

## CHAPTER IX

### CONCLUSIONS AND RECOMENDATIONS

#### 9.1 Farming systems, resource use and livelihood of Tharu ethnic communities

The farming systems of Tharu farming communities is mainly subsistence oriented and crop based. Cereal crop is important components of Tharu farming communities. Cereal crops especially paddy dominates the other crops which occupy the major proportion of the total agricultural production. Different combination of cropping pattern is practiced by different Tharu community which is mainly based on irrigation facility and land types.

The improvement of agriculture is an effect of many resources and inputs. The majority of farmers have no sufficient land for their subsistence. Irrigation is available only half area of total land area. The 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. Optimum use of production inputs such as fertilizer, manure and modern seed variety as well as year round irrigation is the requirement of the present to maximize the agricultural production in Tharu ethnic communities. Services providing by public institutions are not effective to provide services and infrastructure development due to lack of budget for development of infrastructure and lack of coordination and poor access to different services by Tharu ethnic communities as compared to dominant caste/ethnic communities. 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 study area.

Cereal is a staple food of Tharu ethnic communities which contributes 85 to 90 per cent of the total food consumption. The traditional alcohol consumption habit pattern being practiced by Tharu communities leads to high rate of food insecurity which can be improved by discouraging those practices among Tharu communities. Moreover, indigenous leader and institutions could be helpful to discourage those households who use high amount of cereal for making alcohol, higher expenses on festival and ceremonies. The indigenous institution of Tharus should be recognized and incorporated legally by the development agencies to make effective development programs and activities implemented by the development agencies in the study area.

## **9.2 Food security pattern and factors affecting food security**

The survey of 72 households under 12 Tharu communities showed that household food adequacy varied from 44 per cent to 135 per cent with mean adequacy 88 per cent of household requirements. However, 32 per cent of the households were food secure, 35 per cent marginally secure while 33 per cent food insecure. The study has revealed that higher distribution of farm size, income, full land ownership, access to irrigation and participation on agricultural groups influence better household food security status. Based on the results of the regression model using household food adequacy as percentage of requirement met by household as a dependent variable, among selected eight independent variables, adoption of regular modern rice variety seed at the 0.01 per cent level, access to extension at the 0.05 per cent level and total income including both farm and farm income at the 0.10 per cent level were found positively significant and ratio of alcohol making cereal to consumed cereal at the

0.10 per cent level was found negatively significant contributors to the household food security. But yield stability, household adult equivalent members, farm size, household head age were not found significantly contributors to food security.

### **9.3 Constraints and challenges to food security**

It was found through community workshops that land tenure, higher price of production input, unavailability of inputs, lower price of output, inadequate irrigation facility, insect and pest, political instability, low wage labor, lack of technical knowledge, land fragmentation were major constraints to food security in the study area.

The government policy, strategies and programs for many years has been to reach all people by extending agricultural technologies since government does not have adequate resources, the available resources would remain inadequate even for those who are not food insecure. The marginal communities namely Tharu communities have no voice to influence the government; they have been bypassed in many cases. Although the policies and programs are there to improve food security, implementation has not been effective mainly low level of coordination. The Agriculture Perspective Plan (APP), three years interim plan, National Agriculture Policy (NAP) are worth mentioning in the context of addressing food insecurity and poverty. All these documents aims at addressing food security issues through sustained economic growth with a market oriented, private sector based economy. These documents set emphasis on production but does not adequately address the access dimension and utilization of the food security. These are not obvious designed for the access and utilization. APP and NAP has recognized marginal, disadvantaged or indigenous communities' people living in rural areas should be targeted to those

communities by special programs for overall development. According to plan and policy, additional special programs and activities should be implemented to ensure food security for marginal communities namely Tharu communities. However, in the survey, no any respondents said that they received any special programs and activities to ensure food security from the government.

Based on the data and information collected from this study and analysis through household questionnaire, community workshop, interviews and policy analysis, food security is associated with socioeconomic, institutional and ecological factors. This study concludes the following are the causes of food insecurity in Tharu ethnic community:

- i) Traditional practices of cereal grains uses for alcohol making and selling to market immediately after harvest at lower price,
- ii) Lack of awareness /education,
- iii) Low adoption of agricultural technology,
- iv) Lower productivity,
- v) Lower purchasing power of the majority of the Tharu people such as food and production inputs
- vi) Policies and institutions which exclude the those marginal farmers from the benefits of infrastructure development and public services and
- vii) Caste/ethnic discrimination which limit the access of these social categories to education, health and employment opportunities of Tharu community.

#### **9.4 Recommendations**

In order to improve food security status of Tharu ethnic communities, food security strategies and programs should be designed in a way that would focus on and

address the recognized determinants and causes of food insecurity in Tharu ethnic community. Based on the information collected from this research and analysis, the following levels and areas of research and development interventions have been recommended.

#### **9.4.1 Community level**

1. The 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.
2. If land owner invest all expense of fertilizer and seed in their rent out farm, tenant farmers should not sell their product immediately to pay half expenses of production inputs to land owner and it would also contribute to enhance agricultural production by the optimum use of fertilizer and modern variety seed. There should be developed such understanding between land owner and tenant Tharu farmer at community level to improve food security situation of tenant Tharu farmers.

#### **9.4.2 District level**

1. The majority of Tharu farming communities are under subsistence farming because of lower productivity and local agricultural practices. The introduction of suitable agricultural extension programs and activities should put together more effective to explain the existing production systems based on the interest of farmers from decentralized agricultural programs which is formulated and approved by District Development Committee (DDC).

2. District level development line agencies should focus services and infrastructure development to those communities where have poor access to services and infrastructures such as irrigation, road and electricity which should be integrated with agriculture and livelihoods development. Development programs should be allocated based on distributed population of district where is nearly 32 percent Tharu population of total population in study area.
3. The food insecure Tharu households who have less land and income, income generating agricultural programs like mushroom cultivation, poultry, and apiculture from district level budget and programs should be launched with full support package of inputs, training, production management and marketing activities to specific vulnerable population of Tharu communities having less access to land and income sources.
4. Local elites may be more biased against the poor than those at higher levels. Dominant caste/ethnic groups can use their new powers to take advantage of weaker ones. Accordingly, there should be special package development programs and activities suitable and only for vulnerable community to food security who have less access to public services.

#### **9.4.3 Central policy level**

1. The food insecure people do not have resources needed to benefits from costly agricultural technology. The government should be focused to policy maker and researcher for developing technologies suitable for the conditions of poor people.
2. The government should take arrangement completely abolish dual ownership and promote tenant's land right and incentives to encourage land owners to rent out their land to deprived households for formal contract farming. Land inheritance

rules should be revised based on better land reform systems improving optimum use of land resources from the land consolidation perspective.

3. The Tharu community is rich of their culture 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.

### **9.5 Further possible research**

Assessing the food security status of Tharu ethnic communities properly in Dang district, this research needs following further possible researches to address remaining quarries and issues concerned to the food security status of Tharu ethnic communities.

1. The role and impact of Tharu indigenous institution on food security status of the Tharu people
2. Food security assessment among different marginal communities or caste/ethnic groups within study area
3. Impact of land tenure system in food security of Tharu tenant farmer
4. Impact of poverty in food security of Tharu ethnic communities
5. Social inclusion of marginal Tharu communities in development programs and activities of Nepal