Personal co-relates of sprinkler irrigation technology

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ABSTRACT

The Present study was conducted in eighteen Villages in Akot and Telhara Panchyat samiti in Akola district of Maharashtra State. A sample of 100 respondents was drawn randomly with an object to study the Presonal ,Socio-economic,Communicational and Psychological Characterstice of beneficiaries and to study the relationship between personal personal characteristics with evaluation of sprinkler Irrigation Scheme.Data were collected by personally interviewing the respondents and analyzed stastically. The findings revealed that majority of respondent were middle age group, mostly matriculate , possessed land between 4.01 to 10ha.belonged moderately deep category of soil with an annual income between Rs. 1,00,001 to Rs. 2,00,001. Majority of beneficiaries had medium level of social participation, middle level of socio-economic status, medium access to source of information and medium level of innovativeness. The education, land holding ,annual income,social participation, socioeconomic status, sources of information and innovativeness were found to be positively signigicantly correlated with change in cropping pattern, production and productivity, income, employment generation, occupation material possession. Multiple regression analysis showed that all the independent variables together accounted for 18.68, 26.17,21.74,22.68,15.76 and 11.79 in respect of change in cropping pattern, production and productivity, income, employment generation, and material possession. It was found to be significant in all the dependent variables except change in occupation. None of the variables was found to be significantly affecting the change in material possession and employment generation, area under sprinkler irrigation was found to be significant determinant of evaluation.

Key words :
Personal
characteristics,
sprinkler irrigation
technology ,
correlation

INTRODUCTION

The prime importance is given for agricultural development involving land and water management in relation to improved crop production keeping in view the need of resources conservation, development and utilization for higher productivity and profitability. Maharashtra Government implemented the sprinkler irrigation scheme. Keeping this in view, the present investigation was carried out with specific objective to study the Personal ,Socio-economic communicational and psychological characteristics of beneficiaries and to study the relationship between personal characteristics with evaluation of sprinkler irrigation scheme.

METHODOLOGY

The study was conducted in Akola district of Maharashtra state. Out of seven panchayat samities, two panchayat samities, namely Akot and Telhara were selected purposively on the basis of maximum beneficiaries. A sample of 100 beneficiaries was drawn randomly. The experimental design of social research was used to assess the evaluation (impact) of scheme on farmer beneficiaries. The data were collected from them in the structured interview schedule by the researchers.

RESULTS AND DISCUSSION

A perusal of Table 1 revealed that majority of the respondents (56.00%) were middle age, followed by 42.00% in the secondary level of education. Nearly three-fourth of respondent (74.00%) were medium farmer possessing the land between 4.01to 10 ha. Over half of the respondent (57.00%) had moderately deep category of land. Nearly two-third of the beneficiaries (64.00%) had an area above 2ha. Under sprinkler irrigation. Nearly half of the respondent (47.00%) had annual income between Rs. 1,00,001 to 2,00,000/. An overwhelming majority of the beneficiaries (90.00%) were found to be with medium social Participation with a membership in formal social organization. Nearly three-fourth of the beneficiaries (72.0%) were found to have moderate level Socio-economic status in the village community. Three-fourth (75.00%) of the beneficiaries had an access to the different sources of information about sprinkler irrigation scheme to a moderate extent. Over half of the respondents (57.00%) beyond to the medium level of innovations, followed by 23 per cent in

Table 1 : Profile characteristics of beneficiaries		
Sr. No.	Category	Frequency/Percentage (n=100)
	Age	
1.	Young	22.00
2.	Middle	56.00
3.	Old	22.00
	Education	
1.	Illiterate	00.00
2.	Primary School	07.00
3.	Middle School	15.00
4.	Secondary School	42.00
5.	Higher Secondary School	18.00
6.	College	18.00
	Land holding	
1.	Marginal farmer	00.00
2.	Small farmer	00.00
3.	Semi medium farmer	23.00
4.	Medium farmer	74.00
5.	Big farmer	03.00
	Type of soil	
1.	Very shallow	00.00
2.	Shallow	00.00
3.	Moderately deep	57.00
4.	Deep	41.00
5.	Very deep	02.00
	Area under sprinkler irrigation	
1.	Low	00.00
2.	Medium	36.00
3.	High	64.00
	Annual income	
1.	Upto Rs.1,00,000/	10.00
2.	1,00,000 to 2,00,000	47.00
3.	2,00,001 to 3,00,000	27.00
4.	Above 3,00,000	16.00
	Social participation	
1.	Low	00.00
2.	Medium	90.00
3.	High	10.00
	Socio-economic status	
1.	Lower SES	00.00
2.	Lower middle SES	04.00
3.	Middle SES	72.00
4.	Upper middle SES	24.00
5.	Upper SES	00.00
	Source of information	
1.	Low	14.00
2.	Medium	75.00
3.	High	11.00
	Innovativeness	
1.	Low	12.00
2.	Medium	56.00
3.	High	32.00

high level of innovativeness.

Relational analysis:

The findout the relationship between Personal characteristics of the beneficiaries and evaluation of Sprinkler Irrigation Technology correlation coefficient were worked out and are presented in Table 2.

The characteristic of the respondent such as education, land holding, area under sprinkler irrigation scheme, annual income, Social participation, Socio-economic status, source of information and innovativeness had positive and significant correlation with change in their dependent variables as shown in Table 2. In evaluation, age, type of soil, and social participation does not affect socio-economic development of farmers while education, land holding, area under sprinkler irrigation and source of information have good contribution in development of socio-economic status of farmers. These findings are corroborative to the findings of Rao (1986) and Ingle (2002).

It is revealed from Table 3 that the regression coefficient (R^2) indicates that ten variables contributed 0.2617, 0.2268 and 0.2178 per cent the maximum variation towards change in production, change in income and change in productivity are, respectively. These findings are in conformity with the findings of Rao (1986).

Conclusion:

The sprinkler irrigation scheme definitely benefited the farmers both in improving the socio-economic status and helped in increasing irrigation potential in the area. A substantial change occur on beneficiaries in terms changes in cropping pattern their production and productivity, Income, Material Possession and Employment-generation.

Table 2 : Relationship between independent and dependent variable

Sr. No.	Variables	Change in					
		Cropping pattern	Production	Productivity	Income	Employment-generation	Material possession
1.	Age	0.014	0.230[*]	0.078	0.079	0.005	0.061
2.	Education	0.311[**]	0.260[*]	0.329[**]	0.265[**]	0.033	0.047
3.	Land holding	0.326[**]	0.235[*]	0.061	0.208[*]	0.200[*]	0.177
4.	Type of soil	0.152	0.140	0.015	0.078	0.115	0.096
5.	Area under sprinkler irrigation	0.201[*]	0.377[**]	0.195[*]	0.315[**]	0.240[**]	0.060
6.	Annual income	0.220[*]	0.073	0.207[**]	0.228[**]	0.017	0.194[*]
7.	Social participation	0.120	0.096	0.003	0.088	0.211[*]	0.194[*]
8.	Socio-economic status	0.067	0.026	0.022	0.234[**]	0.107	0.196[*]
9.	Sources of information	0.228[**]	0.197[*]	0.230[**]	0.227[**]	0.059	0.109
10.	Innovativeness	0.213[*]	0.229[*]	0.138	0.196[*]	0.197[*]	0.037

* and ** indicate significance of values at P=0.05 and 0.01, respectively

Table 3 : Multiple regression analysis

Sr. No.	Evaluation	R^2
1.	Change of cropping pattern	0.1868
2.	Change of production	0.2617
3.	Change of productivity	0.2178
4.	Change of income	0.2268
5.	Change of employment generation	0.1576
6.	Change of material possession	0.1179

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