

**RESEARCH ARTICLE :**

# Adoption of technologies in non-wood forest products (NWFPs) among tribal women in Coimbatore district

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**SUMMARY :** Non-wood forest products (NWFPs) play a key role in the life and economy of communities living in and around forests. NWFPs have a tremendous potential to create large scale employment opportunity thereby helping in reducing poverty and increasing empowerment of particularly tribal. Tribes depend upon forests for their existence in several ways. Their degree of dependence varies with several factors including socio-economic conditions, distribution, cultural and religious norms, literacy etc., The people, mainly tribals living within or in the margin of forest areas collect non-timber forest products in their daily life. The primitive tribes, who are living inside dense forests are very poor and depend entirely on forests for meeting most of their needs. The present study tries to explore the importance of NWFPs on livelihood of the tribal people. Continuous field survey and interview were done with a structured questionnaire for data collection. In this paper involvement of tribal people in non-wood forest product (NWFPs) activities in Coimbatore district is presented. A sample size of 150 respondents was selected for the study.

**KEY WORDS :**

Tribal, Forest,

Non-wood forest products

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## BACKGROUND AND OBJECTIVES

The different tribal communities fully depend primarily on the minor forest products (MFPs) or non-wood forest products (NWFPs) for their subsistence, while the forest based industries depend on the commercially valuable wood. India is a developing country where millions of people are still living at the forest fringe areas and depend on forest products for their livelihoods (Ghosal, 2011). Tamil Nadu is rich forest

resources and it plays vital role in NWFPs contribution. Also Tamil Nadu comprises of 1300 village forest council which encourage the tribal's in non-wood forest products activities and involve in formation of tribal self-help groups (SHGs) which actively participate in collection and marketing activities of NWFPs. In the light of the above, there exists enormous scope for harnessing the potential of NWFPs by the tribal women population by training them on collection, storage, processing, value –addition and marketing of NWFPs.

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Table A : Selection of districts / taluks/ forest range/villages / respondents					
District	Taluk	Block /Forest Range	No. of villages	No. of SHGs (25 members /group)	Total of respondents
Coimbatore	Mettuplayam	P N Palyam, Karamadi	Senguttai, Paatusolai	2 ( 1 SHG/ village)	150
	Thondamuthur	Boolvampatty, Madukarai	Sadivayal, Potlapathi	2 ( 1 SHG/ village)	
	Pollachi	Valparai, Anamalai	Attakatty, Kadamparai	2 ( 1 SHG/ village)	

Non-timber forest products like fuel wood, grass, fodder, food, medicinal herbs and house building materials are very important contributors to the well being or livelihood of villagers (Basu, 2009; Sarmah, 2006 and Shit and Pati, 2012). Major non wood forest products are available in Tamil Nadu are tamarind, amla, cashew nut, soap nut, aromatic plants, medicinal plants, mango, *Neem*, kadukkai, pepper, illuppai, nutmeg, silk cotton, honey, bees wax, shikakai, ecam leaves etc., There are many industries like mango, cashew and amla processing units are increasing rapidly in Tamil Nadu and the demand for the products also rising. Now days the value added products like amla candy, amla pickle, honey amla, fetch higher price in the market. The trainings and demonstrations on value addition of non-wood forest products was conducted at Thondamuthur and Mettupalyam blocks of Coimbatore district. Then their adoption level in each technology was studied as one of the objective among the tribal self-help group. Keeping in view the importance of non-wood forest products, the present study was carried out among the Irulas and Kurumbas tribes of Coimbatore district.

## RESOURCES AND METHODS

Tamil Nadu has 6, 51,321 tribal population which constitutes 1.02 per cent of the total population. Out of the 36 scheduled tribe communities in the state, 6 Tribal Communities *i.e.* Toda, Kota, Kurumbas, Irulur, Paniyan and Kattunayakan have been identified as primitive tribes. In Tamil Nadu, Nilgiris, Vellore, Coimbatore, Erode, Salem, Tiruvanamalai and Namakkal are rich in forest resources. But, more involvement of tribal people in non-wood forest product (NWFPs) activities is reported in Coimbatore, Erode and Nilgiris districts. Hence, the districts of Coimbatore, Nilgiris and Erode have been selected for the study. In this paper involvement of tribal people in non-wood forest product (NWFPs) activities in Coimbatore district is presented. There are 12 blocks in Coimbatore district. A sample size of 150 respondents was selected. Respondents were selected by random

sampling method. The information to study the objective was collected by using the well-structured interview schedule. A pilot study was conducted in the non-sample area to pretest the schedule in order to test and verify the applicability of the schedule. Percentage analysis was used for making simple comparison for calculating percentages for different items in their adoption behaviour. The selection of respondents is presented in Table A.

## OBSERVATIONS AND ANALYSIS

From the Table 1, it could be inferred that, cent per cent of the tribal women had adopted the usage of gunny bags for collecting dry fruits, limited sun drying, hand picking of fruits and collecting in gunny bags with respect to Shikkakai, Arappu and Sundakkai, respectively due to their participation in the training programme.

### Adoption level of technologies in NWFPs:

The crop wise adoption level has been discussed below.

#### Shikkakai:

From Table 1, it could be inferred that cent per cent of the tribal women had adopted the usage of gunny bags for collecting dry fruits, followed by collection of dry fruits based on the metallic sound of the fruits (73.30%).

#### Amla:

With respect to amla, the tribal women had adopted the usage of gunny bags and hygienic polythene bags to collect berries (87.00%) followed by harvesting fruits based on size and colour (80.00%).

#### Tamarind:

In tamarind, the tribal women had adopted the technology of periodical harvesting based on physiological maturity of fruits for getting the equal yield in all harvest (87.00%) followed by harvesting fruits based on ripening, uniformity in size and colour (80.00%).

**Honey:**

With respect to honey, 33.30 per cent of the tribal women had adopted the technology of collecting the honey without mixing pollen and bee debris which leads to high keeping quality and the technique of heating honey to kill yeast to get clean honey (33.00%).

**Arappu:**

Further, cent per cent of the tribal women had adopted the technology of limited sun drying.

**Sundakkai:**

Cent per cent of the tribal women had adopted the technology of handpicking of fruits and collecting in gunny bags.

**Conclusion:**







From this study we can conclude that non-wood forest products have played the most important role in tribal livelihoods and in fulfilling people's daily needs, especially of food and medicine. NWFPs are a significance source of subsistence production, income and employment to tribal people in and around forests.

NWFPs are of paramount importance to the livelihood of tribals as it provides an alternate source of food to the forest dwellers as agriculture is gradually ceasing to be reliable. However, NWFPs have failed to provide constant and consistent income to the tribal people *i.e.* primary collectors due to reasons like unpredictability of market, unscrupulous middlemen and poverty of the primary collectors, thereby minimizing their bargaining power.

Most of the NWFPs currently provide employment during part of the year, because the processing sector of NWFPs is still poorly developed. Improved labour intensive technologies for processing NWFPs would increase the employment opportunities for longer periods of the year and ensure higher prices for the products. Most of the NWFPs are collected in a particular season although they are utilized all the year round, which highlights the need for proper storage methods.

Therefore, there is tremendous scope to strengthen the NWFPs sector by means of training the tribal people regularly on aspects related to proper collection methods, storage, processing, value addition techniques and marketing of NWFPs.

**Table 1 : Adoption level of technologies in NWFPs in Coimbatore district**

Sr. No.	NWFPs	Technologies	(n=150)	
			Adoption level	
			No.	%
1.		Dry fruits should be collected based on the metallic sound of fruits	110	73.33
		Using gunny bags for collecting dry fruits.	150	100.00
		Demonstration on powder making	90	60.00
2.		The berries should be harvested based on the size and colour	120	80.00
		Gunny bags and hygienic polythene bags to collect berries	130	87.00
		Gunny bags and hygienic polythene bags to collect berries	10	6.67
3.		Periodical harvesting should be done based physiological maturity of the fruits for getting the equal yield in all harvest	130	87.00
		Alternate branch harvesting should be done to get the yield -sustainable harvesting	100	67.70
		Demonstration on preparation of tamarind rice mix	100	67.70
4.		Collecting honey without mixing pollen and bee debris leads to high keeping quality	50	33.33
		After collecting, heating is to be made to kill yeast cells to get clean honey	50	33.33
5.		Limited sun drying	150	100
6.		Hand picking of fruits and collecting in gunny bags	150	100

Moreover, different NWFPs are currently gaining more and more importance in the market, which may increase income opportunities for tribal people in the future. As we know there are some physical barriers for agricultural production in forest areas, a systematic way of harvesting of NWFPs and introduction of modern technologies may bring more improvement in the uses of NWFPs and thus, NWFPs may become potential sources of income for tribal people. At the same time it will be possible to conserve the natural forest and environment. At a stand level, increasing the incomes through the sales of harvested NWFPs is a rational option for forest owners (Tahvanainen *et al.*, 2018).

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