

CHAPTER V

FARMING SYSTEMS, RESOURCE USE AND LIVELIHOOD PATTERNS OF THARU ETHNIC COMMUNITIES

This chapter analyzes the farming systems, resources use and livelihood patterns of Tharu ethnic communities at community level. The farming systems, resources availability and its distribution as well as livelihood condition affect the socioeconomic behavior of every household of the community.

The community is the aggregate of households with common characteristics such as geographic, professional, cultural, racial, religious similarities; communities can be defined by location, race and ethnicity. Moreover, a Tharu ethnic community is one ethnic group of Tharu people living together in the same area or village, usually interacting or depending on each other for existence who share a common culture, values and norms, are arranged in a social structure according to relationships which the community has developed over a period of time.

5.1 Farming systems in Tharu ethnic community sites

Tharu farming communities have been integrating different crops and livestock components in their farming systems to meet their basic needs for food and income. A farming household exercises his management skill to receive farm products from each farming components. The farming systems supply food, employment, farm income and fuel to farming households of Tharu community.

Socio economic, institutional, ecological factors within and outside the system can play major roles for viable continuation of the farming systems. National plan

and policy, access to production inputs, market, technology, infrastructure, social pattern, climate and its variation can influence directly or indirectly to the selection of farming systems and activities.

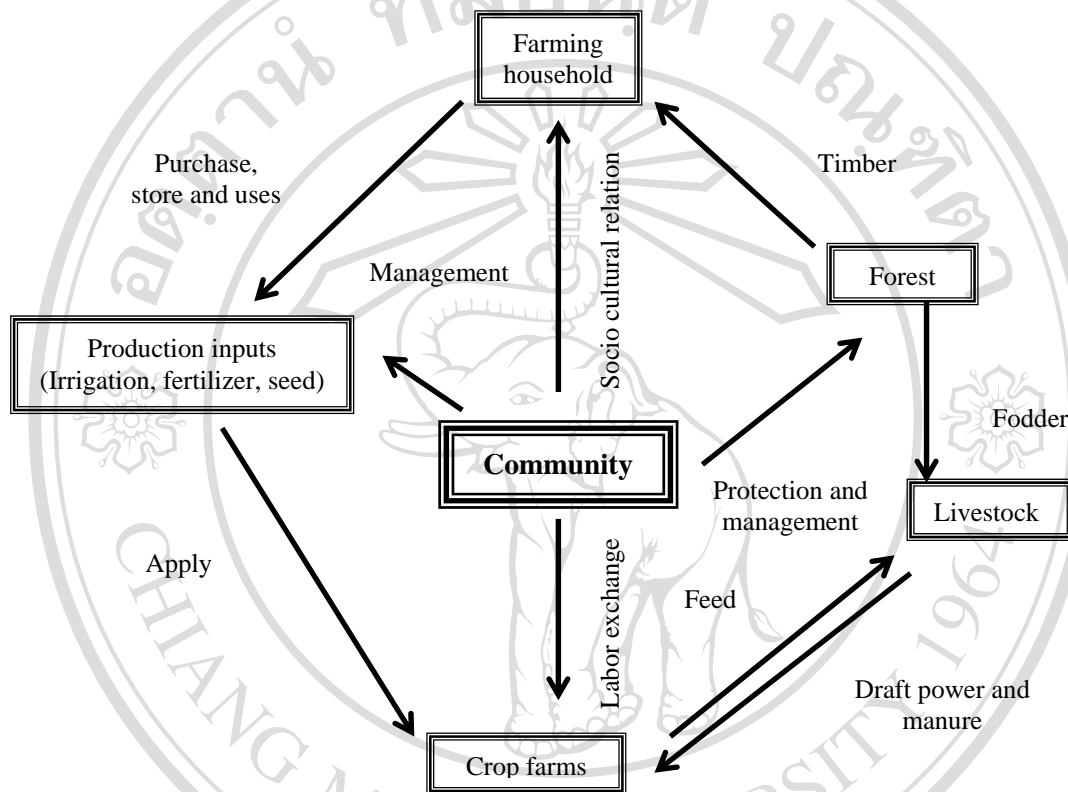


Figure 5.1 Farming systems in Tharu farming communities

Figure 5.1 shows typical farming systems in Tharu farming communities prepared based on the observations and discussions in community workshops in which the farming system is relatively independent of forest and public grazing lands. A much larger proportion of livestock fodder is derived from crop residues and byproducts. Cattle are used as draft animals for transport, soil preparation, milk production and manure whereas pig, goat, sheep and chicken are for meat. The Tharu community plays an important role in the farming systems by protecting, conserving and managing forest components and labor exchange within farms of different

households. It also contributes responsibility to manage and repair irrigation infrastructure which is essential resources for crop farms. There is interrelation between livestock and crop farm in which livestock receive feed and forage and provides draft power and organic manure to crop farm

5.1.1 Crops and cropping pattern system in Tharu ethnic community sites

Crop is the main and most important components of Tharu farming communities. Based on similarities among Tharu communities sites, cropping system of Tharu farming communities can be divided into irrigated community, mixed community and rainfed community and three distinct crop seasons (Table 5.1).

Table 5.1 Cropping pattern system in Tharu ethnic community sites

Communities	Rainy season crop	Winter season crop	Summer season crop
•Irrigated community	Paddy/maize/vegetable	Wheat /lentil+ mustard / Gram+ pea/ coriander/potato	Maize/vegetable/ fallow
	Paddy/maize/ sugarcane	Wheat/lentil/mustard/vegetable/ onion	Onion/ vegetable /fallow
	Paddy/maize	Wheat/lentil+ mustard/vegetable	Vegetable/maize fallow
•Mixed (both irrigated and rainfed) community	Paddy/maize/vegetable	Wheat /lentil+ mustard / Gram+ pea /potato/fallow	Rice/maize/vegetable/ fallow
	Paddy/maize	Wheat/lentil/lentil+ mustard /gram+ pea/fallow	Fallow
•Rainfed community	Paddy/maize	Lentil+ mustard/lin seed/fallow	Fallow

Note: Irrigated community (more than 80% irrigation) = Sisaniya , Kachila, Syani Gaun, Surkedangi
 Mixed (both irrigated and rainfed) community (30 to 79 % irrigation) = Satbariya , Shreegaun, Falkapur, Budha Gaun
 Rainfed community (less than 29% irrigation) = Ambapur, Dubichaura, Motipur, Jhigne
 Source: Workshop and survey, 2007

The three distinct crop seasons found in study area are rainy season, winter season and summer season. Rainy season crops are usually planted during June-July and harvested during September-October where as winter season crop are planted during October-November and harvested during February-March as well as summer season crop are planted during March-April and harvested during May-June. Cereal

crops especially paddy dominates the other crops which occupy the major proportion of the total agricultural production into all community sites. Paddy is the main staple food of all Tharu ethnic communities. However, Tharu community farmer cultivate mainly paddy in irrigated areas and paddy and maize in rainfed areas and some vegetable crop for commercial purpose.

Different combination of cropping pattern is practiced by different Tharu communities which are mainly based on irrigation facility and land types. Maize is grown mainly followed by paddy crop on upland while on low land, paddy is dominant crop followed by maize and vegetable in rainy season. Wheat is mostly grown followed by lentil and mustard as mix crop on both type of the land in winter season crop. Those Tharu communities, who have irrigation facility grows summer paddy, summer maize and off-season vegetables in summer season. Those Tharu communities, who have no irrigation facility, grow mainly both paddy and maize only in rainy season and wheat, lentil and mustard as mix crop and fallow in winter season. Some irrigated farmers harvest summer vegetable, summer maize and summer paddy during summer season along with winter crops during winter season while rainfed farmers' field remains mainly fallow due to the lack of irrigation facility in some of land in winter and whole land in summer season.

5.1.2 Crop coverage area pattern in Tharu ethnic community sites

Irrigated Tharu community sites grow mainly paddy followed by maize and vegetable in rainy season and wheat, lentil and mustard as mix crop and vegetable in winter season and summer paddy, summer maize and off-season vegetables in summer season. Some irrigated and mixed farmers harvest summer and winter vegetable e.g. onion, cauliflower, cabbage, leafy vegetable, cucurbit, and potato for

sale in market and rainfed farmers field remains mainly fallow due to lack of irrigation facility in winter and summer seasons (Table 5.2).

Table 5.2 Crop coverage area of Tharu ethnic community sites

Communities	Rainy season crop	Winter season crop	Summer season crop
	P50/M 45/V 5	W 25/LM 50/GP +C 15/P10	M10/V5/F 85
•Irrigated community	P80/M15/S5	W10/ LM 30/O50/V10	O50/V 10/F60
	P75/M 25	W37/LM 38/V25	V25/M10/F65
•Mixed (both irrigated and rainfed) community	P80/M 15/V 5	W10/LM 15/GP 15/P10/ F 60	P30/M15/V5/F50
	P 50/M 50	W15/LM15/GP 10/P10/F50	F 100
•Rainfed community	P50/M50	LM30/LS 10/ F 60	F100

Note: Number = percentage of coverage area, P= paddy, W=wheat, M=maize, V=vegetable, L=Lentil, M=mustard, LS=linseed, GP=gram +pea, O= onion, P=potato, C=coriander and F=fallow
Source: Workshop and survey, 2007

5.1.3 Cropping intensity in Tharu ethnic community sites

Two types of cropping intensity was found on study site where cropping intensity of irrigated land has more than rainfed land due to higher opportunity for growing summer crops during summer season. Land holding of farmer does not affect cropping intensity in the study sites. The cropping intensity of irrigated land is 235 while 185 for rainfed land.

5.1.4 Cereal yields in Tharu ethnic community sites

Tharu farming communities have the variation of cereal yields in different Tharu communities (Table 5.3). Tharu farmers have higher yields of rice in four communities where farmers use the hybrid seed. The Tharu farmers, who use traditional practices with the local variety of seed and no irrigation, were found to be low in yields in four communities.

Table 5.3 Cereal yields in Tharu ethnic community sites

Communities	Paddy yield	Maize yield	Wheat yield
 Metric ton per ha		
• Irrigated community	3 to 3.5	1.5	2
• Mixed (both irrigated and rainfed) community	1.8 to 2.5	1.2	1.8
• Rainfed community	1 to 2	0.5 to 0.85	1

Source: Workshop and survey, 2007

5.2 Livestock production system in Tharu ethnic community sites

The wide ranges of livestock were identified raised by Tharu farming communities. Livestock was found in every household of Tharu farming communities kept especially for plowing field and for home consumption and the remaining for income. The cattle and buffalo were found as the first priority animal in most of Tharu farming communities for the reason that they use them for plowing, fuel and milk purpose. Most of Tharu communities use cattle dung as fuel for cooking food in their households and cattle dung is used only for organic manure during rainy season. Other animals like pigs, goat, sheep chicken and duck were reared by them which were used for home consumption as meat and some sale for their income. Horse is also kept in some Tharu communities which are used for carrying load from market to their community. It reflects that livestock is also one of the most important components of Tharu farming communities both for domestic use and income.

The productivity of livestock was found very low due to higher percentage of local breeds, traditional management practices, and higher livestock density per unit land and the availability of animal feed, forage and fodder is not sufficient in study

areas. Livestock production system is mainly based on crop residues and by-product, grazing forage on stream, forest and open public land and fodder from farm and forest. Moreover, animal feed from cereal and other grains is also practiced in some of the communities during seasonal unavailability period of grass and fodder in their communities. Integration of livestock in the farming system has supported their cropping pattern and production systems and livestock itself. It reflects that existing livestock production system is necessary to improve for livelihoods and food security of Tharu communities.

5.3 Community level resource use pattern in Tharu community sites

5.3.1 Land use pattern in Tharu ethnic community sites

The farm size of each farmer in Tharu community varied from landless to 6 hectare per household. The farmers who have either no own land or less land for farming rent land from either land lord or institutions in study sites. The share cropping system is adopted for land of land owner where as contract system for land of religious institution. The farm size of own land was found 8 per cent with more than 4 *bigha*, 13 percent 1.5-4 *bigha* 20 percent 0.5-1.5 *bigha* and 59 per cent less than 0.5 *bigha* (Table 5.4).

Table 5.4 Distribution of households by land owned

Communities	Size of land owned (<i>bigha</i>)			
	> 4 <i>bigha</i>	1.5-4 <i>bigha</i>	0.5-1.5 <i>bigha</i>	< 0.5 <i>bigha</i>
 % of households.....			
• Irrigated community	16	25	29	23
• Mixed (both irrigated and rainfed) community	6	12	21	61
• Rainfed community	0	2	10	88
• Average	8	13	20	59

Note: 1.5 *bigha*=1 hectare

Source: Workshop and survey, 2007

Less than 1.5 *bigha* (one hectare) is not sufficient land for their subsistence. Consequently, it reveals that 79 per cent of farmers need additional land which makes them dependence on outsiders land.

5.3.2 Water resource in Tharu ethnic community sites

There are two main rivers in which Satbariya lies near Rapti river and Jigne near Babai rivers. There are other perennial and seasonal water streams lies near all Tharu communities. However, irrigation is only available especially in low land of the study sites due to inadequate irrigation infrastructure. It was found that more than 80 per cent of total area having access to irrigation in four community and no irrigation in three communities (Figure 5.2). All together there was 51 per cent of irrigation facility in Tharu community sites. Perennial stream located nearby the Tharu communities are also used as drinking water. It shows poor access to water resources for irrigation in Tharu community.

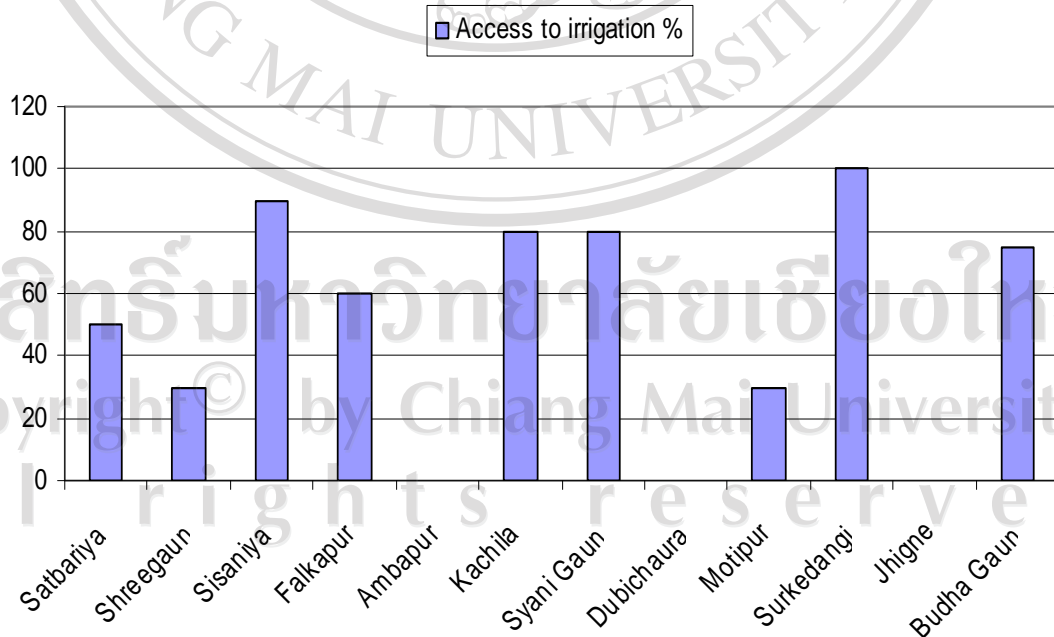


Figure 5.2 Access to irrigation in Tharu ethnic community sites

5.3.3 Demographic resources in Tharu ethnic community sites

The Tharus live in compact nucleated settlements. The household is the basic of the Tharu's social, economic and ritualistic life. They had culture to live in extended (joint) families with three to four generations in the same household. Such arrangements provide manpower for their every day farming and have given them the benefit of skilled and specialized labor. However, it was presently found also as nuclear family in their communities. Consequently, the number of family members was identified ranges from 3 to 21 with 8.1 as the average of household members whereas the average economically active population of household is 6.3, ranging from 2 to 16 economically active members per household. Women and girls contribute cutting crops, transporting them from the threshing area to the house for storage, collecting cow-dung or fire wood for fuel, pounding and grinding grains. They usually do not go for labor and other work if they can fulfil basic need. The Tharus are mostly not motivated by high salary. Bonded labor (Kamaiya system) was mostly practiced in landless Tharu which is not in existence due to banned by government of Nepal since 2002. Population involved in agriculture is employed about half of the year only due to lower land and unavailability of irrigation. Full utilization of the available human resources involved in agriculture can accelerate the agricultural development and ultimately to food security of the farming people.

Skilled worker like carpenter, mason, driver, machinery worker were found to be six percent, service holder like civil servant, military, police, teacher were only one percent and 14 percent wage labor (Table 5.5) whereas 75 percent of wage labor was done seasonally on off-season time of agriculture and daily wages labor was done especially in non farming Tharu household members. The remaining human

resources are only used as agricultural labor. It indicates that there is underemployed labor force in those communities.

Table 5.5 Economically active population by source of employment

Communities	Service	Remittance	Skilled labor	Wage labor	Agriculture Labor
..... % of economically active population.....					
Satbariya	2	1	3	15	79
Shreegaun	1	2	5	21	71
Sisaniya	2	2	9	12	75
Falkapur	0	0	9	17	74
Ambapur	0	3	7	4	86
Kachila	0	2	3	2	92
Syani Gaun	2	2	4	6	87
Dubichaura	2	2	7	17	71
Motipur	4	3	7	35	50
Surkedangi	2	9	5	6	78
Jhigne	0	3	6	31	60
Budha Gaun	2	6	10	46	60
Average	2	3	6	14	76

Source: Workshop and survey, 2007

5.4 Availability of production inputs in Tharu ethnic community sites

All inputs like chemical fertilizer, pesticides, improved variety of seed, credit and labor needed for agricultural production were found available in Tharu community areas. Tharu farmer can buy pesticides and improved variety of seed in registered agro center which are located throughout the study area. Chemical fertilizer is also available in registered fertilizer dealer shops and cooperatives which make them to purchase easily for their demands. Sometimes, Tharu farming communities are facing problems of shortage of chemical fertilizer and quality of

fertilizer in peak period of planting times. It illustrates that all production inputs is available except unavailability of fertilizer during peak period of rice planting time.

5.5 Production inputs used by Tharu farming community

Agricultural production is largely peasant and small scale relying heavily on the use of manual labor equipped with crude implements, while fertilizers, improved seeds, agrochemical (pesticides) are used to some extents. Surveyed Tharu communities were found to use different amount of resources and inputs where higher rate of chemical fertilizer for paddy was used in irrigated Tharu communities, moderately in mixed irrigated communities and lower quantity in rainfed communities. High amount of chemical fertilizer and pesticides was used in those Tharu communities who grow commercial crop like vegetable and use hybrid seed. The irrigated communities' sites are mainly found using hybrid seed of rice while improved seed in mixed irrigated community and local seed in rainfed community sites (Table 5.6).

Table 5.6 Uses of production inputs by Tharu farming community

Communities	Uses of				
	Chemical fertilizer	Organic manure	Chemical pesticides	Seed for rice	Local plow
Irrigated community	High	Low	Moderate	Hybrid	Rarely
Mixed (both irrigated and rainfed) community	Moderate	Rare	Low	Improved/local	Moderate
Rainfed community	Low	Rare	No	Local	Highly

Source: Workshop and survey, 2007

For the case of organic manure, every community has livestock which provides cattle dung but Tharu communities use dung as fuel for cooking. Higher amount of organic manure was applied in only one Rampur community due to

alternative sources of fuel for cooking, moderately in Ambapur and Kachila and Bundha Gaun and rarely in Shreegaun, Falkapur, Dubichaura, Syanigaun, and Jhigne due to less alternative sources of fuel. Tharu plow is indigenous plow which is small made by wood. At the present time, some communities who reside in rainfed land were using indigenous plow. Other communities are using iron plow which is bigger than indigenous plow, can dig very well suitable for better land preparation. It reveals that majority of Tharu farmers are not applying all production inputs on their farm consequently, affect their production system and also can not meet their food sufficiency for basic consumption.

5.6 Availability of service and infrastructure facilities in Tharu community sites

Four Tharu communities have no electricity where they are remote area than others and five communities do not have phone facility for communication. It was found that 25 percent of total household having access to electricity and one percent having phone facility (Table 5.7). Three types of road were available on the sample community in study period. Concrete road and gravel road has road service for transportation throughout year and mud road has no road service for transportation throughout year especially for rainy season. Most of the Tharu communities drink water from well however fresh water from perennial stream is also a source for drinking water in some communities. Drinking water from tap was found especially nearby urban Tharu community areas.

Market structure is available in Lamahi city but presently not functional because of lack of managerial skill. Cold storage and agricultural produce store center is not available in the study area. It reflects poor access to service facilities and development infrastructure and service providing public institutions are non effective

to provide services and infrastructure development in Tharu communities' areas. This can be due to lack of budget allocation for development of infrastructures and lack of coordination of people with service providing public institutions and poor access to different service providing public institutions by Tharu communities than dominant caste/ethnic communities.

Table 5.7 Infrastructure facilities used by Tharu community's households

Communities	Electricity	Phone	Transportation service	Types of road access
..... Percentage.....				
Satbariya	34	0	Bus	Concrete road
Shreegaun	21	0	On foot, bicycle	Mud road
Sisaniya	38	1	Bus	Concrete road
Falkapur	19	0	Bus	Mud road
Ambapur	0	0	On foot, bicycle	Mud road
Kachila	0	0	Jeep for 6 month	Mud road
Syani Gaun	0	1	On foot, bicycle	Mud road
Dubichaura	0	1	On foot, bicycle	Mud road
Motipur	30	1	Bus	Concrete road
Surkedangi	74	1	Bus for 9 month	Gravel road
Jhigne	24	1	Bus	Concrete road
Budha Gaun	48	0	Bus	Concrete road
Average	25	1		

Source: Workshop and survey, 2007

5.7 Community level involvement in agriculture extension services

Government of Nepal has established local agricultural extension service center and livestock service center office to solve crop, livestock and veterinary problems faced by them at local level and also has adopted farmer's group approach to deliver agricultural technology to farmers. Involvement in agricultural extension services and activities plays an important role to adopt improved agricultural technology for better production and productivity of crop and ultimately food sufficiency level, where majority of households consume food from their own production. It shows higher involvement of Tharu farmers of irrigated community sites in agricultural extension services than mixed and rainfed community sites. It was found that 41 per cent households have access to extension whereas 28 per cent involved in farmers group, 18 per cent have training on agriculture and 17 per cent received demonstration programs (Table 5.8) which is lower rate than other ethnic communities in study areas. It indicates that Tharu ethnic farming people have less involvement in extension services and ultimately affect on lower rate of adoption of agricultural technology than other caste/ethnic people in the study area.

Table 5.8 Community level involvement in agriculture extension services

Communities	Access to extension	Farmer's group	Training	Demonstration
 % participation.....			
Irrigated community	70	54	34	33
Mixed (both irrigated and rainfed) community	35	21	15	13
Rainfed community	18	9	5	5
Average	41	28	18	17

Source: Workshop and survey, 2007

5.8 Community level involvement in resource and input management

Irrigation user's group, forestry users group, cooperatives, credit saving groups and farmers groups are involved in natural resource and input management at community level. It was found that four, 83, 51 and 29 percent households were involved in cooperatives, forest users, irrigation users and credit saving respectively for community resources and input management groups (Table 5.9). Except these sustainable development group was found in Satbariya, where as ex-bonded labor group in Shreegaun and Falkapur, kinship group in Sisaniya, youth club in Motipur and drinking water group in Surkedangi Tharu community which covers 16 percent of total household of surveyed Tharu communities. It reflects low level involvement in cooperative and credit saving groups and higher involvement in forest user groups.

Table 5.9 Community level involvement in resource and input management

Communities	Cooperatives	Forest users	Irrigation users	Credit saving	Other
 % participation.....				
Irrigated community	12	100	85	56	20
Mixed (both irrigated and rainfed) community	0	100	55	36	15
Rainfed community	0	50	9	9	15
Average	4	83	51	29	16

Source: Workshop and survey, 2007

5.9 Community level Tharu traditional leader and institutions and their role

The head of the Tharu community is called as *Matawan* (community headman) who performs the role of social and cultural headman. *Matawan* is responsible for settling all kinds of casual and specific problems in the community.

Functional role arrangement of Tharu community set an institutional system called *Khyala* which are held both formally and informally in every walk of Tharu life. *Khyala* is institutional system to stabilize their norms, behavior and value system

which is important to solve the practical problems of individuals and community. Traditional institutions (*Khyala*) plays role for annual evaluation of last year's performance/works, planning for the coming year in which traditional roles can be revived with added efforts.

The Traditional community leader (*Matawan*) facilitates the role for renovations and reconstruction trails and irrigation canals, festivals, cultural ceremony as social and cultural role. As economic/resource management role, he can play role for house constructions, regulating labor exchange system and barter system within the community. As political role, planning for the community actions/activities, implementation of the plan of action, supervision and monitoring, development activities, listening and assessing the problems and resolving them was assigned by community leader which can be improved with current situation.

Community leader has potential roles to revise conservative practices within his community so that traditional roles can be strengthened to make more effective to address the present issues of communities. The community development programs and activities through such indigenous leader and institutions could have been more successful to achieve their goals. The indigenous leader and institution of Tharus should be recognized and incorporated officially by the development agencies which is deeply rooted in their culture and integrated to the social system of Tharus. The development should be socially compatible and culturally sound and then there should be explored the existence and functioning of already existing indigenous institutions among the Tharus in the study area. The previous development programs and activities implemented by the development agencies in the study area have failed to recognize and incorporate the indigenous leader and institutions. Consequently, they

did not succeed to have sustainable impact on the livelihoods and food security of Tharu people which did not give the impression to be convinced ideologically and the development programs and activities were not formulated and implemented in line with the social and cultural realities of the locals.

Participatory development through the creation of sustainable local capacity enhances people's ability to address their own problems and needs. The internal human resource can help and institutionalize the organizational capacity of parent organization through development of community development facilitator (CDF). The community development facilitator can provide a strong, local and internal resource, strengthen institutional capacity of parent organization and enhance their self reliance and sustainability that brings back experience and knowledge to apply within their parent institution. Using CDF skill, parent institutions become more effective at reaching the community and target groups. Community indigenous leader can be developed into community development facilitator who can play major role for the improvement of livelihoods and food security of Tharu community as local resource person in the present time and future and can also lead to raise awareness for development and correct conservative practices adopted presently in their community.

Networking provides opportunities to share and promote development programs and activities and change conservative practices affecting their livelihoods. Strengthening indigenous institutions and networking with other development institutions promotes information and communication sharing amongst different local institutions, increasing exposure and cooperation between its members and broadening the scope for opportunities and resources. Networking strengthens and builds the respect, trust, communication and confidence among them and indigenous institutions of

disadvantaged community like the Tharu community can access to different development programs and activities which was found to have less access than other communities in study areas. It is necessary to promote the already existing indigenous leader and institution to fill the gap of governance where is lack of access to public institutions. For this reason, it is important to revive and promote the already existing indigenous institutional base to fill the gap of governance and also improve conservative practices adopted by communities. Development of community technician from same ethnic group is one of the good ways of adopting new technology and services to Tharu community.

5.10 Food consumption pattern in Tharu ethnic community sites

Cereal is staple food of Tharu ethnic communities which contributes 85 to 90 percent of the total calorie intake. Rice is main cereal which covers 83 to 89 per cent of total cereal consumption followed by maize and wheat. Their consumption depend mostly upon own production consequently, it is necessary to know their own production. Food consumption can be divided into two group based on availability of irrigation. Pork is popular meat for this community followed by fish, chicken, lamb and mutton. These communities harvest fish from natural resources especially during their festival. Lentil and gram is popular grain legume which is used as soup curry. Potato, fruits and dairy product are rarely consumed. Vegetable is more consumed by farmers who produce themselves. Chilli and garlic is popular which is used as spices in Tharu communities. These communities have less practice to buy vegetable and other food items from market except salt. They buy mostly some food items during festival. Exchange food items are also done within the community. Their livestock products like pig, sheep and goat are consumed by exchange or payment within

community. These communities consume normally different sources of food (Table 5.10) which shows that consumption pattern also depend upon own production of their farm. It was estimated that three times more different sources of food were consumed during festival than other regular days. It indicates that consumption practices are culturally different during festival than other normal day.

Table 5.10 Calorie availability for food consumption by sources of food

Sources	Households with irrigation access	Households without irrigation access
 % of calorie intake	
Cereal	85	86
Rice	89	83
Maize	6	11
Wheat	5	6
Meat and fish	3	4
Grain legume	3	4
Potato	1	2
Vegetable	5	1
Fruits	1	1
Dairy product	1	1
Other	1	1

Source: Workshop and survey, 2007

5.11 Tharu culture

Tharu is primarily a patriarchal community which is hereditival in nature. The father is usually the head of the family and controls the budget of the family and other religious activities as a priest. They have traditional culture to nominate cultural leader called *Guruwa* and community leader called *Matawan*. He is expected to be responsible for calling the regular meetings, and appointing a *Chaukidar*, a watchman, to look after problems at both community and domestic levels and crops. The

Guruwa protect their culture in their community with the help of *Matawan*. *Matwan* calls the meeting as per the need of personal and communal/collective problems of community members.

The Tharus have their own costume and ornaments. The Tharus have taken Hinduism, but still retain certain rituals. Wedding ceremony, funerals and birth ceremony are common in those communities. In majority case, marriages are arranged by parents or elders. They practice both cremation and burial. The eldest son, in the case of a male's death, and the youngest son in the case of a female's death, performs the death rituals. Basically the Tharus are animists who believe in spirits good and bad spirits. Stones, wooden pegs, idols and terracotta animal figurines represent these spirits. Household deities are worshipped by the head of the household, whereas the community deities are worshipped by the community priest. Regional deities are worshipped by higher priest. Presently, the Tharus culture is being gradually eroded by the normal Nepali culture. Wedding ceremony is celebrated from one to five days. It was estimated that they utilize excessive food during their festival and ceremony day than normal day. Household, who celebrates ceremony long period of time, makes them food insecure.

Rich culture is still available in Tharu community with the intention that cultural tourism can be enhanced in the study area which can be good sources of income and ultimately affect food security and livelihoods of that community.

5.12 Tharu festival

Tharu are rich in festivals which can be divided into *Bara tihar* (big festival), *Chhoti tihar* (small festival) and *Pujak tihar* (worship festival). Maghi, dashya, atwari, astamaki, dhuhreeri and dewari are big festival. Hardhawa, auli lena, gharyai,

pendya and saunya sakranti are small festival and rath lausarya, chara charaina, gurai, fagui, kenhawa bahannya are worship festival. Moreover, Laub barsha, tihar, badaka akadashi and chaite dashai are related to festival of majority Nepalese people but currently celebrating in each Tharu communities.

Maghi is the main festival of Tharus during 15th January of each year which is celebrated as day of Tharu New Year for those communities. On the day of *Maghi*, *Maghi Devan* is observed as an important occasion among them. On that occasion, every one brings *Jaar* (locally brewed alcohol) and special food items and get together in the courtyard of *Matwan* for the discussion. They, then after a long discussion elect their *Matawan and Guruwa* for the coming whole year. Duration of *Maghi* festival depends upon the decision of *Matwan* which ranges from one week to two month (one month before *Maghi* to one month after *Maghi*). The communities which have more duration of this festival was found toward food insecurity due to higher use of food items including *Jaar* or *Jand* (locally brewed alcohol) and other food items during long period of festival.

5.13 Uses of cereal for making alcohol in Tharu community

It was found 12 per cent of total households without alcohol brewing households while 36, 35 and 17 per cent households were ranges of 1 to 10, 11 to 30 and more than 31 per cent of uses of cereal for alcohol making as compared to their household cereal consumption respectively (Table 5.11).

It reveals that variation was found in different households of different Tharu communities for brewing alcohol which ranged from 0 to 49 percent of total consumption of household. The traditional leader of community who is alert to preparing alcohol in community was found no or little use of alcohol in those

communities such as Satbariya and Sisaniya. So that decision of community leader and traditional institutions leads to discourage and control effectively alcohol making within the community than other person and institutions.

Table 5.11 Cereal uses for making alcohol as compared to their consumption by households

Communities	Percentage of cereal uses for making alcohol			
	0 %	1-10%	11-30%	>31%
Satbariya	31	64	5	0
Shreegaun	0	53	44	3
Sisaniya	27	41	27	4
Falkapur	10	41	44	5
Ambapur	0	9	52	39
Kachila	0	25	42	33
Syani Gaun	0	9	31	60
Dubichaura	0	23	32	45
Motipur	15	40	15	17
Surkedangi	0	40	45	35
Jhigne	0	40	55	4
Budha Gaun	0	23	58	19
Average	12	26	35	17

Source: Workshop and survey, 2007

5.14 Traditional alcohol consumption in Tharu communities

Different ethnic communities are found to have different food consumption pattern or habit and access to resources which relates to adoption of particular types of food. Traditions, beliefs, values and culture affect food consumption patterns or habit of different ethnic community. Each community has its own socio cultural tradition of celebrating festivals and ceremonies which has significant roles in preserving certain types of foods in Nepal. Some communities residing in Terai belt of Nepal

prefer sweets and carbohydrate rich foods. But Tharu communities prefer alcohol brewed from cereal during festivals and ceremonies as a culture than other food items where alcohol consumption is not considered as source of dietary requirement from nutritional and health point of views. The report of FAO/WHO/UNU (2004) defines dietary requirement as the amount of food energy needed to balance energy expenditure in order to maintain body size, body composition and a level of necessary and desirable physical activity, consistent with long-term good health.

Alcohol is used especially for their festivals followed by ceremonies, welcoming guests and entertainment in Tharu communities. Tharu farmer works hard in field with the intention that they drink alcohol to relieve them from their tediousness job. They worship their gods with negligible amount of alcohol which is called *Raksi* (wine) prepared especially from maize. Celebrating festival and ceremony is a joint activity within household; hence it seems that decisions related to festivals and ceremony are also made jointly in inviting guests and relatives from the community and outside the community to different festivals and ceremonies. It is believed in Tharu ethnic communities that the people who invite more guests in their festivals and ceremonies have good luck. Accordingly, Tharu people invite more guests in their festivals and ceremonies and welcome them by local alcohol prepared from cereal in their home. It makes them to use higher proportion of cereal on their alcohol preparing which affect their food consumption due to lack of food availability especially during pre harvest period.

Traditional activities can be revived with some modifications to suit the present time by traditional community leader and institutions which leads toward better food security status of some of Tharu people by discouraging their traditional

alcohol consumption habit in their household and using the quantity of cereal brewed alcohol into foods.

From foregoing analysis, a number of issues can be concluded. Crops and livestock are both important components of Tharu farming communities which are used for both consumption and income. The cropping pattern systems is different in irrigated and rainfed community sites where cropping intensity of irrigated and rainfed land is 230 per cent and 185 per cent respectively. Cereal yield is higher in irrigated area than rainfed area due to higher use of improved seed and fertilizer.

The own farm land of each household varies from landless to six hectare per household in which majority (79%) of the landholding is less than one hectare in Tharu community sites which makes them dependency on outsiders land. The irrigation facility is only about 51 per cent of total land of Tharu community sites. Only nine percent of total economically active population has good employment.

Chemical fertilizer is sometimes not available during peak period of paddy transplanting time. Organic manure and improved variety seed are less used in majority of Tharu communities especially in rainfed areas. Involvement in agricultural extension services and resource and input management is less than other communities. The food consumption pattern depends upon production of their farm.

Tharus are rich in their culture and festival. Tharu people use cereal for brewing alcohol ranging from 0 to 49 percent of total consumption of household which is one of cause food insecurity of Tharu community. The alcohol consumption habit pattern can be improved by discouraging those practices from the community leader and traditional institutions.