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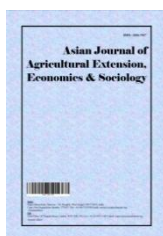
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# **Socio-personal and Economic Profile of Tribal Farmers Practicing Indigenous Technical Knowledge in Ranchi district of Jharkhand**

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## **Authors' contributions**

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

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## **ABSTRACT**

The present study has been undertaken during 2019-2020 to appraise the socio-personal and economic profile of tribal farmers of Ranchi district of Jharkhand. Four villages were randomly selected from the two purposively selected blocks namely Tamar and Angara blocks of Ranchi district of Jharkhand state. The data were collected from 45 randomly selected tribal farmers practicing ITKs pertaining to pest and disease management by personal interviewing the respondents through a well tested structured interview schedule, who were considered as tribal key informants. The findings revealed that majority of the key informants were females (60%) belonging to old age group (71.11%) of Oraon community (46.66%). Majority of the respondents had education upto primary level only (31.12%), whereas about 30 per cent of them were either illiterate or could read and write only. Highest proportion of the key informants had marginal size of land holding with long farming experience (57.78%). Altogether one-third of the respondents had membership of only one organisation and 42.22 per cent of them were not associated with any formal organisation. Majority of the respondents had low level of risk-orientation (57.77%) and innovativeness (60%). Interventions on education, training and technology were suggested as the suitable measures for raising their socio-economic status.

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## 1. INTRODUCTION

India ranks second in tribal population after Africa. As per Census 2011, 250 tribal groups were found to live in isolated tracts spread over the length and breadth of the country while 427 groups have been recognised as Scheduled Tribes. A tribe is a social group usually with a definite area, dialect, cultural homogeneity and unifying social organization [1]. The life style, community habits and habitats of tribals have made it difficult for them to keep pace with modern society; they are not well placed economically, politically, educationally or industrially but they are trying hard to catch up with the rest of the society. A tribal economy should always be characterized by the collection of their social, institutional, technological and finally economic arrangements through which the community seeks to enhance their materials and social well-being. There is always an interaction between the environment in which the community lives and their practices that led to sustain their livelihood.

Jharkhand has remained home to a number of tribal communities since time immemorial. The Scheduled Tribes (ST) population of Jharkhand State as per 2011 census is 8,645,042 (Others including Sarna- 4,012,622, Christian- 1,338,175) of the total of population 32,988,134 of the state. Among all states and UTs, Jharkhand holds 6<sup>th</sup> and 10<sup>th</sup> rank in terms of the ST population and the percentage share of the ST population to the total population of the state respectively. The state has a total of thirty two (32) Scheduled Tribes and all of them have been enumerated at 2011 Census. The Scheduled Tribes are primarily rural as 91.7 per cent of them reside in rural areas including forests and hill tops. They love to stay in deep forest and follow their own primitive system (<https://en.wikipedia.org/wiki/Jharkhand>). Due to remoteness and inaccessibility, the tribal farmers have evolved a self sustainable local or indigenous resource based farming system and is still dependent on indigenous knowledge base i.e. local plants, herbs of medicinal importance. The tribes, forest dwellers and rural people have a rich oral tradition of native and ethnic knowledge about nature and various farm activities. Agriculture is the primary source of livelihood for the overwhelming majority of the tribal population. Majority of the tribes are engaged in agricultural and livestock rearing

activities. Tribal people are an integral component of forests having inseparable symbiotic and mutually reinforcing relationship and emotional attachment [2]. The locally available forest resources are the 2nd important contributor to the total livelihood income streams of the tribal communities of Jharkhand [3]. The tribal people possess the traditional skill base, have access to the resource base and have conducive government policies on forest resources management and trade (Pandit, 2011). The locally available resources play an important role in the livelihood support of these tribal people in terms of subsistence, income and employment generation.

Data pertaining to the contribution of various economic activities among the tribal farmers is mandatory for any economic development programmes for the tribal farmers. So as to eradicate the problems of tribal people, it is necessary for the policy makers to identify and quantify the socio-economic factors which are inhibiting their growth and development. Hence, the study is sought to gather baseline information of tribal people to give database to the policy makers, planners, economists, extension workers and social scientists. So keeping all these points in view, the study entitled 'Socio-personal and Economic Profile of Tribal Farmers Practicing Indigenous Technical Knowledge in Ranchi district of Jharkhand' was conducted.

## 2. METHODOLOGY

The present investigation was conducted in Ranchi district of Jharkhand. Ranchi is one of the twenty-four districts of Jharkhand state in eastern India. As of 2011 it is the most populous district of Jharkhand having a humid subtropical climate. Ranchi has a hilly topography and its combination with dense tropical forests ensures that it enjoys a comparatively moderate climate compared to the rest of the state. According to the 2011 census Ranchi district has a population of 2,914,253. The district has a population density of 557 inhabitants per square kilometer (1,440/sq mi). Its population growth rate over the decade 2001-2011 was 23.9%. Ranchi has a sex ratio of 950 females for every 1000 males, and a literacy rate of 77.13% (<https://www.jharkhand.gov.in/>).

Ranchi district consist of 18 community development blocks. Out of 18 blocks, top two

tribal dominated blocks i.e. Angara and Tamar were selected purposively for the study. Two villages namely Dhurleta and Jaspur from Angara block and Ulidih and Amhesa from Tamar block were randomly selected from among the tribal dominated villages. A total of 45 Tribal key informants were selected purposively from the four selected villages.

The primary data on socio-personal and economic characteristics of the respondents were collected through interviewing and interacting with them in person through a well

structured and pre tested interview schedule. Schedule was categorised under the following heads; gender, age, tribe type, education, land holding, farming experience, social participation, risk orientation and innovativeness. Data were filled in excel and basic statistical tool like frequency distribution and percentage were calculated to draw inferences.

### 3. RESULTS AND DISCUSSION

The findings are presented in Table 1.

**Table 1. Distribution of respondents according to their selected socio-personal and economic characteristics**

S.No	Category	Frequency (f)	Percentage (%)
<b>I</b>	<b>Gender</b>		
1.	Male	18	40.00
2.	Female	27	60.00
	Total	45	100.00
<b>II</b>	<b>Age</b>		
1.	Young (18 to 35 years)	2	4.45
2.	Middle (36 to 55 years)	11	24.44
3.	Old (56 years & above)	32	71.11
	Total	45	100.00
<b>III</b>	<b>Tribe type</b>		
1.	Kharia	6	13.33
2.	Ho	7	15.55
3.	Oraon	21	46.66
4.	Munda	11	24.44
	Total	45	100.00
<b>IV</b>	<b>Education</b>		
1.	Illiterate	3	6.66
2.	Can read only	7	15.56
3.	Can read and write	3	6.66
4.	Primary School	14	31.12
5.	Middle School	9	20.00
6.	High School	5	11.12
7.	Graduate & above	4	8.88
	Total	45	100.00
<b>V</b>	<b>Land holding</b>		
1.	Marginal (<1 ha)	26	57.77
2.	Small (1.0 to 2.0 ha)	9	20.00
3.	Medium (2.1 to 4.0ha)	6	13.33
4.	Large (>4.0ha)	4	8.88
	Total	45	100.00
<b>VI</b>	<b>Farming experience</b>		
1.	Low ( upto 15 years)	5	11.11
2.	Medium (16 to 25 years)	14	31.11
3.	High (above 25 years)	26	57.78
	Total	45	100.00
<b>VII</b>	<b>Social participation</b>		
1.	No membership	19	42.22
2.	Member of one organisation	15	33.34
3.	Member of more than one organisation	4	8.88

S.No	Category	Frequency (f)	Percentage (%)
4.	Office bearer	7	15.56
	Total	45	100.00
<b>VIII</b>	<b>Risk orientation</b>		
1.	Low (scores upto 7)	26	57.77
2.	Medium (8-10)	11	24.45
3.	High (11 and above)	8	17.78
	Total	45	100.00
<b>IX</b>	<b>Innovativeness</b>		
1.	Low (scores upto 11)	27	60.00
2.	Medium (12-15)	16	35.55
3.	High (16 and above)	2	4.45
	Total	45	100.00

### 3.1 Gender

It is evident from Table 1 that 60 per cent of the tribal key informants were females and 40 per cent of them were males. The findings highlighted the importance of women's contributions in tribal farming systems. In the study undertaken by Fernandez and Tick [4] it was stated that an understanding of the role of gender as well as the intrinsic value of the ITK is crucial to the solutions of situation- specific problems.

### 3.2 Age

The data presented in Table 1 show that out of total tribal key informants, the highest proportion of the respondents i.e. 71.11 per cent were belonging to old age group followed by middle-aged group (24.44%) and young (4.45%). This indicated that old age people were the knowledge bearers holding vast knowledge about ITKs which might be lost if they do not share this knowledge with the youngsters. Rakesh [5] also in his study reported that old had more knowledge regarding ITK than other age group.

### 3.3 Tribe Type

Table 1 deliberates that 46.66 per cent of the tribal key informants belonged to Oraon community followed by Munda (24.46%), Ho (15.55%) and Kharia (13.33%).

### 3.4 Education

Results presented in Table 1 show that majority of the tribal key informants had education up to primary level (31.12%) followed by middle school (20.00%) and high school (11.12%). A very less number of respondents belonged to the category

of graduate and above (8.88%). The remaining respondents were either illiterate (6.66%) or can read and/or write only (28.88%). This indicates that the respondents in the study area had low level of education. Shakrawar (2018) and Seeralan (2004) also found that respondents having ITK had mainly primary level of education.

### 3.5 Land Holding

Results presented in Table 1 show that out of total tribal key informants, highest proportion had marginal size of land holdings (57.78%) followed by small (20.00%), medium (13.33%) and large (8.89%). Findings revealed that more than 75 per cent of tribal key informants had small and marginal size land holdings. They were resource poor and utilising the locally available materials in their farming activities rather than relying on input extensive agriculture. The findings are in concurrence with the findings of Singh [6] and Rakesh [5].

### 3.6 Farming Experience

The findings presented in Table 1 show that the highest proportion of the informants i.e. 57.78 per cent was having high farming experience followed by medium (31.11%) and low (11.11%) experience. This indicated that they had been practicing this oral tradition since long and nurturing and as well as contributing to environment protection. Similar findings were reported by Arya [7] and Wankhade [8].

### 3.7 Risk Orientation

It is evident from Table 1 that 57.77 per cent of the tribal key informants had low level of risk orientation followed by 24.45 per cent and 17.78 per cent who had medium and high levels of risk orientation respectively. The reason behind this

might be that they remained isolated from the mainstream of society having minimum interaction with the outside world and belonged to rigid social structure with lower educational background. The findings are in line with the findings of the study conducted by Patidar [9], Rakesh [5] and Mahto [10].

### 3.8 Social Participation

The organizations prevalent in the study area were village panchayats, co-operative credit society, milk co-operative society, rural youth club, Self Help Groups (SHGs), etc of which some tribal key informants were either members or office bearers. It was found that 42.22 per cent of the respondents were not associated with any of the formal organizations. Altogether 33.34 per cent had membership of only one organization and 8.88 per cent had membership of more than one organization and 15.56 per cent were found to be the office bearers. The findings are in concurrence with the findings of Arya [7], Singh [6] and Rakesh (2017) which indicated that tribal farming community like to remain isolated from the mainstream of the society and have rigid social structure and limited social mobility.

### 3.9 Innovativeness

The data in the table depict the level of innovativeness of the tribal key informants. It indicates that majority of them (60%) showed low innovativeness, while 35.55 percent informants exhibited medium innovativeness and remaining 4.45 percent exhibited high innovativeness. The results indicated their rigidity and resistance towards any type of social change might be the reason for lower level of innovativeness. Similar findings were reported by Seeralan [11] Kumari [12] and Shakrawar [13].

### 3.10 Prospects for Socio-economic Upliftment of Tribals Farmers

In order to take appropriate policy measures to mitigate the poverty and backwardness of tribal farmers, it is essential to identify and quantify the socio-economic factors behind their situation. Policy suggestions based on the findings are as follows:

- i. Educational facilities should be improved for the tribal people [14].
- ii. Good, reliable transport and communication facilities should be provided. [15].

- iii. Infrastructural support for meeting input, credit and marketing needs to be strengthened and ascertained.
- iv. Extension agencies must visit the villages and interact with farmers and prioritise their problems
- v. Training should be provided to the tribals in different income generating activities.
- vi. Adopt pluralistic extension approach in farming situation-based strategy.
- vii. Popularize resource conserving technologies.
- viii. Promote appropriate integrated farming system models.
- ix. Capacity building programmes for human resources development of rural youths and farm women.
- x. Value addition of products utilized by tribal farmers
- xi. Development of ready to use RTU products
- xii. Use of modern technologies like ICTs

## 4. CONCLUSION

The study signifies that despite inhabiting in resource rich areas, the tribal farmers are underprivileged in all respects as reflected by their low socio-personal and economic status. The prevailing scenario leads to the repercussions like acute poverty, malnutrition, migration, substandard life quality, debt, naxalism and isolation from national mainstream, lack of awareness and exposure etc. The study revealed that the highest proportion of the respondents i.e. 71.11 per cent were of old age group. 42.22 per cent of the respondents were not engaged with any of the formal organizations like panchayats, cooperatives etc. 60 per cent of the tribal key informants were females and 40 per cent of respondents were males. Majority of tribal farmers i.e. 46.66 per cent of the tribal farmers belonged to Oraon community. Most of the tribal farmers were having education up to primary level. Highest proportion had marginal size of land holding (57.78%) The highest proportions of the tribal farmers i.e. 57.78 per cent were having high farming experience Altogether 33.34 per cent had membership of only one organization. 57.77 per cent of the tribal farmers had low level of risk orientation. Majority of them (60%) showed low innovativeness. To design a strategy for livelihood security, a thorough understanding of the socio-personal and economic characteristics of tribal people subsisting in Jharkhand is imperative. If all the suggestions mentioned above are implemented

in the tribal villages, the development of those backward areas can be realised in near future. By introducing facilities of modern technology, their socio-economic standard can be enhanced.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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