Influence of Selected Variables on Adoption of Jowar Technology by Farmers in Both The Districts

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INTRODUCTION

Sorghum is one of the main stable foodgrains of the world's poorest people. It is one of the four major cereal crops of the world. Maharashtra is one of the major sorghum growing states in India. Sorghum is grown both as Kharif and Rabi crop to the equal extent. In Maharashtra, jowar occupies a total area of 66 lakh hectares which is about 41 per cent of India's total area under this crop. It occupies 46 per cent of the area among the different foodgrains in Maharashtra and its contribution to the total food grain production is to the tune of 49 per cent. Are farmers adopting the recommended packge of practices of hybrid jowar ? What factors are essential for increasing the adoption of recommended packge of practices of hybrid jowar ? The study is therefore, planned to answer, these questions with the objective to delineate the relationship between adoption of recommended package of practices of hybrid jowar and socio-personal and economic chraracteristics of farmers of progressive and less progressive districts.

METHODOLOGY

The study was conducted in Marathwada region of Maharashtra state. Which was purposively selected because the researcher had and access to farmers in this region. Two districts viz., Aurangabad and Jalana were selected by applying scale developed for measuring the prograssiveness of the district.

After identification of districts for their progressiveness one taluka from progressive districts were selected on the basis of having maximum area under jowar crop in kharif season. Aurangabad and jalana talukas were selected for the present study. From the talukas, five villages from each taluka viz.. Harsul, Sawangi, Phulambri, Choka and Chitegaon from Aurangabad taluka and Borkhedi, jamwadi, Nava, Vilhadi and Dabhadi Villages from jalana taluka were purposively selected. Based on the proportionate random sampling technique, 20 per cent jowar cultivators from each of the village were selected randomly for the study, thus, sample comprised of 220 respondents. The heads of selected farm families were personally interiewed with

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the help of specially designed interview schedule. The statistical tests like correlation coefficient, multiple regresion and path analysis were used to analyse the data.

RESULT AND DISCUSSION

Information pertaining to relationship and multiple regression analysis of adoption of jowar technology by the farmers in progressive and less progressive districts has been presented in Table 1.

Independent variables namely, education, land holding, were found to be positively and significantly related with adoption of recommended packge of practices of hybrid jowar by farmers of progressive and less progressive districts. Age was found to be negatively and significantly related with adoption of recommended package of practices of hybrid jowar by farmers of progressive district, whereas, it was found tobe positively related with adoption of farmers of less progressive district. These findings are in line with the findings reported by Dube *et al* (1988) Sinha *et al* (1988).

Multiple regression analysis :

Looking to the farmers of progressive district, the variables viz., land holding and knowledge about technology of jowar were found significantly contributing to the adoption of recommended package of practices of hybrid jowar, whereas, only

education and knowledge about technology of jowar were proved tobe significantly contributing to the adoption of recommended packge of practices of hybrid jowar by farmers of less progressive district,. when the multiple regression coefficient was estimated. It was found that 58.40 per cent and 79.70 per cent variation in the adoption of recommended package of practices of hybrid jowar by farmers of progressive and less progressive districts respectively was explained by the selected independent variables.

Path analysis :

The highest positive direct effect on adoption of recommended package of practices of hybrid jowar of both the groups was exercised by knowledge about technology of jowar. Entrepreneurial behaviour in case of farmers of progressive and less progressive districts was found to be exerting highest positive total indirect effect on adoption of recommended package of practices of hybrid jowar. The first highest substantial positive indirect effect on adoption of recommended package of practices of hybrid jowar was exerted by knowledge about technology of jowar in case of farmers of progressive and less progressive districts.

CONCLUSION AND IMPLICATIONS

It can be concluded that knowledge about technology of jowar was the most important variable affecting

Table 1 :Relationship and multiple regression analysis of adoption of jowar technology by the farmers in progressive and less progressive districts.

Sr. No.	Independent Variables	Simple correlation coefficient		Multiple regression analysis	
		Adoption level of farmers of progressive district	Adoption level of farmers of less progressive district	Adoption level of farmers of progressive district 't' value	Adoption level of farmers of less progressive dist. 't' value
X1	Age	-0.376**	0.198*	-1.292	1.315
X2	Education	0.632**	0.592**	0.968	2.532*
X3	Landholding	0.529**	0.273**	2.466*	1.181
X4	Knowledge about technology of jowar	0.721**	0.880**	4.270**	8.925**
X5	Entrepreneurial behaviour.	0.617**	0.733**	0.358	1.323

* Significant at 5 per cent level of probability.
** Significant at 1 per cent level of probability.

R- square = 0. 5840
'F' value = 29.196**

R- Square = 0.7970
'F' Value = 81.639**

Table 2 : Path Coefficients showing the effects of independent variables on adoption of recommended package of practices of hyrid jowar crop

Sr. No.	Independent Variables	Adoption level if farmers of progressive district (n=110)				Adoption level of farmers of less progressive district (n=110)			
		Direct effect	Total indirect effect	Substantial indirect effect		Direst effect	Total indirect effect	Substantial indirect effect	
				1st	2nd			1st	2nd
X1	Age	-0.093	0.282	0.046 (x2)	0.031 (x4)	0.062	0.135	0.012 (x4)	-0.008 (x2)
X2	Education	0.100	0.531	0.071 (x4)	0.064 (x5)	0.143	0.448	0.081 (x4)	0.075 (x5)
X3	Landholding	0.191	0.337	0.108 (x2)	0.090 (x5)	0.054	0.219	0.013 (x4)	0.010 (x5)
X4	Knowledge about technology jowar	0.499	0.222	0.399 (x5)	0.354 (x2)	0.698	0.181	0.548 (x5)	0.396 (x2)
X5	Entrepreneurial behaviour	0.038	0.578	0.031 (x4)	0.025 (x2)	0.095	0.637	0.075 (x4)	0.050 (x2)

(Figures in parentheses indicate number of independent variables through which it effect)

directly and positively the adoption of recommended package of practices of hybrid jowar. It had also provided a way for the variables viz., entrepreneurial behaviour, education and age in exerting their indirect substantial effect on adoption of recommended package of practices of hybrid jowar. There fore, it is suggested that the T and V staff should come forward to increase farmers knowledge about technology of jowar so that farmers can take their advantage to improve their adoption of recommended package of practices of hybrid jowar.

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> God travels at a shails pace. Those who want to do good are not selfish, they are not in a hurry, they know that to impregnate people with good requires a long time.
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> - GANDHI