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RESEARCH ARTICLE :

Correlates of impact of pumpset supply scheme on tribal farmers

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SUMMARY : Agriculture is the main base of Indian economy. The agriculture development is depend on development of all sectors of farming community may be poor or rich, educated or illiterate, tribal or non-tribal. As tribal villages are located in the forest and hills, they remain more or less cut off from the main stream of national development. Extension education is equally important in tribal communities as it is in the rural communities. It has widely been accepted by the Government that the tribal people must be brought the main stream of Indian life. The tribals are exploited through and alienation, indebtedness, bounded labour, malpractices in exchange of agricultural and forest produce, etc. To overcome in this developmental programme priority was given to agriculture and allied sectors, irrigation facilities and forest and mineral based industries. Efforts were also made to include a change in the traditional ways of agriculture. So as to provide increased income to the tribal cultivators even though they have small holdings. At national and state level various agriculture development schemes are implemented with a view to bring the development in tribal farming. Tribal beneficiaries of pumpset supply scheme largely belonged to middle age group *i.e.* 36 to 51 year (51.33 %), illiterate (26.00 %), belonged to farming community. Majority of them *i.e.* 83.33 per cent doing subsidiary occupation as farm labour, had medium 1.01 to 2 ha hand holding (46.67 %), had medium socio-economic status (40.00 %), 66.67 per cent tribal beneficiaries had utilized the medium level information sources, had medium degree of proneness to change (56.67 %), had low extension contact (86.67 %) and majority tribals had moderately favourable attitude towards scheme (48.00 %).

KEY WORDS :
Correlates, Impact, Supply scheme, Pumpset, Tribal development scheme

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BACKGROUND AND OBJECTIVES

Various agricultural development schemes are being implemented under ITDP for tribal farmers. Under agriculture development scheme, various inputs, implements and funds are provided to tribal farmers for undertaking various objectives are some of the following agricultural development schemes were considered for the study. Especially in agriculture and allied sectors for the effective implementation of those schemes, Tribal development division was established at National level from May 1, 1989 (Rathod, 2001).

The pumpset supply schemes is in operation at Akola district under MADA pocket/ block, since the year of inception and has benefited a large number of tribal farmers from the area. It was found necessary to identify the characteristics influencing the impact of the said scheme and in line, this attempt was made.

RESOURCES AND METHODS

The present study has been conducted in MADA pocket of Akola district in Vidarbha region of Maharashtra state. For the evaluation of impact of pumpset supply scheme, ex-facto design of social research has been used. In the MADA pocket of Akola district, Akot, Telhara and Patur tahsils are mainly included in tribe area pocket. Actual utilization of pumpset supply scheme it has been taken as a study year while before utilization of pumpset it has considered as a base year.

The MADA pocket of Akola district consist of the fifty eight villages *i.e.* Akot (24), Telhara (16) and Patur (18). From each tahsil 5 villages were purposively selected to get maximum number of pumpset supply scheme beneficiaries. A list of tribal beneficiaries of pumpset supply scheme *i.e.* tribal development programme was obtained from Project Officer, Tribal Development Officer, Akola, for all selected 15 villages, 10 tribal farmers from each village were randomly selected by simple random sampling method. Thus, in all 150 respondents were selected from Akot, Telhara and Patur tahsil.

The co-efficient of correlation was worked out to find relationship between selected characteristics and the impact parameters.

OBSERVATIONS AND ANALYSIS

The relational analysis between selected personal, socio-economic, communicational and psychological profile of tribals with impact has been studied and presented below.

Correlates of change in agricultural production :

From Table 1, it is observed that only the land holding of tribal farmers had found to be significant relationship with change in agricultural production and remaining all the variable of personal, socio-economic, communicational and psychological profile were non-significantly related with per cent change in agricultural production.

These are unexpected observations, but probably the quality of information and extension contacts were not effective in case of MADA pocket tribals. Tribals created need of subsidiary occupation to increase the annual income, for their livelihood. Thus MADA pocket tribals area were more inclined towards labour work, hence negative relationship has been observed.

Rathod (2001) revealed that, tribal farmers were not able to maintain the poor quality land in their limited resources. Therefore, land holding has not assisted in increasing their agricultural production, hence, land holding was found to be not significantly related with change in production.

Correlates of change in productivity :

It is revealed from data presented in Table 1 that, from selected independent variable of tribal beneficiaries exhibited non-significant relationship with change in agricultural productivity. Only proneness to change of tribal beneficiaries had significant relationship at 0.05 level of probability with change in agricultural productivity.

It was observed that, quality of information, extension contacts of MADA tribals were not effective and their intention towards labour work as a subsidiary occupation had also not effect the agricultural productivity.

Correlates of change in annual income :

It is revealed from Table 1 that no any selected independent variables had found significant relationship with change in annual income.

Other variables of pumpset beneficiaries did not show significant relationship with income. Generally the subsidiary occupation helps to increase the employment which naturally helped to increase, the income of individual, but previously we observed that in case of MADA pocket tribal it is incorrect, therefore, the relationship of subsidiary occupation with change in annual income was found to be not significant.

Correlates change in cropping intensity :

From the data of Table 1 it is noticed that land and socio-economic status of beneficiaries had highly significant relation with change in cropping intensity (r=0.300 and 3=0.319). Education of tribals was found to have significant correlation (r=0.231) with the cropping

intensity as well as source of information of farmers had significant relationship at 0.05 level of probability with change in cropping intensity, while age, occupation, proneness to change, extension contact and attitude towards scheme was found to have non-significant relationship with cropping intensity.

In case of small farmers, increase in land holding resulted in decrease in cropping intensity, it is identified that with the poor resources, small farmers try to get maximum food grain production to fulfill their family requirements. Finally, previously as we observed tribals also consider as small farmers with respect to their land holding. Therefore, it is obvious that, they prefer to cultivate sole cereals crop, thus cropping intensity is low.

Correlates of impact :

Impact of pumpset supply scheme *i.e.* tribal development programme implemented in study area was studied about per cent change in production, change in productivity, change in annual income and change in cropping intensity. The observations are presented in Table 2.

It is observed that, attitude towards scheme and change in cropping intensity were found to have significant relationship at 0.05 level of probability with impact of pumpset supply scheme (r=0.169 and r=0.168, respectively). However, these variables *i.e.* change in production, change in productivity and change in annual income and remaining all the characteristics of tribals were non-significantly correlated with impact. But previously as we observed, change in production, change in productivity and change in annual income had highly significant relationship with impact.

It indicated that, tribal beneficiaries had used

Table 1 : Correlates of impact parameters

Sr. No.	Independent variables	Co-efficient of correlation (r)			
		Change in production	Change in productivity	Change in annual income	Change in cropping intensity
1.	Age	0.0413 NS	0.0619 NS	0.0887 NS	0.0301 NS
2.	Education	0.0808 NS	0.0212 NS	0.160 NS	0.231*
3.	Occupation	0.0684 NS	0.0695 NS	0.077 NS	0.087 NS
4.	Land holding	0.2142*	0.1022 NS	0.216 NS	0.300**
5.	Socio-economic status	0.107 NS	0.0800 NS	0.134 NS	0.171*
6.	Sources of information	0.0246 NS	0.0712 NS	0.059 NS	0.202*
7.	Proneness to change	0.129 NS	0.189*	0.026 NS	0.0432 NS
8.	Extension contact	0.0370 NS	0.033 NS	0.057 NS	0.149 NS
9.	Attitude towards scheme	0.154 NS	0.101 NS	0.069 NS	0.138 NS

* and ** indicate significance of values at P=0.05 and 0.01, respectively level of probability, NS =Non-significant

Table 2 : Correlates of independent characteristics with impact

Sr. No.	Independent variables	Co-efficient of correlation (r)
1.	Age	0.0775 NS
2.	Education	0.0475 NS
3.	Occupation	0.1046 NS
4.	Land holding	0.1319 NS
5.	Socio-economic status	0.0661 NS
6.	Sources of information	0.107 NS
7.	Proneness to change	0.133 NS
8.	Extension contact	0.0974 NS
9.	Attitude towards scheme	0.169*
10.	Change in production	0.925**
11.	Change in productivity	0.901**
12.	Change in annual income	0.867**
13.	Change in cropping intensity	0.168*

* and ** indicate significance of values at P=0.05 and 0.01, respectively level of probability NS =Non-significant

infrastructural facility properly, which resulted in cropping intensity was seen to be significantly more.

Mahnot *et al*. (1992) stated that availability of infrastructure for irrigation water helps the farmers to increase their cropping intensity. Haffis *et al*. (1997) also reported that due to the availability of bower well, cropping intensity has been increased.

Therefore, it is conducted that, pumpset supply scheme increased cropping intensity of MADA tribals followed by increase crop production and crop productivity.

Conclusion :

It is observed that the selected personal, socio-economic communication and psychological characteristics of tribals farmers have explained very low variation in the change in developmental parameters. Hence, it is necessary to undertake research on different psychological characters of tribals, their customs and beliefs and other social valves. The findings of the research should be seriously considered while planning the agricultural development scheme in tribal areas.

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