



## International Journal of Chemical Studies

P-ISSN: 2349-8528  
E-ISSN: 2321-4902  
IJCS 2019; SP6: 524-530

**Tanu Shree Lakra**  
Department of Silviculture &  
Agroforestry, Faculty of  
Forestry, B.A.U. Ranchi,  
Jharkhand, India

**MH Siddiqui**  
Department of Basic Sciences &  
Humanities, Faculty of Forestry,  
B.A.U. Ranchi, Jharkhand,  
India

(Special Issue -6)  
3<sup>rd</sup> National Conference  
On

**PROMOTING & REINVIGORATING AGRI-HORTI,  
TECHNOLOGICAL INNOVATIONS  
[PRAGATI-2019]  
(14-15 December, 2019)**

### **Socio-economic and livelihood dependency of people of west Singhbhum district, Jharkhand**

**Tanu Shree Lakra and MH Siddiqui**

#### **Abstract**

West Singhbhum district of the Jharkhand lying under the eastern plateau region is divided into 18 administrative blocks with a population of approximately 12 lakh people. This district has more than 50% of tribal population and about one fourth of the population belongs to backward classes. The social profile of the district has been presented from collecting data from 160 households from 8 villages, randomly selected two blocks with the help of structured questionnaire. The data on population, caste profile, family size, house type, literacy status and occupation were collected to know their livelihood dependence on different resources. The population data has indicated dominance of male members in the district. The schedule tribal population was dominating, whereas the family size belongs to the medium size i.e., about 11 person per family. However, small family constituted of about 5 members. Throughout the district, the houses type varied from kuccha (mud house) to pakka (brick house) house. The kuccha houses were dominating type of the people's residential houses. The literacy status of West Singhbhum district was very low as most of the people were having primary and secondary level of education. The graduate level of education was found about 7.5%. The land holdings varied from 1 hectare to 10 hectares in the district and from 1 hectare to 2-hectare land holdings were common among the local people which was observed to the tune of 74%. The main occupation of the people was agricultural practices (80%), which included crop cultivation, intercropping with forest trees, fruit trees etc. and vegetables. The livelihood of tribal people is mainly dependent on agriculture as well as on forest resources. The land use practices to increase income from their limited land resource by maximum number of households included agriculture and agroforestry (agrisilviculture, agri horticulture, silvopasture and silvihorticulture). The preferred agricultural crops are in kharif season paddy, maize and in rabi season wheat, pea whereas, vegetables crops are chilli, ginger, tomato etc. The forest tree was Gmelina arborea, Dalbergia sissoo, while preferred fruit trees were Mangifera Indica, Artocarpus Heterophyllus and Carica papaya etc. In this way adoption of agroforestry was found as one of the alternative ways of land use practices to increase income from their existing land resource by maximum number of households.

**Keywords:** Social profile, land holdings, occupation, agriculture, agroforestry

#### **Introduction**

West Singhbhum the largest district of Jharkhand state is situated in the South Eastern part of state under Eastern plateau and hill region. It is located between 21° 58' and 23° 36' North latitude and 85° 0' 86° 54' East longitude and lies in the South Chhota Nagpur division with the sub divisional Head Quarter at Singhbhum Sadar, Porahat and Saraikela. The district is bounded on north by Khunti district, on the east by Saraikela-Kharsawan district, on the south by Keonjhar, Mayurbhanj and Sundergarh districts of Orissa and on the west by Gumla

**Corresponding Author:**  
**Tanu Shree Lakra**  
Department of Silviculture &  
Agroforestry, Faculty of  
Forestry, B.A.U. Ranchi,  
Jharkhand, India

district of Jharkhand. Besides the districts headquarter of Chaibasa, the other towns in the district are: Chakradharpur, Chiria, Gua, Jhinkpani, Kharsawan, Kiriburuand Noamundi. West Singhbhum district is divided in 18 administrative blocks inhabited by approx 12 lakhs people. The district has about 2016 villages. It has a sex ratio of 985 females per 1000 males. The tribals constitute more than 50.5% of the total population of the district. One fourth of the population falls under backward classes, while Minorities (Muslims and Christians) form 5%. As per Census, 2011 the predominant Tribes found in this district are Santhals, Oraons, Mundas, Ho and Kharias. The languages spoken are Santhali, Mundari, Kurukh, Khortha, Nagpuria, Sadhri, Khariya, Ho, Mahto, Karmali, Hindi, Urdu, Bangla etc.

The linkages between tribal people, livelihood dependence on forest resources and poverty is complex and requires locally-specific analysis (Singh *et al.*, 2007) [8]. In order to understand the contribution of forest and its potential to integrate with its agriculture production system to increase tribal livelihoods, socio-economic upliftment, nutritional security, environmental conservation, migration restraint and rural development, the agroforestry is emerging as one of the best alternatives for maximization of output from land resources. Kareemulla *et al.*, (2009) [3], reported that the natural resources development in farmer's and common property resource lands through water conservation, plantations, micro and minor irrigation, renovation of water bodies, land development, irrigation facilities, flood and drought control and rural connectivity under the National Rural Employment Guarantee Scheme (NREGS) created ample employment and income opportunities for rural mass enhancing their livelihood assets (physical, natural, financial, human and social capital) and social security and reducing unemployment, migration and poverty in Ananthapur district of Andhra Pradesh.

## Material & method

The present study is conducted to find out social and economic status of people for livelihood generation. Two blocks namely Sadar and Jhinkpani were randomly selected amongst 18 blocks of West Singhbhum district and from each block four villages San kosai, Bargutusai, Lupungutu, and Guera from Sadar Block and Kelende, Raghunathpur, Tutugutu, and Surjabasa from Jhinkpani block. Further from each village 20 households were randomly selected for collection of data. The data on parameters such as population, social class, size of family, house type, land holding occupation of farmer & land use practices, income generation from different sources (poultry, vegetables etc.) were collected with the help of well-structured questionnaire from randomly selected household of Sadar and Jhinkpani Blocks. The data obtained were further analyzed statistically.

## Results and discussion

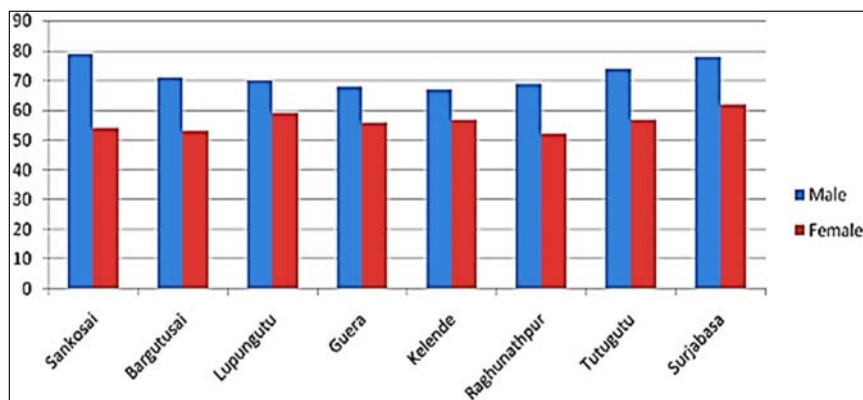
The observations collected with the help of questionnaire on existing agroforestry practices and social characteristics of respondents based on response of randomly selected 160 respondents from each 8 villages at the rate of 20 household per village. The findings obtained are described below:

### Population data

Population data of West Singhbhum district surveyed from 8 villages of two blocks namely Sadar and Jhinkpani indicated population of male members more as compared to female population in all the studied villages Table 1). Village-wise percentage distribution of male and female population indicated that out of eight villages, maximum male population was found in Sankosai and Surjabasa village followed by Tutugutu and Bargutusai. In case of female maximum percentage was found in Surjabasa followed by Lupungutu. Total male and female population based on eight study villages are shown with pie chart (Figure 1) showed dominances of male members to the tune of 56%, whereas female member represented only 44%.

**Table 1:** Population data of Sadar and Jhinkpani blocks

Population	Study blocks of west Singhbhum								Total	Mean $\pm$ SE	%
	Sadar block				Jhinkpani block						
	Sankosai	Bargutusai	Lupungutua	Guera	Kelende	Raghunathpur	Tutugutu	Surjabasa			
Male	79	71	70	68	67	69	74	78	576	73.12 $\pm$ 1.60	56.14
Female	54	53	59	56	57	52	57	62	450	56.25 $\pm$ 6.96	43.85



**Fig 1:** Population of Sadar and Jhinkpani blocks

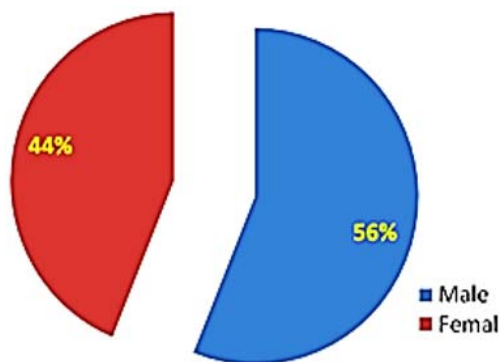


Fig 2: Population of Sadar and Jhinkpani blocks

**Caste Profile**

Distribution of social class of respondents from Sadar and Jhinkpani Block presented in Table 2 indicated that in both the blocks Schedule Tribe and Backward caste were dominant castes in all the villages, whereas very less member of Schedule Caste (SC) resides in the study areas. The status of

social class calculated in percentage (Figure 3) also indicated that all the villages were dominated by schedule tribe population which varied from 70-85% in comparisons to other castes (SC and OBC). Overall distribution of schedule tribe, schedule caste and other backward caste population is also indicated with pie chart (Figure 4).

Table 2: Caste profile of Sadar and Jhinkpani blocks

Population	Study blocks of west Singhbhum								Total	Mean ± SE	%
	Sadar block				Jhinkpani block						
	Sankosai	Bargutusiai	Lupungutua	Guera	Kelende	Raghunathpur	Tutugutu	Surjabasa			
SC	1	2	1	1	1	2	2	2	12	1.5 ± 7.77	7.50
ST	16	16	17	15	17	16	14	15	126	15.75 ± 77.78	78.75
OBC	3	2	2	4	2	2	4	3	22	2.75 ± 13.43	13.75

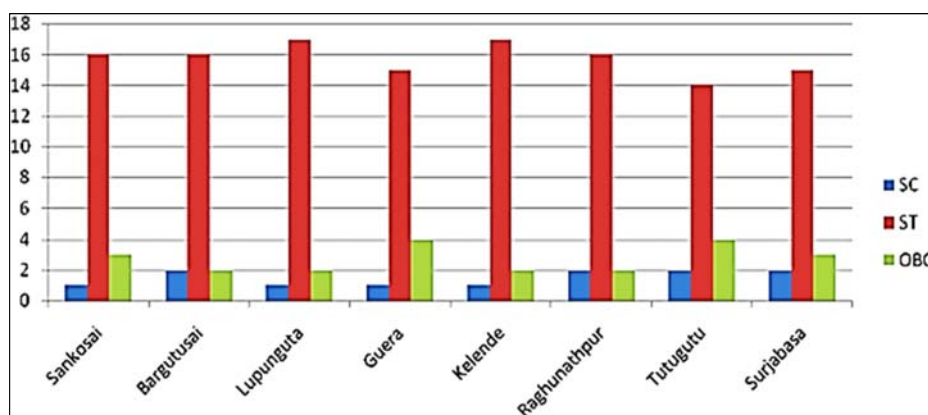


Fig 3: Caste profile of Sadar and Jhinkpani blocks

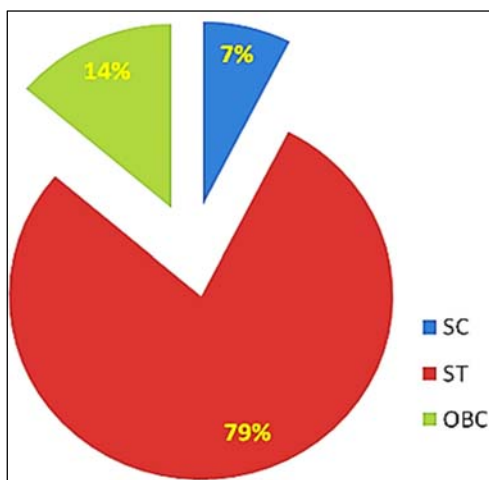


Fig 4: Caste profile of Sadar and Jhinkpani blocks

**Family size**

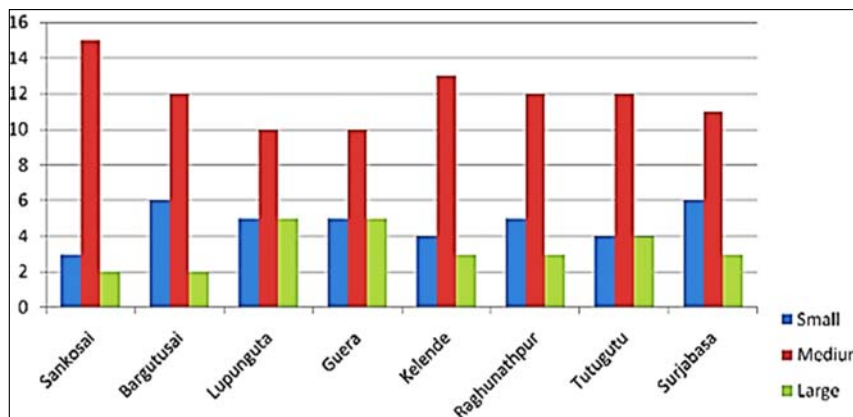
The average number of family members observed in Sadar and Jhinkpani Blocks varied from 5 to 7 members (Table 3) in each house hold. The comparative family size shown with percentage (Figure 5) has indicated that households having large (above7) family members were quite low (16.87%). The family size studied in terms of small, medium and large indicated dominance of medium size in all the study villages with the maximum percentage (75%) in Sankosai village whereas, minimum in Lupungutu village. The representation of large family was found less. With the help of pie chart, the comparative distribution of small, medium and large family is shown in Figure 6 also supported the dominance of medium family.

This indicates that the majority were of medium families indicate clear cut dominance of medium families among respondents. This has been also been supported by Bisaliah (1995). Medium size of family indicates that the tribals have a

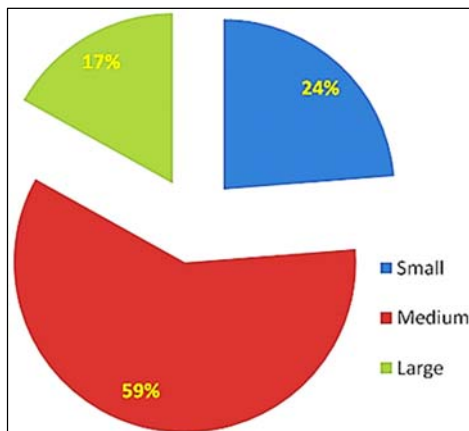
tendency to live in a nuclear family as also reported by Sachidananda (1979) [6], and Srivastava (1982).

**Table 3:** Family size of Sadar and Jhinkpani blocks

Family size	Sadar block				Jhinkpani block				Total	Mean ± SE	%
	Sankosai	Bargutusai	Lupungutua	Guera	Kelende	Raghunathpur	Tutugutu	Surjabasa			
Small	3	6	5	5	4	5	4	6	38	4.75 ± 0.36	23.75
Medium	15	12	10	10	13	12	12	11	95	11.87 ± 0.58	59.37
Large	2	2	5	5	3	3	4	3	27	3.37 ± 0.42	16.87



**Fig 5:** Family size of Sadar and Jhinkpani blocks



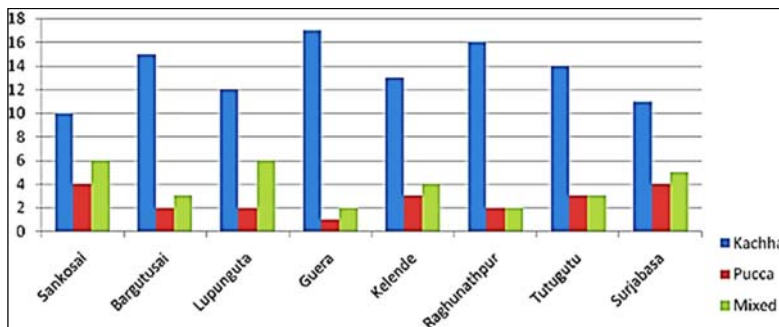
**Fig 6:** Family size of Sadar and Jhinkpani blocks

**House types**

In the study are a most of the respondents have Kuchcha houses (Table 4). The percent distribution of house in two studied blocks has again indicated dominance of Kuchcha houses to the same extent (67.5%) in both blocks, whereas Pucca houses were 11.25% and 15% for Sadar and Jhinkpani blocks, respectively (Figure 7). On the other hand, mixed type of house was found as 21.25% for Sadar and 17.50% for Jhinkpani block. The Kuchcha house represented maximally in Guera village whereas, Pakka house were more in Sankosai and Lupungutu village. The mixed houses (Kuchcha and Pakka) were more in Sankosai and Lupungutu whereas, less in Guera. The comparative strength of the houses type are shown with pie chart (Figure 8) also indicating prevalence of Kuchcha houses.

**Table 4:** House types of Sadar and Jhinkpani blocks

House type	Sadar block				Jhinkpani block				Total	Mean ± SE	%
	Sankosai	Bargutusai	Lupungutua	Guera	Kelende	Raghunathpur	Tutugutu	Surjabasa			
Kuchha	10	15	12	17	13	16	14	11	108	13.50 ± 0.86	67.50
Pucca	4	2	1	1	3	2	3	4	21	2.62 ± 0.37	13.25
Mixed	6	3	3	2	4	2	3	5	31	3.87 ± 0.58	19.37



**Fig 7:** House types of Sadar and Jhinkpani blocks

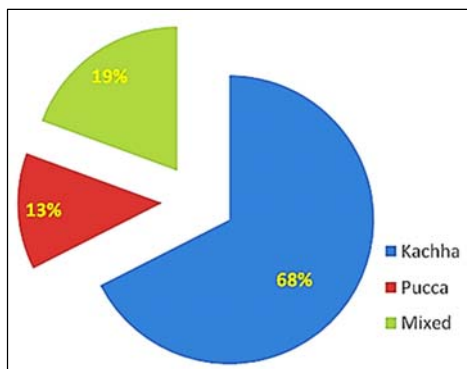


Fig 8: House types of Sadar and Jhinkpani blocks

**Literacy**

The literacy of Sadar and Jhinkpani block presented in Table 5 indicated that in Sadar block most of the respondents have primary level education followed by secondary level

education. The literacy of the all villages presented in percentage (Figure 9) indicated that in Sadar block most of the respondents have primary level education 53.75% whereas secondary level education was to the tune of 28.75% in all the villages. Very less (3.75%) percentage of graduation level education was noticed. Similarly, in Jhinkpani block the respondent having primary level education was maximum (38.75%) followed by secondary level education (20%), whereas 7.5% respondents were illiterate (Figure 10).

Similarly, Rasid (2002) observed that in Bangladesh 44% of household heads were literate and its rate varied from 31% for always poor household heads to 68% for the occasionally poor household heads. Further, he mentioned that higher literacy levels are strongly correlated with use of more services. It also indicates an element of empowerment and awareness. It could possibly be associated with the better living conditions and higher status of literacy.

Table 5: Literacy of Sadar and Jhinkpani blocks

Literacy status	Sadar block				Jhinkpani block				Total	Mean ± SE	%
	Sankosai	Bargutusai	Lupungutua	Guera	Kelende	Raghnathpur	Tutugutu	Surjabasa			
Illiterate	2	2	2	5	2	2	1	1	17	2.12 ± 0.44	10.62
Primary	10	9	8	6	5	6	10	10	67	8.00 ± 0.73	41.87
Secondary	5	7	6	5	5	6	2	3	39	4.87 ± 0.58	24.37
Intermediate	3	2	3	2	4	4	4	3	25	3.12 ± 0.29	15.62
Graduate	0	0	1	2	1	2	3	3	12	1.50 ± 0.42	7.50

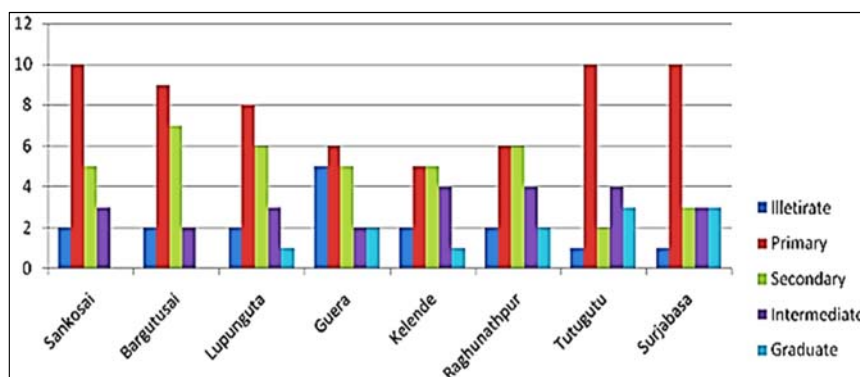


Fig 9: Literacy status of Sadar and Jhinkpani blocks

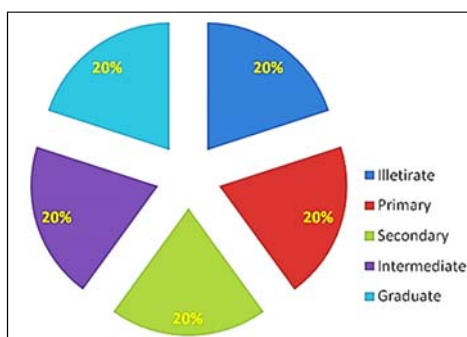


Fig 10: Literacy status of Sadar and Jhinkpani blocks

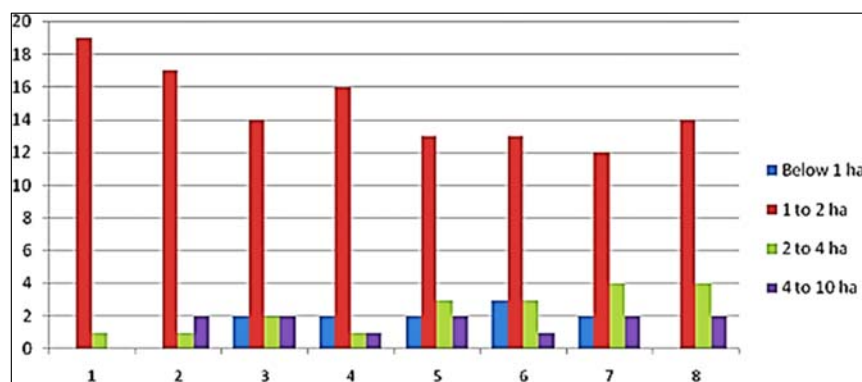
**Land holding**

The data on the size of land holdings of Sadar and Jhinkpani blocks are presented in Table (6) which indicated that most of

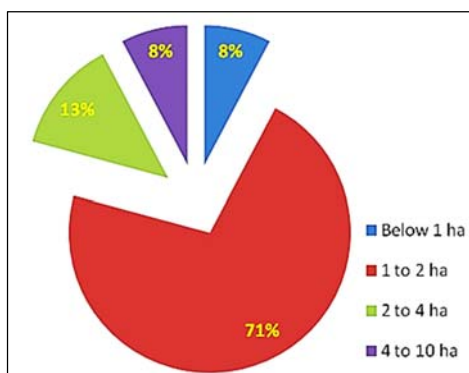
the respondents have preferred to put the land under Agricultural practices. The size of land holdings for studied villages (Figure 11) indicated that of Sadar and Jhinkpani blocks are presented in depicted that almost 82.5% respondents were having land holdings in the range of 1-2 ha followed by 6.25% for both 2-4ha and 4-10 ha, whereas in case of Jhinkpani block the maximum no. of respondent size 65% were having land holding size of 1-2 ha. However, for other land holding groups it was observed as 8.75% only. Total landholdings are also shown with pie graph (Figure 12) indicating prevalence of maximum land holdings between 1 and 2 ha. Similarly, Dwivedi *et al.* (2007) observed that marginal farmers had an average land holding of 0.71 ha, the small farmers of 3.14 ha while the medium to large farmers had holding size was 3.46 ha.

**Table 6:** Land holding of Sadar and Jhinkpani blocks

Total land	Sadar block				Jhinkpani block				Total	Mean ± SE	%
	Sankosai	Bargutusiai	Lupungutua	Guera	Kelende	Raghunathpur	Tutugutu	Surjabasa			
Below 1 ha	0	0	2	2	2	3	2	0	11	1.37 ± 0.41	6.87
1 to 2 ha	19	17	14	16	13	13	12	14	118	14.75 ± 0.83	73.75
2 to 4 ha	1	1	2	1	3	3	4	4	19	2.37 ± 0.46	11.87
4 to 10 ha	0	2	2	1	2	1	2	2	12	1.50 ± 0.26	7.50



**Fig 11:** Land holding practices of Sadar and Jhinkpani blocks



**Fig 12:** Land holding practices of Sadar and Jhinkpani blocks

**Occupation**

The occupation was observed in under groups as Agriculture, Labour, Private Job, Govt. job and others for the study villages Table 7), which indicated maximum adoption of agricultural practices by respondents of all the respondents. Agriculture has been adopted by most of the respondents with their percentage 82.5% and 76% in Sadar and Jhinkpani blocks, respectively (Figure 11). Beside agriculture, in Sadar block the respondents worked as daily wage laborers (10%), in private jobs (5%) and some were in Govt. jobs (2.5%).

Similarly, in Jhinkpani block the respondents were observed working as labour (12.5%), in private job (7.5%) and very less respondents (3.75) were in Govt. jobs for livelihood support. The preference of occupation of respondents were in order of Agriculture >Labour>Private Job>Govt. job>others (Figure 12).

As per Behr and Lee (2004) [1], approximately 25% of households in Periyar Tiger Reserve Kerala also engaged in off-farm activities. The number of working people engaged in business and government service profession was found very few. Chauhan and Ingle (1988) [2], studied the role of farm forestry in Akola district of Vidharba region, Maharashtra and reported that majority of farmers have small land holdings, none of the small and marginal farmers had adopted farm or agroforestry (Marwar *et al.* 1993) [4]. Singh and Dagar (1996) [7], have presented survey of agroforestry system undertaking in the Mussorie hills near Dehradun (Uttarakhand) and found that about 80% of land holdings were <1ha, 15% were 1-2.5 ha and 5% were 2.5-10 ha. The systems identified were Agri-Silviculture, Agri-Horticulture, Agri-Silvi-Horticulture, Silvi-Pastoral and Homestead. The present findings are supported by the percentage of small land holdings were larger than medium and higher land holdings are reported by earlier workers.

**Table 6:** Occupation of Sadar and Jhinkpani blocks

Occupation	Sadar block				Jhinkpani block				Total	Mean ± SE	%
	Sankosai	Bargutusiai	Lupungutua	Guera	Kelende	Raghunathpur	Tutugutu	Surjabasa			
Agriculture	18	17	15	16	14	14	18	15	127	15.87 ± 0.58	79.37
Labour	1	1	4	2	2	3	2	3	18	2.25 ± 0.36	11.25
Private Job	1	1	1	1	3	2	0	1	10	1.25 ± 0.31	6.25
Govt. Job	0	1	0	1	1	1	0	1	5	0.68 ± 0.18	3.12

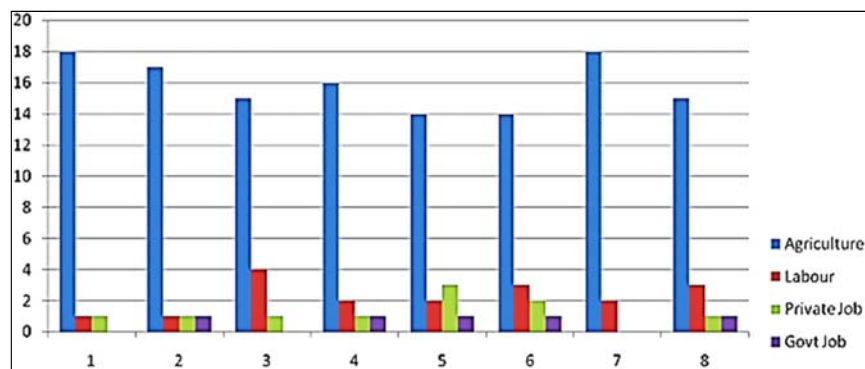


Fig 13: Occupation of Sadar and Jhinkpani blocks

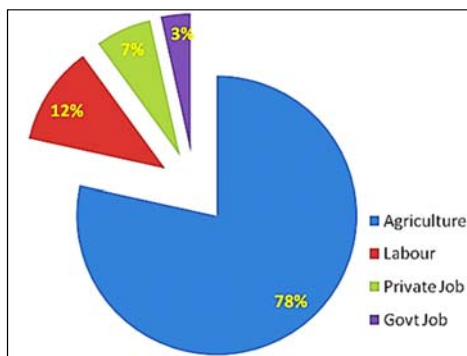


Fig 14: Occupation of Sadar and Jhinkpani blocks

- Sachidanda. The changing Munda concept Publication Co. New Delhi, 1979.
- Singh VP, Dagar JC. Agroforestry System for Mussorie Hills Western Himalayas in special issue. The Indian Forester. 1996; 122(7):610-614.
- Singh PK. Economic analysis of participatory agroforestry practices. Ph.D. Thesis (Unpublished), Forest Research Institute University, Dehradun, and Uttaranchal, 2007.

### Conclusion

Therefore, from the present study it is noticed that socio-economic conditions of people of West Singhbhum is basically dependent upon agricultural practices including agroforestry practices for livelihood support due to less landholdings. The level of poor education also forces them to work as agricultural labourers for economic support.

### Acknowledgements

The senior author is thankful to Birsa Agricultural University, Kanke, Ranchi for financial support in the form of fellowship during study period.

### References

- Behr DC, Lee DR. Implication forest-dwelling households labor allocation for NEFP conservation and cultivation: a case study from Kerala, India, Ph.D. Thesis, Cornell University, Ithaca, NY 14853, USA, 2004.
- Chauhan PS, Ingle PO. Role of farm forestry in meeting the fuel wood requirement of village. Advances in Forestry Research in India ed, Ram Prakash, IBD, 1988, II.
- Kareemulla K, Reddy KS, Rama Rao CA, Kumar S, Venkateswarlu B. Soil and water conservation works through National Rural Employment Guarantee Scheme (NREGS) in Andhra Pradesh-an analysis of livelihood impact. Agricultural Economics Research Review, (Conference number): 443-450, 2009, 22.
- Marwar SS, Ingle OP, Mukewar MA, Deshmukh GR. Socio-economic analysis of farm forestry in Vidhana of Maharashtra State. Advance in forestry research in India. 1993; IX:219-232.
- Mohankumar B, Miah MG. Agroforestry for Asian food security. In: Book of abstract:1S, World Congress of Agroforestry, 27 June-2 July, Florida, USA, 2004.