innovativeness, knowledge of maize cultivation technology, mass media exposure and extension participation had positive and highly significant correlation with socio-techno-economic changes of maize growers. The variables like age shows negative but non-significant relationship with socio-techno-economic changes of maize growers.

Major constraint faced by maize growers are high cost of farm inputs, high cost of chemical fertilizers, unavailability of plant protection appliances, lack of technical guidance from village level workers, low market price of agricultural produce and inadequate and untimely supply of agricultural inputs and more important suggestions given by maize growers supply of production inputs at subsidize rate, recommended agricultural technology for maize crop should be disseminated by village level workers in time, establish village information centre or kiosk in each village and Short duration variety should be available

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