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Level of agricultural modernization of tribal farmers

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Abstract
Agricultural modernization is a psychological state of farmers mind. Agricultural modernization means from traditional agriculture to modern agriculture transformation process and means. To assess this situation, a study was conducted in Khedbrahma and Vijaynagar taluka of Sabarkantha district were selected purposively being tribal dominating area. Total 20 villages were randomly selected from 2 purposively selected talukas and 10 respondents were randomly selected from each village. Thus, total sample size was 200 farmers. And it is observed that 51.00 per cent of the respondents had medium level of agricultural modernization, followed by 29.00 per cent with low level. Remaining 20.00 per cent respondents had high level of agricultural modernization. And it is observed that six independent variables viz., education, annual income, economic motivation, risk orientation, scientific orientation and farmers' attitude towards ITDP were found to be positively and significantly related with the agricultural modernization of the tribal farmers.

Keywords: agricultural modernization; tribal farmers; ITDP

Introduction
Every country which has modernized its agriculture and has achieved higher production has done so, only through the introduction of science and technology into the farming system. The Indian peasants in recent years have shown encouraging sign of changing from traditional to modern one, through conversion of agricultural technology into production accomplishment. Peasantry modernization is related with the application of science and technology in the farming. Therefore, increase in agricultural production is necessary as economic and social benefits are directly dependent on the extent to which farmers use the improved technology. During the last 65 years, a number of changes have taken place in Gujarat and India through implementation of various development programmes. In spite of this, we are yet to modernize the rural peasants and their economy up to the desired level. In Gujarat, there are certain districts, where progress in peasantry modernization is very low in general and tribal districts in particular. There are 193 Integrated Tribal Area Development Projects with 303.41 lakhs of schedule tribe population. In Gujarat, the tribal population constitutes 14.92 per cent of the total population. Integrated Tribal Development Project (ITDP) was implemented in 1976 throughout the state in tribal pockets for welfare of the tribal peasants even though majority of the peasants in this area not yet able to reach expected level of agricultural modernization and socio-techno-economic change. To assess this situation present study on "An impact analysis of peasantry modernization in agriculture under Integrated Tribal Development Project of Sabarkantha district" was planned

Methodology
Ex-post-facto research design was used in present investigation. Multistage random sampling technique was used for selection of districts and talukas. While, villages and respondents were selected using simple random sampling technique. Gujarat state has 33 districts and out of these, Sabarkantha district was purposively selected for this study because of Sabarkantha is a tribal dominating district of North Gujarat. The present study was undertaken in Integrated Tribal Development Project (ITDP) area of Sabarkantha District of Gujarat State. Sabarkantha District comprises eight talukas, out of which two talukas *viz*., Khedbrahma and Vijaynagar were selected purposively being tribal dominating area. From each selected taluka, ten villages were selected randomly, thus, finally samples of 20 villages from 2 purposively selected talukas were considered for the study.

From each village, ten respondents were selected randomly. Thus, random samples of total 200 tribal farmers were selected for the present study. The data were collected with the help of well-structured, pre-tested, Gujarati version interview schedule through personal contact and data were compiled, tabulated and analysed to get proper answers for objectives of the study. The statistical tools used were frequency and percentage, arithmetic mean, standard deviation. The respondents were categorized into low, medium and high level of Agricultural Modernization Index (AMI) using ± S.D. from Mean (ℜ).

Results and Discussion

Level of agricultural modernization of tribal farmers

Table 1: Distribution of the respondents according to their level of agricultural modernization (n = 200)

Sr. No.	Level of agricultural modernization	Number	Per cent
1	Low (< 28.58 index)	58	29.00
2	Medium (28.58 to 60.22 index)	102	51.00
3	High (> 60.22 index)	40	20.00
Total:		200	100.00

Mean (ℜ) = 44.40 S.D. = 15.82

It could be seen in Table 1 that 51.00 per cent of the respondents had medium level of agricultural modernization, followed by 29.00 per cent with low level. Remaining 20.00 per cent respondents had high level of agricultural modernization.

Thus, more than three fourth (80.00 %) of the respondents had low to medium level of agricultural modernization. The reasons for above situation might be due to their medium level education, medium mass media exposure and medium extension contact.

Relationship between selected independent variables and agricultural modernization

Table 2: Relationship between selected independent variables and agricultural modernization (n = 200)

Sr. No.		Independent variables	Correlation coefficient ('r' value)
[I]		**Personal:**	
	1	Age	-0.696**
	2	Education	0.251**
[II]		**Socio-economic:**	
	3	Size of land holding	0.219^{NS}
	4	Annual income	0.417**
	5	Migration habit	-0.011^{NS}
	6	Social participation	-0.134**
[III]		**Communicational:**	
	7	Sources of information	0.135^{NS}
[IV]		**Psychological:**	
	8	Level of aspiration	-0.079^{NS}
	9	Economic motivation	0.553**
	10	Risk orientation	0.362**
	11	Scientific orientation	0.463**
	12	Attitude towards Integrated Tribal Development Project	0.551**

* Significant at 0.05 level of significance. NS = non-significant at 0.05 level.
** Significant at 0.01 level of significance.

It can be concluded from table 2 that six independent variables *viz.*, education, annual income, economic motivation, risk orientation, scientific orientation and farmers' attitude towards Integrated Tribal Development Project (ITDP) were found to be positively and significantly related with the agricultural modernization of the tribal farmers. Two variables *viz.*, age and social participation were found significantly, but negatively correlated with the agricultural modernization of the tribal farmers. Remaining variables *viz.*, size of land holding, migration habit, sources of information and level of aspiration were failed to show any significant correlation with the agricultural modernization of the tribal farmers.

Conclusion

It could be concluded that 51.00 per cent of the respondents had medium level of agricultural modernization, followed by 29.00 per cent with low level. Remaining 20.00 per cent respondents had high level of agricultural modernization. It can be concluded that six independent variables *viz.*, education, annual income, economic motivation, risk orientation, scientific orientation and farmers' attitude towards Integrated Tribal Development Project (ITDP) were found to be positively and significantly related with the agricultural modernization of the tribal farmers. Two variables *viz.*, age and social participation were found significantly, but negatively correlated with the agricultural modernization of the tribal farmers. Remaining variables *viz.*, size of land holding, migration habit, sources of information and level of aspiration were failed to show any significant correlation with the agricultural modernization of the tribal farmers.

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