

Chapter 4

Peasantry in Kathmandu Valley and Its Southern Ridges

4.1 Introduction

From ancient times, different societies of caste/ethnicity have been adopting various strategies for acquiring a better livelihood in Nepal. Agriculture was, and is, the main strategy. The predominant form of agriculture practised throughout the hilly area of the Nepal is crop farming, livestock and forestry at the subsistence level. Kathmandu valley including Lalitpur district is no exception. The making of handicrafts used to be the secondary occupation in the urban areas of the district. People in the montane and the rural part of the district was more dependent upon the forest resources for subsidiary income. Cutting firewood, making *khuwa* (solidified concentrated milk cream) and selling them in the cities was also a part of the livelihood for the peasants in rural areas. However, since the past few decades peasants/rural households who depended on subsistence farming have faced greater hardships in earning their livelihoods from farming alone due to rapid population growth and degradation of the natural resource base; mainly land and forest. As a result, they have to look for other alternatives to make living. With the development of local markets and road network, people started to give more emphasis to various nonfarm works as their secondary occupation that would not only support farming but also generate subsidiary cash income. Thus, undertaking nonfarm work has become a main strategy for a better livelihood in these regions. With the introduction of dairy farming along with credit and marketing support under the dairy development policy of the government, small scale peasant dairy farming has flourished in these montane regions. Hence, in these rural areas dairy farming and milk selling that earns much needed cash have become a vital strategy for their better livelihood.

On the other hand, villages lying within the valley that play the role of hinterland to the cities by continuously supplying food, labour and culture to city dwellers are also transforming dynamically. As the urban areas of the cities keep on expanding these villages keep on nearing the cities and finally get dissolved. With the growth of urban area not only the cultivated crops and nature of farming changes, but the type of work people undertake as a strategy for better livelihood changes, as well. More and more people get involved in petty works that are typical to urban regions, such as fresh and processed food (vegetables, fruits, beaten rice, etc.) vending, trading, skill labouring, handicraft making, and so on. These works generate cash income and supplements farming, as well.

Against this background, this chapter has been prepared to examine the socio-economic differences between different households, ethnic groups and villages on the basis of the farming, food self-sufficiency as well as different jobs adopted to acquire food security and better livelihood. For this purpose, two villages, Dal Choki and Bungamati were chosen for the study. Dal Choki is a montane village, which lies in the central part of Lalitpur district and in the southern ridges of the Kathmandu valley. Where as, Bungamati is a village lying in the western part of Lalitpur district, on the bank of Bagmati River that runs through the heart of the

Kathmandu valley. The survey was conducted at the household and village level using different sets of questionnaire in 2000. The findings are presented in this chapter to show the contrasting difference with earlier chapters, as well.

4.2 General Characteristics of Lalitpur and Study Villages

Lalitpur district is situated in the Kathmandu valley. The valley is endowed with fertile alluvial soil, derived from the bed of an ancient lake. This fertile soil used to support the dense population of the valley and surrounding areas. The valley has been the seat of literate high culture since the ancient times and continues to be so today. History tells that the valley got its name “Nepa” later on “Nepal” from the early inhabitants of the valley, “Newar” though “Nepal” is the name of the entire country now. The villages on upland plateaus and steep slopes of the valley have for the most part been for “*Parbatiya*” (hill people) settlements. The Newar community dominates the centre of the valley.

One of the two villages studied, Bungamati, is a Newar village with fertile land on the bank of Bagmati River that runs through the heart of the Kathmandu valley. It has a typical Newar flavour and is a hub of traditional Newar culture as it is also a home of Karunamaya, the Red Machhendranath, one of the main deities of the Newars. On the other hand, Dal Choki, is a montane village with the settlement pattern different from Bungamati but similar to other montane settlements on the central Nepal. In both the villages farming is one of the main sources of livelihood.

4.2.1 Physical Features

Lalitpur District covers an area of 385 square kilometres (39,270 hectares) in the Central Development Region. It is surrounded by Makawanpur District in the south, Bhaktapur and Kathmandu District in the north, Makawanpur and Kathmandu Districts in the west, and Kabre District in the east.

The elevation of Lalitpur District ranges from 457 metres to 2,831 metres above sea level. The highest hill of the district is Nagi Danda, which is about 2,831 meters (9,285 ft) above sea level, and next comes Phulchowki Danda about 2,766 meters (9,073 ft.) above sea level. From the geographical point of view, Lalitpur District can be divided into two distinct parts – the plains of Kathmandu valley including Patan city and its surroundings and the montane region of the southern part covering about two-thirds of the area of the District. According to the Department of Metrology and Hydrology, the relative humidity of the district ranges from 50 to 80% within one year. The average annual rainfall is 1,233 millimetres. The average maximum temperature recorded is 23.6 degrees Celsius and the average minimum temperature, 10.7 degrees Celsius. In southern parts of the district lying out of the valley, such as Pyutar and Malta, the maximum temperature recorded is 41.2 degrees Celsius. The climate of the district is sub-tropical in the south, temperate in the valley and cool temperate in the valley ridges. Major rivers of this district include the Bagmati River, Godawari River, Nakhu River, Khani River, Durlung River and Monohara River. Major ponds and lakes include Nagdaha, Saraswatikunda, Godawari, Katuwaldaha and Goledaha.

The district is divided into one sub-metropolitan and 41 Village Development Committee (VDC) for administrative purposes (**Figure 4.1**). The district headquarter is Lalitpur Sub-metropolitan (Patan city). The district itself is divided into three election-zones and thirteen unit areas (*ilaka*).

Dal Choki village lies in the centre of the district with Lele and Nallu villages in the North, Chaughare in

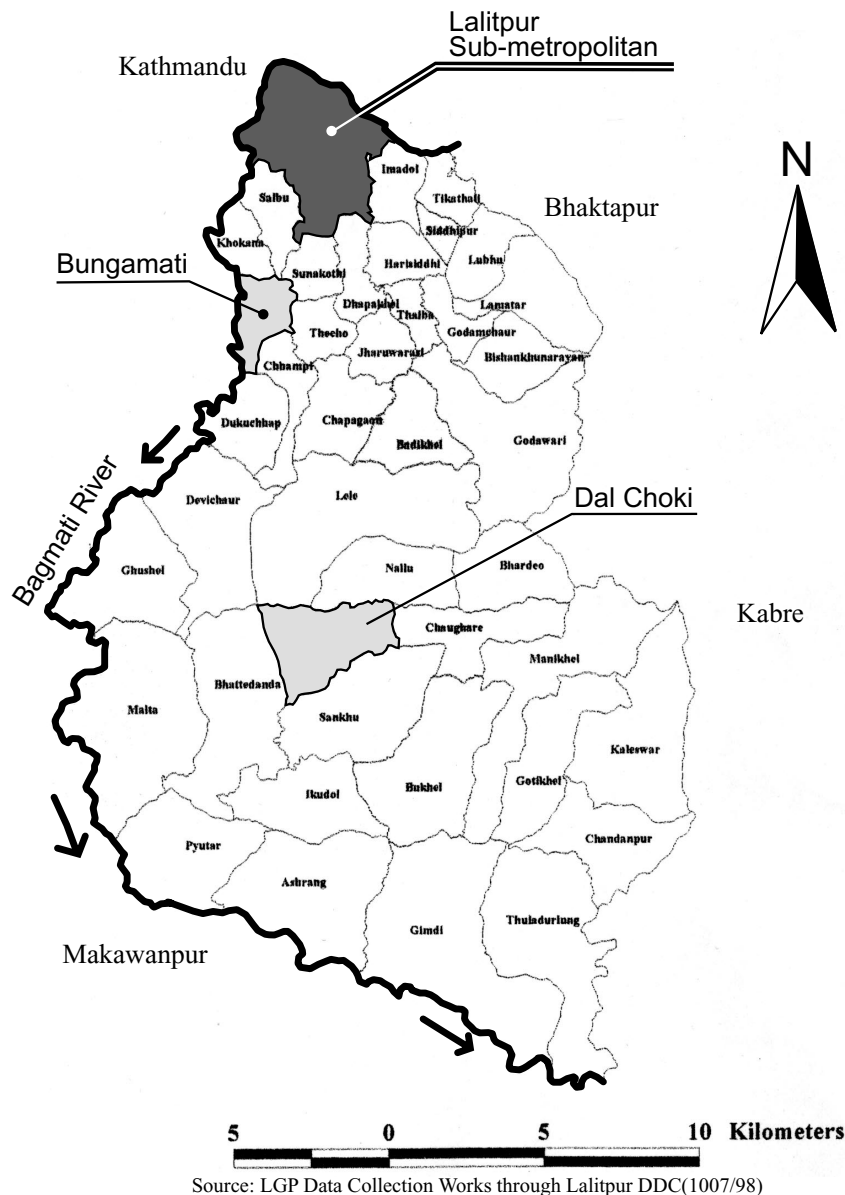


Figure 4.1: District Map Showing Study Villages

the East, Shankhu in the South and Bhatte Danda in the West. The altitude of the southeast base of the village is 1,980m, which is the lowest, and in the north base the altitude varies from 2,025m to 2,216m. The settlements are scattered on the southern face of the hills, mostly around 2,000m to 2,200m of altitude. It takes about two and half hours to walk up from Tika Bhairab, a nearest village in the valley or one hour to walk from Tinpane Bhanjang, main point to cross the valley, to the centre of the village. Tika Bhairab can also be accessed through a newly constructed seasonal road built by the villagers which goes up to the top of the hill and touches the Kanti Highway, a fair weather road connecting Lalitpur district with Makawanpur district in the South. This road increased the mobility of the villagers and the goods transported to and from the village. The main market places for the products are Lele, Chapagaun and Patan city.

With an altitude ranging from 1,290 to 1,360 meters, Bungamati Village lies on the plain of the valley in the Northwest of the district, surrounded by Saibu and Khokhana villages in the North, Chhampi and Dukuchap in the South, Nakhu River in the East and Bagmati River in the West. This village can be easily accessible by bus or taxis from Jawalakhel, the western centre of Patan city. Following the normal bus route after crossing the Nakhu Bridge, the road goes to Saibu, Bhaise pate and then Khokana before arriving at Bungamati village.

The main road that leads to the village, branches to the lower part of the village, settled by Newars, and to the upper part, which is settled by Bahuns and Chhettris in a settlement called Chunni Khel. The main market place for the products is Patan city. The market inside the village has been developing slowly. There is a famous temple called the Red Machhendranath Temple in the village.

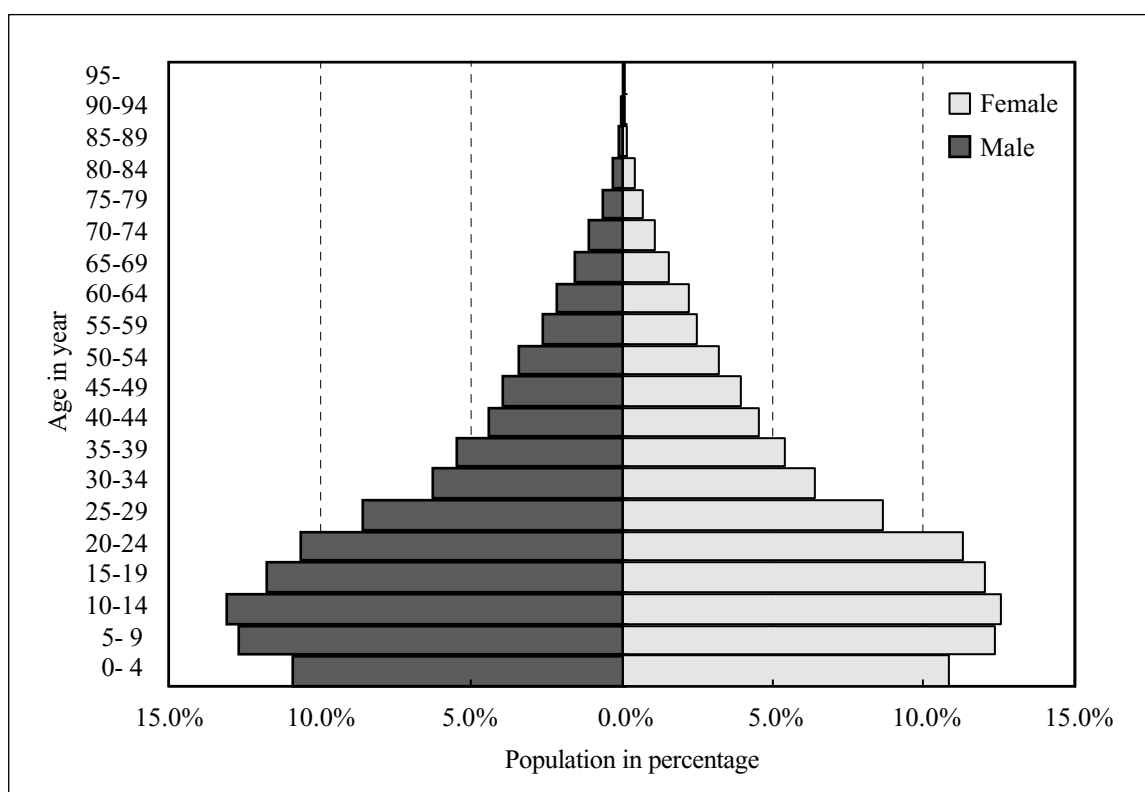
4.3 Demography and Settlement

4.3.1 Population and Ethnicity

According to the 1991 census of Nepal, the total number of households in Lalitpur District is 45,682, with a population of 257,086 and an average household size of 5.6. This includes 130,326 males and 126,760 females, providing a sex ratio of 103 males per 100 females. The annual urban population growth rate in the district is 3.8% and the average annual population growth rate is 3.3% with a population density of 667.8 per sq. km.. The population growth rate is higher than the national average of 2.2%. About 55% of the population in the district live in rural areas and 45% in urban areas.

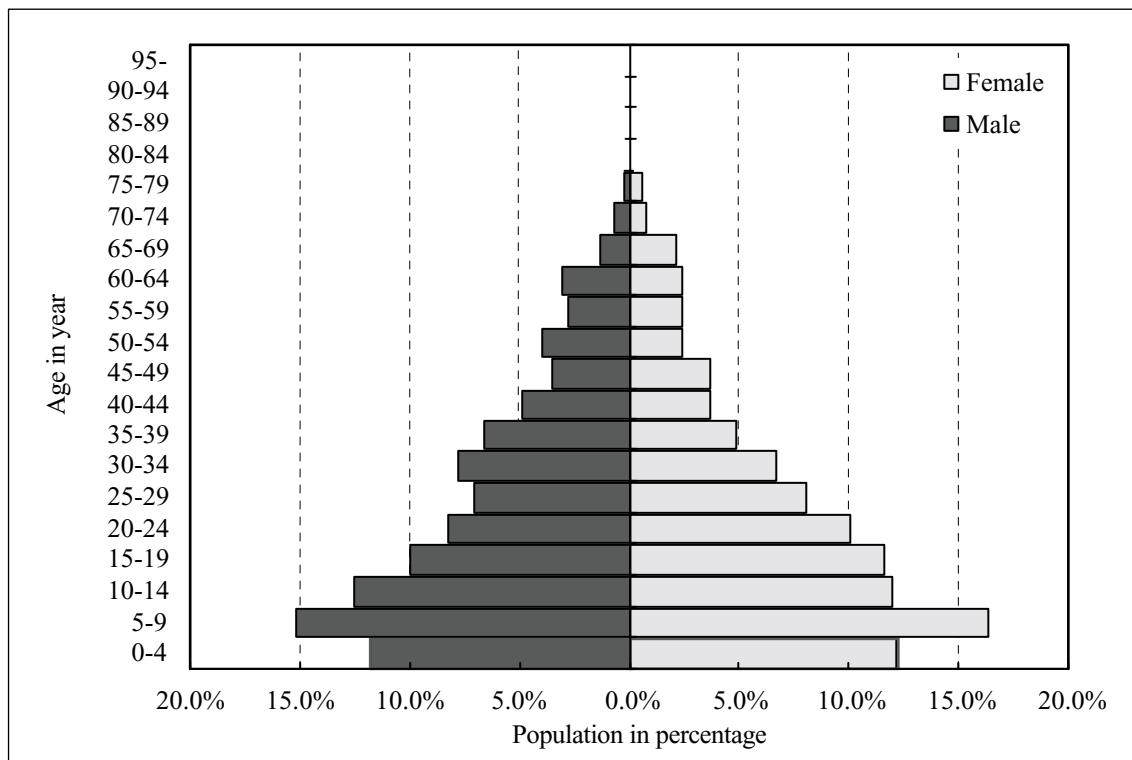
The population age structure is pyramid shaped with young population up to the age cohort group 25-29 dominating the whole population (**Figure 4.2**). The share of males and females is rather well balanced in each age cohort group. The numbers of population, both male and female shows a slight declining trend in the cohorts of 5-9 and 0-4 groups. However, it is too early to understand this as the declining trend in the increase rate of population growth of the district.

According to the field survey, the population of Dal Choki village is 1,410 living under 249 households. The average family size is 5.7. The sex ratio is 93 males per 100 females, which is quite lower than the district average. The population age structure of this village is similar to the district, but rather lopsided to the female



Source: CBS, 1993.

Figure 4.2: Population Pyramid of Lalitpur District, 1991.



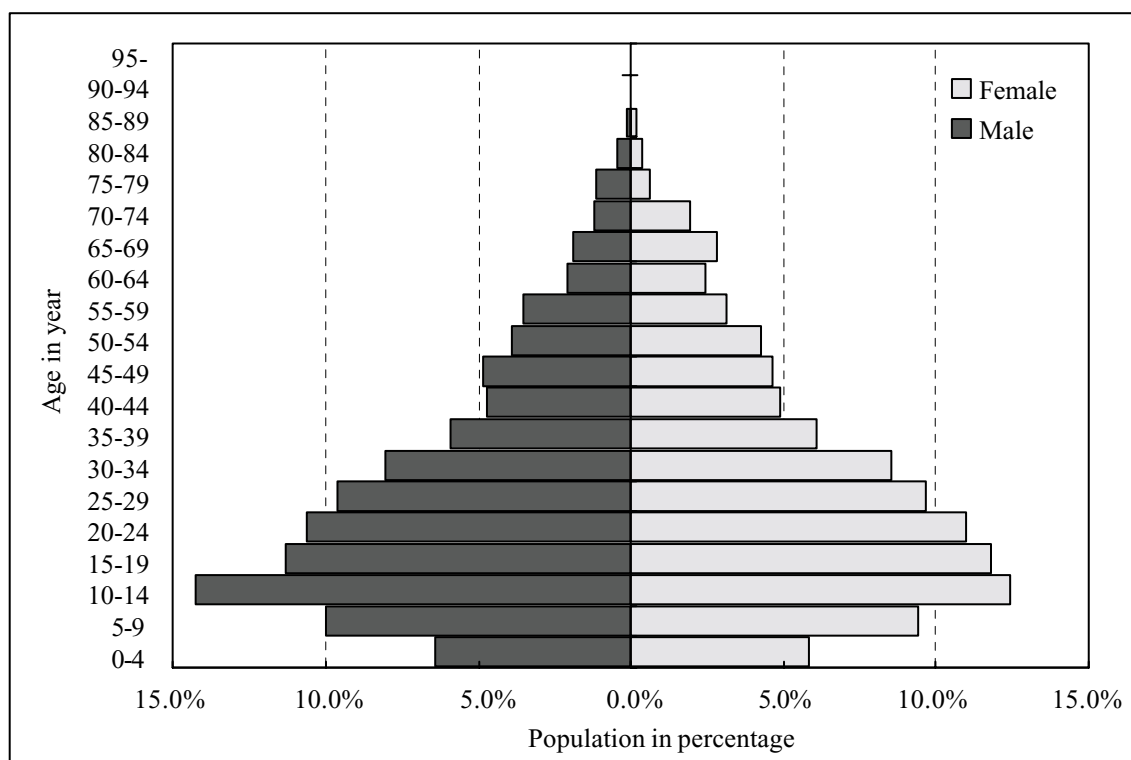
Source: Field survey, 2000.

Figure 4.3: Population Pyramid of Dal Choki Village, 2000

youths and more irregular in the different age groups. Female headed-households constitute 11% of all the households. According to the 1991 census, the population of Dal Choki was 1,051 living under 193 households, giving average family size of 5.5 and the sex ratio, 101 males per 100 females. The change in the sex ratio within the past 10 years is worth noticing. The population of 5-9 age cohort in 2000 seems natural, including the male-female ratio. The sudden decrease in the following cohort could partly be the result of villagers sending their children to school in the valley making them reside there (**Figure 4.3**). The decline thereafter up to 25-29 age cohorts, especially in males, is partly due to migratory job undertaking in the city areas, some with higher education. In doing so they generally leave their spouses in the village. This would partly explain the more number of females in these cohorts. The slight increase of males in 35-39 age cohort could be explained by the return of some of these migrants to the village to get engaged in generational household responsibilities. In this village also it is too early to predict decrease in population growth rate from the lesser number of population in 0-4 age cohort. Besides, the old people are proportionately less in number.

The population of Bungamati is 4,814 living under 888 households. The average family size is 5.4. The sex ratio is 103 males per 100 females. There are 18% of the households headed by the females. The population age structure of this village is different from the district. The population is in the declining numbers in the age cohorts of 5-9 and 0-4 (**Figure 4.4**). This kind of character in population can at times be observed in urban population structure in recent years, which indicates a decrease in population growth rate. The male-female ratio of numbers in each cohort is also rather balanced, with the exception of 10-14 age cohort. This trend can also be understood as a sign of this village being stable regarding the migration of the villagers in search of job and or education opportunities.

According to 1991 census, in Lalitpur district, Hindus are the dominant religious group, covering 72.5%, followed by Buddhist 26.2%, and others. In Dal Choki VDC, 76.5% are Hindus and remaining 23.5 are Buddhists. Most of the Tamangs are Buddhists, and the Bahuns, Chhetris, Newars, Magars and people of



Source: Field survey, 2000.

Figure 4.4: Population Pyramid of Bungamati Village, 2000

Table 4.1 : Ethnic Distribution in Study Villages and Lalitpur

Caste/Ethnicity	Dal Choki		Bungamati		Lalitpur District	
	Population	%	Population	%	Population	%
Bahun	449	31.8	513	10.6	28,477	11.7
Chhetri	64	4.5	723	15	50,057	20.56
Newar	3	0.2	3084	64	118,431	48.64
Magar	355	25.2	23	0.5	6,874	2.82
Tamang	321	22.7	453	9.4	28,836	11.84
Occupational caste	207	14.7	18	0.4	6,016	2.47
Others	11	0.8	0	0	18,395	8.21

Source: LDDC, 2000 and field survey, 2000.

Note: Others include Rai, Limbu, Gurung and Sherpa.

occupational caste are Hindus. In Bungamati 41% are Buddhists and the remaining 59% are Hindus. All the Bahuns, Chhetris, Magars and people of occupational caste are Hindus. Newars generally follow both the religions side by side. Among Newars, sub-caste groups of Shakyas, Brajacharyas, and some Tuladhars and Maharjans declared themselves Buddhists.

The district is composed of various ethnic groups, including Newar, Bahun, Chhetri, Tamang, Magar, Danuwar, Sherpa, Maithali and other occupational caste groups such as Damai, Kami, Sarki as shown in **Table 4.1** Newars are the dominating ethnic group in Lalitpur district, covering 48.6% of the population. They usually live in the urban area and clustered settlements in the rural area. Tamangs, Bahuns, Chhetris usually live in the hills, in rather scattered settlements. Bahun (31.8%), Magar (25.2%) and Tamang (22.7%) are the dominating ethnic groups in Dal Choki, where as Newar is the dominating ethnic group covering 64% of the population in Bungamati.

4.3.2 Settlements and Housing

Settlements inside the district differ according to geographic conditions. In the plain area the density of settlement is high. So is the population. The density decreases in the southern hilly areas and in the southern ridges of the Kathmandu valley.

The settlements in Dal Choki are spread among terraced fields with individual houses linked by pathways and surrounded by the sloped agricultural fields accompanied by cowsheds nearby the houses. The houses are of one or two-stories and the walls are made of stone with mud mortar and mud plaster, thatch or galvanised iron-sheet roof. The ground floor of the houses is used for cooking and worshipping purposes and the second floor is used for sleeping and storage of the grains. But the settlement situation of Newars in Bungamati is totally different. Their houses are densely packed multi-storied buildings adjoined to each other, almost forming a wall. They use the top floor for cooking, storing grain and worshipping, while other floors are used for sleeping, entertaining the guests and performing other daily activities. In the Newar tradition, the ground floor is regarded as the outer rim of the house that normally takes the pollution, hence often left dark. Domestic animals, if any, are kept in this floor. Agricultural by-products, i.e., straw, bran, organic manure are piled here. Recently more of these spaces are used as workshop by the people engaged in handicraft works. With urbanization more of this space is also being used as shops and eateries.

Another important feature of Newar settlements in the valley is that space and settlements are ritually organized according to the “*mandala* model”. The *mandala* design was the basis of town planning during the early medieval Malla Period. In Bungamati, the Red Machhendranath temple serves as the centre of importance in the *mandalic* model of town conceptualisation with houses of high-ranking Newar Buddhists like Shakyas and Bajracharyas surrounding its immediate vicinity. They are surrounded in the next layer by Newar Buddhist merchants like Tuladhars, next in caste ranking according to the Newar traditional system, and Newar farmers (Maharjan, Dongol), and are followed by the people of subsequent castes in the next layer. In the outer border of the core settlement, the low-ranking Newar occupational caste group can be found. Agricultural fields surround the core settlements of the village. Hence, the agricultural fields are located rather far away from the houses of the farmers. (Impure) wastes are dumped around the border of the settlements, near the river. This is an important characteristic of *mandala* model of Newar town/settlements¹.

The structure of houses represents the economic status of occupants. Cement roofed houses have not yet been introduced in Dal Choki village. More than half of the houses (58.%) are stonewalled with mud mortar and galvanised iron roof-sheet where as some 41% are stonewalled with mud mortar and straw or thatched roof. Some (0.7%) don't have a house and live in rented rooms. Most of the first type of houses belongs to Bahuns and Magars. After saving money from cash income, especially from selling milk, villagers tend to change the straw or thatched roof into a galvanised iron-sheet roof. Nowadays, this trend is most noticeable among the Tamang households whose incomes have started increasing with the undertaking of livestock farming and milk selling, recently.

In Bungamati 61% of the houses are made up of brick, with mud mortar and a roof covered by tiles or galvanised iron-sheet. Some 15% of the houses are made up of furnace brick, with cement mortar and a galvanised iron-sheet roof and 11% are made up of furnace brick with cement mortar and a concrete roof.

¹ For understanding the *mandala* model of Newar towns and the mesocosmos, Gutschow and Kolver (1975), Maharjan (2002), Gellenr (1992), Levy (1990), Locke (1980), and Vergati (1995) are recommended.

Some 12% of the houses are *kaccha*, made up of raw brick, with mud mortar and roof covered by straw or thatch. Most of the Newars (73%) own the first type of the house. Newars, who recently got well-to-do, due to cash income earned from handicrafts, tend to build new houses of cemented concrete roofs. Most of the households who own more than one house are Newars involved in making and selling handicrafts. *Kaccha* houses generally belong to the people of occupational caste of Newar ethnic group.

4.3.3 Migration

Migration inside the municipality and the surrounding areas is higher than other areas of the district. But in the rural areas in-migration from other districts is not noticeable. Migration within the district and areas bordering other districts is noticeable, as can be seen in Dal Choki. By drawing a Mobility Map during the Participatory Rural Appraisal (PRA), the migration of Dal Choki village has been figured out. Every year, economically sound and educated people from Dal Choki village often migrate temporarily to Patan city and Chapagaun, the regional center, in search of business, jobs and better education for their children. During the past 15 years, thirty households have migrated from Dal choki to Makwanpur district, four households to Chitwan district, and five families to Banepa municipality in Kabre district. The families who migrated into Chitwan and Makwanpur were poor families; they hardly had enough food for a month. Of those who migrated to Banepa, three families were poor who hardly had enough food for one month and two families had food sufficiency levels of nearly three months. It was also found from the PRA that four families have migrated to Patan city in the last 10 years, who were mostly educated and economically sound. In Bungamati, there was no out-migration for recent decades. But in the border areas of the village next to Patan city, much influx of people can be seen due to the urbanization of this area. According to the district profile, in the rural areas of the district, 1.6% of total households migrated due to economic reasons, 0.7 %, due to social reasons, and 0.2%, due to educational reasons. Total migration, in and out, in the district was 2.7 % of the total population for the last decade.

4.4 Education and Training

Literacy rate and educational level is one of the key factors affecting the adoption of different strategies to secure food. The education sector plays a strategic role in the attainment of the country's multifarious economic development and the adoption of the appropriate tools and techniques in agriculture and other occupations. The performance of this sector reflects the true development of the country. Education is correlated with different development variables. Indeed, it is considered essential to have a sufficient number of educated, conscious, responsible and skilled manpower to accelerate the development effort. It is also one of the major service sectors in rural areas that people get engaged for livelihood. People engaged in education in the rural region, such as teachers command high status and are considered as the local leaders.

4.4.1 Educational Institutions

In Lalitpur district, the educational level and institutions cannot be generalized. As already mentioned, due to two distinct physical features and settlement, the educational levels and institutions in these two areas are also different. In the district, according to district education office registration files recorded up to 1997, there are 125 primary schools, 22 lower secondary schools and 51 secondary schools registered as govern-

ment schools. Similarly, 25 kindergarten schools, 64 primary schools, 33 lower secondary schools and 75 secondary schools are registered as private schools. Most of these private schools are in Patan city and some are in the villages surrounding the city. For higher education there are three government colleges under Tribhuvan University, out of which, two colleges run up to Master's degree. Besides, there are four private colleges, which run up to Bachelor's degree. After the implementation of the government new education structure (10 + 2 years of school education), higher secondary school policy, 13 higher secondary schools have been registered recently. Aside from formal education, there are a variety of training and adult literacy programs run by government agencies, NGO activities and the private sectors.

There are altogether seven schools in Bungamati, which include one public and one private secondary school, one public and one private lower secondary school, two public primary schools and one private primary school. Recently, one higher secondary school has been established. Similarly, altogether there are four schools in Dal Choki, including one secondary and three primary schools. All of these schools are public. There is no higher secondary school in this village. Therefore, the villagers have to go to Patan city or Chapagaun for higher education. In both the villages adult literacy programs are popular especially among women. These adult literacy classes are generally organized by different NGOs in coordination with local organizations.

Table 4.2 : Education Status According to Sex in Study Villages

Education Level		Dal Choki			Bungamati		
		Female	Male	Total	Female	Male	Total
No Schooling	IL	317	153	470	1,023	359	1,382
	L	79	111	190	519	763	1,282
Schooling	PS	179	201	380	448	589	1,037
	LS	27	38	65	90	146	236
	HS	19	53	72	108	255	363
	SLC	8	14	22	23	72	95
	IA	2	13	15	22	63	85
	Bachelor	-	11	11	4	40	44
	Ph.D.					1	1
Total		631	594	1,225	2,237	2,288	4,525

Source : Field survey, 2000.

Note 1 : IL; illiterate, L; literate, PS; primary schooling, LS; lower secondary schooling, HS; higher secondary schooling, SLC; passed school leaving certificate exams, IA; intermediate level passed.

Note 2 : Children under 6 not enrolled in school are not enumerated.

Table 4.3 : Participation in Training Programs

Trainings	Dal Choki	Bungamati
Agricultural	20	9
Environment awareness	23	0
Forestry	15	0
Health	5	4
Education	10	5
Finance & cooperative	5	3
Income generating skill	15	77
Others	7	2

Source: Field survey, 2000.

Note: Others = faith healing, gender and volunteer training. Unit = %.

The education level of the people varies according to the diversity of the educational institutions in different areas within the district. The literacy rate in the urban area is higher than rural areas. In Lalitpur District according to 1991 census, 63.3 % of the people are literate. The literacy rate in Dal Choki is 61.6%, the figures for males and females being 74.2% and 49.8%, respectively (**Tables 4.2**). In Bungamati 69.5% of the people are literate. Here too, the figures for the males are higher (84.3%) than those for the females (54.3%). The tables show that there are 11 graduates in Dal Choki whereas in Bungamati they are 45 in number. Most of the literate people are either just literate (due to adult literacy programs or self learning) or enrolled up to the primary level in both the villages. Their shares in total literate population are 51.2% in Bungamati and 46.5% in Dal Choki. The educational status of Bahuns in both the villages are better than all other caste/ethnic groups. However, the educational status of Tamangs, Magars and occupational castes are relatively lower.

4.4.2 Training Program

Trainings are necessary to build up personal skills and social capacity. In Dal Choki people have been participating in different kinds of training programs. As shown in **Table 4.3** most of the trainings are focused on agriculture, forestry and environmental conservation. In the agriculture sector, livestock-related trainings are most attended whereas in the forest sector, trainings on forest management and user group formation are popular. Almost all the trainings are provided by non-governmental organizations without taking fees from the villagers. In Bungamati, most of the trainings focus on income generation and skill development training especially relating to handicrafts such as carpet weaving and wood-crafting. Almost all of these trainings are self-financed except for some organized by community groups. Only about 9% of the trainings are related to agriculture in Bungamati, despite the dominance of agriculture in the village and its surroundings.

4.4.3 Language Ability

Language is essential for effective communication and skill transformation. With Nepali being the national language, most of the people speak the Nepali language in these two villages. Some 3.9% of the people in Dal Choki and 8.5% in Bungamati do not understand Nepali. Where as 12.2% of Newars in Bungamati can't speak Nepali. Generally, older Newar women and men do not understand Nepali. On the other 33 % only speak Nepali. However, some 8.2% of Newars are also fluent in Nepali. Many of the people (52.6%) in Dal Choki speak Nepali only.

In the case of mother tongue ability, it is not surprising to find that most of the mother tongues of Magars, Tamangs and Newars are only spoken. They cant read and write their mother tongues. Some 70% of Magars and 86% of Tamangs in Dal Choki can only speak their mother tongues, whereas 22 % of Magars and 10 % of Tamangs are good (fluent and can read/write) in their mother tongues. In Bungamati 85% of Newars and 99% of Tamangs can only speak their mother tongues. Some 5% of Newars and only 1% of Tamangs are good at reading and writing their mother tongues. The abilities of the villagers to read and write Nepali and mother tongues depend on education. Females are always lagging behind in education and in being able to read and write Nepali and respective mother tongues in all the caste and ethnic groups.

4.5 Occupational Structure and Cash Income

4.5.1 Occupation Structure

Due to vast differences in infrastructure and development, the occupational structure is also markedly different within the district. The economy of Lalitpur District is, to a large extent, still based on agriculture. According to the District Profile 2000, in rural area of the district, 7% of the population is involved in the service sector, 3% in the business and manufacturing sectors, and 45% in the agriculture sector. The remaining 45% do not have fixed occupations but most of them are engaged in skilled or unskilled labour work and small vendor businesses for short periods of time.

Dal Choki village is more agrarian in nature, in terms of occupational structure, compared to Bungamati. In Dal Choki village 100% of the economically active household members are either fully or partially involved in agriculture as is shown in **Table 4.4**. According to the survey, 86% of economically active people have agriculture, including crop farming and livestock as their main job, whereas in Bungamati it is only 52%. Since the land type of Dal Choki is comparatively not very favourable for the crop farming most of the agricultural work includes livestock rearing. Due to the promotion of dairy farming and the establishment of a milk-chilling centre in Lele, livestock rearing has received a new momentum in this village and the surrounding area. This occupation is now not only the main source of cash income for the Bahuns and Chhetris, but also for Magars, Tamangs, and people of occupational caste in Dal Choki village.

According to the baseline survey of Community Development Project (1991) of USC-Canada (Shrestha, 1992), the selling of bamboo work and firewood used to be one of the main jobs for the Magar and the Tamang communities in Dal Choki. But it is almost nonexistent today. The numbers of big animals held per household also proves the statement that Magars, Tamangs and the people of occupational caste are taking livestock farming as their main job, as can be seen from animal holding data (big animals per household are, 2.3 for Tamangs, 2.6 for Magars and 3.1 for people of occupational caste).

In Dal Choki, very few people are involved in business, salaried and professional jobs as their main occupation. Most of the businessmen are shop owners and milk traders. Most of the professional workers are teachers inside the village. Others are priests and politicians. Most of the people who have salaried jobs are working outside the village. They are generally involved in lower-end service jobs of the organizations they work for.

Table 4.4: Main and Side Job Categories in Study Villages

Job Category	Main Job						Side Job					
	Dal Choki			Bungamati			Dal Choki			Bungamati		
	F	M	Total	F	M	Total	F	M	Total	F	M	Total
Business	5	9	14	40	203	243	1	31	32	3	9	12
Farming	374	312	686	817	446	1,263	11	44	55	399	523	922
Manual labouring	1	10	11	9	39	48	2	30	32	44	60	104
Professional job	2	24	26	7	32	39		2	2	2	2	4
Salaried job	6	25	31	62	343	405	1	12	13	1	9	10
Skilled labouring	9	18	27	136	308	444	4	13	17	14	66	80
Grand Total	397	398	795	1,071	1,371	2,442	19	132	151	463	669	1,132

Source: Field survey, 2000.

Notes: 1) Business: Shops, mills, industries, bakery and middlemen in milk, vegetable and handicraft selling. 2) Farming: poultry, animal husbandry and milking, crop farming and contact farming. 3) Manual Labouring: Day labourer, farm labourer, wage worker, helpers in transportation and milk carrier. 4) Professional: Teacher, priest, doctor, engineer, lawyer and politician. 5) Salaried: government & non-government service, forest guard, VDC president and health worker. 6) Skilled Labouring: Handicraft workers, blacksmith, driver, mechanic and goldsmith.

Bungamati has a more developed economy, which can be attributed to its location in the valley and in the vicinity of the city. This village has a very fertile land, the production of crops is very good and the markets for the products are also favourable. The proportion of people engaged in agriculture as their main job is low (51.7%). However, 81.5% of all side jobs are still related to farming. Many people (89.5%) are actively or inactively involved in agriculture in Bungamati. Some, 18.2% of the economically active people are involved in skilled labouring, 16.6% are working in salaried jobs and 10% are engaged in businesses as their main jobs. All these job engagements directly contribute to the economy of the village uplifting the daily lives of the villagers.

The promotion of handicrafts has had a very good impact in this village. Out of the economically active people involved in skilled labouring as the main job, 88% are engaged in handicraft-related works, especially woodcrafts, carpet weaving, *pauwa* and *thanka* painting (paintings mostly with religious motives, commonly known as “Manadala” in Japan). These are newly introduced occupations in the village, basically introduced from Patan city, and are spreading quickly among the villagers; mostly Newars. According to the field survey, only five households have handicraft as their traditional occupation, which they have been undertaking for generations. All other people have started this occupation only a decade ago. Nearly 40% of them started only three years before. Out of a total of 444 people involved in skilled labouring as their main jobs, 416 are Newars, mostly being involved in woodcraft work. Within the Newars, most of those doing such work are Shakyas and Tuladhars, the Newar high caste people. According to the villagers, some of the Newar farmers have also learned woodcraft in the recent years and are now involved in this occupation. There are many reasons for adopting handicraft work as an alternative strategy for their livelihoods. Those who are involved in this occupation see it as the easiest way to earn cash. Once a person has the skill of craftworks it is easy to start the work on a very small scale, using self-labour and small amount of investment. A part of the housing space in the generally multi storied Newar houses can be easily turned to the workshop. The skill can be acquired by obtaining trainings for some months, which is not very expensive and requires no high level of school education. Thus, 44.6% of the people involved in skilled labouring are literate without schooling, 22.2% are illiterate and 19.6% have education of only primary schooling. Women can also easily get involved in this work. Some also learn the skill through their masters while working for them.

However, educational level does play a vital role in choosing the main occupation for livelihood. In both villages, those who are involved in professional and salaried works are well educated; 65.4 % of the people engaged in professional work in Dal Choki and 79% in Bungamati have an education level above the high school.

Choosing manual labouring as a main job is the last option for all. Those who do not have sufficient education, land or animal holding generally choose this occupation as their main job. Almost all of them are working outside the village. Most of the manual workers are Tamangs in both villages. In Bungamati, 25% of the manual workers are from the Tamang community even though they constitute only 9.4% of the village population. People undertaking manual labouring as a main job in Dal Choki are mainly the people of occupational caste (36.4%) and the Tamangs (54.5%).

The feminisation of the agriculture in both the villages can also be understood from **Table 4.4**. This is more noticeable in Bungamati than in Dal Choki. There may be several reasons for the feminisation of agriculture in both the villages. The main reason is that due to smaller per capita land holding, the male members of the family tend to work in other alternative jobs to meet the daily necessities of the family, leaving the household and farm works to the females and the aged. This is more true for Bungamati where the

females undertaking farming as the main job is nearly twice the number of the males. Further, one of the strategy made by the women empowerment program of the Local Development Program of the UNDP, is to generate income for the females which they can use freely in the village through vegetable farming.

Many people are involved in more than one job in both the villages. Those who are involved in agriculture as their main job and do not obtain food self-sufficiency are taking side jobs to earn cash to buy food. **Table 4.4** shows the number of people involved in different side jobs. In Dal Choki only 19% of the people with main jobs are involved in side jobs. Whereas in Bungamati 46.3% of the people are involved in side jobs.

Table 4.5 : Cash Income From Nonfarm Jobs in Dal Choki

Job Category	Main Job				Side Job			
	No. of People	Total Income (NRs.)	% Cover	Average (NRs.)	No. of People	Total Income (NRs.)	% Cover	Average (NRs.)
Business	14	172,000	8	12,286	32	201,400	23	6,294
Manual labouring	11	158,000	7	14,364	37	333,300	39	9,008
Professional	26	802,000	36	30,846	2	14,000	2	7,000
Salaried	31	767,000	34	24,742	13	213,900	25	16,454
Skilled labouring	27	342,000	15	12,667	18	97,000	11	5,389
Total	109	2,241,000	100	20,560	102	859,600	100	8,427

Source: Field survey, 2000. Note: US\$ 1=NRs. 75.

Table 4.6 : Cash Income From Nonfarm Jobs in Bungamati

Job Category	Main Job				Side Job			
	No. of People	Total Income (NRs.)	% Cover	Average (NRs.)	No. of People	Total Income (NRs.)	% Cover	Average (NRs.)
Business	243	6,912,200	23	28,445	12	120,000	5	10,000
Manual labouring	48	1,076,700	4	22,431	104	903,520	41	8,688
Professional	39	1,047,600	4	26,862	4	22,000	1	5,500
Salaried	405	9,131,200	31	22,546	10	158,000	7	15,800
Skilled labouring	444	11,597,178	39	26,120	80	1,001,500	45	12,519
Total	1,179	29,764,878	100	25,246	210	2,205,020	100	10,500

Source: Field survey, 2000. Note: US\$ 1=NRs. 75.

Table 4.7 : Total and Per Capita Cash Income From Nonfarm Jobs in Study Villages

Caste/Ethnicity	Dal Choki				Bungamati			
	Total income from main job	Total income from side job	Total	Per capita income	Total income from main job	Total income from side job	Total	Per capita income
Bahun	2,531,600	443,400	2,975,000	6,626	2,741,000	22,300	2,763,300	5,387
Chhetri	211,500	37,400	248,900	3,889	3,418,000	295,420	3,713,420	5,136
Magar	1,595,400	176,400	1,771,800	4,991	102,000	-	102,000	4,435
Newar	10,000	-	10,000	3,333	23,002,998	1,619,100	24,622,098	7,984
Occupational caste	919,700	166,500	1,086,200	5,247	129,000	600	129,600	7,200
Tamang	1,014,000	238,600	1,252,600	3,902	1,786,700	772,000	2,558,700	5,648
Others	77,000	22,000	99,000	9,000	-	-	-	-
Grand Total	6,359,200	1,084,300	7,443,500	5,284	31,179,698	2,709,420	33,889,118	5,965

Source: Field Survey, 2000. Note: Unit is NRs. US\$ 1=NRs. 75.

4.5.2 Cash Income

Although agriculture is main occupation, the cash income from selling crops is not high. Since the food sufficiency obtained from their own production is very low; an average of 5.1 months in all the households in Dal Choki, very few people sell the crops. However, beans and mustard are exception. In the case of Bungamati, some agricultural products, especially green vegetables and beans, are sold. It is one of the main sources of cash income for those who depend on farming.

Tables 4.5 and 4.6 show the cash incomes earned from different main and side jobs other than farming in Dal Choki and Bungamati villages. The average income per person involved in main jobs is NRs. 20,560 and NRs. 25,246 in Dal Choki and Bungamati, respectively. Similarly, average income per person involved in a side job is NRs. 8,427 in Dal Choki and NRs. 10,500 in Bungamati. In both main and side jobs, the average income per person is higher in Bungamati. This clearly indicates that the economic condition of the Bungamati is better than in Dal Choki. Looking at the individual job categories, incomes on average in business, manual labouring and skilled labouring are much higher in Bungamati than in Dal Choki. Businesses and skilled labouring in Bungamati are mainly related to handicraft, accounting for 56 % of the whole nonfarm income. This is mainly due to the availability of competitive markets within and nearby the village, a side effect of the promotion of handicraft and tourism in the country. Incomes from manual labouring as a side job contributes a great deal in both the villages, covering 39% and 41% of the total side job incomes in Dal Choki and Bungamati, respectively.

In Dal Choki, Bahuns have a per capita nonfarm income of NRs. 6,626 and in Bungamati per capita nonfarm income of Newars is NRs. 7,984 (**Table 4.7**). The other two main ethnic groups in Dal Choki, Magars and Tamangs, do not have as high a per capita nonfarm income as others. Per capita nonfarm income of the people of occupational caste is NRs. 5,247 in Dal Choki. Since per capita landholding of the people of occupational caste is lower they have to depend on nonfarm jobs. The average per capita nonfarm income in Dal Choki is NRs. 5,284 and in Bungamati it is NRs. 5,965.

4.5.3 Location of Jobs

Almost all the farmers own their cropland inside the village in both the villages, within one hour walking distance and they can go to work and come back home easily within a day. **Table 4.8** shows the location of nonfarm jobs. In Dal Choki, 88% of nonfarm jobs are inside the village, whereas in Bungamati only 57.6 % is inside the village. This indicates that the advantage of being close to a city area gives more opportunity to work outside the village and the villagers of Bungamati are more mobile than the villagers of Dal Choki. Lying in the valley they are also more privileged than the villagers in Dal Choki.

Table 4.8 : Location of Nonfarm Jobs

Location of nonfarm job	Dal Choki		Bungamati	
	Numbers	Percent	Numbers	Percent
Inside village	95	88	679	57.6
Within district	5	4.6	275	23.3
Within valley	7	6.5	211	17.9
In Nepal	1	0.9	12	1
Out of country	-	-	2	0.2

Source: Fiel Survey, 2001

4.6 Landholding and Food Self-sufficiency

Land ownership by land type is an important indicator of the economic status of households and food security. For the purposes of this study, the land has been divided into four types of farmland: paddy land (*khet*), terrace/upland (*pakha*), homestead (*bari*), agro-forest and forestland. Owning irrigated paddy land is important for the well being of the people. In Dal Choki there is very little paddy land. The farmland in Dal Choki is rather poor due to steep hills. As shown in **Table 4.9**, 80.4% of the land owned by the farmers is non-irrigated *pakha*, owned by 94% of the households. Of the rest, 11.2% are homestead, 7% are agro-forest land and 1.4 %, *khet*.

Bungamati lies in the fertile valley and thus the quality of land is very good. 63% of the land owned by the farmers are irrigated paddy fields held by 89% of households and 31% are non-irrigated terrace. There is only 2% non-irrigated paddy field and only 2% irrigated terrace land (**Table 4.9**).

Total farmland owned by the villagers in Dal Choki is 121.6ha, whereas it is 246.7ha in Bungamati, leading to a per capita landholding of 0.086 ha and 0.052 ha, respectively. The total average food sufficiency of cereals attained through self production for the whole village is 4.3 months in Dal Choki. The food self-sufficiency for the Bahuns is higher than other caste/ ethnic communities. Even though the Magars have a slightly higher per capita land holding (0.098 ha), they are only food self-sufficient for 4.1 months, lesser nearly by a month, as compared to 5.2 months for Bahuns. Tamangs have a food sufficiency of cereals for 3.7 months with a per capita landholding of 0.085ha (**Table 4.10**). The food self-sufficiency of cereals for people of occupational caste and others are very low and forms vulnerable groups in the village, often termed as the “ultra poor” in various platforms.

The lower food self-sufficiency of cereals for the Magar and Tamang ethnic groups, despite their higher per capita landholding is often regarded by some as due to the propensity of their food consumption behaviour. Magars and Tamangs have a tendency to use cereals for the production of alcohol, whereas the Bahun community has a tendency to be a spendthrift. However, alcohol consumption is a part of food culture for these Tibeto Burman language speaking ethnic groups having important roles to play in religious and social functions. It is also necessary to bear the hardship of manual labouring and cold montane weathers.

The total average food sufficiency attained through self production for the whole village is 7.1 months in Bungamati. Newars, the dominant dwellers of the village have higher food self-sufficiency, 7.3 months, with

Table 4.9 : Landholding According to Land Type in Study Villages

Land type		Dal Choki		Bungamati	
		Total in ha	No. of holders	Total in ha	No. of holders
Paddy land (<i>khet</i>)	Irrigated	1.2	13	153.81	784
	Non-irrigated	0.46	1	4.87	48
Terrace land/ upland (<i>pakha</i>)	Irrigated	-	-	5.13	53
	Non-irrigated	97.57	234	75.66	650
Homestead (<i>bari</i>)		13.58	183	7.02	311
Agroforest		8.77	49	0.23	12
Total land		121.58	247	246.72	880
Avg. farmland per person		0.086		0.052	
Forest holding		28.37	189	0.2	9
Average Forest holding per household		0.15		0.02	

Source: Field survey, 2000.

Table 4.10 : Landholding and Food Self-sufficiency in Study Villages

Caste/Ethnicity, landholding and food self-sufficiency	Dal Choki		Bungamati	
	Per capita landholding (ha)	Average food self-sufficiency (months)	Per capita landholding (ha)	Average food self-sufficiency (months)
Bahun	0.091	5.2	0.048	7.1
Chhetri	0.068	3.8	0.049	6.6
Newar	0.102	3.0	0.051	7.3
Magar	0.098	4.1	0.023	2.2
Tamang	0.085	3.7	0.052	6.5
Occupational caste	0.063	2.6	0.101	3
Others	0.048	2.5	-	-

Source: Field survey, 2000. Note: Others = Rai, Limbu, Gurung, Sherpa.

Table 4.11 : Food Self-sufficiency in Lalitpur and Study Villages

Food sufficiency	Lalitpur	Bungamati	Dal Choki
Up to 3 months	18	18.4	44.5
4 to 6 months	42	31.2	44.9
7 to 9 months	19	14.6	7.6
10 to 12 months	21	35.8	2.8

Source: LDDC, 2000 and field survey, 2000. Note: unit =%

a per capita landholding of 0.051 ha. This is followed by Bahuns and Chhetris, who has per capita landholding of 0.048 ha and 0.049 ha and food self-sufficiency for 7.1 and 6.6 months, respectively. Even though the Tamang community holds 0.052 ha per capita, their food self-sufficiency is only 6.5 months. The main reason behind this is that 58% of the land owned by the Tamangs is non-irrigated *pakha* land. Another reason may be similar to that of Dal Choki in regards to the differences in food consumption behaviour.

Looking at **Table 4.11**, in the district as a whole, only 21% of households have food self-sufficiency levels of cereals for more than 9 months. Most of the households (42%) fall under a food self-sufficiency level of 4-6 months. The food self-sufficiency of Bungamati is higher than the district. In Bungamati 35.8% of households have more than 9 months of food self-sufficiency. Out of them more than 70% have food self-sufficiency for 12 months and above. Some 18.4% have only 3 months of food self-sufficiency. Dal Choki has poor levels of food self-sufficiency despite holding higher per capita farmland. Some 44.5% of households have food self-sufficiency of only up to three months while some 44.9% have food self-sufficiency for 4 to 6 months. Only 2.8% of households have more than 9 months of food self-sufficiency. Out of them, only 4 households have food self-sufficiency for more than 12 months.

In Dal Choki 61.1% of the households are smallholders who cover only 35.1% of the total farmland area, 35.6% are medium holders who cover 57% of total land and 1.6% are large holders who cover 7.9% of the total farmland as shown in **Table 4.12**. Only four families are landless. Among them two are from the occupational castes. In Bungamati, 70 households (8%) are landless. 80.5% of households are smallholders who cover 62.5% of total farmland and 14.88% are medium holders covering 37.4% of the total farmland. There are no large farmers in Bungamati. Comparatively Tamangs constitute a higher proportion of landless households even though they hold larger per capita farmland in the village. This indicates that there is a polarization among the Tamangs in terms of landholding. The average food self-sufficiency in months for each farm category in both the villages is shown in **Table 4.12**.

Table 4.12: Distribution of Land and Food Self-sufficiency According to Farm Size in Study Villages

Farm size	Land holding	Dal Choki			Bungamati		
		House hold (%)	Land holding (%)	Average food self-sufficiency (months)	House hold (%)	Land holding (%)	Average food self-sufficiency (months)
Landless	Landless with livestock		-		0.23	0.01	1.5
	Landless without livestock	1.62	0.10	0.50	7.73	0.04	1.64
Small	Under 0.1 ha	2.02	35.10	3.50	12.05	62.50	7.27
	0.1 ha and under 0.2 ha	12.55			25.11		
	0.2 ha and under 0.5 ha	46.56			43.30		
Medium	0.5 ha and under 1 ha	29.55	57.00	4.90	13.86	37.30	10.40
	1 ha and under 2 ha	6.07			1.02		
Large	2 ha and over	1.62	7.80	6.50		-	
Total and average		100	100	4.10	100	100	7.30

Source: Field survey, 2000.

Note: 1) "Landless with livestock" are holding having area under crops less than 0.01272 ha (4 Aanas), but raising at least two productive animals (i. e.; two cow, buffalo, ox, mule or five goats, sheep, pig or 20 poultry birds or equivalent. 2) Small = 0.01272 ha to under 0.5 ha; Medium = 0.5 ha to under 2 ha; Large = 2 ha and over.

4.7 Forestland Usage

In Lalitpur district, the forest covers 40% of the land. Almost all of the forest lies in the hilly areas of the eastern and the southern parts of the district. Forests still play an important role in the district economy. According to the district profile, 55% of households still totally depend on the forest for their cooking fuel and fodder. Most of these families acquire forest resources from community forests, which cover 8,819ha and are distributed among 134 Community Forest Users Groups benefiting about a thousand households.

Forest area started to degrade vigorously after the nationalization of forests in 1957, mainly due to the lack of local participation in the management. The effect was also seen in the study villages. After the introduction of Panchayat Forest Act in 1978, reforestation efforts started in these areas through the participation of local people, government and INGOs. This was further enhanced by introduction of community forestry, which allowed the villagers to participate in forest management through users groups. Accordingly, the forest area has been increased by 22% between the early 1970s and 1990s in Dal Choki. Now, most of the forests in this village is secondary forest.

Area of forestland in Dal Choki is higher than in Bungamati. In Dal Choki, 43% of its land is covered by forest, whereas in Bungamati only 3% of its land is covered by forest. In Dal Choki there are four Forest Users Groups using 143ha of forestland and in Bungamati there are two Forest Users Groups using only 4.2 ha of forestland. Dependency on forest is quite high in Dal Choki. Almost all the households (99%) depend on the forest for cooking fuel in Dal Choki, whereas in Bungamati only 45% households depend on fuel wood for cooking and the rest have started to use kerosene, gas and electricity. About 19% of the total land own by the villagers is forestland in Dal Choki whereas in Bungamati it is very negligible. The main reason for owning forestland in Dal Choki is for the fuel used for daily household needs and the fodder for animals. During the rainy season and labour scarce periods, the farmers collect fodder and fuel wood from their private forestland close to their houses.

According to the sample survey, 65% of the fodder and fuel wood requirement is fulfilled by community forests, 27% by private forestland and the remaining 8% is fulfilled by common land and waste land, such as

land by the side of the road, river banks and external boundary of national forest. In Bungamati, most of the fuel wood requirement is fulfilled from private land, especially the trees available in the boundary of farmland since their requirements are less. But in southern part of the village especially in wards 7, 8 and 9 where most of the non-Newars live, wood is still a major source of fuel and this area has more livestock than other Newar-dominated areas. So they are more dependent upon the forest. Some of them also use dried cow dung cake as fuel for cooking.

4.8 Livestock Holding

Livestock rearing is an integrated part of the Nepalese subsistence farming system. Cattle and buffaloes play a significant role, not only by providing milk and meat but also in maintaining the fragile ecology by providing organic manure and sustain the soil fertility.

Main animals reared in Lalitpur District are cow, buffalo, goat, chicken, sheep, pig and duck (**Table 4.13**). Lalitpur as a whole and in Bungamati, the number of cows is still higher even though the priority for buffaloes is increasing. But in Dal Choki the numbers of buffaloes is higher than cows.

In Bungamati cattle rearing is used to be one of the main livelihoods. Nowadays, it is confined to a handful of households. Most of the villagers said that the lack of space, difficulty in finding grazing place and fodder, and reluctance to do hard work when they had other alternative means to earn money with less physical effort, has resulted in decrease of animal husbandry in the village. But in contrast, livestock farming is growing rapidly in Dal Choki as one of the main sources of livelihood for all levels of people, regardless of caste/ethnicity or farm size. Dairy farming is supported by the partial rebuilding of Kanti Highway, the seasonal road inside the village and the milk-chilling centre in Lele.

According to the field survey, only 26.5 % of the households in Bungamati hold animals with an average of 1.9 big animals, 2.8 small animals and 5.5 chickens per household, whereas in Dal Choki 89.6 % of the households hold animals with an average of 2.5 big animals, 3.4 small animals and 6.8 chickens per household. Most of the livestock holders are Bahuns and Chhetris in both the villages. It seems that the Newars of Bungamati village have left animal husbandry. Only some solitary cases of Newars still keeping sheep, goats or cows are found. People of occupational caste in Dal Choki have 3.1 big animals per household as compared to 2.7 per Bahun household. The main reason behind these people undertaking animal husbandry as a supplementary livelihood strategy is the promotion of dairy farming in the village with the support of government and non-governmental organizations. Average holding of big animals by Tamangs of Dal Choki is 2.3

Table 4.13 : Animal Holding in Lalitpur and Study Villages

Animals	Lalitpur	Bungamati	Dal Choki
Cow	27,097	361	54
Ox	4,328	3	48
Buffalo	26,431	55	452
Goat	36,900	367	682
Chicken	359,165	835	1,165
Sheep	7,300	74	-
Duck	3,110	214	-
Pig	4,345	497	-

Source: LDDC, 2000 and field survey, 2000.

per household. In Bungamati, only Bahuns hold 3 big animals per household.

Similarly, looking at the landholding categories in both the villages, the trend that can be seen is, one whereby the larger the landholding, the higher the number of animals reared. In Dal Choki large farms have 2.4 big animals per household, medium farms, 2.2 and small farms, 1.8. In Bungamati, medium farms have 2.1 big animals per household and small farms, 1.7. In both the villages, landless households do not have big animals. Instead, they own small animals; mainly chickens in Dal Choki, and chickens and pigs in Bungamati.

Buffaloes are stall fed and cows are generally grazed. Currently, an average household usually spends 1.06 hours per day to collect the required 1.98 *bhari* (1 *bhari* = 30kg) of fodder and fuel wood per household in Dal Choki. According to a USC Canada Base Line Report, in 1990, it used to take 2.04 hours per day to collect the required 1.4 *bhari* of fodder and fuel wood per household, and the fodder locally available was sufficient for 8 months only. Nowadays fodder locally available is sufficient for the whole year. Use of agricultural by-products, especially straw and hay, as fodder are less in Dal Choki as there are not much such by-products in the village and even if they want to use it they have to procure it from Lele or other surrounding villages. But in Bungamati straw is fed to these animals more than any other fodder. The people who have to depend on forest for fodder and fuel wood in this village spend 58 minutes per day on average to collect the required 1.3 *bhari* of fodder and wood.

4.8.1 Livestock Cash Income

In Dal Choki, cash income from animal husbandry is quite high in comparison to Bungamati. Nearly 66 % of meat and 87 % of milk are sold in Dal Choki. The main produce from animals in Dal Choki is milk, which they sell through milk groups to the Dairy Development Corporation or to the local private dairy companies. There are three milk groups in Dal Choki. According to the records of these milk groups, they sell on an average 1,000 litres of milk earning NRs. 16,000 every day. The annual per capita cash income from milk in Dal Choki is NRs. 4,141. The villagers consider it as “White Gold”. The villagers’ living standard has been changed by the milk business not only in Dal Choki village but also in the whole of southern montane part of Lalitpur District. Another important thing is that most of the buffalo milk is sold because the dairy gives payment on the basis of fat content and buffalo milk contains more fat particles than cow milk. In Bungamati, there is only one milk group in the southern part of the village. On an average, they sell 400 litres of milk per day earning NRs. 6,300.

Besides big animals, small animals like goats are also popular in both the villages. According to the sample survey in Dal Choki, 64% of the goat meat is sold. In Bungamati, sheep and pig farmings are also popular. Newrs of lower caste generally raise pigs and Newar farmers raise sheep.

4.9 Financial Transaction

4.9.1 Procurements of Loans

To build up the economy, role of finance cannot be neglected. In both the study villages there is no formal banking institutions inside the village. For formal banking they have to go to the city areas or rural centers. The people of Dal Choki generally prefer to go to Lele or Chapagaun for banking and villagers of Bungamati generally go to Patan city. In Dal Choki, there is a Small Farmer’s Development Program (SFDP) of the Agricultural Development Bank of Nepal with its coordinating office in Lele. Similarly in Bungamati

there is Women Cooperative Group formed by UNDP's Village Development Program, which provides soft loans for the women in the agriculture sector.

According to the district profile, in the rural areas of the district, 21.7% of households are taking loans. Some 21.5% of loans are for agriculture, 27.5% for household expenses, 20% for business and the remaining 31% for miscellaneous purposes. People in Dal Choki village are more engaged in financial transactions, in terms of involvement and utilization of formal and informal financial institutions. Almost all of the households (93%) in Dal Choki have loans of which 65% is formal loan provided under SFDP by Agricultural Development Bank. Another 32% is informal loan provided by neighbours, friends and merchants. Remaining 3% is semiformal loan from various local saving and credit groups (**Tables 4.14**). Most of these loans (70%) are used for farming, especially livestock farming (89%). Some 16% of the loans are used for household expenses, 10% for asset building and only about 3% for business (**Tables 4.15**). The asset-building loan is used to purchase land. During the study it was found that the trend of buying land near Lele or Chapagaun villages rather than buying land inside the village was increasing.

In Bungamati, there are only 30 people borrowing loans from various sources. This number is much less than those in Dal Choki. More than half of these loans are semiformal borrowed by the female members of the recently formed Women's Cooperative Group under the guidance of village development program of UNDP. These loans have a share of about 38% in the total loans transacted (**Table 4.14**). This indicates the loan amount per each transaction is small. In fact this is a target-oriented loan disbursed to the members of groups for production activities, such as vegetable and livestock farming (88%), and handicraft work (12%). Formal loans from banks and formal finance companies have a share of some 23% and informal loans from local merchants, friends and relatives, 17%. They together sum up to about 46% of the total loan amount transacted in the village and are used mainly for investment in handicraft businesses. In one case informal loan was used for meeting household expenses. There was also a person who was borrowing money from its employer to invest in handicraft business. Thus, 40% of loans are used for business purpose, 57% for farming and 3% for household expenses (**Table 4.15**).

Even though the interest rate of merchants is higher, maximum being 30% in Dal Choki and 28% in Bungamati (on average 24% in Dal Choki and 21% in Bungamati), people still use merchants, especially for household expenses as it is convenient and easier to borrow from them. In fact formal and semiformal institutions don't give loans for household expenses in these villages. Hence, all the loans meant for household expenses, with exception to few destitute cases in Dal Choki, are informal in both the villages.

Table 4.14 : Loan Type and Loan Amount in Study Villages

Loan type, amount and interest rate	Dal Choki					Bungamati				
	No. of borrowers	Share (%)	Loan amount (NRs)	Share (%)	Average interest rate	No. of borrowers	Share (%)	Loan amount (NRs)	Share (%)	Average interest rate
Formal	149	64.8	3,177,800	64.2	18%	7	23.3	145,000	22	18%
Informal	74	32.2	1,719,000	34.7	24%	5	16.7	161,000	24.4	21%
Semiformal	7	3.0	51,000	1.0	15%	17	56.7	253,500	38.4	12%
Others	-	-	-	-	-	1	3.3	100,000	15.2	5%
Total	230	100	4,947,800	100	20%	30	100	659,500	100	13%

Source: Field survey, 2000.

Notes: Formal = SFDP, Agricultural Development Bank, Nepal Bank Limited and private financial institute, Informal = Villagers, friends, village merchants, Semiformal = Women Cooperative Groups, Saving and Credit groups and Others = loan from employing office.

Table 4.15 : Purpose and Amount of Loan in Study Villages

Loan purpose, loan amount and interest rate	Dal Choki					Bungamati				
	No. of borrowers	Share (%)	Loan amount (NRs.)	Share (%)	Average interest rate	No. of borrowers	Share (%)	Loan amount (NRs.)	Share (%)	Average interest rate
Asset building	24	10.4	1,096,000	22.2	23%	-	-	-	-	-
Business	6	2.6	105,000	2.1	18%	12	40	305,000	46.2	18%
Farming	161	70.0	3,259,800	65.9	18%	17	56.7	343,500	52.1	11%
Household expenses	37	16.1	462,000	9.3	23%	1	3.3	11,000	1.7	20%
Others	2	0.9	25,000	0.5	21%	-	-	-	-	-
Total	230	100	4,947,800	100	20%	30	100	659,500	100	14%

Source: Field survey, 2000.

Notes: Asset building = to buy and built house and land , Business = to run shops, industries, skill labouring work like handicrafts, Farming = All loans related to farming including livestock, Household expenses = loans for food, cloths, education, ritual ceremony etc., Others = to repay previous loan.

In Dal Choki, Bahuns, Chhetris and Magars have benefited the most from the formal and semiformal lending program receiving per capita loans of NRs. 4,100. This amount is just NRs. 2,000 for the occupational caste and only NRs. 2,700 for the Tamangs. Similarly, Bahuns and Chhetris receive two-thirds of the total formal and semiformal loans in Bungamati. Although the Newars are dominant ethnic group in this village they receive only 28.8% of total loan.

4.9.2 Savings Methods

There are three types of saving groups operating inside Dal Choki. The saving and credit groups which have more experience in running the group and or those groups which have generally well-off members do regular saving of certain amount, i.e., NRs. 50 per month by all the members. The money saved in this way is lent to the members later to be invested in various productive activities, in turn. The members borrowing such money pay dividend/interest to the group. There are also peer groups that save NRs. 20 and NRS.10 per month. The members of these groups generally come from middle class and poor families, respectively. Most of these groups were started with the guidance from the SFDP and other NGOs. In Bungamati, few newly formed female groups are making monthly savings also. Besides, some males are also making savings for mutual aid in their respective informal group.

Banks are the most commonly used formal institutions for saving. Most of the people save for future security but wouldn't reveal their savings. However, the revealed savings are very low in both villages.

4.10 Farming and Production

In the Nepalese context, farming is still subsistence in nature. It is broadly defined to cover all land-based activities, such as cropping, animal husbandry, horticulture, and forestry and their linkages. In the study villages, the farming and production is different due to the physical quality of the land. Dal Choki village is totally based on a hill-farming system, whereas Bungamati follows a valley-farming system. Farming is the prime source of sustenance for most of the people in Dal Choki, even though food self-sufficiency and productivity are low. In Bungamati, even though the skilled jobs and businesses are emerging slowly, farming is still dominating as one of the main occupations due to its high productivity and market facility for agricultural products.

Because the land type of Dal Choki is mostly non-irrigated *pakha* or homestead land, there is not much difference in the cropping pattern and production within the village. Looking at the cropping pattern, maize, grown from April to August, is the main crop and cultivated on all types of land in Dal Choki. The preparation of land starts from the beginning of March. Livestock manure is put in during the preparation of land. The amount of manure used is not fixed. It depends on the labour time and the manure availability within the household. Some households also hire labour for land preparation. From the survey, it is seen that on average 35 *bhari* (nearly equivalent to 1,050 kg) of manure is utilized per ropani on terrace and *bari* land. They put manure only once for the whole year in the field. The farmers also use urea for maize. Some farmers also plant millet in the same period. After maize, most of the farmers plant mustard and some plant *dal*/beans. On the homestead land, beans and vegetables are generally planted. Paddy and wheat are grown in the lower areas where irrigation is available. Since the area of *khet* (paddy cultivable land) is less, the production of paddy in Dal Choki is also very little.

In Bungamati, the cropping pattern is more heterogeneous. On irrigated fields, paddy is the main crop, which is grown from the end of June to the end of November. After that wheat is grown as a winter crop. Instead of wheat some farmers prefer to grow green vegetables that have a good market value, such as cauliflower, cabbage, potato, radish, onion and spice crops like garlic, ginger, etc. The cropping patterns generally found on irrigated land in Bungamati are paddy – wheat; and paddy – radish/cauliflower/onion/cabbage/beans - potato/cabbage/*dal*. Some farmers use a portion of their land for beans, red chilli, and maize instead of paddy. But almost all of the farmers, who have irrigated *khet*, grow paddy. These cropping patterns are also popular on non-irrigated *khet*. But, since they have to depend upon the rainwater, their cropping patterns and intensity are not fixed. Instead of paddy, some farmers plant maize, which need not much water to grow, on this type of land.

Non-irrigated *pakha* land is another type of land found in Bungamati. On this type of land maize is the main crop that is planted from the middle of April to the end of August. After maize, most farmers plant mustard, *dal* and beans. On irrigated *pakha* land, wheat and maize are grown but some farmers also plant paddy. Most of the farmers prefer to cultivate vegetables and potatoes on irrigated *pakha* land every year.

Comparing livestock manure use, Bungamati uses less livestock manure and more chemical fertilisers than Dal Choki. The mainly used chemical fertilisers are urea and potash. Fertiliser use is especially high for vegetables. According to villagers in Dal Choki there is not much difference in the production whether chemical fertilisers are used or not. Besides, the market to buy the fertilisers is also far away. In Dal Choki none of the farmers have responded about using pesticides but the farmers in Bungamati are also using pesticides, again in vegetable farming.

Looking at the yield of the crops, as shown in the **Table 4.16**, Bungamati has higher yield compared to the district as a whole. Dal Choki village can be regarded as having some of the least productive land in the district. As mentioned in the above section, the food self-sufficiency of cereal crops in Dal Choki is 4.3 months with a per capita landholding of 0.086ha, whereas in Bungamati it is 7.1 months with a per capita landholding of only 0.052ha. Very little of the cereal crops produced are sold in both the villages. But comparatively, the amount of crop sold in Bungamati is higher than in Dal Choki. This is mainly due to the presence of a market facility and the high production of some well-off families who produce more food than they require. Mustard, *dal* and beans are widely sold crops in both the villages. Nearly 30% of mustard and 20% of *dals*/beans are sold in Dal Choki. These are the main cash earning crops of Dal Choki farmers.

These crops are sold in Chapagau and Patan city. Sometimes, merchants will come to the village to purchase crops. In Bungamati 12% of mustard and 17% of *dal*/beans are sold. Another main cash earning crop in Bungamati is potato. Crops that form the main food in each village, i.e., maize, wheat and potato in Dal Choki and paddy and maize in Bungamati, are mostly self-consumed. Only some of them (3% of maize in Dal Choki and 1.5% of paddy in Bungamati) are sold by surplus and or cash strapped farmers. Paddy is not directly sold. Villagers make beaten rice from paddy, widely consumed by the Newar community of the valley, and sell it in the markets at Patan city.

In Bungamati vegetable farming is getting popular as it is one of the main marketable products of the village. There is a very good market for fresh vegetable in the cities of Patan and Kathmandu. Thus, the farmers have started to allot more of their lands for vegetable farming. Currently vegetable farming covers 10% of all cultivated land in the village. Although the professional farmers are still few, most of the farmers are growing vegetable at least for their self-consumption. Farmers have not only realised the importance of vegetables in daily diet but they can actually spare some patches of land for the cultivation of vegetable in spite of the fact that they have very little land. This is possible due to the high yield of cereals that form the staple food and most of the villagers do not face food insecurity. Even in Dal Choki most of the *bari* (homestead) land is used for vegetable farming and the products are basically self-consumed.

As mentioned above, people of Dal Choki village have harder time in meeting the food self-sufficiency as compared to Bungamati village. The food lean period in Dal Choki is from Jestha to Bhadra (May to August) and most people feel the most difficulty in managing the food during the period of Shrawan-Bhadra (July-August). This period is the rainy season and milk production is low as most of the cattle become dry. They do not have other alternatives for income. At that time the last alternative they choose is to take loan. According to sample survey 49% of the people are selling milk as a strategy to meet the food deficit, 21% are selling the livestock and taking loans, while 14% are simply depending on loans only. These loans are taken from merchant lenders, friends, neighbours or middlemen of milk business inside the village. Some semiformal programs also provide short term consumption loans. Some 8% depends on earnings from day labouring and disposing of livestock, and the rest (8%) depends on the little savings they have, to procure the food during

Table 4.16 : Area and Yields of Major Crops in Lalitpur and Study Villages

Crop, area and yield	Lalitpur District			Bungamati			Dal Choki		
	Cultivated area (ha)	Share (%)	Yield (kg/ha)	Cultivated area (ha)	Share (%)	Yield (kg/ha)	Cultivated area (ha)	Share (%)	Yield (kg/ha)
Paddy	5,249	21.0	4,730	13.104	28.3	5,879	0.102	0.2	1,553
Wheat	4,416	17.6	1,900	13.077	28.2	1,511	1.421	2.6	470
Maize	9,470	37.8	2,000	7.023	15.2	3,033	26.708	49.2	2,010
Millet	650	2.6	1,440	-	-	-	1.501	2.8	684
Barley	250	1.0	1,100	-	-	-	0.356	0.7	444
Potato	700	2.8	12,200	4.072	8.8	2,478	0.305	0.6	324
Vegetables	1,040	4.2	12,600	4.942	10.7	9,005	1.700	3.1	300
Mustard	2,210	8.8	610	2.498	5.4	204	12.006	22.1	344
Dal/ beans	250	1.0	640	0.641	1.4	329	6.758	12.5	542
Soybean	50	0.2	600	0.521	1.1	87	1.000	1.8	460
Others	750	3.0	7,100	0.458	1.0	1,253	2.400	4.4	900

Source: District Profile of Lalitpur, 2000, & field survey 2000.

Note: The village data for this table are based on sample survey. Sample size for Bungamati is 65 and for Dal Choki is 45. Others = Fruits, Mulberry, Coffee, Chilly, Garlic, etc.

this period. After Bhadra they can start harvesting maize and the food situation gets better.

In Bungamati the food lean period is not so serious and most villagers do not face specific hardship for procuring food. People like Tamangs and low caste Newars who are not self-sufficient in food have a difficulty in managing the food requirement during the period of Ashoj-Kartik (September-October). This is the period when the food stock of the previous year reaches the bottom and the new paddy is just harvested from the field and still needs to be cleaned and dried for consumption. But they use earnings from manual labouring and loans to purchase their food needs.

4.11 Community Groups Performance

In Dal Choki, there are specially four types of Community Groups; Community Forest Users Groups (CFUG), Saving and Credit Groups (SCG), Mothers Groups (MoG) and Marketing Groups (MaG). The main objectives of CFUG are to manage and distribute the forest product specially fuel wood, fodder, grass and timbers required by the villagers. They also have responsibility of conserving the forest. There are four CFUGs in the village. In terms of participation in rules and regulation, program selection and implementation, operation and maintenance, all the members highly evaluated these CFUGs, with exception to Tinmane Thulo Ban CFUG. The reason may be due to its large number of members and branching out from another group, which had the members of Lele village, as well. Although it is the oldest CFUG in the village, it was not well evaluated in terms of transparency and leadership. With managing of forest by CFUGs the welfare of the villagers have been greatly enhanced in general. In spite of the fact that the people were consuming a lot more fuel wood, fodder and timber than a decade ago, the time needed to collect them have decreased by about 20% and the crown coverage of the forest has increased from 40% to 50%. The increased availability of fodder have enabled the farmers to undertake livestock farming, especially dairy farming, which has greatly enhanced their cash incomes and contributed in uplifting their livelihood. Thus, they are using and preserving the forest well.

Most of SCG are formed under the guidance of SFDP, which is providing loan for livestock farming and members do the saving on regular basis in these groups. The main community groups working inside the Bungamati Village are related to women saving and credit groups and agricultural product marketing groups under the guidance of village development program of UNDP.

In Bungamati there are also very many indigenous groups among the Newars functioning from historical times, locally know as *guthi* besides the development induced groups. In this village these *guthis* are formed on basis of Newar caste groups. Each caste groups has a *guthi*, like Tuladhar *guthi*, Mali *guthi*, and so on. When the population is large as in the case of Maharjans and Dangols, they have many *guthis*, generally segregated by locality. These *guthi* groups generally perform ritual customs of the Newars; birth, adulthood, marriage, death ceremonies, seasonal social functions, rituals of festival of the Red Machhendranath and other festivals². These *guthis* are based on social networks and no third party interventions in their functions and no any financial support from the outside are observed. Some of these groups are also undertaking development activities and often the young members also make group savings and lend it to the members in turn, to be used in some productive activities.

² For further understanding of Newar *guthi*, Ishii (1980), Gutschow and Kolver (1975), Furer-Haimendorf (1956), Gellner (1992), Levy (1990), Locke (1980), Nepali (1988), Quigley (1985) are recommended.

4.12 Summary

From the study, it is clear that Bungamati is better in economic condition than Dal Choki. Although the per capita landholding is higher in Dal Choki the food self-sufficiency is lower than in Bungamati. This is mainly due to the difference in land type and its management translated in to yield difference and transport and marketing facilities available. Food self-sufficiency of Tamangs and Magars is lower than Bahuns and Chhetris even though they hold more per capita land in both the villages, partly due to the type of land they hold and partly due to their food habit.

Livestock farming is gaining popularity in Dal Choki and all ethnic groups including the occupational caste, Tamang and Magar have adopted it. Availability of market, transport facilities and favourable government policies on dairy development have helped promote dairy farming. It has become a good source of cash income in the village and milk selling, which used to be done by only Bahuns and Chhetris before, has been undertaken by all the villagers now. Thus, livestock holding and access to forest for fodders have direct impact on livelihood and food security of large number of households in the village. Many households sell milk to meet the food deficiency in hard times. Access to loan has direct impact on owning livestock and meeting the food deficit. Hence, in Dal Choki livestock farming and milk selling has become one of the main alternatives for better livelihood. Participatory management of the forest by forming users group have also aided in livestock farming, in addition to sustaining the forest with proper use of forest extracting more fuel wood, fodder and timber.

In Bungamati, the farmers are diverting their food crop oriented farming to cash crop oriented farming focusing on green vegetables production. Since the village lies in the city fringe farmers can earn good living by marketing the vegetables. Many people with better education have also taken up the nonfarm jobs. Further, handicraft work skill has been transferred to the different groups of the people, especially Newars, through self-learning and or trainings promoted by government and NGOs. Many of such villagers are taking handicraft work as the main job to earn cash income, which has become an alternative source of income for better livelihood for many people in this village.

Thus, people in the study villages are changing their dependencies on subsistence farming for food security and livelihood to different strategies; livestock and vegetable farming, and handicraft making, utilizing the locally available natural resources, skills/knowledge and opportunities, in alternative ways and transform their livelihood to a more stable one with better food security, though of varying degrees, in two villages. Bungamati, the village in the Kathmandu valley has been more successful in this transforming their livelihood and the villagers, including those in the lower stratum have almost no problem in securing food. However, Dal Choki, the montane village in the southern ridges of the valley has just started to transform their livelihood. So far they have been partially successful with the undertaking of livestock that produces “white gold”, the milk, every day. Some even take it as a blessing.

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