

CHAPTER III

SOCIOECONOMIC AND DEMOGRAPHIC PROFILE OF THE STUDY AREA

3.1 General description of study area

3.1.1 Physical characteristics

Salle village of Hattikharka Village Development Committee (VDC) is situated in Dhankuta, the eastern hill district of Nepal (Figure 3). The village is about 15 km north from the nearby town, Dhankuta Bazar. It is close to Jorpati village located on Dhankuta-Basantpur road (Figure 4). The area falls steeply to the north west from an exposed ridge at 2200 m elevation down to 450 m and forms a part of the catchment area of Mangmaya *Khola*, which is a tributary of Arun river.

The climate is cold in winter and mild in summer. Normally, the temperature all year ranges from 9 to 21 degree centigrade. Frost can be expected from first week in December to the third week in February. There is occasional snowfall in the winter. The rainy season occurs from May to September, with an average rainfall per year of 1620 mm (recorded at the PAC meteorological station). The amount of rainfall during the rainy season is 80 to 90 per cent of the annual precipitation (Figure 5).

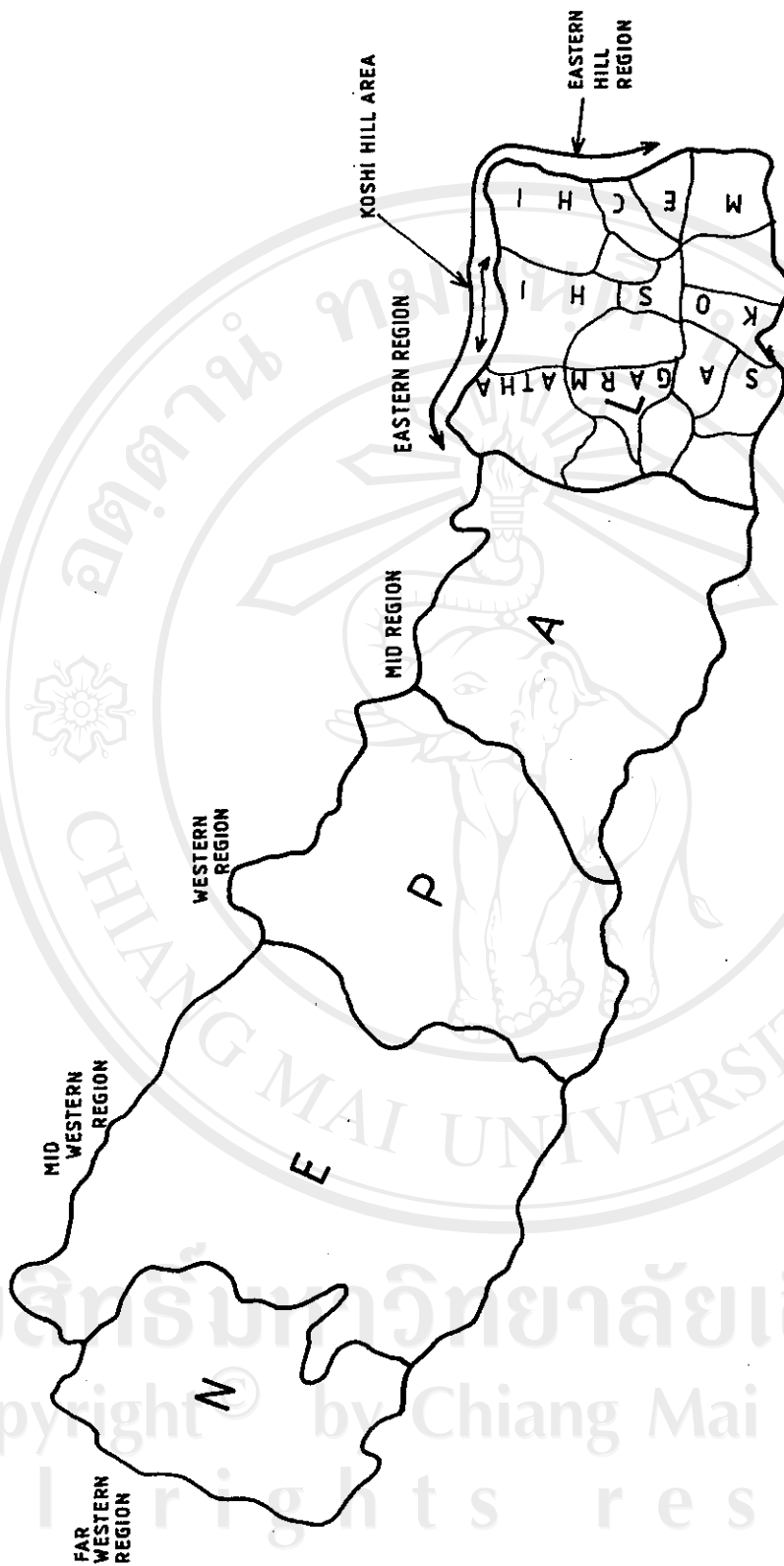


Figure 3 Map of Nepal showing the eastern hills
Source: David and Gibbon (1989)

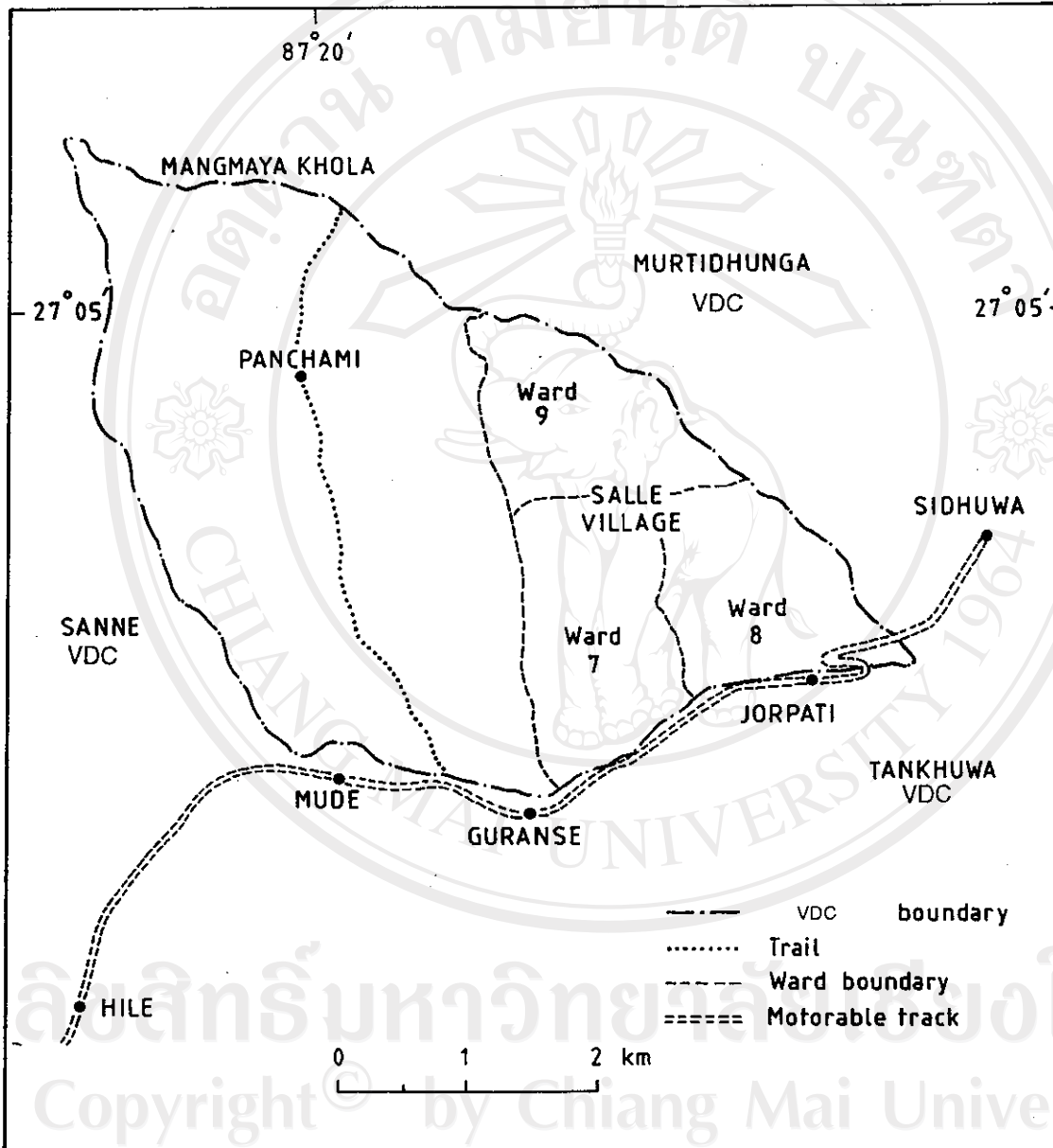


Figure 4 Map of Hattikharka Village Development Committee showing the study area

Source: Thapa *et al.*, 1990

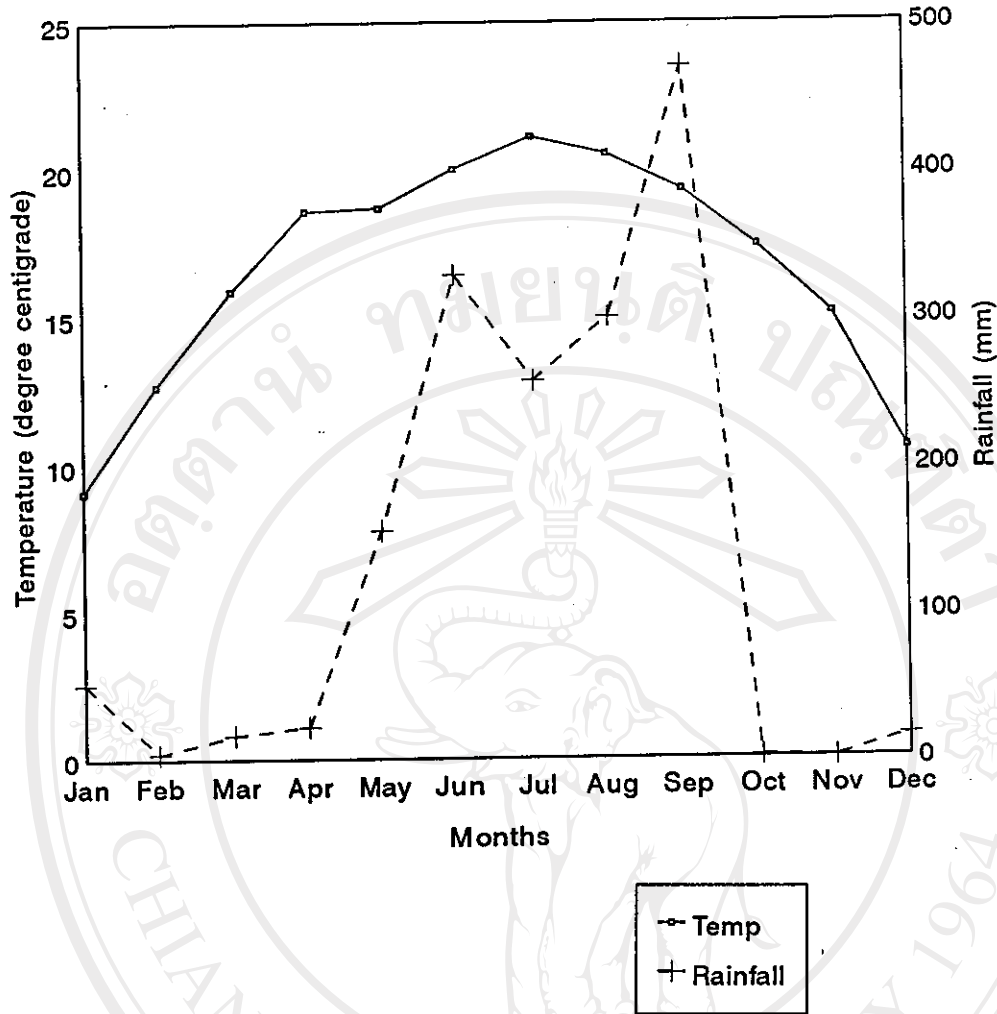


Figure 5 Average monthly temperature and rainfall pattern at Salle
Source: Data recorded at PAC (1992)

The soil in the area is acidic with high organic matter in the top layer. Most of the cultivated land is largely confined below 1800 m and above this there is an area of 30 ha of land stretching east-west which is locally known as *Nagi* (downs/grassland) previously used for rough grazing. But now it is under private tree planting program and no more grazing system is practised. Some small private forests lie near to the residential areas.

3.1.2 Economic, demographic and social characteristics

The total population of Salle village (includes 7 and 8 wards) was 1332 comprising 226 households in 1990 (Thapa *et al.*, 1990). The total households in 1992 are 212. About 6 per cent of the households migrated to other villages or to the city area for employment during this period. The majority of the villagers are of Magar caste. The distribution of population by ethnic groups indicated 84 per cent Magar, 6 per cent Gurung, 4 per cent Chhetri, 3 per cent Brahmin and 3 per cent Damai. Magar dialect is widely spoken. However, the people generally speak the national language "Nepali".

Table 1 Farmers' categories according to socioeconomic status

Socioeconomic group	No. of HH surveyed	No. of respondents		Total respondents
		Male	Female	
Rich Magar/Gurung	9	6	8	14
Medium Magar/Gurung	48	30	32	62
Poor Magar/Gurung	31	15	27	42
Medium Brahmin/Chhetri	9	9	9	18
Poor Brahmin/Chhetri	6	5	4	9
Total	103	65	80	145

Source: PRA and RRA, 1992

A total of 103 households were sampled and 145 respondents were interviewed out of which 65 were male and 80 were female (Table 1). The household size varies in different socioeconomic groups showing larger household size in Magar, Gurung than in Brahmin, Chhetri. However, average size of household is 6 (Table 2). Household size is a direct indication of availability of household labor for various agroforestry and household activities.

The majority of households are male headed and only a few are female headed (6 per cent households) in this village. Female headed households are most typically with widow or wife of a migrant worker. Percent of such type of households in Salle is less than that found by McDougal (1979) in his survey of Chheskam, a village of Koshi hills. Among the respondents, the literacy rate is 26 per cent. However, there is an increasing trend for school attendance.

Table 2 Family size by socioeconomic group

Socioeconomic group	Total No. of HH#	Per cent	Av. HH size
Rich Magar/Gurung	9	4	7.3
Medium Magar/Gurung	96	47	7.2
Poor Magar/Gurung	86	42	6.2
Medium Brahmin/Chhetri	9	4	6.0
Poor Brahmin/Chhetri	6	3	5.7
Total	206	100	6.48*

Note: # and * indicate household and average household size irrespective of socioeconomic group.

Source: PRA, RRA and Survey, 1992

The livelihood of the village depends on agriculture. Magar, Gurung are prominent in terms of landholding, livestock holding, access to forest resources and directly to economic status (Table 3). However, they share a common mixed culture of Hindu and Buddhism and have a strong solidarity in different agricultural and social activities.

The village has access of two nearby markets; Sindhuwa and Hile. Despite this, the involvement of development institutions in the area is very negligible. There is a primary school, which is main source for disseminating information about local gathering, village meeting etc. The local *pandera* (spring) are the sources of drinking water in the village.

The rich and medium farm families are self sufficient or almost self sufficient in food requirements. To a large extent, poor farmers are food deficient up to six month a year.

Table 3 Land, tree and livestock holding by socioeconomic group

Socioeconomic group	Av. landholding (ha)	Av. no. of trees/HH (farmland)	Av. no. of livestock per HH*
Rich Magar/Gurung	4.39	112	15.6
Medium Magar/Gurung	2.85	111	8.9
Poor Magar/Gurung	1.71	44	4.9
Medium Brahmin/Chhetri	1.88	98	7.5
Poor Brahmin/Chhetri	1.16	45	6.5
Mean	2.39	82	8.7

Source: Survey, 1992

*HH indicates household.

3.1.3 Categorization of household

The households were categorized into five types on the basis of socioeconomic status through Wealth Ranking procedure (Table 2). Magar, Gurung are characterized by three economic groups rich, medium and poor with 4 per cent, 47 per cent and 42 per cent of the total population respectively where as Brahmin, Chhetri are categorized into only two medium and poor groups which consist of 4 per cent and 3 per cent population. The criteria for rich, medium and poor listed by farmers are as follows:

Rich

1. Food sufficient and some surplus.
2. Pensioners/ army services outside the country.
3. Enough land for cultivation and some rented out.
4. Own animals for meat, milk and draft purposes.

Medium

1. Food sufficient for 8 to 10 months only.
2. Service holders and/ or having outside sources of income.
3. Working elsewhere as the farm labor.
4. Keep animals for milk, meat and income.
5. Have just enough land for cultivation.

Poor

1. Food sufficient for 6 to 8 months from their own agricultural production.
2. Working as farm labor, porter and wage labor e.g. road construction.
3. A few number of animals (but only few have milch animals).

3.2 Land use patterns and farming system**3.2.1 Land use**

The land use types in the Salle village includes "*Bari*" (non irrigated), "*Khet*" (irrigated paddy land), "*Nagi*" (grassland) and private forestlands. The farmers practise subsistence nature of agriculture in the fragmented small pieces of land. Almost all the households own upland and 52 per cent of the households own upland as well as paddy land. The access to *nagi*land and forestland is limited, with 21 per cent household owning *nagi*land and only 13 per cent households having private forest land (Table 4).

Average size of landholding is 2.39 ha, but the average farm size is 1.71 ha. This figure is higher than either the national average (0.4 ha) or the 0.5 ha reported by Conlin and Falk (1979) for the Koshi hills.

Table 4 Average size of landtypes owned by household (ha)

Socioeconomic group	Land types							
	IL ¹		RL ²		NL ³		FL ⁴	
	Av. size	HH owning (%)	Av. size	HH owning (%)	Av. size	HH owning (%)	Av. size	HH owning (%)
Rich Magar/ Gurung	1.27	100	1.89	100	0.65	50	0.58	88
Medium Magar/Gurung	0.33	19	1.26	100	0.76	26	0.50	11
Poor Magar/ Gurung	0.17	3	0.84	100	0.40	16	0.30	2
Medium Brahmin/Chhetri	0.62	56	1.06	100	NA	11	0.20	56
Poor Brahmin/Chhetri	0.20	17	0.91	100	None	None	0.05	17
Mean	0.52	52	1.19	100	0.60	21	0.33	13

Note: 1: indicates Irrigated/ *Khet* land (mainly for rice)

2: indicates Rainfed/ *Bari* land

3: indicates *Nagiland*/ Grassland

4: indicates Private Forestland

Source: Survey, 1992

3.2.2 Cropping pattern

Dryland farming is widely practised in the study area. The cropping systems vary according to altitude. The major cropping patterns at the mid altitudes (1100 to 1700 msl) are potato intercropped with maize and soyabean intercropped with maize. Other minor patterns are maize/ millet- fallow and maize - wheat. At

low altitudes (< 1100 msl), the dominant patterns are rice- rice- fallow, maize- rice- fallow and rice- wheat- fallow. The general patterns of cropping over the season by land type and altitude are presented in Figure 6.

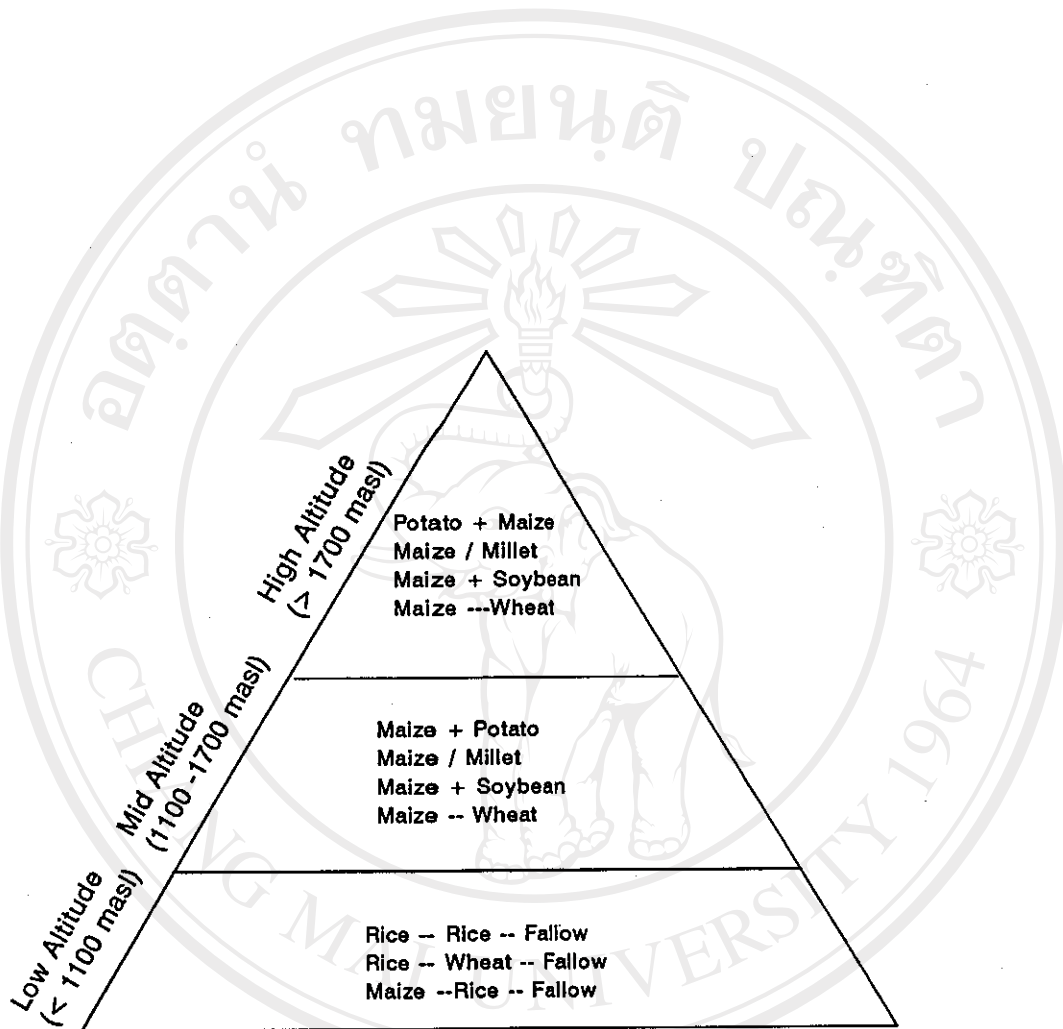


Figure 6 Cropping pattern by altitude in Salle village

Source: Survey, 1992

Lower cropping intensity may be attributed to longer growing periods for crops due to prevalence of relatively lower temperature and problems of frost and snowfall in winter in mid and high altitude areas.

3.2.3 Animal raising and tree management

Livestock enterprises are highly diversified with predominance of buffaloes and pigs. Currently, all households rely mainly on stall feeding with grazing on fallow *bariland* during winter. The total number of livestock has decreased over time because of increased scarcity of livestock feed that resulted from restriction of grazing in *nagiland* (grassland) after tree plantation.

Only few farmers have large area of land, so that almost all face problem of inadequate forest and grazingland. The grassland which was previously need for grazing is now become private land. Grazing in that area is prohibited. A large number of fodder and fuelwood trees per farm are observed because of poor proximity and access to natural forests.

3.2.4 Off farm activities

The seasonal labor, portering, wage labor on road construction and army service are the main sources of off farm income (Table 5). Besides, selling of agricultural products and also small stocks (pig, poultry, goats etc.) are major sources of income for the farmers. The wages from agricultural labor and portering are the main source of income for poor farmers whereas for rich and medium farmers, the important source is remittances (army and police pension). According to Conlin and Falk (1979), the contribution of portering to annual cash income works

out to 35 per cent per family, however, it differs depending on land holding and economic status.

Table 5 Sources of income

Sources	Per cent of households	Rank
1. Sale of agricultural products and livestock	70	1
2. Daily wage labor	38	2
3. Family member in service or army/ pension	24	5
4. Portering	19	4
5. Seasonal labor	30	3

Source: Survey, 1992

The income earned from off farm activities are used for different purposes depending upon the type of farmers and family needs. Poor farmers spent off- farm income primarily on food whereas rich farmers would use it for clothing, schooling of children and for farm investments. Sale of livestock e.g. buffaloes, cows, goats, sheep, pigs etc. is also a major source of cash income and an important reason for fluctuation in the livestock number. However, sale of livestock products for cash is not a major activity in Salle. Only, 29 per cent responded that they sold livestock products and these were usually in smaller quantities (Campbell *et al.*, 1990). From the Table 5, it is noted that most of the households get higher income from sale of agricultural products and livestock. It is followed by daily wage labor, seasonal labor, portering and remittances.