Analysing the Commercial Viability of Tamarind (The Minor Forest Produce) for the Tribal in Jharkhand

Dr Shanta Rani Kerketta
Associate Professor (Economics)
Lady Irwin College (University of Delhi)
Sikandra Lane, New Delhi-110001

Abstract: Forest plays a very important role in the socioeconomic lives of Tribal. They collect and sell the forest products in local markets and earn their livelihood. The present study is conducted to study the commercial viability of Tamarind production in Jharkhand taking into consideration both primary and secondary data. The four districts of Jharkhand namely Khunti, Chaibasa, Simdega, and Gumla were selected for the study. Primary data has been gathered through field monitoring carried out in different villages in four districts of Jharkhand. Structured interviews, FGDs (Focus Group Discussions), observation and visit to local markets were also done and used as the tools to closely examine the activities involved in studying the commercial viability of Tamarind in the State. Present study entitled "Analysing the commercial viability of Tamarind" was carried out to understand the commercial value of Tamarind production in Jharkhand, and analyse the benefits derived from the government schemes. Jharkhand, despite being one of the largest tamarind producing state, the involved producers gets very less share in whole of the value chain. This is because of lack of knowledge of market, Less support from co-operatives and Van Dhan Vikas Kendras, no/less information about government schemes and more importantly till date there is no fully mechanized production unit to make the finished products out of the minor forest produce namely Tamarind. The middlemen and wholesalers mostly earn by semi-processing it and then exporting to other states namely West Bengal, Andhra Pradesh, Tamil Nadu, Karnataka, Orissa and Delhi.

Keywords: Non-timber forest products, Minor Forest Produce, Minimum Support Price, tribal, Joint Forest Management.

1. Introduction

Of the total population of Jharkhand state, around 75.95% live in the villages of rural areas, 26.34% population of which is tribal. 35 lakhs families are below the poverty line out of the total number of about 69 lakh households. The total net sown area is only 28% of the geographical area of the State due to undulating terrain, whereas the total irrigated area is only 12.77% of the net sown area and the rain is very undependable (Jharkhand 12th Five-year plan). Jharkhand is an important State from the viewpoint of tribal population in India and around 35 types of Scheduled Tribes live in Jharkhand (Minz and Hansda, 2010). The tribal population of Jharkhand is concentrated mainly in Chhotanagpur plateau (Ranchi, Hazaribag, Giridih, Palamau, Dhanbad, Bokaro and Singhbhum districts) and Santhal Parganas. Although Jharkhand is one of the most prolific mineral states in the country, the sector have not been able to recompense tribal people properly. Tribal people are still dependent on a variety of natural resources for sustaining their lives; non-timber forest products (NTFPs) are one of these. Shaanker et al., (2004) estimated that in India alone over 50 million people are dependent on NTFPs for their subsistence and cash livelihoods. These NTFPs contribute about 20 to 40% to the annual income of tribal people who are socially and economically deprived and having very less landholding (Verma and Paul, 2016). Jharkhand is a forest state and based on the interpretation of IRS Resourcesat-2 LISS III satellite data of the period November 2017 to January 2018, the Forest Cover in the State is 23,611.41 sq km which is 29.62% of the State's geographical area. Forest Cover in the State has increased by 58.41 sq km as compared to the previous assessment reported in ISFR (India State of Forest Report) 2017 [FSI (Forest Survey of India), 2019]. These forests have enormous potential of producing NTFP and are capable to make a strong contribution to tribal income. The NTFPs play a central role in the socio-economic, cultural and political systems of tribal societies and the entire lives and livelihoods of these people revolve around forests and forestry (Bedia, 2014). Islam and Quli (2017) reported an average gross annual income was Rs. 27894.20 household-1 annum-1 composed of agriculture (36.24%), NTFPs (17.18%), wage labour (9.75%), livestock (8.86%), business/shopkeeping (8.72%), timber (7.83%), service (6.78%), and others (4.63%). This indicates that the commercialization of NTFPs is one of the main drivers for socio-economic development, poverty reduction and livelihood security of the tribes in Jharkhand. Forest resources are considered as a commodity of high value across the state as most of the locals are dependent for their daily subsistence needs mainly for food and fuelwood. Forests play an important role in the economic, cultural, and social lives and supporting rural livelihoods and food security in Jharkhand (Kumar and Saikia, 2020). The present study is conducted to keep all above facts under consideration and evaluate the commercial viability of Tamarind production in Jharkhand.

2. Materials and Methods

2.1. Study area

The present study is conducted taking both primary and secondary approaches. Primary data has been gathered through field monitoring carried out in different villages in four districts of Jharkhand. The following eight villages from four districts of Jharkhand were taken for sample study.

Table 1 The detailed profile of the eight sample Villages from four districts namely Khunti, Chaibasa, Simdega and Gumla of the state Jharkhand.

Sample Villages Census Parameter	Gulu	Bindra	Bara Jhikpani	Ipilsingi	Ramjori	Kalhatoli	Kondra	Kobja
Total Population	502	1207	1,720	2,127	1698	716	2280	2603
Total No of Houses	99	224	325	437	353	143	455	531
Male Population	240	625	743	1042	829	347	1126	1338
Female Population	262	582	977	1085	869	369	1154	1265
Scheduled Tribes Population	407	1169	1409	1,344	1295	581	1367	1828
Working Population	215	634	740	1216	872	451	1426	1385
Child(0 -6) Population by 2011	100	201	298	403	283	116	364	409
Main Workers	38	362	351	313	602	135	1426	649
Cultivators	9	326	129	252	392	87	297	558
Agricultural Labourer	1	0	125		174	44	43	27
Marginal Workers	178	272	389	903	270	316	1018	736
Marginal Workers(Male)	90	138	148	417	79	109	377	101
Marginal Workers(Female)	88	134	241	485	191	207	641	635

https://www.census2011.co.in/

The primary data was conducted through structured interview with purposive selection of the samples. 115 structured interviews were conducted from four villages from four districts of Jharkhand. Both men and women were interviewed.

Table 2 Interview conducted in eight villages of four district of Jharkhand

Districts	Division	Community/Communities	Location/Village	Interviewed		Total number of respondents
				Men	Women	
KHUNTI	South Chotanagpur division	Munda, Oraon	Binda	8	2	10
			Gulu	13	2	15
CHAIBASA	Singhbhum Kolhan division	Ho	Bara Jhikpani	12	3	15
			Epilsinga	15	5	20
SIMDEGA	South Chotanagpur division	Oraon, Kharia	Ramjori	9	1	10
			Kalhatoli	12	3	15
GUMLA	South Chotanagpur division	Oraon	Kondra	19	1	20
			Kobja	8	2	10
Total Respondents						115

FGDs (Focus Group Discussions), observation and visit to local markets were also done and used as the tools to closely examine the activities involved in studying the commercial viability of Tamarind in the State.

Table 3 Tools adopted for data collection

S. No	Activities involved	Data Collection	Places visit	Total
1.	Personal interviews	Structured Interview	In all eight sample villages from four districts of Jharkhand	115
2.	Focused Group Discussion	Interaction with participants	In all eight sample villages of four districts of Jharkhand	8
3.	Local market visit	Observation / Visit	In all eight sample villages of four districts of Jharkhand	8

2.2. Survey and data collection

Under the present study, data were collected through household surveys, trader surveys, focus group discussions, and collation of secondary information. Structured questionnaires were used to capture the primary information from forest village communities and small traders. The questions were grouped into the following categories i.e. production/collection, processing, storage, value addition, price, transport and sale. The focus of the survey was confined to

(a) Volume collected for sale of Tamarind,

(b) Household income through commercialization of Tamarind and

(d) Major barriers associated with collection/ production, processing/storage and trade of Tamarind. The survey was conducted by visiting each village mentioned in Table 1 & 2. Interviews with a group of collectors (including men and women separately and together) were used for this purpose, along with more participatory research methods such as FGDs. FGDs with selected groups on the basis of purposeful sampling were conducted to obtain maximum information. The samples were selected from the age groups 15-46 and above. These included local youth, village representative, elderly person, men and women.

For the secondary source, the information was available through various literatures like books, journals, periodicals, government data, reports, schemes, notification and consultation with expert organizations and local NGOs..

Besides, the household survey, small traders associated with concerned villages were also contacted for the survey. Market rates and market-chain was further cross-verified through visiting local traditional markets (locally called Hat) nearest to sample villages.

3. DATA INTERPRETATION

The state of Jharkhand is spread over an area of 7.97 million hectares. Around 29% of the Jharkhand's area is under forest covering and 3.4% of the forest cover of India ranks 10th among all states. Jharkhand is also known as the land of the forest. A vast majority of the tribal population live in or near the forest, trying to make both ends meet on a living based on Non- timber Forest products and subsistence agriculture. Since the early 1990s, the role of NTFPs for sustainable forest use and poverty alleviation has received increased attention.

This study Analyses the Commercial Viability of Tamarind (The Minor Forest Produce) in Jharkhand. It specifically focusses to find out the potential financial benefit for the tribal who are involved in collecting and selling of tamarind. Tamarind is a seasonal fruit and it is collected once in a year. The tribals of the sample villages collect and sell it either to the small paikaries (middle men) or directly in the local haat.

Table 4 Annual Seasonal collection of Tamarind

Minor Forest Produce	Collection Season	Collection Days	Selling Rate of raw Tamarind
Tamarind	Feb-March, April-May	31 Days	With seeds 15-20 Rs/Kg

3.1 Field observation

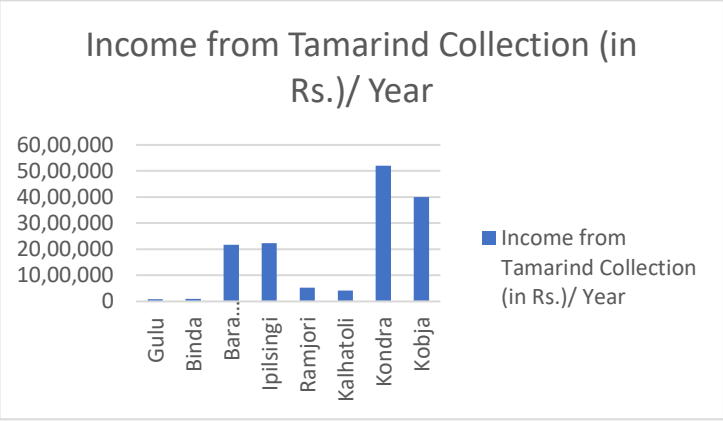
• The table 1 & 2 show the field observation of Tamarind in four districts of Jharkhand

— Khunti, Chaibasa, Simdega and Gumla.

Table 5 Income (in Rs.) generated through potential Tamarind collection in studied villages:

Village	District	Collection for sale (in Quintal)/ Year	Sale Price (in Rs.)/ kg	Income (in Rs.)/ Year
Gulu	Khunti	4.5	20	90,000
Binda	Khunti	4.8	20	96,000
Bara Jhikpani	Chaibasa	145	15	21,75,000
Ipilsingi	Chaibasa	149	15	22,35,000
Ramjori	Simdega	35	15	5,25,000
Kalhatoli	Simdega	28	15	4,20,000
Kondra	Gumla	130	40	52,00,000
Kobja	Gumla	100	40	40,00,000

Fig 1



Unlike other Forest produce it is observed that Tamarind is grown at the household vicinity and not found in the midst of the Jungle. It was observed that the collecting season of Tamarind in the given districts were from February-March and April-May.

• It was found that collection of Tamarind is done by two methods. One is done by the villagers and another is done by the contractors. The villager involved in collection of Tamarind is done by beating the tree to break the Tamarind pods. Generally male members of the collector family climb the tree while others are involved in collection of the fallen pods. Collection takes 1-2 days for a single tree.

• Another method of collection of tamarind is done by the contractors. Almost in all districts, the study shows that the contractor, during the ripening period of Tamarind buy the tamarind tree in contract from the owners. When tamarind is ready, a person employed by the contractor collects tamarind from fields or backyard and directly sells it to the middle-men in Local Haat Bazaar or in Town market.

• After collection of Tamarind, it is stored in jute sack and the collectors wait for haat bazaar day which is held in nearby village and sell it directly there.

The villagers either sell Tamarind directly to the local haat bazar to the middlemen at 15-20 Rs/Kg the village level. The price is gradually increased with the nodes of market chain. (figure 2)

• From the town market, the Tamarind is distributed to different districts and states.

•The practice of selling tamarind is prevalent in all the villages of the districts. The study found that it lacked processing practices of tamarind, like de-seedling of tamarind at primary level. The process of collection, storing, and transporting of tamarind is done on individual basis by the villagers. Therefore, Tamarind is sold to market without value addition.

Fig 2: Market Process of Tamarind

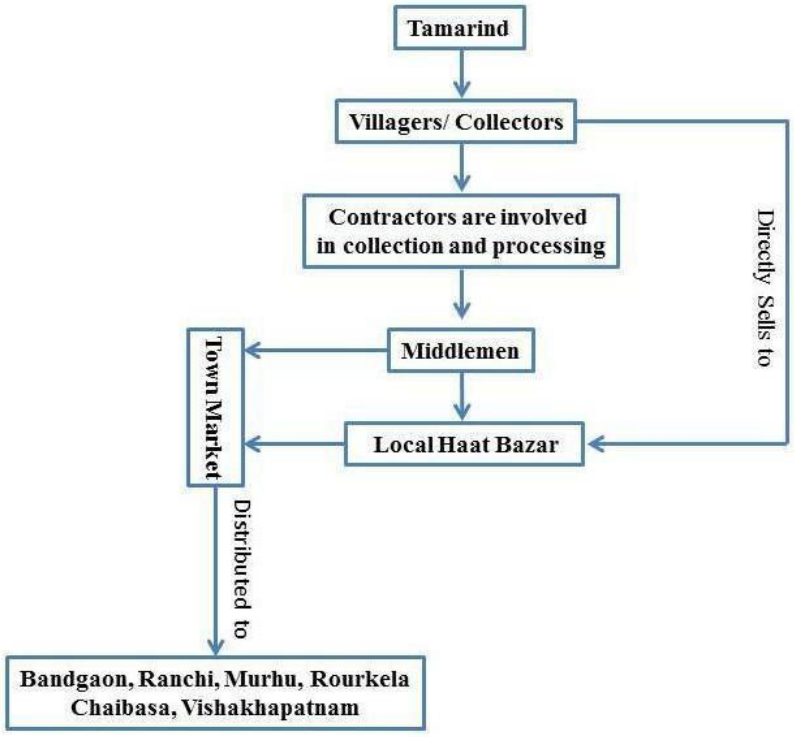


Fig 3: Value Chain of Tamarind

4. Findings and Analysis of Tamarind

Both women and men are equally involved in collection of Tamarind with majority falling within 18-59 year. In some villages, most of the collectors are smallholder farmers and school and college going students.

The major market outlet of villagers for selling of tamarind is the village haat bazar. On the other hand, for contractors and middlemen, the market outlets are both haat bazar and town market.

Prices of tamarind are not fixed and largely influenced by the production of the crop and market trends. The prices are usually decided by big traders. Prices of tamarind also fluctuate with production of vegetables like tomato, people of nearby areas and West Bengal often used tamarind as a substitute of tomato.

In Murhu block, tamarind is collected by the villagers and it is kept in sacks. The contractors comes to collect it and sell to middle-men or wholesalers in market. In Pandra, the local collectors from villages sell tamarind to haat bazar without value addition. In Pandra, the producers who are affiliated with Abussal Group (local NGO) get the update of the market price of Tamarind, which helps them to sell it in local haat bazar.

Only in Khunti value addition of tamarind is found. A couple living in Siladon (VDVK) in Khunti district is working on finished product of tamarind. The seed is removed from the tamarind and pulp is made through the help of machine. Then cakes are made and are further exported to different states in India or alternatively sold to TRIFED . Whereas, in other districts the de-seedling process is done by the people manually by beating with a sticks and sold through village traders or in local markets. No machine to remove tamarind seed is found in rest of the districts. Almost all the produce from the districts are exported outside without any value addition which naturally fetches less remuneration to the producers than they could have otherwise got through value addition. There is no formal processing of tamarind present in the districts. Tamarind moves out to other States and gets the processing and value addition done there. During the interview it was also observed that the government mechanism are hand in glove with cold storage owners that even after agreement being signed between the group of villagers in Chaibasa district, yet the whole consignment of truck is refused to be taken on the plea that there is no place in the cold storage. The villagers also suffer the price loss on account of rain slashing down on the tamarind during the transport process.

Jharkhand, despite being one of the largest tamarind producing state, the involved collectors gets very less share in whole of the value chain. The middlemen and wholesalers mostly earn by processing it and then exporting to other states.

In recent days, commercialisation and the Market Development approach is getting very much interest. This approach is particularly suited to provide enterprise opportunities to rural masses, remote regions, and to the people involved in a particular sector or sub sector where the market knowledge is not developed. Whole commercial viability is analysed for the region in order to make it an effective approach. The collectors, processors, traders are an important part of commercialisation process. There is no mechanised

automated factory in the state of Jharkhand to ensure the value addition of the Tamarind. As a result the villagers expressed that they really find difficulty in selling or marketing the huge collection of tamarind. Schemes for ensuring fair prices to MFPs gatherers, Mechanism for Marketing of Minor Forest Produce (MFP) through Minimum Support Price (MSP) and Development of Value Chain for MFP was introduced in 2013. The schemes ensure sustainability of resource base by addressing the problems like perishable nature of the produce, lack of holding capacity, lack of marketing infrastructure, exploitation by middlemen, etc. Hence, entrepreneurship skills to forest produce gatherers have been provided under the Pradhan Mantri Van Dhan Yojana (PMVDY) in 2018. The Van Dhan Vikas Yojana is an initiative of the Ministry of Tribal Affairs and TRIFED. It was launched to improve tribal incomes through value addition of tribal products. TRIFOOD Scheme was also launched by the Ministry of Food Processing Industry, Ministry of Tribal Affairs and TRIFED and it promotes value addition to MFP. To ensure that existing schemes and initiatives reach the tribals, TRIFED's regional officials across the country village and digital connect initiative has been taken. On this occasion, agricultural minister announced to connect more mandis online. Two crops – Mahua and Tamarind from Jharkhand have been listed in the e-mandi among 25 crops. However during the field visit and survey it was found that these initiatives are not percolating down to the tribals living on the edge of poverty.

Jharkhand is one of the largest exporters of Tamarind. Various uses of tamarind like making pickle, candies and medicines are known to the villagers. However, when asked about the factors that were holding back the growth of the tamarind industry and value addition in different districts, the three most common factors mentioned were: lack of market information and marketing of Tamarind , lack of awareness by relevant government institutions about the potential of the tamarind, and lack of recommended silvi cultural practices. All the interviewed collectors of tamarind were involved in a very basic, primary level of processing of tamarind and none of them have ever received any training/extension/advice by any entity either governmental or private except in Siladon, in Khunti district. A lack of proper processing skills to meet the required standards is found to be the biggest problem facing the industry. In order to increase the fair share of producers and collectors in Jharkhand it is imperative to start processing of tamarind in the state through community institutions. Added to this the misery of villagers keep on mounting on account of high handedness of the middleman and lack of ethical support from / fair price support from the Government officials.

In case of Tamarind, the villagers keep about 20-25 percent of their product for home consumption and the remaining quantity is sold in the local market. About 65 percent of Tamarind is sold to small scale collectors known as middlemen. The middlemen sell it to district level wholesalers or commission agents in high price.

Most of the small-scale collectors are permanent residents of collection areas. Around 10-25 small scale collectors from each village are involved in collection as Baniyas or middlemen. Of the total amount they collect, about 95 percent is sold to district level large traders and the remaining 5% is sold to large exporters. There are about 5-15 large scale collectors who sell the majority of their volume to large exporters while a very small amount (about 5 percent) to wholesalers.

Collectors are primarily involved in collection, drying, and storage. There are also 3-5 commission agents in each district who collect both the Tamarind from producers and sell directly to large exporters. Exporters/processors use commission agents for collection whenever there is price fluctuation in the market so that they can bargain with large collectors during the lentil procurement process.

The processing factories fulfil various functions such as washing, storing, cleaning, drying grading, sorting, de- seeding Tamarind. However, none have a proper value addition system for Tamarind. It is surprising to see that there are no processing factory of tamarind in the state of Jharkhand.

Wholesalers buy the processed Tamarind from local haat bazar and sell it to retailers within and export outside the respective districts. They are stationed in large markets including Khunti, Gumla, Simdega, Ranchi. Tamarind from Jharkhand is exported to West Bengal, Odisha, Andhra Pradesh, Tamil Nadu and Delhi.

Retailers buy packaged and processed Tamarind from wholesalers and processors/exporters and sell it to the final consumers. The functions of retailers are weighing and retailing to consumers.

Government of Jharkhand has introduced a two-tier cooperative structure, the Minor Forest Produce Co-operative Development and Marketing Federation Limited known as JHAMFCOFED' for Procurement, Processing, Marketing and Value addition of MFPs. The object of the federation is to promote MFP industries on a cooperative basis. Thus, it reveals that Jharkhand is sitting amidst a mine of gold. The only problem is that it has not yet realized its value. The value addition if done to Tamarind, it can give a huge income for Tamarind collectors.

The activities involved in low participation of value chain of four districts are as follows:

Lack of Market knowledge

About 75% of the farmers sell their produce at the farm level to the village merchants, retailers, big producers or to the pre harvest contractors. They cannot afford to transport their produce to distant markets on account of the non-availability of transport facilities, expensive transport, mal practices in the market. Information regarding demand, supply, price, market outlook, knowledge of the consumer's preference, marketing channels are important for marketing of produce.

Less support from co-operatives and VDVK

The study found that despite impressive development and government attention, the MFPs sector continues to rely on uncontrollable variables, resulting in huge gap of production and distribution income. Field study reveals that Tamarind collectors are getting only Rs 15-20 a kg. One of the major reasons for this is that they sell their Tamarind through middlemen and only he earns the profit and provide a little amount of money to the villagers. This is the reason villagers are also engaged in agricultural practices. Another reason for their involvement in agriculture is that Tamarind only grows during the January to March and rest of the season they have to depend on agriculture only.

LAMPS/PACS have been formed at the panchayat level. LAMPS/PACS have to provide fertilizers, seeds, insecticides, and other agro products. Due to lack of working capital in the LAMPS/PACS, there are a lot of difficulties in execution of above works. It is absolutely necessary to provide working capital and infrastructure and logistic support to the LAMPS/PACS.

Lack of government Market support

The field study found that the government market is yet to establish in four districts. The collectors sell Tamarind to the middlemen in the Local Market as there is no government established market, this is one of the reasons the villagers earn less as there is no fixed price of Tamarind in that local markets. Therefore, huge variation of price is found for the same product in different districts. Also, there is no private or government established agency in the remote village to collect their Tamarind at the Minimum Support Price.

Lack of awareness about scheme/ Lack of display of the price board at market/ less scheme promotion/ lack of knowledge:

It has been observed that the scheme of MSP for Tamarind has not reached among the tribal gatherers on a large scale and is limited to few areas of the district. The implementation unit in the district has failed to spread the awareness amongst the gatherers or accommodating more gatherers under the scheme. The only thing that is happening under the scheme is that –few gatherers are just informed about the price of the produce. The factor that is affecting them to collect and do value addition of Tamarind is lack of knowledge and financial assistance. 72% of them think its money and the remaining 28% think it is knowledge. Even the panchayat representative are not coming forward to help them.

5. CONCLUSION AND RECOMMENDATIONS

The study concludes that production of Tamarind plays a vital role in rural life traditionally, economically and socially. One thing we must understand is that MFP in comparison to horticulture is a ready- made gift of Nature. Whereas in horticulture, fruits and vegetables have to be grown and nurtured manually, MFP grows by itself. We only need to add value to it through processing to take commercial advantage. For this to happen, bodies at the grassroots level like Joint Forest Management committees need to be empowered and legislation needs to be made a little pro-tribal. In this research study, the following suggestions have been provided under the following categories:

1. The youth cooperative groups who are trying to organize and start the initiatives should be helped with the constant visit of the Government officials so that they are able to find the best available markets for the collection and storage made by them during the season.
2. Funds should be provided to the village panchayats for the MFPs production. So that they can support villagers. And value addition should be flagged as an economic issue of the state.
3. Under governmental scheme, equipment should be provided to the village cooperatives in subsidized rate for doing value addition for deseeding, pulp making and packaging.
4. Government should establish markets in the villages and purchase MFPs with the proposed MSP. So that villagers or collectors receive adequate amount for their MFPs.
5. Government banks should be established in the villages and proper counseling must be provided to the village people on how to use the services of banks.
6. Villagers must be provided with the facility of public transport so that they can carry their products easily.
7. There should be fair practice policy followed by the Government officials who should literally support the villagers post the agreement signed that they in any case will pick their produce and not reject it on account of flimsy ground such as no cold storage, tamarind is wet etc.
8. The government should encourage direct marketing between villagers and Lamps so that there is no involvement of middleman.
9. Training should be provided to the Tamarind collectors to do value addition in Tamarind produce like making of tamarind pulp, toffees, juice concentrate, pulp powder, pickle and jam.

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