TEA AND COFFEE INDUSTRY IN NEPAL

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PART I

ABSTRACT

Tea is one of the most important beverages in the world. As the drinking habit of tea is gaining popularity day by day in Nepal the demand of tea is also increased at faster rate. Mainly two types of tea are grown in Nepal, CTC and orthodox tea. At present the country has total 3828 ha under tea production and produced about 2915 mt. The share of orthodox tea is only about 10% in quantity. The orthodox tea has a very good market in foreign market. Consumption of CTC tea in domestic market is about 6-7 million-kg out of which only 40% are met through local production and 60% is imported, mainly from India.

Tea industry, an important agro-based and labor intensive industry, besides providing employment opportunities, checking pollution and the out migration from rural areas and it also helps the country's economy by curtailing the import of tea from outside.

INTRODUCTION

Tea (*Camellia spp*) is widely consumed beverage in Nepal. It has a long history of cultivation in eastern mid hill particularly in Illam dating back to more than a hundred years. A well-distributed rainfall, moist and warm climate, appropriate soils and topography have made the eastern region congenial for successful tea production from terai to hill.

Looking to the past, tea cultivation and practices in Nepal was initiated in the year 1863 when Mr. Gaj Raj Singh Thapa brought about a few seed and planted them in the hill of Illam. Gradually some developed to a healthy plantation and thus tea industry in Nepal took growth. But though tea has a long history of more than 130 years the industry is still in its infancy stage.

REVIEW OF ACTIVITIES RELATED TO TEA INDUSTRY IN NEPAL

Institutional Support for Tea Industry in Nepal:- Tea Development Corporation (NTDC) was established in the year 1966 with an objective to promote and expand tea sector. Till 1993, it had a dual nature of commercial and promotional function. The commercial function was the production of tea to meet the domestic demand. Promotional function was to carry on the extension services for tea industry development, which started as the Out Growers Scheme (OGS) in the year 1978 and continued the service till 1993 and was handed over to NTDC. Presently, annual tea

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production of this corporation is about 10,00,000 kg made tea and is a potential force of Nepal tea industry.

National Tea and Coffee Development Board was established in the year 1993 with a view to promote and expand tea cultivation in Nepal. The board along with it's head office at Kathmandu, has regional office located at Illam. Under the regional office there are six tea extension units located at Manglabare, Jasbire and Fikkel of Illam district and Solma, Hile and Lalikharka of Terathum, Dhankuta and Panchthar districts respectively. These extension units provide support to the farmers in the form of training and supervision and also provide the farmers with planting materials.

The main objective for the establishment of the board is to provide advice and guide to the government on effective policy formulation and implementation.

Tea and Coffee Development Section was established under Fruit Development Division in 1993. The main objectives are coordination with related agencies for implementing, technical support to growers, monitoring and evaluation, survey and identification of pocket area for commercial tea and coffee program.

Besides this, few NGO and INGO's are supporting in the field of promoting tea sector. These organizations are conducting different promotional activities like studies, training, seminars and meetings etc. But besides the government, there has been no technical and financial support has been provided to the tea industry.

Support Service in Tea Sector :- The support services for tea industry in Nepal has been very little. HMG provided financial support in tea in terms of low rate of interest, which was initially two percent, then 3.5 percent and lastly 5 percent during the production span of 1973 to 1975. During this time overall private sector flourished.

In the year 1985 after visiting the eastern development region by His Majesty's the King, the government announced 5 district such as Jhapa, Ilam, Dhankuta, Panchthar, Tehrathum as Tea Zone. This announcement brought an effective change in tea industry and incentives were also given to tea sector. Nominal land tax was imposed and a subsidy of 50 percent over interest was given for a period of five years in Terai and 7 years in Hills. But in the year 1989/90 all the facilities that the tea sector were enjoying, were stopped and about 40 private investor companies were plugged.

Agronomic practices in brief :- Mainly two types of tea are produced in Nepal. CTC (Curl Tear and Cut) and Orthodox tea. CTC is mainly grown in Jhapa (Terai). Orthdox tea is grown in the hilly areas of Illam, Dhankuta, Terhathum and Panchtar. For commercial tea production needs an annual rainfall of not less than 1250 mm, monthly rainfall of less than 50mm severely limits production. Temperature should exceed 11^0C and frost is not tolerated by tea.

About 15,000 to 20,000 plants are required for a hectare. It produces its significant yield from fifth year onwards. The economic age of tea bush is generally 30-50 years after which the crop yield and quality yield starts decline. Plucking of tea leaves (tender green leaves and buds) usually commence from the month of April/May to the month of October/November. Green leaves pluck once in every week for about 7 to 8 months. The green leaf of tea plucked in various flushes is processed to produce CTC and Orthodox tea. Other types such as green leaf and oolong tea and instant tea are hardly produced in Nepal. The conversion ratio between made tea to green leaf is approximately 1:4. Drying of tea requires significant quantity of energy (1 kg of made tea consumes about 4kg of fuel wood or 1,25 kg of coal or 0.35 litre of furnance oil).

Quality grades of tea

A. Green leaves :

a) Very high quality (1leaf + 1bud),
b) Standard quality (2 leaves + 1bud + 1 banjhi),
c) Regular (3 leaves + 1bud + 1 banjhi), and
d) Low quality (4 leaves + 1 bud + double banjhis)

B. Orthdox tea :

a) Fine tippy golden flowery orange pekoe (FTGFOP)
b) Tippy golden flowery orange pekoe (TGFOP)
c) Golden Flowery orange pekoe (GFOP)
d) Golden flowery broken orange pekoe (GFBOP)
e) Broken Orange pekoe (BOP)
f) Golden orange fannings (GOF)
g) Pekoe dust (PD)
h) Broken tea (BT)

Production in Nepal : At present national production volume of tea is estimated at about 29,00,000 kg/annum in which about 2,44,000 kg is Orthodox tea. The production trend of tea for five years is given in Table 1.

Orthodox tea production: Orthodox tea plantation is concentrated mainly in five districts. Among these districts Illam alone produces over 80% of the total orthodox tea (Table 2).

Table 1. Name of the clones that are grown in hills and terai climatic zone

Hill	Terai
1. TRA/Phoomsering 312, 2. Goomtee selection, 3. Selimbong selection, 4. Bannockburn 157 5. TRA/Tukdah, 6. TRA/Ambari 7. TRA/Tudah 383, 8. TRA/Ambari 9. TRA/Rungli, 10. Rungliot/144	1. TV 18, 2. Tenali, 3. TV 1, 4. AV 2, 5. Tarapur 207, 6. Tarapur 316

Table 2: Tea production in Nepal from 91/92 to 95/96

Fiscal year	Production kg/ha
91/92	15,74,000
92/93	18,00,000
93/94	25,00,000
94/95	27,00,000
95/96	*29,00,000*

Source: Tea and Coffee Board

Table 3: Region wise orthodox tea production trend (kg) in 1996

Name of the producers	District	Production
Himalayan Range tea (P. Ltd)	Fikkel, Illam	66,000
Nepal small Tea planters' Ltd	Fikkel, Illam	54,000
Kanyam Tes Estates	Kanyam, Illam	67,000
Illam Tea Estates	Illam	27,000
Kanchanjunga Tea Estate	Fidim, Panchtar	30,000
Small holder's hand made tea	Illam, Terathum, Panchthar, Dhankuta	NA
Total National Production		244000

Source : C.B. Subbha, 1997

Socio-economic Impact of Tea industry

1. Tea is one of the high value cash crop which occupies 0.05% of total cultivated areas and contributes 0.14% of the total AGDP of the national economy.
2. Orthodox tea produce in the hills can be exported to the overseas and has high potential for generating foreign exchange, whereas C.T.C tea produce in terai substitutes the import for domestic market
3. Tea industry, being a labor intensive, can generate employment opportunities. with mobilization of local labor and natural resources it can support to promote national economy with reduce rural poverty.
4. Tea industry helps to improve the ecology and environment. Tea, being a deep-rooted perennial plant provides high amount of biomass to the soil. The plantations in the hill slopes give protective cover and as a result soil erosion and landslides are reduced. Albizzia sp, i.e. leguminous tree, usually planted for the sake of shade for young tea saplings, and acts as green manuring. Its canopy fully covers soils and provides greenery and beauty to the nature.
5. As compare to other traditional crops, cost benefit ratio from tea is high.
7. Development of tea industry helps to develop other economic and social infrastructures like rural road, health post and school.

PRESENT STATUS

The tea sub-sector comprises of government owned tea estate managed by Nepal Tea Development Corporation (N.T.D.C), the private estates and the small holders. The total area under tea plantation is 3828 ha (969 ha of public estates, 1706 ha under private estates and 1153 ha small holders).

Public Estates : There are seven tea estates out of which two estates are located in Illam district (hill) and produce Orthodox tea and rest five estates are located in Jhapa district (terai) produce C.T.C tea.

Out of the total area (about 969 ha, 1996) coverage under public owned tea estates about 300 ha area is covered under orthodox tea with annual production volume of about 94,000 Kg. Remaining about 669 ha is covered under C.T.C tea.

Table 3: Tea Area Distribution in Public Tea Sector, 1994

Public tea estates	Area (ha)	Types
Burnea Tea Estates, Jhapa	285	CTC
Chillingkot Tea Estates, Jhapa	43	CTC
Tokla Tea Estates, Jhapa	255	CTC
Kanyam Tea Estates, Illam	186	Orthodox
Bardesi Tea Estates, Jhapa	20	CTC
Soktim Tes Estates, Jhapa	73	CTC
Illam Tea Estates, Illam	49	Orthodox
Total	917	

Source: Tea and tea, 1994

Private Tea Estates : At present more than 51 private tea estates are registered. About 1706 ha area covered under tea in private sector. Among them about 50 percent have matured gardens. Most of these private estates are located in Jhapa district produce C.T.C tea. These gardens are in preliminary stage and do not have their own processing factory. In the hill there is only one privately owned tea estate, i.e. Kanchanjangha Tea Estate having its own plantation and the processing factory which produces about 30,000 kg of made tea from an areas of about 75 ha. Two privately owned factory located in hill do not have their own plantation and purchase leaf from the small farmers. Production of orthodox tea from private sector is 150,000 kg made tea annually.

Small Holders : Small holders came in to the tea industry in 1978 under the NTDC, and they handed over to the National Tea and Coffee Development Board in the year 1993. During initiation there were only about eight farmers with the plantation area of 79 hectares. As per the records available presently, about 2187 farmers are actively involved in tea cultivation and practices in an area about 1153 ha and production of orthodox tea is estimated at about 1,20,000 kg annually during the year 1996. So, area under orthodox tea cultivation by small holders has dramatically increased during two past decades. Small holders are mostly concentrated in Ilam and Panchthar districts. Most of the plantation has not reached a productive stage. Increasing trend in area of small holders is given in Table 4.

Table 4: Orthodox Tea area distribution in small holdings in 1994 and 1996

S.N	Small holders	Area (ha)		
		1994	1996	% increase
1	Fikkal, Illam	257.4	487.5	89.4
2.	Jasbire, Illam	97.9	191.6	95.7
3.	Mangalbare, Illam	85.85	224.2	161.2
4.	Lalikharka, Panchthar	46.25	193.8	319
5.	Hile, Dhankuta	23.21	25	7.7
6.	Solma, Tehrathum	24.15	30.9	27.9
	Total	534.76	1153	115.6

Source: NTCDB, 1994 and Subbha,C.B.,1997.

Stagnant situation faced by public, private and small holders: All components of tea sub-sectors are partially stagnant. NTDC has been stagnant because of unnecessarily high degree of the Government's indulgence in its operation as well as day to day work. The private estates have been unable to achieve the potential growth due to lack of policy package, technical know-how and proper entrepreneureship. Small holders are suffered from lack of technology, training, proper credit program and market outlet for their output. Other major constraints are lack of appropriate energy source for drying of tea, market information for export market and research.

MARKETING

Marketing is one of the major parts of production. All the efforts to increase the production will be turn into wastage if there is no market for the production. Tea market in Nepal is composed of tea traders from different sub sector like the government owned tea estates, the private estates, the small holder and the packagers and blenders.

The public estates managed by NTDC, sales about 30 to 40 percent of their product through packet sales and the rest remaining is disposed off by means of closed tea auction. In all the major tea growing countries tea is marketed through a specialized system of auction sales but in Nepal such system has not been practiced, therefore different traders have their own system of marketing channels.

Private estates sell their tea through bulk sale to the dealers exporter and packaging industry, and packet sales through their own packaging industry.

Farmers sell their green leaf either to the processing factory or make their own hand made tea and sell in the local market.

Packaging of tea industry in the supply of tea in domestic market plays vital role. Basically two kind of packaging industries are operating in Nepal. The first one import/buy C.T.C tea in bulk from India and elsewhere, sells packet tea in the domestic market through their dealers, sales depots and other traders. Packaging industries of the second kind buy tea from domestic industries and either sell their packet tea in the domestic market or sell their tea in bulk to the operator. Domestic marketing channel in diagram is presented in annex -1.

Tea Export : The ecological situation of the country is very suitable to expand the production of orthodox tea in the hilly region of Nepal and is one of the high value export items. Germany has been the main market of Nepalese orthodox tea. In 1991/92 a total volume of 2884 kg orthodox tea was export to Germany, 3746 kg in 1993/94 and was increased to 11515 kg in 1995/96. Other markets are Japan and France.

Over the last few years export of tea is increasing slightly. But still the export of orthodox tea of Nepal in the world market is not significant as compared to the production of orthodox tea. Total volume and value of orthodox tea exported to the overseas countries for the last five years are presented in Table 5.

Table 5: Orthodox tea export from 1989/90 to 1993/94

Year	Total export (Kg)	Value (NRs.000)
1989/90	18,456	2254
1990/91	18,452	4800
1991/92	21,610	5712
1992/93	25,000	na
1993/94	48,000	na

Source: Codex Consultants, 1996

Tea Import : In Nepal, people drink mostly C.T.C tea due to higher price of orthodox tea. A estimation consumption of C.T.C tea in domestic market is about 6-7 million kgs out of which only 40% is locally produce and 60% is imported mainly from India (Table 6).

Table 6: Tea import from 1985/86 to 1994/95

Year	Quantity (mt)	Value (Rs. ,000)
1985/86	1287	45927
1986/87	1100	45890
1987/88	951	38532
1988/89	884	37180
1989/90	928	36043
1990/91	822	44452
1991/92	1818	82018
1992/93	Not available	57900
1993/94	1399	78783
1994/95	1154	57354

Source: Codex Consultants, 1996

CONSTRAINTS AND RECOMMENDATIONS

At present CTC tea has not been facing market problem. This is because the domestic tea demand is virtually for CTC tea and the present production meets only 40 percent of the total demand and rest is importing from India. However, Nepalese orthodox tea is facing market problem mainly due to the lack of a proper marketing channel although the demand for orthodox tea in overseas market is high. Thus, emphasis should be given on market development.

Quantity of exportable quality of tea is not significant. Quantity can be increased through expansion area. In order to improve the quality and quantity of tea research, training and extension needs to be developed and implemented both for the small holders as well as the private tea estates and processing units. Tea wholesaling without auction is creating a situation of under invoicing resulting in the loss. So, auction system should be developed at the wholesale level.

Processing of tea require coal, furnace oil and fuel wood for drying and withering, gunny bags, polythene sleeves and tea chest for packing. Because of high tariffs on the imports of these materials, tea production in Nepal cannot become competitive.

Drying of tea require significant amount of energy. Procurement of fuel wood has become a tedious process requiring a number of recommendation and clarification from the various agencies. Import of furnace oil by the individual factory is not permitted resulting into delay and sometimes-even unavailability during peak season.

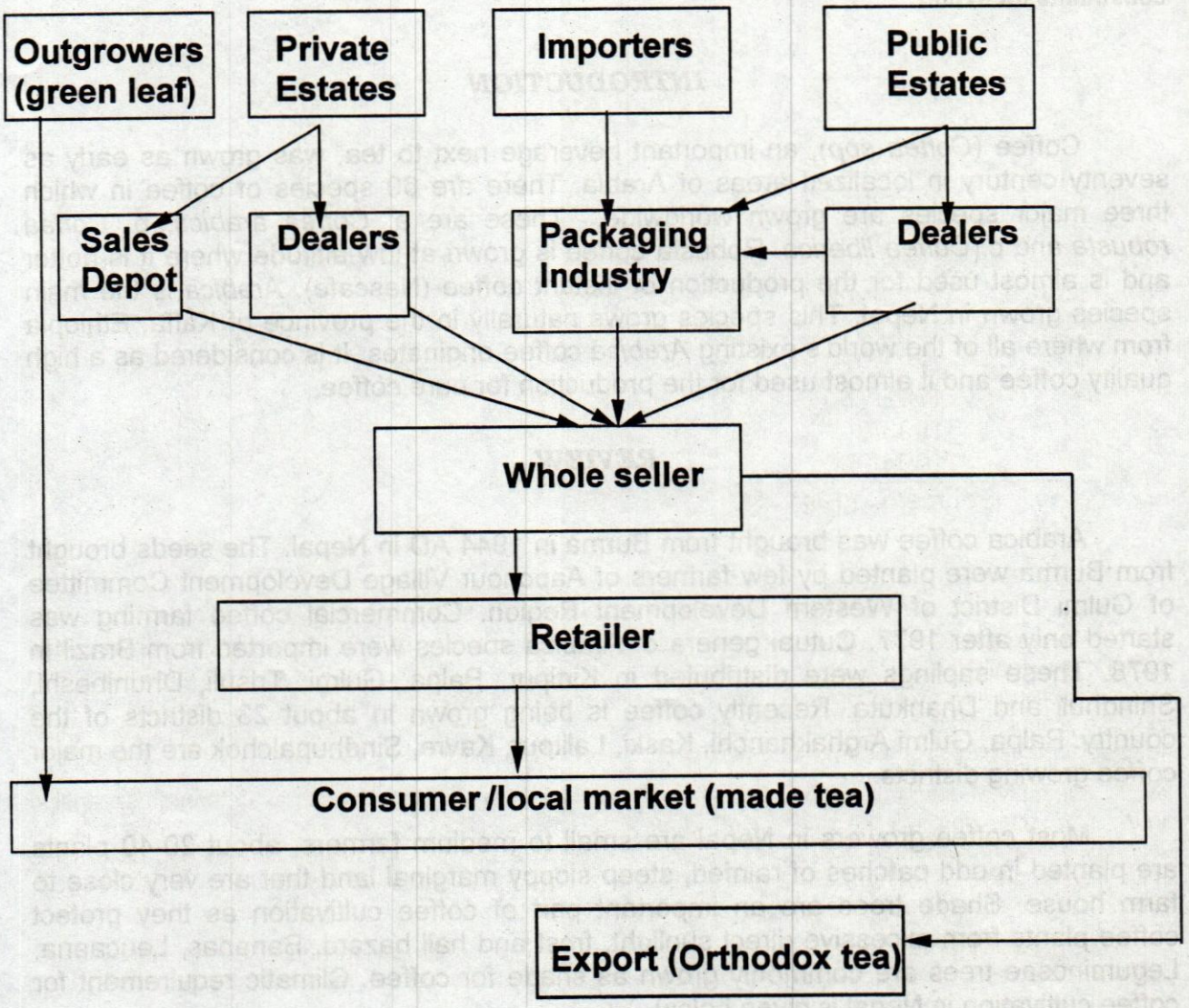
Low quality of tea being produced both in the hills and terai due to the absence of research in production and tea processing. Basic research program should be initiated collaboration with private sector to support tea production, tasting, and quality improvement.

Due to lack of training, quality plucking of leaves is absent. The two-leaf and bud approach necessary for quality tea is hardly adopted. So, the quality has never been upto the standard meaning resulting, low selling prices and low buying price for green leaf.

Tea packets are subjected to double tax system. There is a sale taxed in tea packing materials whether purchased/imported by the packers. When the packers pack tea and are ready to sell they are again sale taxed resulting into double taxes. This is certainly constraint hindering the tea sub sector.

Tea export on L.C. or advance payment is difficult due to small consignment and the nature of commodity. So mail order system of export or defered payment system should be allowed. Inadequate land ceiling for tea estates. Land ceiling should be raised.

Annex - 1. Diagramatic sceche of marketing channel in the domestic market



PART II

ABSTRACT

Coffee is an important beverage next to tea in the world. With the rapid urbanization and increasing inflow of tourist, the drinking habit of coffee is increased in Nepal. The main species of coffee grown in Nepal is Arabica. Coffee production in Nepal is new technology, introduced in Gulmi in 1944 AD. Out of total coffee growers about 88% farmers are from Western Development Region. It is the main coffee-growing region. At present coffee production is only 38 mt. from 259 ha. in Nepal, which is very negligible so the processing mills are not in a position to run in full capacity. Besides processing mills, very few businessmen export dry cheery coffee to the overseas market mainly in Japan and Germany. The demand of Nepalese coffee is high because coffee produce in Nepal is virtually organic. But at present small volume of quantity are the main constraints for export.

INTRODUCTION

Coffee (*Coffea spp*), an important beverage next to tea, was grown as early as seventy century in localized areas of Arabia. There are 60 species of coffee in which three major species are grown worldwide. These are a. *Coffea arabica*, b. *Coffea robusta* and c. *Coffea liberica*. Robusta coffee is grown at low altitude where it is hotter and is almost used for the production of instant coffee (Nescafe). *Arabica* is the main species grown in Nepal. This species grows naturally in the province of Kaffa, Ethiopia from where all of the world's existing *Arabica* coffee originates. It is considered as a high quality coffee and it almost used for the production for pure coffee.

REVIEW

Arabica coffee was brought from Burma in 1944 AD in Nepal. The seeds brought from Burma were planted by few farmers of Aapchour Village Development Committee of Gulmi District of Western Development Region. Commercial coffee farming was started only after 1977. Cutuai genera of Arabica species were imported from Brazil in 1978. These saplings were distributed in Kirtipur, Palpa, Gulmi, Trisuli, Dhunibeshi, Shindhuli and Dhankuta. Recently coffee is being grown in about 23 districts of the country. Palpa, Gulmi Arghakhanchi, Kaski, Lalitpur, Kavre, Sindhupalchok are the major coffee growing districts.

Most coffee growers in Nepal are small to medium farmers, about 20-40 plants are planted in odd patches of rainfed, steep sloppy marginal land that are very close to farm house. Shade trees are an important part of coffee cultivation as they protect coffee plants from excessive direct sunlight, frost and hail hazard. Bananas, Leucaena, Leguminosae trees are commonly grown as shade for coffee. Climatic requirement for coffee cultivation in Nepal is given below

Elevation:	600 to 1200 m
Annual rainfall:	1600 to 2500 mm
Shade:	Medium to light, depending upon elevation and aspects

Temperature:	15 ^{0}C to 25 ^{0}C
Soil:	Deep, friable, porous, rich in organic matter, moisture retentive
Relative humidity:	70-80%
Aspects:	Northern, Eastern and North-eastern are ideal
Slopes:	A gentle to moderate slope is ideal

A coffee plant produces their first significant crop in their fourth year after planting and continues to produce for many years, but the most economic stage is from five to fifteen years of age. Coffee is generally planted from April to June and picking takes place from January to March. Harvesting is practices either by strip picking or single plucking. Average dry cheery production per plant in Nepal is about 464 gms.

Institutional Support for Coffee Industry in Nepal: After King's visit in western region in 1977, the Government announced this region as Coffee region and also the royal directive about the need for development of coffee industry in Nepal. The farmers received loan from ADB/N. This loan covers expansion of area in coffee, planting, maintenance and irrigation. Fifty- percent subsidy on the interest rate was provided by the Government till 1888/89 after that this subsidy was completely stopped.

His Majesty's Government established Coffee Development Center in Aapchour, Gulmi in 1985 to strengthen the research and training program of coffee. But due to lack of manpower the technical services and research provided form this center could not meet the government objectives. Right now Selection 274, Selection 11, Selection 42, Selection 29 and Selection 44 of Arabica species are maintained in Gulmi farm for the study.

National Tea and Coffee Development Board and Tea and Coffee Development Section under Fruit Development Division was established in 1993 for the similar function as in Tea.

There are two coffee-processing factories. Nepal Coffee Co. Pvt. Ltd. (NECCO), private factory was established in 1985 at Manigram, Butwal with the help of ADB/N loan and also received strong encouragement after visit of His Majesty's of King. This company collects dry beans and process them and sell the processed bean (partchment bean) to the exporter or roasted beans or powder coffee to the wholesalers and retailers. This factory has annual capacity of 100 tons green beans (250 days X 8 hours X 0.5 ton). But due to lack of enough raw materials, the mill is operating at only 8% capacity.

Recently another coffee processing unit under the named of Everest Coffee Mills Pvt. Ltd. is established. This mill has been exporting cheery coffee bean to Japan since three years about 4 mt. annually.

Salt Trading Company was also involved in the distribution of coffee from farm to the market. Now this company is not in the position to buy coffee berries from farmers due to insufficient quantity.

Marketing of Coffee in Nepal: Due to low volume of coffee coupled with the problem of scattered and remote areas for production, marketing of coffee is not well defined and is still unorganized. Those farmers whose production is very low usually produce hand made coffee by conventional processing method and consume themselves or sell them in the local market. However, major farmers whose production

exceeds the capacity of home processing sells their produce to the bulk buyers and processors; these are Nepal Coffee Co. Pvt Ltd. (NECCO), Butwal and Everest Coffee Mill (ECM), Panchkhal.

After processing, NECCO and ECM, according to the nature of the processed coffee I. e green bean or roasted bean or ground powder coffee either sells them to the wholesaler, the retailer or the exporter. The green bean can be sold to the international agent who in turns roast and pack for exports in a value added from. Besides the green beans the roasted beans in a value added form with the company own brand name is sold or exported.

Import and Export market of coffee: In Nepal consumption of coffee is very low. Since there is no tradition of coffee drinking amongst Nepalese. Foreigners both tourist and residents are the main consumers. According to the NECCO, annual consumption of domestically produced pure coffee is estimated at about 6-8 mt.

Coffee is mainly imported from India in the form of instant coffee because Nepalese consumers prefer instant coffee. In the year 1994/95 coffee imported from India was at the value of Rs. 17,900 thousand which increased by about 28.5 percent in the year 1995/96 value at Rs. 23,000 thousand. Besides India, coffee also imported in Nepal from Hong Kong, Saudi Arabiya, Singapore, UAE and USA.

Coffee exports from Nepal started in the year 1993/94 when Salt Trading Corporation Ltd. (STC) exported 9060 kg of unwashed *Arabica* green beans to Netherlands. Although the interest of the importers was positive and the demand is further increased. The export volume declined in the year 1994/95 to 5040 kg due to the reason of unavailability of green beans.

Besides NECCO, ECM, STC, very few businessmen also export coffee to the overseas market mainly in Japan and Germany but the export volume is insignificant.

PRESENT STATUS OF COFFEE IN NEPAL

In Nepal, total production of dry cheery coffee is estimated at about 38 mt (1996). Total area under coffee is estimated at about 259 ha and total number of plant is estimated at about 4,51,367 (Table 7). Out of this, only about 27 percent are in productive stage. Western Development region is the main coffee growing region of the country. Out of the total coffee farmers about 88 percent are from this region and the share of this region in the total mature plants and total cherry production is 92 and 93 percent respectively.

In order to compare the potential profitability of coffee with that of other traditional crops output-input of coffee was 2.53 where as in rice and wheat it is 1.44 and 1.25 respectively (Gulmi Arghakhanchi Rural Development Project in 1992).

Table 7 - Area, production and number of farmers involved in coffee production in Nepal. (1996/97)

S. No	Districts	No. of farmers	No. of plants	No. of matured plants	Area (ha)	Production (mt)
1.	Palpa	267	118623	12749	95	14
2.	Gulmi	654	39346	20091	18	12
3.	Argakhanchi	250	6068	2689	4.3	1
4.	Syangja	110	10679	1400	8.2	1.4
5.	Parbat	35	3750	1000	2.5	0.2
6.	Baglung	313	53950	35025	35	2.5
7.	Lamjung	152	3435	1000	2.5	1
8.	Tanahu	14	2740	n.a	2	n.a
9.	Rukum	42	1072	15	0.7	n.a
10.	Kaski	387	17128	500	10	1.15
11.	Lalitpur	396	26419	3249	23	2.5
12.	Myagdi	20	600	n.a	0.3	0.1
13.	Kavrepalanchok	38	2600	775	2.6	n.a
14.	Gorkha	14	2700	n.a	0.5	1.5
15.	Jhapa	6	n.a	n.a	16	n.a
16.	Sindhupalchowk	14	2178	2088	1.05	n.a
17.	Nuwakot	10	160079	n.a	37.5	n.a
	Total	2526	451367	80581	259	37.35

CONSTRAINTS AND RECOMMENDATIONS

At present coffee industry is in infant stage. Total volume of production is not yet sufficient for export. Therefore, the urgent need in this industry is to increase the production, which can be done with expansion of coffee area and with increase in yield.

Unlike other food crops, coffee plant takes four to five years to commence yielding and cannot easily be replaced, therefore, it is critical to do everything correctly from beginning. But existing extension service for the coffee farmers is poor and the Coffee Development Center established in 1985 with the objective of conducting research in coffee is very far from its objective. Therefore, coffee industry is lacking from effective research and extension services. Growers have to be guided by effective extension services to grow coffee successfully skill such as management, pruning, recycle pruning, harvesting, pulping, etc. are required to be carried out during critical period throughout the year for maximum production.

Agriculture extension workers of the coffee grown areas will need intensive training in coffee cultivation and post-harvest technology so they can train the growers.

Coffee being a crop with a long gestation period should have a soft loan to growers to assist them with the initial costs of establishing coffee gardens. But the loan is a touchy subject and need to be paid back. If growers take loan and are not successful due to lack of technical advice or wrong technical advice. They can not pay back their loan because of not receiving any income from their coffee garden. There is 15% interest on bank loan, which is felt to be too high. Loans are also not provided in the proper time.

One has to be serious about quality, which is in demand to fetch a good commodity price. To improve existing quality of the coffee processing method must be

changed to wet method. It would be easy to reverse the existing unwashed processing method to the washed method while the industry is still small.

For improve the existing quality roasted bean should be kept in an airtight pack which is not in practice.

In Nepal more than 2500 coffee growers are scattered in different districts with a small volume of production. Therefore, collection of dry beans is not only expensive but also difficult to cover all coffee farmers. Establishment of coffee collection centers with functioning like developing a market network, collection and dissemination of the marketing information, provide warehouse, market yard and the market facilities may give a birth to a competitive marketing for upcoming coffee industry.

The activities conducted by existing NTCDB for the development of coffee industry can be considered rudimentary and not so effective.

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