

Original Research Article

Economic Impact of Mahua (*Madhuca spp.*) on Tribal Livelihood and It's Marketing In Chhattisgarh State

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ABSTRACT

The present paper attempts to examine the collection, consumption, selling, income and employment and also disposal pattern of Mahua by forest dwelling tribes in Chhattisgarh. The sample of 240 respondents was selected through multistage sampling technique from state. The study revealed that on an average 320.75 Kg. Mahua flower and 94.55 Kg. of Mahua seed were collected in Chhattisgarh. The disposable pattern of Mahua in state was showed that overall 289.56 kg. of Mahua flower and Mahua seed 91.35 kg. were sold. For marketing of Mahua flower 2 marketing channels i.e. collector – consumer and collector – village merchant – wholesalers – consumer were observed and for mahua seed 3 marketing channels i.e. collector – consumer, and collector – village merchant – wholesalers – consumer, and collector – village merchant – wholesalers – CGMFPMFED – consumer were observed.

Keywords

NTFPs,
Economics,
livelihood,
marketing, Mahua
and Tribes

Introduction

NTFPs are considered to be important for sustaining rural livelihoods, reducing rural poverty, biodiversity conservation, and facilitating rural economic growth (Global NTFP partnership, 2005). An estimated 80 % of the population of the developing world uses NWFP (Non- Wood Forest Products) to meet some of their health and nutritional needs (FAO, 2008). NTFPs (also called as “minor forest products” in national income accounting system) are sources of food and livelihood security for communities living in and around forests. They are also known as Nonwood, minor, secondary, special or specialty forest products (Shiva, 1993). At global level, more than two billion people are dwelling in forest, depending on NTFPs

for subsistence, income and livelihood security (Vantomme, 2003) it is an important source of income for the poor in many developing countries. In addition, several opportunities for improved rural development are linked to NTFP.

The collection of NTFPs by tribals was primarily for meeting their subsistence needs. Over time, these NTFPs acquired commercial value resulting from huge trade transactions and income levels due to rising demand. Trade in NTFPs can act as an incentive for forest conservation by providing a source of income from resources that might otherwise appear to have little financial value. Chhattisgarh is third largest

state of India in terms of forest cover which is 5.6 million hectares which is 46.39% of state and 8.06% of the country. Madhya Pradesh and Arunachal Pradesh being at first and second in terms of forest cover (Forest Census, 2011). Out of the total population of Chhattisgarh, tribals constitute about 32.5% mostly live in dense forested areas in Sarguja and Bastar (Census, 2011) and are known for their unique lifestyle, rituals, traditions and superstitions.

Mahua also known as Mowra Butter tree (*Madhuca Spp*) is found in mixed deciduous forests of Central India, Maharashtra, Andhra Pradesh, Madhya Pradesh and Chhattisgarh. It is also planted in the plains of northern India and Deccan Peninsula. It is one of the most valued trees among tribal communities of central India and its every part is used for various purposes. The succulent cream-coloured corollas when fall on the ground during March and April are collected and dried. These are a rich source of sugars and contain appreciable amounts of vitamins and calcium. The importance of this Non Timber Forest Products (NTFPs) contributing to rural livelihoods and alleviating rural poverty is well known in Chhattisgarh. Therefore, this study was undertaken in Chhattisgarh with the objective of finding out the economic impact of Mahua and its marketing pattern on forest dwelling tribes.

Materials and Methods

The recorded forest area in the Chhattisgarh is 56.772 km² with is 44.21 percent of total geographical area. The Study will be conducted in all 3 agro-climatic zones of Chhattisgarh. Chhattisgarh is having 27 districts, for the study one district from each agro climatic zone viz. Dantewada, Sarguja and Rajnandgaon are selected on the basis of forest cover and presence of tribal

communities. The two blocks will be selected randomly from each district. Thereafter two villages from each block will be selected randomly. Finally twenty respondents (tribal NTFPs collectors) were selected randomly from each of the selected villages. Thus 240 respondents were selected from the selected state.

Method of Enquiry and Data Collection

Primary data from the selected NTFP collectors will be collected through well prepared and tested schedule. The data includes cost of different operations and manpower and time involved in collection, marketing and primary processing of different NTFPs at farm level and also financial help provided by the state government and forest department. The data were collected from selected tribal forest dwellers by personal interview method. The analysis of collected data was carried out by using mathematical and statistical tools like summation, percentages, averages, means etc.

Results and Discussion

Mahua average collection, consumption, selling, income and employment of selected households in Chhattisgarh

It can be seen from Table 1 that on an average 320.75 Kg Mahua flower and 94.55 kg. Mahua seed were collected by the selected tribal households. It also revealed that out of the total 31.19 kg. mahua flower and 3.19 kg. mahua seed were consumed by households. And rest of the quantity i.e. 289.56 kg. Mahua flower and 91.35 kg. mahua seed were sold in the market at the rate of Rs 17.34 and Rs. 21.19 per kg. respectively. And income generated by selling were Rs. 4973.95 for Mahua flower and Rs. 1937.26 for mahua seed. Table 1

also showed that Mahua flower provides 5.98 hours of active work in day and 22 days of employment to tribes, whereas Mahua seed provides 4.47 hours of active work in day and 12 days of employment.

Bhattacharya and Patra (2004) examined consumption pattern of 38 Non-Wood Forest Products. This study indicated that villagers consumed sufficient quantities of the total NWFP, 76 per cent consumed by them as food whereas 24 per cent are sold for income generation. Kumar, Y. *et al.*, (2017) also reported in their study mahua flower and mahua seed were sold at Rs. 40-50 and Rs. 10-15 per kg. respectively. Singh and Shah (2004), Sinha (2008) and Johnson *et al.*, (2013) were also coated similar kind of results in their studies.

Disposable pattern of Mahua by sampled households in Chhattisgarh

The disposable pattern of Mahua flower and mahua seed in Chhattisgarh was presented in Table 2 which shows that overall 289.56 kg. of Mahua flower was sold by selected households.

In which 220.79 kg. (76.25 per cent) was sold to village merchant followed by 68.88 kg. (23.79 per cent) sold directly to the consumers. While out of 91.35 kg. of Mahua seed 37.13 kg. (40.64 per cent) was sold to village merchant followed by 33.30 kg. (36.45 per cent) quantity sold to Minor Forest Produce Society and 20.92 kg. (22.90 per cent) sold directly to the consumers.

Muthyalu (2008) conducted the study on Collection and Marketing Practices of Non-Timber Forest Produce in Adilabad district of Andhra Pradesh. He found that the NTFPs collectors sell 89 per cent of their produce like Tendu leaves, Gums etc. to the forest department and rest they sell directly

to the ultimate consumer or to the processor. Similar kinds of results were also observed in study of Sinha (2008) and Acharya (2013).

Marketing cost and price spread of Mahua flower in Chhattisgarh

It was clearly revealed from Table 3 that the marketing charges paid by the collectors in the marketing of Mahua flower was Rs. 75.02 per quintal in Channel – I, and the marketing charges paid by the collectors, village level retailers and wholesalers was observed Rs. 157.67, Rs. 65.88 and Rs. 79.32 per quintal respectively in channel - II.

The price spread analysis of Mahua flower was also presented in the Table 3. It can be seen from the table 4.13 that the net price received by the collectors was highest being 95.67 per cent in channel – I followed by 57.76 per cent in channel – II. The net margin for village retailer and wholesaler was at 13.35 and 19.10 per cent respectively along with 9.79 per cent marketing charges in channel – II. The marketing charges was 4.32 per cent in channel - I.

Marketing cost and price spread of Mahua seed in Chhattisgarh

Table 4 revealed that the marketing charges paid by the collectors in the marketing of Mahua seed was Rs. 72.80 per quintal in Channel – I, the marketing charges paid by the collectors, village level retailers and wholesalers was observed Rs. 107.50, Rs. 75.88 and Rs. 82.38 per quintal respectively in channel – II and in channel – III the marketing charges paid by the collector was highest Rs. 125.10 as compared to other channels as it requires good amount of processing. The marketing Charges paid by CGMFPFED were Rs. 350.50.

Table.1 Mahua average collection, consumption, selling, income and employment of selected households in Chhattisgarh

S. No.	Name of NTFPs	Quantity collected (Kg.)	Quantity consumed (Kg.)	Quantity sold (Kg.)	Selling price (Rs. / Kg.)	Income generated (Rs.)	Employment days	Active hours of work / day
1.	Mahua Flower	320.75	31.19	289.56	17.34	4973.95	22.00	5.98
2.	Mahua Seed	94.55	3.19	91.35	21.19	1937.26	12.00	4.47

Table.2 Overall disposal pattern of Mahua by sample households in Chhattisgarh

S. No.	Name of NTFPs	Quantity of NTFPs traded (Kg.)	Disposal pattern of NTFPs (%)		
			Consumers	Village Merchant	Minor Forest Produce Society
1.	Mahua Flower	289.56 (100)	68.88 (23.79)	220.79 (76.25)	0.00 (0.00)
2.	Mahua Seed (Stone)	91.35 (100)	20.92 (22.90)	37.13 (40.64)	33.30 (36.45)

Table.3 Price spread of Mahua flower under different marketing channels (Rs./Q)

S. No	Particulars	Charges (Rs. / qt.)	Channel- I	Channel – II
A.	Collectors			
	Price received by collector		1734.70	1944.31
	Processing cost		52.04	133
	Transportation charges		18.46	20.32
	Loading / unloading charges		4.52	4.35
	Sub-total (marketing cost)		75.02	157.67
	Net price received by collector		1659.68 (95.67)	1786.64 (57.76)
B.	Village Level Merchant (Kochia)			
	Transportation charges	16.00		16.00
	Loading / unloading charges	3.50		3.50
	Physical losses	1 % of the total value		19.44
	Weighing and packing charges	7.50		7.50
	Miscellaneous charges	1 % of the total value		19.44
	Sub-total (marketing cost)			65.88
	Price paid by village merchant			1944.31
	Price received by village merchant			2423.04
	Net margin of village merchant			412.85 (13.35)
C.	Wholesaler			
	Transportation charges	16.00		16.00
	Loading / unloading charges	5.00		5.00
	Physical losses	1.5 % of the total value		26.16
	Weighing and packing charges	9.00		9.00
	Miscellaneous charges	1.5 % of the total value		26.16
	Sub-total (marketing cost)			79.32
	Price paid by wholesaler			2423.04
	Price received by wholesaler			3093.12
	Net margin of wholesaler			590.76 (19.10)
	Total marketing cost		75.02 (4.32)	302.87 (9.79)
	Ultimate Consumer Price		1734.70 (100.00)	3093.12 (100.00)

Table.4 Price spread of Mahua seed under different marketing channels (Rs. / Q)

S. No.	Particulars	Charges (Rs. / qt.)	Channel I	Channel II	Channel III
A.	Collectors				
	Price received by collector		2313.35	2119.17	2200
	Processing cost		52.80	88.00	105.60
	Transportation charges		16.00	16.00	16.00
	Loading / unloading charges		4.00	3.50	3.50
	Sub-total (marketing cost)		72.80	107.50	125.10
	Net price received by collector		2240.55 (96.85)	2011.67 (72.61)	2074.90 (69.25)
B.	Village Level Merchant (Kochia)				
	Transportation charges	20.00		20.00	
	Loading / unloading charges	4.50		4.50	
	Miscellaneous charges	2 % of total value		42.38	
	Weighing and packing charges	9.00		9.00	
	Sub-total (marketing cost)			75.88	
	Price paid by village merchant			2119.17	
	Price received by village merchant			2369.17	
	Net margin of village merchant			174.12 (6.29)	
C.	Wholesaler				
	Transportation charges	20.00		20.00	
	Loading / unloading charges	5.00		5.00	
	Miscellaneous charges	2 % of total value		47.38	
	Weighing and packing charges	10.00		10.00	
	Sub-total (marketing cost)			82.38	
	Price paid by wholesaler			2369.17	
	Price received by wholesaler			2769.72	
	Net margin of wholesaler			318.17 (11.48)	
D.	CGMFPMFED				
	Payment of commission agent				220
	Transportation charges				25.00
	Loading / unloading charges				5.50
	Storage charges				100
	Sub-total (marketing cost)				350.50
	Price paid by CGMFPMFED				2200
	Price received by CGMFPMFED				2996.17
	Net margin of CGMFPMFED				445.67 (14.87)
	Total marketing cost		72.80 (3.15)	265.76 (9.59)	495.60 (16.54)
	Ultimate Consumer Price		2313.35 (100.00)	2769.72 (100.00)	2996.17 (100.00)

The price spread analysis of Mahua seed was also presented in the table 4.14. It can be seen from the table 4.14 that the net price received by the collectors was highest being 96.85 per cent in channel – I followed by 72.61 and 69.25 per cent in channel – II and channel – III respectively. The net margin for village retailer and wholesaler was at 6.29 and 11.48 per cent respectively along with 9.59 per cent marketing charges in channel – II. The net margin for CGMFPEFED was observed 14.87 per cent after the payment of commission agent along with 16.57 per cent marketing charges in channel – III. The marketing charges was 3.15 per cent in channel - I.

In conclusion, the study shows that farmers are not cultivating the Mahua but making profit out of it by collecting them and selling into the market either directly to the consumers or through the mediators at different levels. The state Government also plays a key role in enhancing their profit by procuring most of the NTFPs either through commission agents or through primary minor forest produce society at village level. Results of such studies will further strengthen the case for or against NTFPs collection as a mechanism for alleviating poverty and supporting wildlife conservation. The present research and enquiry would be greater significant to the policy makers. Further, economists may develop new policies on the marketing of non-timber forest products (NTFPs) so that the profitability share (producers share in consumer rupee) should be increased

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