

PROMOTING MARKETING OF CINNAMON TREE PRODUCTS IN PALPA DISTRICT OF NEPAL

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Abstract

This paper highlights the issues occurring in the promotion of Cinnamon tree product marketing in Palpa district of Nepal. Cinnamon production and collection systems are reviewed. Case studies indicate how poor people maintain their livelihood by marketing cinnamon bark and leaf in the study area. Profit and marketing margin analysis indicate most benefits are diverted to road-head and wholesale traders. Primary producers are receiving a very small share. The comparative benefit cost analysis of selling cinnamon leaf in crude form vs as processed (oil) after steam distillation is explored. The sensitivity of producing Cinnamon leaf oil to labor cost and market price changes is also analyzed. Selling the essential oil of cinnamon leaf to India is more profitable than selling raw Cinnamon leaf. However, several legal constraints render such sale infeasible. The existing tax and royalty system includes collection and permit systems, conflicting sectoral and cross sectoral policy, and rules hindering the effective promotion of Cinnamon products. This study suggests that group marketing has to be promoted by Conservation Utilization of Medicinal Plants Cooperatives Limited (CUMPCOL) in order to generate more income for farmers locally. Group marketing can help eliminating road head traders.

1. Introduction

Cinnamomum tamala is a tall tree found in the forests and farmlands in the Middle Hill Range of Nepal. Both wild and domesticated *Cinnamomum* species fulfill subsistence requirements of millions of people, especially of members of ethnic minority groups living in locations of Nepal that are economically disadvantaged and physically remote (ANSAB, 1997; Parajuli, 1998; Pandit, 2003). The leaf of this species is called *Tejpatta* and the bark *Dalchini*. The bark and leaves contain aromatic oil and are used as spices in the Indian sub-continent. Since the early 1960s, farmers of different middle hills districts of Nepal have been planting, protecting and harvesting *C. tamala*. In areas with marketing facilities, local people sell raw or processed cinnamon products including leaf and bark for cash income to fulfill their household needs in several mountainous districts including Palpa. Exports of these products to India and other neighboring countries has continued to increase for the last two decades, indicating that the species has great potential for income generation for poor and disadvantaged people (Parajuli, 1998; Maharjan, 2002).

Why This Study?

Scientific studies on NTFP the collection, domestication and management of *C. tamala* are very rare in the case of Palpa district. Particularly in the marketing sector, information is scarce. It is well known, however, that the local economy and, hence, traders

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have considerably benefited from trading of cinnamon leaf and bark. What is still unclear is the relative benefits that a host of agents ranging from the non-timber forest product collectors in villages to the wholesale traders at regional cities are getting from this trade and related policy issues inhibiting the sale of cinnamon products and their essential oils from Palpa. Furthermore, no study is being done on how much incremental benefits a collector receives if he or she sells essential oil of *Tejpat* after steam distillation. The profit and marketing margins of some NTFPs exported from Palpa district have not been analyzed. It is assumed that normally NTFP collectors in remote locations of the district receive a very small share of the final sale value of NTFPs. The processing potential of *Tejpat* is also discussed with reference to information provided by the Conservation Utilization of Medicinal Plants Cooperatives Limited (CUMPCOL). But the validity of this assumption has not yet been scientifically scrutinized. More detailed discussion is also needed on policy related issues on NTFP trading and existing trading situation in the districts.

2. Study area

Palpa district is located in the Middle Hills belt of the Western Development Region of Nepal. The district comprises 65 Village Development Committees (VDCs) and a municipality with a population of 2,36238 of which 53 % are female. The annual population growth rate is 1.7% and the literacy rate only 48% (Male 61% and female 39%) (CBS, 1991). The district is inhabited by various castes and ethnic groups. The majority of the population consists of Magars (49%) followed by Brahmins/Chhetris (31%), scheduled castes² (11%) and others (9%). Palpa district was selected as the study site because a considerable proportion of households in this district are engaged in cinnamon bark and leaf production and trading. With an area of 1366 km², this district ranges from 152 m-1936 m above mean sea level. As in other Middle Hill districts, more than 50% of the population do not have adequate food. Natural resource degradation in this district is typical for large tracts of fragile agricultural slopes in the upper elevations of the district. The problems are largely rooted in and linked to high population densities, leading to acute scarcity of available per-capita resources, lack of adequate education and overall poverty of the rural population.

Palpa is a diverse district in terms of the availability of natural resources. It has some of the most spectacular natural areas in the district, manifested by the immense contrast in altitude and ecology within a small landmass. The district includes a territory of great biodiversity extending from broadleaf forests in the South to sub-temperate ecosystems in the North, comprising 39 % high forests, 12.6% % shrub land and degraded forests (Parajuli, 1997). The major forest types of the district are subtropical, deciduous and coniferous. Cultivated lands occupy around 30% of the total land area, and the rest are uncultivated grazing lands (HMG/N, 1999).

Based on property rights, forests in this area can be broadly classified into two broad categories: private and national. Private forests are those which are either registered with the District Land Survey Office and District Land Revenue Office or are the part of national forests encroached upon by private landholders adjacent to their farmlands. The land in

² Sometimes called untouchables, these people have no hope of improving their social status during their life time.

between private farmlands and national forests is also called *Losepose* lands³. Cinnamon cultivation is found to be highest in such lands. There, the use rights of forest products like cinnamon leaf and bark have not yet been formally handed over to individual households but traditionally these rights have been enjoyed by individual households. Meanwhile the national forests consist of five types (1) government managed forests, (2) community forests, (3) leasehold and (4) religious forests and (5) protected forests. National forests are owned by the government, which has exclusive rights to use and manage them, and transfer these rights to communities, institutions and individuals. The District Forest Office (DFO), on behalf of the government, supervises all matters pertinent to these forests at the local level. In community forests, use and management rights are handed over to the concerned local communities by the DFO. According to DFO records, almost 18516 ha (26 %) of total forest area have been handed over as community forests to about 31924 user households, covering all VDCs and one municipality. Private forest is the biggest source of cinnamon leaf and bark production compared to government and community forests.

3. Methods

To obtain relevant data, diverse groups of stakeholders such as primary producers/collectors, district cooperative CUMPCOL, Federation of Community Forestry User Groups Nepal (FECOFUN) district branch office, Palpa Federation of Chambers of Commerce (PCCI), Local Initiatives Support Programme (LISP) of Swiss Project, and the District Forest Office were consulted. A case study of selected collectors, PRA (group discussion) with cinnamon growing farmers at local markets, discussion with traders at the road head of Dovan, and unstructured interviews with the representatives of the CUMPCOL were the major sources of data. Regarding the data on steam distillation of cinnamon leaf oil, CUMPCOL provided information about the last one -year period.

A participatory meeting of cinnamon producers/collectors and road head traders was conducted at the local road-head market, Dovan to investigate the amount of cinnamon traded at Dovan road-head markets (See photo attached). They were also asked to rank the quantity of *Dalchini* and *Tejpat* traded at Dovan market by individual households of three villages, Beruwa and Firfire of Koldanda Village Development Committee (VDC) and Jaymire of Dovan VDC areas. The problems faced by collectors for NTFP marketing were listed during the meeting. Participants were also asked the exact rate of sale of these products at roadhead and Butwal wholesale markets, linked to India.

The district forest officer, rangers and former DDC members were consulted for information relating to *Tejpat* oil production through steam distillation. They were mainly asked questions relating to the policy and administrative aspects of NTFP management and marketing. Information on the amount of NTFPs legally exported from Palpa district was also obtained from the DFO.

The information obtained through various sources was shared in a district workshop held on Sept 15, 2003. Interactions between traders, producers and district line agencies including the DFO were exploited during the workshop.

³ *Losepose* lands, a unique feature of Palpa district's agro ecosystems, are patches of national forest linked to agricultural land, especially Cinnamon plantations (See photographs). The users of such forests have no legal basis to use the products but have been using without legal basis.

4. Result and discussion

4.1 Cinnamon collection and production system in Palpa district

The collection and production of cinnamon species in forest and farmlands to fulfill basic household needs is a long-established tradition in Palpa district.

The collection of *dalchini* and *tejpat* from both community and government forests and production on private farmlands has become an important activity for increasing number of villagers in Palpa district. *Dalchini* and *tejpat* marketing now offer many pro-poor communities a more convenient means of seasonal employment. Since cinnamon is an evergreen tree, farmers can collect its leaves throughout the year. However, leaf quality is better in the winter. While bark collection is effective in the pre-monsoon and post monsoon seasons when the tree is still active. Farmers usually avoid collecting both leaves and bark during the monsoon because of problems of drying of leaves and bark, and also because of labor demand for rice growing. Case study indicated that collecting cinnamon leaf and bark in good yield years could make more money than could be earned working as temporary field laborers. Cinnamon collection has the added benefit of fitting into a flexible schedule. In the villages visited, the research team was informed that at least one member from each household produced cinnamon leaf and bark. The wealthier Brahmin and Chhetri families have access to cinnamon tree on their farmlands and *non*-agricultural lands, which others must search for in the forest. Normally cinnamon bark is collected after the trees are felled to the ground.

Taking advantage of the situation of open access, people harvest cinnamon bark and leaves freely from government forests. Wage laborers hired by the NTFP license holders, mostly from other areas, also extract these resources. Local people openly express their frustration regarding such encroachment of forest by outsiders. However, they cannot prevent outsiders from entering the forest because of lack of legal rights. According to the current forest laws, anybody holding a license issued by the DFO upon payment of the stipulated amount of royalty can extract cinnamon leaves and bark from the government-owned forests in a designated area. Normally, traders based at roadhead market centers pay the stipulated royalty to the DFO when they transport NTFP to Butwal. There is high competition among people within and outside the community for collection of these products because of attractive benefits and a ready local market.

Unlike open access government forests, access to community forest land is limited to the members of the relevant group. Unless they resort to poaching, outsiders cannot collect any kind of products from these forests without the permission of their members. Following the adopted rules, timber cutting and firewood harvesting from a living tree is strictly regulated by the FUGs, and group members rarely dare breach the rules mutually agreed upon among themselves. This has resulted in notable improvement in tree density in community forests compared to government forests as confirmed by other studies conducted in similar ecological conditions (Webb and Gautam, 2001).

4.2 Harvesting practices of Cinnamon products

The bark of Cinnamon is stripped or peeled by cutting the main stem and limbs of 5 to 6 year-old trees. Longitudinal incisions are made to connect the rings. The bark is removed in strips and rolled into bundles for sale (See Photo attached). However, the problem is that this

method is applied to only cinnamon trees grown on farmlands. In the majority of cases, when people collect this product from government forests, the trees are felled and then peeled. Sometime, they bring the whole trunk home and household members help to peel off the bark.

Case History # 1

An elderly couple at Dovan VDC, ward No 5 losing bargaining power of Cinnamon product sale

Bal Bahadur Ale, age 70, from his small cottage house made of bamboo and thatch grass, smiles to everybody appears as if he has no problem unless somebody watches him carefully. He has 16 family members but now he is separated and lives with 6 family members including his wife and smallest daughter in law and son, two grand sons at Dovan-5 His other family members live in Koldanda-8, 3 hours walk from Dovan-5 (A Cinnamon pocket area). Mr. Bal Bahadur was migrated from Koldanda long time ago. His smallest son went to Malaysia for work two years ago. Mr. Bal Bahadur is not able to payback the loan that was borrowed for his son going to Malaysia. Mr. Bal Bahadur and his wife work as laborers for other rich people. He has seven ropani of lands and grows upland rice, some ginger and turmeric there. In his village farm, there are almost 100 Cinnamon trees coppiced every two-three years. He gets almost 80Kg of dried Cinnamon bark every year and sells to the Dovan road- head trader at a rate of 15/Kg.

Her greatest regret is that whatever amount of cinnamon product they have produced has to be sold to road head trader as soon as it is dried. Her need for money forces her to sell these products to the trader at road head at a low price. If they could stock the produce for long time these products could taken to Butwal and sell it at higher price. Storage of these products and bargaining with the traders are great challenges for the poor Cinnamon producers.

4.3 Cinnamon leaf (Tejpat) and bark (Dalchini) production

The estimated production of *Dalchini* and *Tejpat* and number of growing individual trees of *Cinnamomum tamala* vary between forests and farmlands. The study done by CUMPCOL in 2001 with financial support from District Forest Office and LISP/HELVETAS, Palpa indicated that the number of Cinnamon trees and estimated yield of its leaves (*tejpat*) and bark (*dalchini*) was substantially higher on private lands than in government and community forests in 19 VDCs indicating the importance of growing Cinnamon trees on farmlands (Table 1). A total of 1856 households were involved in cultivating *Cinnamomum tamala* in 19 VDCs of Palpa district.

Table 1: Cinnamon production in forests and farmlands in Palpa district

Forest type	Number of seedling, shrub and trees			Amount of products (Kg)		
	Seedling	Shrub	Tree/pole	Tejpat	Dalchini	Fuelwood
Private land/forests	227957	193809	99519	2383480	1238016	4453475
Community forests	780	157	-	3760	1953	22822
Government forests	50530	20	510	12214	6344	7025
Grand total	284397	194609	100186	2399454	1246313	4483344

Source: DFO/LISP Report, 2001

The participatory resource assessment (PRA) meeting held at Dovan road-head market confirms that local people are dependent on Cinnamon bark and leaf sale for their livelihood. A total of 13 Cinnamon producers/collectors including two road-head traders (Hom Nath Timilsina and Govinda Pandey) were present in the assessment. They assessed the quantity of *Dalchini* sold and the number of households involved in selling this product during the peak season of the year (Sept and October) at the Dovan road-head. In Jaymire village, all households are involved in cinnamon bark production and sale, compared to 92% and 85% of households in Beruwa and Firfire village, respectively (Table 2). The participants reported that the rate of *Dalchini* per Kg ranges from Rs.16- 20. Besides *Dalchini*, all most all households also sell the *Tejpat* and a few sell *Asparagus roots* to the road-head traders. One of the participants reported that she sold 750 kg of *Tejpat* to CUMPCOL at a rate of Rs 4/kg (see case history #2). According to participants, *Dalchini* and *Tejpat* trading has contributed significantly to the household economy of the local people in Palpa district.

Table 2. Average production and number of households being involved in Cinnamon bark trading at Dovan road head

Village/tole	Average estimated quantity sold (Kg/Household/year)	Number of households	Number of Households selling <i>Dalchini</i>			
			Not selling	In two week	In a week	Two times in a week
Jaymire village	160	40	-	12	15	10
Beruwa village	250	26	2	1	14	9
Firfire village	180	13	2	-	4	7

Source: PRA exercise at Dovan, 2003

4.4 Local peoples' perception on Cinnamon marketing

Participants at the meeting were asked the problems they faced while selling their products. The most common answers were the lack of awareness about market information system and the limited opportunity to sell NTFPs to alternative traders, as they are few. As a combined effect of these two factors, collectors' bargaining power is severely constrained and producers have to sell at whatever prices the road-head traders offer to them. Ideally, selling NTFPs directly to wholesale traders in Butwal would bring greater returns to the collectors. Participants expressed that they have to pay illegal money to every check post along the way they carry Cinnamon leaves and bark to Butwal, which has discouraged producers to sell their produce in whole sale markets.

Another problem expressed by one of the participants was lack of transportation facility. With the exception of few villages in the lower zone close to the highway, all other villages in Dovan and Koldanda VDCs have no road access. Therefore, people have to walk to the road-head market centers and carry loads of NTFPs heaped on their back to sell there. Depending on the location of the village, it takes between two to six hours on foot to reach the nearest road-head market. If the collectors wanted to sell their NTFPs in Butwal, they would have to travel further by either bus or truck. Thus, normally it would require two days to agroforestry produce in regional cities. According to the collectors, whenever they carry their products down to the road-head, they have to either sell them at the low price offered them, or they have to wait for three to four days in the hope of obtaining a higher price. Spending that much time hardly is economically

viable. Moreover, staying at the market center for three to four days incurs substantial costs in terms of food and accommodation, which takes away whatever additional benefit they might get. The problem does not end there. Sometimes, the same type and quality of NTFPs is given different prices by different traders. As a result, traders can easily cheat collectors. Moreover, weighing machines are made more “suitable” for traders. Because of all these problems, collectors have to accept whatever price they are offered, as there are only few traders.

Unfortunately Dalchini resembles the bark of other two species namely *Bilauni* and *Bhorla*, which local people, particularly traders at national border, are found to be mixing with real *Dalchini*. The amount of *Bilauni* and *Bhorla* exported in District Forest Office indicated that this malpractice is common in Palpa. The frequent complaint heard from villagers and traders was that such adulteration is very high at the national border before the products are actually exported to India. This practice has devaluated the quality of Nepali *Dalchini* in India. As a result, primary collectors fail to fetch a good price from Nepali *Dalchini* sale. Coupled with the above, the lack of a market information system has also compelled local collectors and producers to sell their products at a low price (See case history # 2).

4.5 Trading of Cinnamon and other NTFPs

The commonly marketed NTFPs in Palpa district are *Dalchini*, *Tejpat*, *Asparagus* root (Kurilo) and *Emblica Officinalis* (Amala). A few *Swertia chirayita* comes from upper belt. The marketing of these products takes place in three trading levels. They are the primary collectors/producers; road-head traders at Dovan, who handle either small quantities or bulk; and the wholesalers in Butwal and/ or in Nepalgunj (Table 3). The road-head traders at Dovan and Wholesalers of Butwal expressed that most NTFPs particularly, Cinnamon products reach the Indian market via Nepalgunj border as traders of Lucknow in India adjacent to Nepalgunj border control the NTFP trade. Because of this, the traders at Dovan and Butwal are not allowed to export NTFPs through the nearest national border at “Sunali”. This is the reason why the transportation cost from Dovan to Nepalgunj was included in the marketing margin analysis (sub-section 4.6) In principle, primary collectors/producers could sell NTFPs either to road-head traders or to wholesalers. For practical reasons, including material and financial interdependency at the local level, distance between forests and farmlands or road-heads, and the mode of transportation, most collectors would sell their NTFPs to road-head traders. Virtually no households in the study district would sell NTFPs to wholesalers, and definitely none to any traders across the national border, in India..

Case history #2

NTFP producers lack market information: A case of Mrs Parbati Rai of Koldanda village

Parbati is a young, vivacious 25-year-old mother of two children. She lives in the village of Koldanda. Her husband works as laborer in the village and helps Parbati to bring Dalchini and Tejpat to Dovan road-head market. During the agricultural slack season, both husband and wife collect Dalchini and Tejpat either from community or government forests. They collect approximately 100 Kg of Dalchini every year and sell to road head traders at a rate of Rs. 18/Kg.

Besides they have 150 Cinnamomum tamala trees on their farmland. They started harvesting Dalchini and Tejpat 9 years ago. They coppice Cinnamon tree in every two - three year interval and harvest about a half Kg of bark from each 3 year coppiced tree. Parbati rarely ventures out of the village except for selling Dalchini and Tejpat at Dovan. Parbati usually sell Dalchini to Mr. Govinda Pandey, local merchant at Dovan. The drying and processing of Dalchini and Tejpat is done by Parbati. She learned the art of separating the Cinnamon bark and leaves from the tree. In addition to Dalchini, Parpati sold 750 Kg of fresh Tejpat to CUMPCOL last year and earned Rs. 3000. This business has helped them to maintain their livelihood. There is biggest question, what will happen to this family if CUMPCOL declines to buy Cinnamon leaves. Both husband and wife have no idea about this and lack knowledge on the rate of Dalchini and Tejpat in Butwal and Indian markets. Because of this, they are selling these products at low price.

4.6 Profit and marketing margins

The profit margin received by collectors from the sale of cinnamon products is very low, barely one-quarter of the margin received by traders (Table 3). If the cost of royalties is included in the total cost, the road-head traders' profit and marketing margins would be substantially higher (more than 100%) (Table 3). However, it was observed that traders at road-head markets usually avoid paying royalties to the DFO, claiming that the products were from the private farmlands. In so doing both forest official and trader earn illegal money (see greater details in policy related section). The comparison of the export of *Dalchini* and *Tejpat* (Table 7) and estimated availability (Table 1) is the proof for illegal sale of these products in Palpa district.

The marketing margin analysis revealed that cinnamon producers received significantly less marketing margins, compared with final sales values of NTFPs at wholesalers' sale prices. An efficiently functioning marketing system presumably enables producers and collectors to reap a major proportion of the benefit accruing from the corresponding business-at-large (Dixon *et al.*, 1989; Gittinger, 19982). To determine this benefit necessitates the analysis of marketing margins indicating the difference between producer and sales values, and representing all income flows not returned to the producers. In short, the typically long marketing channel absorbed a substantial share; in certain cases the lion's share of the marketing margin in cinnamon trading.

Table 3: Profit and marketing margin % (Prices and costs are Rs/Kg)

Level of trading channel	Dalchini	Tejpat
Collectors		
Sale price	18	7
Collection cost	6.67	1
Processing cost	3	1
Transportation cost	2.5	2.5
Moisture loss (.15%)	2.7	1.19
Packaging cost (jute bag or rope)	0.25	0.25
Total costs	15.12	5.94
Net profit (%)	19	18
Road head traders at Dovan		
Sale price	40	20
Purchase price	18	7
Royalty	20	10
Storage loss	0.9	0.35
Total costs	38.9	17.35
Net profit (%)	3	15
Net profit (%) without royalty	112	176
Wholesalers in Nepalgunj		
Sale price	45	25
Purchase price	40	20
Transportation	0.5	1
Export duty	2	1
Subtotal	42.5	22
Net profit (%)	6	15
Collector's Marketing margin (%)	40	28

USD 1 = Nepalese Currency Rs = 74.10

4.7 Sensitivity analysis of tejpat trading

There are basically two options for the collectors to sell *tejpat*.

1. Selling in crude/raw form
2. Selling in processed (essential oil) form

4.7.1 Selling in crude form

Collectors have three choices of selling crude cinnamon leaf (*Tejpat*). They can sell either to road-head traders or to wholesalers and or to Indian traders. The analysis of the profit and marketing margin has clearly indicated that collectors' margin would be increased by almost double if *Tejpat* is sold directly to Indian traders using wholesalers' sale price.

However, in view of the existing capacity of the producers in terms of marketing of *Tejpat* oil, it would not be appropriate to sell products in India in a way that involves several risks and complexities during trading. However, selling *Tejpat* in Nepalgunj through organized group marketing is seemed to be promising and thus recommended. The CUMPCOL could lead such venture rather than going for oil production.

4.7.2 Selling in processed (essential oil) form

The existing trade situation shows that Nepal can hardly compete with international markets for marketing of essential oil of different species. Several agencies related to the NTFP sector in India and elsewhere in South Asia were contacted for possible sales of *Tejpat* oil. Until today no response has been obtained. Further to this, several Nepalese essential oil producing companies and cooperatives were consulted. Examples of essential oil producing plant of *Galtheria* species in other hill districts (Dolakha and Kabhre Palanchok) indicated that essential oil marketing has sharply declined over recent years irrespective of species.

Comparison of selling crude cinnamon leaf and processed essential oil indicated that sale of essential oil gives a 22% increment in the net income (Table 4). However, there are several complexities in selling cinnamon essential oil to India. For instance, in order to sell the product to India, the concerned cooperative needs to have a letter/certification of origin of the product endorsed by Federation of Nepalese Chambers of Commerce and Industry (FNCCI), which is infeasible for small cooperatives like CUMPCOL. Only a company registered with Department of Industry or with District Cottage and Small Industry (DCSI) can get such a letter from the Department of Industry with the recommendation of FNCCI. Another problem associated with registering the cooperative, as a private company is that the registered company has to conduct EIA if the forest based product to be harvested is more than 50t/year (Environment Protection Act, 1998).

4.8 Existing situation of *Tejpat* oil sale

The existing sale of *tejpat* oil produced by the steam distillation unit at Dovan of Palpa district and facilitated by CUMPCOL seems to be profitable (Table 3) but the volume of sale is very small. In order to create or increase the demand of this product locally, the packaging needs to be improved and the trade name has to be leveled on different sized bottles followed by advertisement of its advantages. A total of 127 observations over a six-month period of the cinnamon leaf oil steam distillation indicated that the net benefit obtained is highest in the thirty days between November 15 and December 15. Observation shows that the average return per kg of raw material used by the steam distillation unit is Rs. 1. 234. Meanwhile, the highest return per kg of raw material used was observed between October 15 and November 15 (Table 4). The result is negative in Feb/March when the supply of *tejpat* was minimum. The benefit cost ratio of the entire plant for producing cinnamon leaf oil is found to be 1.22 (Table 4).

Table 4: Benefit -cost analysis with existing market price

Items	Oct	Nov	Dec	Jan	Feb	March	Total
A. Production (lit)	33.370	23.830	46.350	38.940	23.625	15.835	181.950
	133480	95320	185400	155760	94500	63340	727800
B. Cost of production							
No of observation	23	16	28	29	17	14	127
Raw material (Kg)	20079	12540	26350	23425	13650	11900	107944
Raw material (Rs 4/Kg)	80316	50158	105400	93740	54600	47600	431814
Boiling time (Rs. 24/hour)	6300	3600	7562	6984	4140	3408	31994
Fuelwood (Rs 1.50/Kg)	12300	6750	13875	12900	8700	7425	61950
Electricity (Rs. 5/unit)	260	150	310	285	170	90	1265
Staff salary (Rs 400/day)	11687	6269	12848	12473	7011	6248	56535
Labor cost (Rs 100/day)	1363	744	2263	3444	931	675	9419
Machine depreciation (Rs. 550/month)	550	245	130	701	0	0	1626
	112776	67916	142388	130526	75552	65446	594603
C. Net benefit (A-B)	20705	27404	43013	25234	18948	-2106	133197
Net benefit per Kg of raw material	1.031	2.185	1.632	1.077	1.388	-0.177	1.234

Benefit cost ratio = 1.22,

USD 1 = Nepalese Currency Rs = 74.10

4.9 Future Scenarios

Two possible scenarios have been explored taking into consideration of the capacity of the *Tejpat* steam distillation unit.

Scenario # 1: Benefit cost analysis with the reduced staff cost

Staff hired for operating the distillation unit seems excessive compared with the capacity of the unit and work requirement. It was not logical for three staff running the machine to monitor the performance of two laborers working there. Since the staff salary is four times higher than the laborer's wage, almost 50% of the staff time is spent doing nothing. Since the factory is at the initial stage of its operation, one or two staff can look after the performance of the two laborers. The same staff could maintain the office records and manage of the overall activities being undertaken by CUMPCOL. In view of the above arguments, benefit cost analysis was done with reduced 50% staff costs (Table 5). By reducing staff cost (50%), the net benefit of the entire plant would be increased by 21 percent. This benefit can be achieved without hampering any performance of the existing distillation plant.

The net benefit per kg of raw material invested is 1.49 and the benefit-cost ratio is 1.28. Taking into consideration the limited marketing opportunities, the small difference in return on investment of *tejpat* oil compared to selling *tejpat* in raw form is not viable in the long run. If *tejpat* oil market is expanded to a wider scale in Nepal, this scenario promises to

be profitable. For this reason, marketing skills need to be improved and advertisement of this product needs to be done at different levels.

Table 5: Benefit cost analysis with 50% reduced staff cost

Items	Oct	Nov	Dec	Jan	Feb	March	Total
A. Production (lit)	33.370	23.830	46.350	38.940	23.625	15.835	181.950
	133480	95320	185400	155760	94500	63340	727800
B. Cost of production							
No of observation	23	16	28	29	17	14	127
Raw material (Kg)	20079	12540	26350	23425	13650	11900	107944
Raw material purchase (Rs 4/Kg)	80316	50158	105400	93740	54600	47600	431814
Boiling time (Rs. 24/hour)	6300	3600	7562	6984	4140	3408	31994
Fuelwood (Rs 1.50/Kg)	12300	6750	13875	12900	8700	7425	61950
Electricity (Rs. 5/unit)	260	150	310	285	170	90	1265
Staff salary (Rs 400/day)	5844	3135	6424	6236	3505	3124	28268
Labor cost (Rs 100/day)	1363	744	2263	3444	931	675	9419
Machine depreciation (Rs. 550/month)	550	245	130	701	0	0	1626
	106932	64781	135964	124290	72047	62322	566335
C. Net benefit (A-B)	26548	30539	49437	31470	22454	1018	161465
Net benefit per Kg of raw material	1.322	2.435	1.876	1.343	1.645	0.086	1.496
Benefit cost ratio = 1.2851							

USD 1 = Nepalese Currency Rs = 74.10

Scenario # 2 Benefit cost analysis with reduced staff cost and market price

Due to various projects implemented in the district and good coppicing power of cinnamon trees, the level of production of *Tejpat* is expected to increase. Under such a situation, there are chances that the market price will go down. There is also a possibility of decreasing prices of *Tejpat* oil due to competition in marketing. Taking into consideration the above points, benefit cost analysis was done using 50% reduced staff cost and 20% decreased market price. Under this assumption, the net benefit of the entire distillation unit becomes a positive 1.08 (Table 6). This implies that even with the decreasing market price and reduced staff cost, the enterprise is financially viable.

Table 6: Benefit cost analysis with 50% reduced staff cost and 20% reduced market price

Items	Oct	Nov	Dec	Jan	Feb	March	Total
A. Production (lit)	33.370	23.830	46.350	38.940	23.625	15.835	181.950
	106784	76256	148320	124608	75600	50672	582240
B. Cost of production							
No of observation	23	16	28	29	17	14	127
Raw material (Kg)	20079	12540	26350	23425	13650	11900	107944
Raw material (Rs 4/Kg)	80316	50158	105400	93740	54600	47600	431814
Boiling time (Rs. 24/hour)	6300	3600	7562	6984	4140	3408	31994
Fuelwood (Rs 1.50/Kg)	12300	6750	13875	12900	8700	7425	61950
Electricity (Rs. 5/unit)	260	150	310	285	170	90	1265
Staff salary (Rs 400/day)	5844	3135	6424	6236	3505	3124	28268
Labor cost (Rs 100/day)	1363	744	2263	3444	931	675	9419
Machine depreciation (Rs. 550/month)	550	245	130	701	0	0	1626
	106932	64781	135964	124290	72047	62322	566335
C. Net benefit (A-B)	-148	11475	12357	318	3554	-11650	15905
Benefit-cost ratio = 1.02808							

USD 1 = Nepalese Currency Rs = 74.10

4.10 Policy and legal issues hindering the promotion of NTFP enterprise

There are several policy issues related to the smooth functioning of the NTFP enterprise in Nepal, particularly in Palpa district. They are elaborated below:

4.10.1 Conflicting NTFP Sectoral, Cross-Sectoral Policies and Laws

The linkages between Sectoral and Cross-Sectoral Policies and Laws relating to the management and utilization of forest resources of Nepal are contradictory and confusing. For instance: The Forest Act 1993 and Forest Rules 1995 allow communities to run any industry outside the forest area after obtaining approval from the concerned agency on the recommendation of the DFO. However, the Environment Protection Act and Regulation 1997 dictates that any communities who are willing to run any forest based industry or enterprise in their locality should conduct Initial Environmental Evaluation (IEE) if the amount of forest based products to be harvested is 5 to 50 t/year. If the product to be harvested for the particular enterprise is more 50 t per year, the respective enterprise or industry must conduct Environmental Impact Assessment (EIA) as per items 6 of the Environmental Protection Regulation-1997, which is rather impossible for a small and micro-enterprise run by CFUG. It implies that no forest based enterprise development is possible in Nepal. At the same time, confusion arises on the location of the construction site of forest-based product industries. Constructing houses within a distance of 35 km from the forest area is not applicable under the mountain terrain conditions of Nepal. If one strictly followed this rule, no community could establish any NTFP related industry.

In view of the above conflicting Policies and Laws, CUMPCOL is not able to register its enterprise/industry either with the Department of Industry (DoI) or with the District Cottage and Small Industry (DCSI). As explained earlier, without registration of such an industry, Department of Industry and FNCCI will not provide a *letter of origin* for the product like cinnamon essential oil to be exported to India. As a result, cinnamon essential oil produced by CUMPCOL in Palpa district has been stocked for the last several months. There is no clarity and similarity about the procedural aspect of the registration of the forest based small-scale industry. There is need to have a legal provision for the reorganization of cooperatives as cottage and small industry.

4.10.2 Double taxation system has discouraged farmers to grow NTFPs in their farmlands

The 1999 Local Governance Act has given enough power to DDC in promoting NTFP based enterprises in the district. The DDC's role is to identify and develop an industrial area in the respective district. Taking advantage of this, DDC imposes tax at the rate of 10% of the royalty earned by the DFO. At the same time an extra half a rupee is charged to trader for each Kg of *Tejpat* exported from the district. In every case, trader keeps margin in NTFP trading, which will be ultimately deducted from primary producers' margins. Because of such double taxation system, farmers are discouraged to grow NTFPs in their farmlands.

4.10.3 Royalty systems are not appropriate for sustainable harvesting of NTFPs

Specific royalty rates for selling NTFPs are listed for particular products in Forest Regulation-1995 as an annex (See Forest Regulation-1995: 29-37). These rates are unclear and sometimes exceed the market price. For instance, the royalty per Kg of Cinnamon leaf is 10, which is higher than the local market price. We found local collectors selling this product at Rs. 7-8 per Kg. This applies to a lot of other products like the bark of cinnamon, lichen plant and the leaves of *sal* (*shorea robusta*). As a result, some NTFPs are illegally traded from the study district, leaving no records for assessment (Table 7). Royalty rates, trade regulation mechanisms, enterprise development and processing provisions are the some of the information gaps for effective policy formulation..

Table 7: NTFPs legally exported from Palpa district during 1999-2001

Species	1999 Kg	2000 Kg	2001 Kg
Dalchini	830	1150	6275
Tejpat	-	-	75
Bark of Bilauni shrub	1709	-	2825
Bark of Bhorla	28	-	-
Mint	4	-	-

Source: District Forest Office (DFO), Palpa District.

4.10.4 Confused meaning and naming of certain NTFPs

The royalty rates of some of products mentioned in the Forest Rules 1995 differ by species. For instance, the bark of *Cinnamomum tamala* and root of *Rauwolfia serpentina* are sold with two names to save money from paying taxes by the traders. Because of this, most of the products are illegally sold without paying any royalty (Table 8).

Table 8. Differences in royalty rate of the same NTFP species

Species	Name mentioned in the Forest Rule -1995	Royalty rate (Rs)	Local market price (Rs)
1. <i>Cinnamomum tamala</i>	Bark of Sinkauli	100/Kg	16/Kg.
	Bark of Dalchini	20/Kg	16/Kg
	Tej pat (Cinnamon leaf)	10/Kg	7/Kg
2. <i>Rauwolfia serpentina</i>	Chandmoruwa root	50/Kg	-
	Sarpagandha root	10/Kg	-

Source: Review Forest Regulation, 1995

4.10.5 Inappropriate permit systems have accelerated Cinnamon degradation

Legally, district forest officer can allow outsiders to extract timber as well as cinnamon tree products from government forests adjacent to community forests, as use rights have not yet been formally transferred to the concerned communities. This policy often creates conflict between the local people and district forest officer, discouraging the members of community forest from conserving these resources. Anyone can get a cinnamon collection permit from the District Forest Office in government forests. Sometimes, more than one person is allowed to collect these products in the same forest area, leading to serious competition by permit holders. Such a system has accelerated the pace of cinnamon product degradation, as reported by one of the collectors.

5. Recommendations

5.1 Make legal provision for the reorganization of cooperatives as cottage and small industry:

As mentioned, CUMPCOL being a cooperative is not able to sell *Tejpat* oil to India. In order to do this, any industry must register under the Industrial Act 1997 so that the industry will get letter of origin of the particular product from DoI/FNCCI. There is no legal provision for the cooperative to issue letter of origin of the same. This is the reason why the *Tejpat* oil produced by CUMPCOL through steam distillation process is being stocked. There is a need to have a provision of reorganization of cooperatives as cottage industry. The advance received from one of the traders from India was returned to him by the CUMPCOL, as they could not produce letter of origin of *Tejpat* oil. There is an immediate need to make provision for trade facilitation of essential oil in Nepal through amendment of Cooperative Act 1992. Thus, recognizing the cooperative as an industry, which can run any cottage and small industry and thereby facilitate the sale of any NTFPs produced through such industry, is strongly recommended.

5.2 Abolish conflicting Sectoral and Cross-Sectoral Policies and Laws

Once the above matters are included in the Cooperative Society Act 1992, the conflicting Sectoral and cross Sectoral Policies and Laws should be abolished. As indicated in the previous section, any forest-based industry to be operated at local level should conduct either IEE or EIA based on the quantity of products (5-50 t/year harvest requires IEE and more than 50t/year requires EIA) being harvested from the particular forest. The law or policies remain silent for the product harvested from private lands. This has seriously curtailed in the registration of the cinnamon oil producing company with DoI and DSCI at

Dovan VDC of Palpa district, as this industry required at least 100 t of raw material per year to operate the machine in a sustainable manner (Table 4).

5.3 Avoid double taxation system for the product like Tejpat

DDC, as a main actor to identify and develop industrial area in the district, charges double taxes to the traders for export of *Tejpat* from the district. Such a system should be abolished and a one-window tax system promoted.

5.4 Review of the Royalty System

The current levying of royalty at high rates for some NTFPs such as *Cinnamomum tamala* and *Parmelia nepalensis* has hindered the promotion of the growing of NTFP species, the more so as royalty rates happened to be even higher than the local pricing of these products. This partly explains why villagers sold their NTFPs to road-head traders. They, in turn, sold these products to wholesalers illegally, without paying any royalty to the DFO. Therefore, the royalty system should be reviewed and revised, in line with current market prices. In addition to this, as discussed earlier, Royalty rates of same product vary with different names. For instance, the royalty rate of Chandmoruwa is Rs. 50/Kg and Sarpagandha is Rs. 10/Kg. Both products are same only confusion arises with name. This applies true with Cinnamon products as well. Taking into consideration of these things in mind, there is a need to revise the existing royalty rate of certain NTFPs discussed in the previous section.

5.5 Discontinuation of issuing NTFP collection and export permits to outsiders holding a NTFP processing company certificate

Exclusively local people in their capacity as members of formal groups should obtain permission to engage in activities related to the NTFP economic sector. These activities should include the establishing of an inventory of wild species, monitoring their status, ensuring conservation, setting quotas for harvesting, collecting seedlings for propagating and planting, supervising related practices, enforcing adherence to regulations, and trading in raw and processed materials as well as manufactured goods. Local groups only should be issued collection and trade licenses.

A pernicious loophole in the existing Forest Rule must be closed. The Forest Rule imposes a ban on the exporting of certain NTFP species in a processed form out of the district of origin. Special permission for exporting out of the district of origin may be granted solely to enterprises certified as NTFP processing companies entitled to export / import NTFPs on which the said ban is imposed. This ban has been circumvented, indeed, as neither degree nor form of processing is defined. Taking advantage of the loophole, businesspersons from outside holding a certificate to collect and export the banned NTFPs on behalf of a processing company have connived with DFO staff to obtain the required license. Many such outsiders were found to have obtained licenses issued by the DFO. It is therefore mandatory that the Forest Rule be amended so as to close the loophole and eliminate ambiguity, and that strict control be exerted over the DFO so as to put an end to the said malpractice. In short, outsiders must neither be allowed nor enabled to collect and export NTFPs.

5.6 Registration of the growing of NTFP species in private lands and exemption of domesticated NTFPs from levying royalty

Although there is no legal requirement for farmers to have parcels of private land registered on which to plant NTFP species, many farmers are still hesitant to grow any such

species on their farmlands. The stumbling block has been the royalty system, as it applies equally to NTFPs collected in the wild and grown in private land. Any person or organization seeking registration of a private forest may get this done by the DFO, with explicit reference to the tree species and their numbers. Thereupon, a certificate under Forest Rule 1995 would be issued. Proposed here is an amendment to the effect that such forest registration in private lands cover the growing of NTFP species, all the same, and permit the sale of NTFPs, in the same manner as farmers sell produce from their farmlands like cereals, fruits and vegetables. Strict monitoring by local government agencies or community organizations should be in place to ensure that NTFPs offered for sale were harvested from private farmlands.

5.7 Promote improved marketing system

Basic requirements include information of demand and supply including pricing, formation of groups to strengthen bargaining power in marketing, and specialization in trading for raising of standard and quality assurance.

- **Provision of Market Information:** The provision of information on the pricing of NTFPs at the different points in the market-marketing channel enables sellers to obtain NTFP higher prices. This will substantially increase the profit margins of both local NTFP collectors and producers. So far, they have not been fully aware of the pricing of NTFPs at different market centers. As a consequence, the selling of NTFPs below market prices has been common, at the levels of local collectors, village-based traders and road-head markets alike.
- **Study market feasibility of particular NTFP before implementing any Business Plan:** Based on the business plan for Tejpat processing (Maharjan 2001), CUMPCOL started processing *Tajpat* at Dovan VDC of Palpa District. Because of the policy and institutional constraints coupled with the inadequate buyers of this product, CUMPCOL is not able to sell the product. It is therefore recommended to conduct a feasibility study of the marketing of Cinnamon oil.
- **Facilitate group marketing:** To strengthen the bargaining power of villagers in selling their NTFPs, it is proposed to resort to group marketing as an important element of the enabling strategy. In order to implement this, existing collectors and producers have to be organized into NTFP marketing group. The groups to be established should get federated into one local marketing organization in charge of selling NTFPs in bulk to wholesalers. Alternatively, CUMPCOL could take lead to organize collectors/producers' groups at local level with cost sharing basis. Once the collectors are the members of the CUMPCOL, they would be happy to sell to CUMPCOL. So far, individual collectors and producers had little or no means to negotiate pricing, given the small amounts offered for sale. Either the DFO or some LISP/HELVETAS operating on location ought to be assigned to facilitate this process in an advisory capacity.
- **Promoting product specific trading:** Specialization is considered indispensable for the following reasons. Focusing on any particular commodity most probably entails the adoption of appropriate management practices to safeguard against damage and loss, to raise standards of storing and transporting, to upgrade quality and to facilitate quality assurance and control. In short, emphasis on quality would and should override concern about quantity. This paradigm shift would have direct salutary effects on the

practices in collecting NTFPs and, hence, the management of NTFP resources in forests and farmlands, at large, the sustainable supply of NTFPs, and ultimately more profitable business for specialized NTFP traders as well. It would lead to the discontinuation of trading in virtually all kinds of NTFPs, along with a large assortment of agricultural outputs as well as inputs and household goods. The exceptionally few specialized traders should be officially recognized and rewarded by granting tax privileges, to set an examples for others.

5.8 Promote institutional linkage and co-ordination between agencies working in the promotion of Cinnamon marketing

Legal, policy and institutional linkage and coordination are very important to promote the NTFP based enterprise development activities at all levels. According to the various legal provisions and policy framework of Nepal, different line agencies of the government and other I/NGO, CBO can play an effective role in promoting the NTFP-based enterprise development in the local and national level. The role and responsibility or duty and power of the different agencies and institutions are clearly explicit in the legal framework. But the functional aspect is not satisfactory for the local community, who are interested in establishing a small-scale enterprise. Mostly, the functions of the government agencies are not effective and sufficient to encourage NTFP-based enterprises. Many local communities lack information about the rights stated in state policies and regulatory framework of NTFP related Policies and Laws. The extension program of the procedural aspect of the enterprise development is impotent for the local community. However, the linkages and collaborative efforts are not being made by the concern government agencies and civil society/private sector as expected. In view of these realities, some collaborative arrangement between different agencies involved in NTFP promotion and trade in the country is deemed necessary. For instance DOI, DSCI, District Cooperative Office, Office of Company Register, FNCCI and FECOFUN can jointly provide support to local communities to register NTFP based industry and provide NTFP marketing information to local producers.

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