MARKETING ANALYSIS OF MINOR FOREST PRODUCT CHAROLI (*Buchanaria lanzan*) AND GUM IN DHANORA TAHSIL OF GADCHIROLI DISTRICT

THESIS

Submitted to
Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola
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DECLARATION OF STUDENT

I hereby declare that the experimental work and its interpretation of the thesis entitled **" MARKETING ANALYSIS OF MINOR FOREST PRODUCT CHAROLI (*Buchanaria lanzan*) AND GUM IN DHANORA TAHSIL OF GADCHIROLI DISTRICT"** or part thereof has neither been submitted for any other degree or diploma of any University, nor the data have been derived from any thesis / publication of any University or Scientific Organization. The source of materials used and all assistance received during the course of investigation have been duly acknowledged.

Place: Akola. **(Kankate Jayshri Rajendra)**

Date : 14 / 06 /2018 Enrolment No. KK/673

CERTIFICATE

This is to certify that the thesis entitled **"MARKETING ANALYSIS OF MINOR FOREST PRODUCT CHAROLI (*Buchanaria lanzan*) AND GUM IN DHANORA TAHSIL OF GADCHIROLI DISTRICT"** submitted in partial fulfillment of the requirement for the degree of **"Master of Science in Agriculture (Agricultural Economics)"** of Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola is a record of bonafide research work carried out by **KANKATE JAYSHRI RAJENDRA** under my guidance and supervision.

The subject of thesis has been approved by the Student's Advisory Committee.

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THESIS APPROVED BY THE STUDENT'S ADVISORY COMMITTEE INCLUDING EXTERNAL EXAMINER (AFTER VIVA–VOCE)

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Place: Akola. **(Jayshri Kankate)**

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(D) Abbreviations

%	-	Per cent
°C	-	Degree centigrade (Celsius)
/	-	Per
Agril.	-	Agricultural
Dr. PDKV	-	Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola
e.g.	-	Exampli gratia (For example)
et al.	-	Et alia (and others)
etc.	-	Et cetra
Fig.	-	Figure
Ha	-	Hector
i.e.	-	That is
Kg.	-	Kilogram
Mm	-	Mlli meter
Mha	-	Million hectare
No.	-	Number (s)
MFP	-	Minor forest product
NTFP	-	Non timber forest produce
qtl.	-	Quintal
Qty.	-	Quantity
Rs.	-	Rupees
Sq. Km	-	Square kilometre
Sr. No.	-	Serial number
SHG	-	Self help group
Viz.,	-	Videlicet (namely)

(E) THESIS ABSTRACT

a)	**Title of the thesis**	**:**	**"MARKETING ANALYSIS OF MINOR FOREST PRODUCT CHAROLI (*Buchanaria lanzan*) AND GUM IN DHANORA TAHSIL OF GADCHIROLI DISTRICT"**
b)	**Name of student**	**:**	**KANKATE JAYSHRI RAJENDRA**
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ABSTRACT

Minor forest products technically defined as all vegetables and animals product other than firewood and timber obtained from the forest. These products are being used as old as human existence. In subsistence and rural economies, the role and contribution of minor forest products in the daily life and welfare of people all over the world are crucial because of their richness of variety, as sources of food for example fruit,

nuts, honey, insect, animals etc. fodder, fibre, fertilizers, medicinal extract, construction materials, cosmetic, natural dyes, tannin, gums, resins, latex, and other exudates, essential oils, edible oils, decorative articles, horns, tusks, bones, pelts, plumes, hides, and skins non wood lignocellulosic products, phytochemicals and aroma chemicals etc.

The present study entitled “Marketing analysis of minor forest product charoli and gum in Dhanora tahsil of Gadchiroli district.” was undertaken with a view to study the various channels of marketing of MFP and to analyze the problems faced by the tribal farmers in transacting MFP. Out of twelve tahsil of Gadchiroli district, Dhanora tahsil is a tribal dominated tahsil which was selected purposively on the basis of maximum area under forest. Random sampling technique was followed regarding selection of the villages and tribal farmers. All the villages were listed out and villagers were selected at random.

Primary data were collected from tribal farmers by personal interview. For this purpose, a pre-tested questionnaire, specially designed for the present study was used. While collecting the information every effort had been made to cross examine the informant to get accurate and reliable data. Two important minor forest products i.e. Gum, Charoli were considered for the study as they were having maximum arrival in Adivasi Co-operative Society of Dhanora tahsil of Gadchiroli district.

Cropping pattern of selected tribals and it was found that at overall level highest area was sown under paddy crop followed soybean, gram, tur and mung. From total collection of charoli and gum, tribals sold highest amount of charoli and gum to the self help group, followed by wholesaler and lowest to the retailer. In channel I the minor forest products passes through collector to SHG to retailer to consumer. In channel II the products passes through collector to wholesaler to retailer to consumer. Whereas, in channel III the products passes through collector to retailer to consumer. Charoli required highest marketing cost than gum because of high perishability of charoli pods.

The average total employment was available from MFPs collection for 124.68 days out of which, employment from charoli collection was 48 .53 days. Employment generated from gum collection was 76.15 days which accounts 61.08 percent. Overall average income from gum was highest as compared with charoli. Poor transportation facilities was the major constraint during marketing of minor forest produce observed in study area.

CHAPTER I

INTRODUCTION

1.1 Background information

Human's dependence on plant for their existence dates back to the beginning of the human race. Forest continues to be of great economic importance. The life of all living beings was dependent on forest still the art of agriculture was acquired. Since then human civilization has come a long way and things have changed beyond imagination. Forest continues to be source of importance raw materials for many industries and provide employment to people living in or around forest. It recognized as renewable natural resources. Some of the products obtained from forest trees, plants and shrubs have medicinal properties. The Ayurvedic system of treatment is primarily based on the medicines obtained from vegetable kingdom. Forest is considered as means of sustaining ecological balance and the most important single factor to protect the environment.

In India, Minor forest products are an important livelihood source for several communities, particularly those living in forest fringe villages. About 400 million people in India depend on MFP for sustenance and supplemental income. According to 2011 census, the tribal population in India was 104 million people which accounts for 8.6 per cent of total population of the country. It is estimated that, there is one tribal man for every fourteen Indians. In India, about 53 per cent of total tribal population lives in rural areas and nearly 31 per cent of them are directly dependent on MFP for their livelihood. Government revenue realized from MFP is in the order of Rs 20 billion per year. This provides 50 per cent of household income for 20 to 30 per cent of rural population particularly for tribal. Potentially around 3000 species of forest products are found to be useful, but only 126 have developed marketability. Around 50 per cent of forest revenues and 70 per cent of forest based export income of the country comes from MFP. Thus, it can be depicted that MFP form one of the main stays of income and sustenance for many tribal communities (Rao, 1996). In subsistence and rural economies, MFP has diverse uses, for example,

as food, fodder, fibre, fertilizer, herbal medicine, cosmetic, and cultural products. In terms of income, it has been estimated that up to 35 per cent of the income of tribal households in India comes from the collection of unprocessed MFP. Also, since MFP involves a large variety of seasonal products, returns are frequent and relatively continuous. Small-scale forest-based enterprises, many of them based on MFP, provide up to 50 per cent of income for 20 to 30 per cent of the rural labour force in India (Campbell 1988). In addition to subsistence and income-generating potential, MFP also provides food security to large low-income populations, their cattle and other domestic animals, particularly during droughts or famines. Many of these MFP were initially handed over to industries at a low price through long- term agreements, which created hardships for the poor artisans and forest dwellers. Subsequently, in the 1960s and 1970s, the Government of India nationalized trade in some MFP to safeguard the interests of the poor. Under this system, local communities involved in MFP collection and sale were required to sell their MFP to the Forest Department or to its authorized agency and in turn receive the payment for collection. The nature and extent of MFP trade nationalization varied considerably from state to state and from product to product. However, nationalization affected the communities adversely in several cases. Rather than improving the bargaining position of the poor, it reduced the number of legal buyers and choked the free flow of goods. In addition to this, delay in paying the gatherers by government stimulated the growth of intermediaries, contractors who operated on higher margins to cover uncertain and delayed payments and to pay police and other authorities to ignore their illegal activities.

Minor forest products technically defined as all vegetables and animals product other than firewood and timber obtained from the forest. These products are being used as old as human existence. In subsistence and rural economies, the role and contribution of minor forest products in the daily life and welfare of people all over the world are crucial because of their richness of variety, as sources of food for example fruit, nuts, honey, insect, animals etc. fodder, fibre, fertilizers, medicinal extract,

construction materials, cosmetic, natural dyes, tannin, gums, resins, latex, and other exudates, essential oils, edible oils, decorative articles, horns, tusks, bones, pelts, plumes, hides, and skins non wood lignocellulosic products, photochemical and aroma chemicals etc.

Forest produce mainly divided into two categories i.e. major & minor. Major forest products are timber, small wood and fire wood. Minor forest produce (MFP) is defined as “non wood forest produce, which can be exploited without harming the forest and will not include minerals as well as forest animals or animals part.” Minor forest products are derived from variety of sources, plants, animals and other non- living components of the ecosystem.

Scheduled Tribes (STs) are indigenous, have their own distinctive culture, are geographically isolated and are low in socio – economic conditions. For centuries, the tribal groups have remained outside the realm of the general development process due to their habitation in forests and hilly tracts. After independence, Government of India has scheduled the tribal groups in the constitution and provided special provision for their welfare and development.

1.2 Importance of study

India is mega-diversity country over 15,000 species of plants is so far recorded, of these, 3000 (20 per cent) species yield MFPs. As per one study conducted by food and agriculture organization (FAO), these are at list 150 MFPs including 26 essential oils, which are important from the point of view of international tread (FAO, 2008). As estimated 80 per cent population of the developing world uses MFPs to meet some of their health and nutritional needs. MFPs are important source of income in many important countries.

Forest is an important natural property for man and our environment is depending on it. All countries at the world are concerned about existence of man and forest. In India nearly two lakh villages are situated in and around the forest area with a total population of 400 million

people, the majority of them are dependent on forest for their development.

The word ‘minor‘ applied to these types of products is, however is misnomer, because over the years such products are contributing in a much significant way to the national economy . So much, so that in some of the states as much as 50 percent of the forest revenue is derived from MFPs. It is also reported that MFPs contributed 30-50 percent of the total forest revenue of the country.

As of 2010, the FAO of united nation estimates India’s forest cover to be about 68 mha. or 22 per cent of the country`s area. Forest industry contributes 0.9 per cent to the Indian GDP. With 50,632 sq.km. i.e. 16.40 per cent of total forest area cover. There are 93 per cent tropical and 7 per cent temperate forest. In tropical forest, there are 80 per cent deciduous 19 per cent evergreen and 1 per cent other type of forest.

Minor forest products (MFPs) are seen as crucial in improving the livelihoods of tribal poor and to promote sustainability as there is immense potential of these product in value added in national and international market. The collection of these products in area specific major market are in Utter Pradesh , Uttaranchal , Jammu and Kashmir , Punjab , Rajasthan , Delhi , Madhya Pradesh , Bihar , and Andhra Pradesh .

TRIFED purchases minor forest produce with minimum support price through its 500 service centres in tribal mandis and deal with 60 different type of minor forest products, mainly Niger seed, gum, lac are being exported from Andhra Pradesh, Orissa, Rajasthan, Madhya Pradesh, Bihar and Maharashtra.

According to the National Commission on Agriculture (1976) various items of minor forest products have the potential to bring economic development of the rural and tribal people in the country. Traditional market forces are still effectively operating in marketing and processing of minor forest products. Therefore, it is necessary to know the pattern of arrival of minor forest products in market and analysis the trend in price variation for minor forest products in pocket of Gadchiroli district of Maharashtra.

The Gadchiroli district of Maharashtra constitutes of 11299 km of the forest lands making a home for a variety of Non Timber Forest Produce (NTFP) including Gum plants, Oil seeds, in Gadchiroli hosts the 13 crucial NTFPs amongst the t forest dominated and tribal inhabited the major occupation of district includes rain fed agriculture dominated by paddy production and Minor Forest Produce (MFP) collection. Both the seasonal activities occupy rainy and summer reasons respectively. Due to a high spread jungle, The major species are Bamboo, Tendu, Mahua, Charoli, Triphala (Amla, Hirda, Behda), Karanj, Palas ,Gum etc..

1.3 0bjectives of the study

1. To study the socio-economic status of selected tribals.
2. To study the marketing system of selected minor forest products.
3. To examine the employment and income generated through minor forest product.
4. To identify the constraints faced by the selected tribals for marketing of minor

1.4 Hypothesis

1. Tribal's share in consumer rupee is satisfactory.

1.5 Scope and limitations

The present study of minor forest products is an integral part of development and survival of people living in and around forests and depending on them. The potential economic value of MFPs either in term of utilization or their market value is often underestimated or unknown. In recent days , there seems to be worldwide trend on increasing use of natural products for health and personal care and India is a major player in the international market.

For the study Dhanora tahsil were selected from Gadchiroli district purposively.

The researcher had some difficulties in getting support from tribals during collection of the data. Tribals usually collect MFP in a group

rather than independent, hence quantifying the produce collected, consumed and income earned by individuals was difficult, as respondents gave the information for the group. This challenge was overcame by frequent interactions with the sample tribal farmers. The following are some limitations of the experiences by the researcher:

- Data collected is based on tribals past memory. This can lead to data inaccuracy. Efforts were made by the researcher to crosscheck to make data reliable and accurate.
- Since the study pertains to a particular location, it cannot be generalized and implied to other locations.

CHAPTER II

REVIEW OF LITERATURE

In any systematic research, the review of literature under the study forms an integral part of the investigator to acquire knowledge about the previous work done in this area of research and provides a foundation to theoretical framework. The exercise helps in highlighting the methodology and results obtained in similar fields. The literature related to present study had been reviewed and highlighted here under following heads.

The review of literature is presented in this chapter under the following heads:

1. Socio-economic status of selected tribals.
2. Marketing system of selected minor forest products.
3. Employment and income generated through minor forest product.
4. Constraints faced by the selected tribals for marketing of minor forest products.

1. Socio-economic status of selected tribals

The findings of following studies try to explain the position of socio-economic condition of tribal households.

Huda (1980) studied the socio economic problems of North-East India and found that agriculture and allied activities constitute the main source of livelihood of the people living in this region. The employment in manufacturing was less than 5.00 percent.

Sujatha (1990) made an attempt to examine disparities in education among the different tribal groups and within the tribes between male female in the state, which has the lowest tribal literacy (7.86 percent) in the country. The highest and the lowest literacy range between 19.37 percent and 1.26 percent found among the Valmiki and Khands respectively. In fact, except Yerukulas all the other 5 major tribes (*Lambada, Yenadi, Koya, Kondakapu and Gond*) have literacy rate below the state average tribal literacy.

Khare (1991) this book studies the impact of economic development on socio-economic condition of tribes delineating not only the influence of economic planning on their life-style, but also dealing with important measures for improvement in their socio-economic conditions. The tribes being the original inhabitants of the land constitute a significant part of India, not only in demographic sense but for the variety and richness of their culture too. There are about more than 600tribes in India differing greatly in their social organizations, institutions, customs and traditions including socio–economic conditions.

Annaraja and Thiagarajan (1993) observed that the people of India include a very large number of primitive tribes who subsist on hunting, fishing by simple form of agriculture. The constitution of India prescribes certain safeguards to uplift the tribals. There are programmes of the central and state government to extend financial assistance for STs for obtaining education right from the primary stage. The purpose of the investigation was to find out the effect of psycho-socio factors on the academic achievement of the ST adolescents. Regarding personality factors, ST adolescents are better in temperament, independency and adjustment than non STs. As regard to academic achievements, non-STs are better than STs.

Rao and Rao (1996) conducted a study to find out the extent of adoption of rice production technology by the tribal farmers in high attitude and tribal zone of Andhra Pradesh during 1992-93. The characteristics of the farmers were examined against 22 variables identified in the research literature. Results revealed that majority of the respondents had adopted the rice production technology to the medium extent. Rational analysis had shown that the extent of adoption was found to be positively and significantly associated with age, farming experience, training received, and socio-economic status, cropping intensity, aspiration, economic motivation, innovativeness, information source utilization and its credibility.

Srivastava *et al.* (1997) found that majority of Buksa tribe have been found to be engaged in agricultural activities, in comparison of other tribes of U.P hills. There is however difference in the economic status

of these tribes in different areas. Bhotia tribes are most educated among all the tribes of U.P hills and even in comparison to non-tribal locals. They are socially and economically awakened people. Raji tribe has been found to be unaware with alternative employment opportunities. The may be because of the illiteracy and the primitive nature of tribe.

Jabbi and Rajyalakshami (1999) have selected two districts viz. Bhojpur and Bhumika on the basis of the levels of literacy in 1981, and the changes during 1981-1991. All the indicators of school education Bhojpur was better than Bhumika. It was also found that this access to excess to education was less for the SC/ST children and girls than for the children in the forward caste/non caste groups and boys respectively. Parental occupation, education and socio-economic status of the family influenced the enrollment of the children.

Research by Sunderland *et al.* (1999) reconfirms that NTFPs provide sources of food, medicines, and income to many households in Central Africa. Yet, these studies also confirm that the contribution of NTFPs to local and national economies is typically small relative to agriculture. In four forest villages in South-Western Cameroon, NTFPs contributed 9% to the household economy compared with 43% for agriculture. Similar figures are reported for households in South-Eastern Cameroon (NTFPs 1.2%; agriculture 31%) and South-Western Central African Republic (NTFPs 10%; agriculture 51%). Harvesting of wild NTFPs is most important for poor families that have limited or no access to agricultural markets. Wealthy households or those with access to agricultural markets (i.e. hose that can sell cash crops) often consume NTFPs, but seldom harvest them for sale.

Bakshi and Bala (2000) present the social-economic status of several scheduled tribes inhabiting in various regions of our sub-continent. Their life-style, customs and traditions are quite different from the population in our rural and urban areas. In fact 'they live in their own world'. Their social backwardness has been assessed at various levels and schemes have been launched for the education of their children, to provide them health facilities and jobs for their daily needs.

Sahu (2001) the Editor has tried to present in this volume the life and culture of Indian Tribes. The tribal of India constitutes 8.08 per cent of the total population of India. They generally inhabit in different ecological and geo-climatic conditions mostly inaccessible to other people. So such tribal group is distinct from the other in ethnic affinity and social practices. They are having some salient features, which make them unique. The cultural identification or way of living is still strong among them. The government since independence is trying to develop and improve the socio-economic condition of the tribal people. A huge amount has already been spent over the tribes in the name of tribal upliftment, but the tribals still join mainstream of national development. The pathetic situation of the tribal life has attached the attention of academicians to present diagnostic studies afresh.

Bano (2002) presented the findings that in contemporary India tribal women have entered into a variety of jobs and professions. They get the benefit of reservation of seats in all the three times of Panchayat Raj after 73rd constitutional amendment. Hence with the development of the tribal society from savage to civilization, the gender relations have become more and more complicated. In the past the tribal women were not much discriminated against men. She is considered as a property either owned by the parents or by the husband. In other walks of life the discrimination against man is not much striking. Even today, it is she who does marketing. It is she who takes smaller parts of her produce to market. It is she who makes the best of shopping. She does not shy to coming entertain herself by consuming liquor in the company of her kinsmen. She freely moves in the weekly markets, laughs and giggles. Despite working hard in the field of production, tribal women are sidetracked in social counseling.

Devi (2005) Socio–economic conditions of Tribes, in this book an attempt is made to analyze the socio, economic, cultural, religious and living conditions of different tribes in Srikakulam district. The contents of this book are designed to serve the needs of wide variety of readers including economists, anthropologists, sociologists, public administrators

and political theoreticians. Based on both primary and secondary sources of data collected from field study, this work portrays the evaluation and analysis of tribal agriculture, employment conditions, and income expenditure patterns, estimation of poverty levels, indebtedness and credit patterns of selected tribal households of Seetampeta tribal mandal of Srikakulam district in Andhra Pradesh.

Rao (2013) studied that the socioeconomic status of the scheduled tribes in Visakhapatnam district of Andhra Pradesh State (India). In the sample, More than 53 percent of the cultivators have farm income around ₹ 2,000.00 to ₹ 5,000.00. Even though the wage laborers are more in the sample population, the share of income derived from that is less when compared to cultivation. There is a need to put more attention on educational aspects of scheduled tribes, where this only can motivate them for future life.

Arook and Rahman (2016) studied the some primary data, which are collected from a structured questionnaire survey, interview, observation and focus group discussion and also on some secondary data which was collected from different sources. It is found that among tribal people, 60.94% households were involved in agricultural day labour activities. Around 22.14% households depend on their own cultivable land for production,5.99% in various formal and non-formal services sectors (offices support staff, security guard and Garments factory), 2.34% of total sample HHs are involved in livestock rearing 2.85% tribal households were found involved with small business activities (Petty shop, tea stall). Among the Mahali and Roabidas tribal community have their own tradition occupation e.g. cobbler, bamboo material small cottage etc., Regarding average monthly income of the households, majority (50.26%) of the households are up to 4000.00 BDT per month. Only 3.13% reported that their income is more than 6000.00 BDT.

Sunatkar and Dange (2016) Studied that agricultural land use pattern at micro level in Gadchiroli District. This study is based on secondary data collected from secondary records. Agriculture production is influenced by physical, climatological, socioeconomic, technological and

organization factors. An Endeavour is made here to study crop combination regions. The crop data has been computed with the help of Weaver's technique of crop combination. Physiographic, temperature, rainfall, soil and drainage influence on agriculture land use pattern in this district. The district is categorized as Tribal and undeveloped district and most of the land is covered with forest and hills. Forests cover more than 75.96 % of the geographical area of the district the main agriculture produce in this district. By computing crop ranks and crop combination in District has identified ten crop combinations. Such type of study represents real situation of cropping pattern in District and helps to planners, agricultural scientists and research scholars.

2. Marketing system of selected minor forest products.

Campbell (1993) opined that according to some rough calculations based on the valuation of NTFPs (Non timber forest products), an average return of INR. 2720 was realized per hectare annually in India. He observed that forest based enterprises provided up to 50 % of income for 20 to 30 % of labor force in India.

Biswas and Karpate (1994) observed that the forest department of Maharashtra state advertised through the local newspaper about the collection minor forest produce like timber and fire wood. The basic price of these commodities, quantity, date and time of auction were notified. The produce was sold to the highest bidder and they were allowed to take the produce against the cash payment. The transportation of auctioned material was to be arranged by the buyer.

A study in Botswana of the Southern African Plateau Taylor and Parratt (1995) depicts that people most likely to be involved in NTFP use (namely rural communities) have very limited access to technology. As such, it is likely that they will end up selling the NTFP in a relatively 'raw' state to an intermediary who will then end up selling it to a processor. The profit margin increases the further up the chain you go and the harvester would thus realize the least profit margin.

Rao and Singh (1996) studied a contribution of MFPs in tribal economy as a case study in South Bihar and South West Bengal. According to them in South Bihar and South Bengal the MFPs like Mahua flowers and seeds, Sal seeds and leaves, tendu leaves, tamarind and mushroom emerged as major product sold by tribal at this region .

Negi and Bhalla (2002) studied the collection and marketing of important medicinal and aromatic plants in tribal area of Himachal Pradesh. They noted that there were two systems of sale and medicinal and aromatic plants are in vogue in the areas. The first was the direct sale by the collectors/ contractors to the wholesalers and the second system was often called sole on consignment basis which was commonly followed.

Nagpure *et al.* (2003) studied the marketing of bamboo in Gondia forest division of Nagpur forest circle in Maharashtra state. They attempted to study different channels at marketing of bamboo in the study area. Bamboo was sold through open action method and study revealed that bamboo was sold by three channels i.e. 1) forest deport – consumer, 2) forest deport- wholesaler / saw miller – retailer –consumer 3) forest deport- wholesaler/ saw miller- consumer.

Beohar (2003) analyzed the marketing channels and marketing structure of non wood forest products and evaluated their marketing efficiency. The results revealed that the tribal NWFP collectors had to bring produce to collection centres of LAMPs. Afterwards the product was kept for future sale either through open auction or sealed tender.

Naidu *et al.* (2003) conducted study on temporal variations in the marketing of minor forest produce in tribal areas of Andhra Pradesh- A case study. The number of tribals in the country accounted approximately seven per cent of the total population. As the tribal agriculture is mostly on primitive lines and with meager irrigation sources, it is inevitable for the tribal farmers/laborers to draw their subsistence largely from the forests by collecting and marketing of minor forest produce (MFP). Mahua seed, pungam seed, tamarind pulp and tamarind produce were purposively considered for the study because they occupy major share in the total

transactions of MFP of the tribal farmers. As most of the lendings to the tribal farmers is given by GCC at a very low rate of interest when compared to the local village traders, the transactions through GCC were greatly increased.

The study conducted by Sawhney and Engel (2003) in Bandhavgarh National Park, India pointed out the majority of the sampled households (97%) collected NTFPs. All the households collecting NTFPs also sold it, though there is a ban on sale of NTFPs. Overall, sale of NTFPs constitutes the most important source (26%) of cash income for the households, and the third most important source of total income (13.8%). On an average each household made US $ 44 from the sale of NTFPs in 2000. From the sale of different source of NTFPs to the total NTFPs income, amla product (42%) contribute the highest followed by tendu patta (41%), mahua (12%) and fuel wood (4%) where as chironji (1%) contributed the least.

Alibaba and Rao (2005) studied the marketing pattern of minor forest produce in Adilabad District of Andhra Pradesh. They reported that, there are two channels of marketing for minor forest produce, in which, only honey and tamarind pass through channel one which consists of tribal seller-village trader-wholesaler-retailer-consumer and all other remaining minor forest products pass through channel two which consists of tribal seller-Girijan Co-operative Corporation-consumer. They stated that, the tribals were exploited by offering low price when they sold to village traders and hence, loans should be provided through GCC to minor forest produce collections to prevent distress sale to village traders .

Sinha *et al.* (2007) studied about the exploitation of tribes in factor and product markets in Tripura. In this study an attempt was made to assess how far and to what extent the tribes in Tripura were exploited in the factor and product markets in comparison to their non-tribal counterparts. The study revealed that there was discrepancy in the wage rate paid to the tribal and non-tribal laborers in the different goansabhas and the inability of the tribal seller in realizing better market price.

Singh and Quli (2010) evaluated the contribution of NTFPs in tribal economy and also found out the marketing channel of non-timber forest products. The study was carried out at 50 villages of Bandgaon and Goelkera blocks of W.Sighbhum district (58.31% of tribal population) of Jharkhand. The study concludes that tribals depend to a great extent on non-timber forest product economically. But the labours involved in collection of the produce are ignored. The scenario of economics is too unrewarding for the collectors. This study also reveals that the role of opportunity cost and exploitation by middlemen ranking the highest. Some measures also been suggested to improve the condition of tribals as well Sharmah

Rath and Mohanty (2011) studied the collective NTFPs marketing in Koraput, Raygada, Nuapada, Kalahandi and Malkangiri Districts in Orissa. They observed that collective marketing of NTFPs is a common strategy to help securing the rights and benefits for the primary collectors, particularly for women who are the primary collectors along with the men who are traders and middleman. The NTFPs they collect includes mahul, hill-broob, tamarind, siali leaves, honey, chironjee seed etc. The co-operative group trade both raw and processed form of NTFPs. 286 villages were covered having 583 SHGs including 8851 families with the business turnover of Rs. 1.80 crore and having a profit margin of Rs. 87.65 lakh governed by 29 large co-operative societies.

Bodade *et al.* (2016) studied that, the average family size was 5.44. The major minor forest products found in study area were mahua, gum and charoli. Participation of tribal farmers in local institution was satisfactory, but participation of landless labourer was poor. The education standard of tribal farmers as well as landless labourer was low. Most of the respondents sale their MFPs in weekly market. However, some of them were selling their MFPs to local marchant, taluka level traders, Adivasi Multipurpose Co-operative Society. The season (month of collection) of above MFPs varies from product to product however, common season of availability of MFPs was during April-June. The total annual estimated gross returns from MFPs for tribal farmers were

Rs.2549, whereas the operating cost incurred by tribal farmers was Rs.1673.Benefit Cost Ratio was 1.52. This revealed that there were minor differences in cost, returns and profitability structure of farm.

3. Employment and income generated through minor forest product

Lal *et al.* (1983) conducted a study on the same community and reported that the average annual income of a family was INR. 7700 per annum. The annual income of the farm family was medium for 54 % of the families, high for 33 %, while low for 14 %, but in general, the income of the tribal farm families was low. When Family expenditure considered, it shows that 90 % of the income earned was spent on necessities while 5 % was on recreation and cash savings account hardly 2.36 %, while borrowing accounted for 8.36 % and investment accounted for less than 30 % of the total income.

Thiagarajan (1989) revealed that 75.5 % of the tribal household had low income while the rest 24.5% of them had high income. Therefore the economical status of tribal's was much below the satisfactory level as 77.87% of them were having their annual family income less than INR.2500,wereas 13.33% of them were in the group of INR.2500 to 3500 and only 9% of them derived income above INR.3500. Further, he reported that tribal usually had very low family annual income and spend very low amount even for the necessities. The low level of family expenditure was mainly due to the fact of low level of incomes. Hence, the contribution NTFPs to the improvement of livelihood of the forest dwellers and equitable distribution of the income amoung the different section of the forest dependent people is questionable and need to be studied further.

Rao (1992) examined the employment and income pattern of forest dwellers in the three different ecological and economic settings in Andhra Pradesh. Resource endowment was found to have a definite bearing on the employment pattern. Position of the land and its cultivation had generated more days of employment among Araku tribes, whereas its absence drove the tribal's in Nallamalai to collection of forest produce for a living.

Raut *et al.* (1992) studied on employment, income and expenditure pattern of tribals in the Nasik district of Maharashtra and found that the collection of minor forest products (MFPs) was found to be the only source of income during the summer season. Wage earning was the prime source of income for landless group, which amounted to the tune of 50 % of the total income.

Sekar and Surendran (1993) found that among the tribal households, three members were involved per day in NTFPs collection, whereas only two members served as agriculture laborers. The income realized was INR.2800 annum per head from NTFPs collection in the respect of marketing of the NTFPs, to marketing channel were found to exist.

Namdeo and Pant (1994) highlighted that, Sal seeds had potential to provide employment to 4.5 million persons for a period of 40 days and regular employment of 300 days per year for 0.436 million persons in processing of Sal seeds. The annual production of the gum Karaya10 was about 6000 tons and creation of 600000 mandays of work at the rate of 10 kg per person per day.

Das (1995) studied the role of NTFPs in the economy of forest fringe dwellers of South-West Bengal. He observed that on an average, one NTFP collector working for five to six hours a day could earn INR. 17 to 26 from NTFPs and the collection season was more or less distributed throughout the year. He reported that, of the five Forest Protection Committees (FPCs) studied, the average family income from NTFPs varied from INR. 6046 in Dalangora FPC to INR. 9569 in Khatam.

Palit (1995) reveled that in his study on the role of NTFP in Joint Forest Management revealed that an average, each household of Raigarh forest protection committee was engaged for 63 days per year in the collection of NTFPs. The income earned from the sale of NTFPs was INR. 2421 per household.

Olawoye (1996) opined that rural households spend income realized from NTFPs to buy food to maintain their families. This provides a

supplement to the economic status in the lives of the generality of the rural dwellers. Hence, dependence upon several combined and seasonal activities is an important way to ensure household food security.

Hegde (1997) compared the income composition and employment of the three tribal communities (Jenu kurubas, Soligas and Betta kurubas) in Madumalai Wild life sanctuary in India and showed that Jenu kurubas derived more employment and income from commercial Non-Wood Forest products than the Soligas and Betta kurubas communities. The analysis of the correlation indicates that Jenu Kuruba community was more dependent of forests than others. It was seen that all other sources of income, such as forest labour, wage labour and salaried jobs reduced the reliance of the people on the forest.

Sharma *et al.* (1997) had undertaken a study of 17 villages in Mandla district of Madhya Pradesh. They revealed a heavy dependence of tribal on forests. However, the sale of non timber forest products accounted for only third of the economic dependence on forest.

Vidyarthy and Guptha (2002) highlighted the role of NTFPs in the economy of communities living in and around forests of South Bihar. Nearly 49 items of the NTFPs found to sustain the people especially landless and marginalized groups during lean season and supplement their income during other seasons. The study showed that NTFPs contributed significantly to the annual income of the households (86%). Besides the economic value of NTFPs, local communities were also enjoying several qualitative benefits from the forest such as medicinal.

Pervaz (2002) in his study on NTFP sector in Dhading district of Nepal observed that the NTFP generated maximum employment (60.72 %), followed by agriculture (22.30 %), allied activities (15.83 %) and other sources (1.16 %). With regard to income generation, allied activities were the major contributor to the total household income with 34.74 % followed by NTFP (32.08 %) and agriculture (29.50 %).

Mitchell *et al.* (2003) stated that, about 70 % of the NTFP collection in India takes place in the tribal belt of the country. It would be

seen from the literature that the NTFP based small scale enterprises provide up to 50 % of income for 20 to 30 % of the rural labor force. Whereas 55 % of employment in forestry sector is attributed to the sector alone. Therefore collection of NTFPs was a major source of income and employment for forest dwellers. For instance, tendu leaf collection was observed to provide about 90 days of employment to about 7.5 million people every year in India.

Poffenberger (2006) opined that, NTFPs still remains an important source of income for hundreds of millions for rural livelihoods.

Muthyalu (2008) conducted the study on Collection and Marketing Practices of Non-Timber Forest Produce in Adilabad district of Andhra Pradesh. He found that in the tribal areas most of the tribal communities are collecting and selling NTFP items. In the study area, agricultural income constituted highest contribution (67.2 %) in income followed by NTFPs collection with 30.6%. The NTFPs collectors sell 89 % 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.

Yadav M. and K Basera (2013) studied Increasing trade in forest products (both timber and non-timber) has supported economic growth and has helped in reducing poverty in a number of emerging countries. There is strong evidence that forest products play a significant role in the livelihoods of the world's rural poor. Forest products are the main source of income for the forest dwelling population in many countries. The present study based on secondary data related to availability, production, marketing and the dependency of rural population on forest products. The study intended to understand the production and trade status of forest production and how these products can be used in an improved way to reduce poverty. Thus, the present study endeavored to assess the trade status of forest products and their role in economy at global, national level as well as regional level.

4 Constraints faced by the selected tribals for marketing of minor.

Banafar *et al.* (2005) reported that marketing is one of the unorganized and under managed sector in Chhattisgarh state. Marketing plays an important role in Bastar District of Chhattisgarh state. Bastar district has difficult terrain, lacks infrastructural development for marketing medicinal, herbal and aromatic plants. Producer, village merchant, dealers were generally found engaged in assembling of medicinal, herbal and aromatic plants. The major constraints in production and marketing of medicinal, herbal and aromatic plants are the poor socio-economic conditions of the farmers as the cultivation of medicinal, herbal and aromatic plants are highly capital intensive. As far as constraints are marketing of medicinal, herbal and aromatic plants, in concerns the role of producers-seller was negligible in the fixation of the price.

Awono *et al.* (2010) observed that women are the primary gatherers and traders of non-timber forest products (NTFPs) but they have limited access to processing technologies, marketing strategies and market information. They also accessed the impact of the research and training provided by CIFOR and found out that the traders initially interviewed, 95 percent of them were women. 81 percent of traders said their incomes increased as a result of the training received, 11 percent of traders mentioned a negative impact and 8 percent reported no impact. The average increase in income for those who benefited was 55 percent. The revenue gained from NTFPs was used for basic household needs.—school fees, food and health costs. These results indicate that a capacity building program could reduce the constraints faced by traders by providing them with marketing information, accounting tools and processing and storage technology skills.

Gupta *et al. (*2015) studied in Bilaspur district of Chhattisgarh State during the year 2014-2015. The data were collected with the help of well structured pre-tested interview schedule through personal interview. The findings of this study reveal that per cent respondents were involved in collection of mahua. With regard to problems faced by the respondents in collection and marketing of NTFPs, majority of the respondents (95.56%)

pointed out that they were facing the problem of low and fluctuated market price primarily, while; 95.56 respondents suggested for development of existing market infrastructure primarily, to overcome the problems faced by them in the collection and marketing of NTFPs.

CHAPTER III

METHODLOGY

The present study entitled “Marketing analysis of minor forest product charoli and gum in Dhanora tahsil of Gadchiroli district.” was undertaken with a view to study the various channels of marketing of MFP and to analyze the problems faced by the tribal farmers in transacting MFP. In the field research, the step involved are selection of research topic, formulation of objectives, nature and source of data to be collected, deciding methods of collecting data and analysis of data. The methodology adopted for the present study is discussed below.

3.1 Sample design

The Gadchiroli district in Maharashtra state was selected purposively for the present study, because most of the backward tribal tract and 76.13 per cent of area under forests fell under this district .Random sampling technique was followed regarding selection of both the villages and sample farmers.

3.1.1 Selection of district

The Gadchiroli district located South-eastern corner of Maharashtra was selected purposively for the present study. The major areas of backward tribal tract fell under this district. Gadchiroli has total geographical area 16517.590 sq.km. Out of which forest area is 12576.202 sq.km. and compared to geographical area percentage of forest area is 76.13 per cent.

3.1.2 Selection of tahsil

Out of twelve tahsil of Gadchiroli district, Dhanora tahsil is a tribal dominated tahsil which was selected purposively on the basis of maximum area under forest.

3.1.3 Selection of villages

Random sampling technique was followed regarding selection of the villages and tribal farmers. All the villages were listed out and villagers were selected at random.

3.1.4 Selection of merchants

For collecting the information pertaining to marketing of MFP, four self help group, five wholesalers and eight retailers from each marketing channel were selected at random in the study area.

3.2 Collection of data

3.2.1 Primary data

All the necessary information for the present study was collected by “survey method”. Primary data were collected from tribal farmers by personal interview. For this purpose, a pre-tested questionnaire, specially designed for the present study was used. While collecting the information every effort had been made to cross examine the informant to get accurate and reliable data. Personal and family expenses were excluded and only expenditure on collection of the MFP was strictly taken into consideration. Data from tribals will be collected in morning hours on farmers farm.

Data in respect of arrivals and prices were collected personally by visiting forest offices. Similarly, the data of arrivals and prices were collected for the period of last 5 years of selected minor forest product.

3.2.2 Secondary Data

The secondary data of arrival and prices of MFPs were collected from Adivasi Co-operative society in Dhanora tahsil of Gadchiroli district.

3.2.3 Selection of minor forest products

Two important minor forest products i.e. Gum, Charoli were considered for the study as they were having maximum arrival in Adivasi Co-operative Society of Dhanora tahsil of Gadchiroli district.

3.3 Methods of analysis of data

3.3.1 Tribal`s (collectors) Share in Consumers Rupee

It was the price received by the collectors expressed as a percentage of the retail price (i.e. the price paid by the consumer).if Pr is

Plate 1: Interview with Tribals and Socio-economic Structure of Sample tribals at Tal: Dhanora, Dist: Gadchiroli

the retail price, Pf is the tribal`s price and the tribal`s share in the consumers rupee (Ps) will be worked out the following formula.

Ps = (Pf/Pr) X 100

Estimation of Cyclical Indices

The time series data on minor forest products were not available. Due to this limitation the cyclical indices were not workout.

CHAPTER IV

SOCIO-ECONOMIC STATUS OF THE GADCHIROLI DISTRICT

This chapter is devoted to the socio economic background information of Gadchiroli district, which was selected for present study. Agro-climatic and socio economic condition have profound influence on the production of crop and livestock. The study of economic background is necessary in understanding the implication of the physical conditions under which production is carried out. The various factors like topography, location, climate, rainfall, soil, irrigation, marketing and communication facilities etc. decide the sustainability of a particular enterprise to that area. Therefore, a brief account of the agro-climatic and socio-economic conditions prevailing in the district is given so as to have better understanding of the region and to help interpretation of results and drawing inferences.

4.1 Location

Gadchiroli is located at 20.10 degree north and 80.0 degree east. It has an average elevation of 217 meters (715 feet) Gadchiroli district is one of the largest in Maharashtra by land area. It occupies an area of 14412 sq. kilometers. Gadchiroli district consist of twelve tahsils viz. Gadchiroli, Dhanora, Chamorshi, Mulchera, Aheri, Sironcha, Etapalli, Bhamragad, Wadsa, Armori, Kurkheda, Korchi.

4.2 Boundaries

Gadchiroli district is situated in the southeastern corner of Maharashtra, and is bounded by Chandrapur district to the west, Gondia district to the north, Chhattisgarh state to the east, and Telangana state to the south and southwest.

4.3 Topography and soil

Geographically, Vainganga khore is one of the particular area in Gadchiroli district. The major area of the district is having undulating topography on large scale. Except a narrow strip along Godavari and Pranhita rivers. The low land of the district shows rolling topography with

isolated hill rocks. The eastern part of district i.e. Dhanora, Etapalli, Aheri and Sironcha talukas are somewhat higher part of district and covered by thick forest. Hills are located in the area of Bhamragad, Tipagad, Palasgad and Surjagad in the district.

The predominant soil cover in the district is clay, clay-gravel, sandy loam, deep black soil, reddish and yellowish brown soils, on hill slopes, brown and gray soils of plains and laterite and lateritic soil.

4.4 Rainfall and Climate

Gadchiroli district experiences extreme variations in temperature with very hot summers and very cold winters and an average relative humidity of 62 per cent. The climate is tropical in Gadchiroli. The temperature in the month of May is generally high. Average maximum and minimum annual temperature of the district is 35.2 degree Celsius and 27.2 degree Celsius respectively.

Gadchiroli district receives rainfall from south-western winds mainly in the month of June, July, August and September. July and August are the months during which the maximum rainfall as well as maximum continuous rainfall occurs. The average annual rainfall of Gadchiroli district is 1493 mm.

4.5 Population

In 2011, Gadchiroli had population of 1,072,942 of which males and females were 541,328 and 531,614 respectively. In 2001 census, Gadchiroli had a population of 970,294 of which males were 491,101 and remaining 479,193 were females. Gadchiroli district population constituted 0.95 per cent of total Maharashtra population. In 2001 census, this figure for Gadchiroli district was at 1.00 per cent of Maharashtra population.

There was change of 10.58 per cent in the population compared to population as per 2001. In the previous census of India 2001, Gadchiroli district recorded increase of 23.29 percent to its population compared to 1991.

4.6 Ethnographic setting

The total population of the district is 10,72,942 that includes 5,41,328 males and 5,31,614 females (as per census 2011) most of the density of population is located in Chamorshi taluka which is 1,79,120 and its percentage is 16.69 per cent.

Most of the people living in district are of tribal community. The population of tribals in the district is 4,15,306 and its percentage is 38.17per cent while the population of scheduled caste people is 1,20,745 and its percentage is 11.25% approx. Due to this , district is categorized as tribal district. The major communities of tribal those reside in the district are Gond, Madia, Pardhan and Kolam. They have their own languages as" Gondi, Madiya."

The tribals in the district have their own culture. They are used to perform worship of their God 'Persa Pen' and others. They do dance 'Rela' on auspicious occasions and when new crop come. Rela dance is popular among tribal. The other dance is 'Dhol' dance. Holi, Dashera and Deewali are the main festivals of tribal. Tribal community families reside in the dense forest of district. The other community people have their own festival such as Ganpati, Dashera, Diwali and Holi .in some part of district villagers are interested in arranging " Natak " on the occasion of " Shankar pat" in the month of January and February and also arrange the culture programmes as " Dandar " on festival day like Dashera , Diwali, Holi etc.

a. Madia

Madia are chiefly found in Dhanora and Bhamragad tahsil of Gadchiroli district. Madia Gonds or Madia or Maria are one of the endogamous Gond tribes living in Gadchiroli district of Maharashtra state, and Baster division of Chhatisgad state in India. They have been granted the status of primitive tribal group by the government of India under its affirmative action or reservation program. The Madia Gonds are strongly affected by naxal activities. The Madia Gond use the self designation

Madia, and call the area where they live Madia desh. They speak the Madia dialect of Gondi. The shifting cultivation of Madia is known as jhoom.

The primary occupation of the Madia tribals is cultivation and collecting minor forest produce such as mahua seds and mahua flowers , charoli, gum, hirda, behda, tendu leaves etc.

b. Halba

Halba are concentrated is in the district of Chandrapur, Yavtmal, Gadchiroli district. It is said that word halba is derived from an old Kanada word ‘ Halbar or Halbaru’ meaning ancients.

Every Halba house is constructed facing to North. There is an independent place for deoghar. The Halbas generally plant Tulsi in courtyard of their house. Preparation of poha (beaten rice) is also the subsidiary occupation of Halba tribals. In addition they are cultivars and agricultural labors. The main festival of Halba are Tej festival, Herilli festival and sirata festival. Halba speak Halbi dialect. They believe in magic and evil spirits. The marriages among the Halbas are usually arranged through mutual friend known as Mahalia. The bride price system known as Dej is in existence widows are permitted to remarry. Rice is the staple food of the Halbas. They drink a particular type of beverage called Basi. They use bamboo temtraps called ‘Zinkara’ for catching fish.

c. Kharia

The Kharias trace their origin like that of the Mundas. The Kharias are one of the most backward of the Kolarian tribes and appear to be allied to the Mundas an savers. They are originally from Madhya Pradesh and Orissa. They are cultivators and laborers. The kharias also worship their ploughs and axes.

d. Nigesia

This is a primitive tribe. Their original place is Madhya Pradesh where they found in abundance. They call themselves as Kisan, a term which is also applied to the Oraons. The tribe derived their name from Nagoba i.e. Cobra and they say that somebody left in infance in the forest and a cobra came and spread its hood over the child to protect him from

the rays of the sun. Some Mundas happened to pass by the side and seeing this curious sight they throughout the child must be destined to greatness.

4.7 Demographic Features

Dhanora tahsil, with population of about 83 thousand in Gadchiroli district, the 6th least populous sub district, located in Gadchiroli district of state Maharashtra in India. There are 219 villages in the sub district, among them Dhanora is most populous village with population of 6109 and Parasvihar is the least populous village.

The sub district is home to about 83 thousand people, among them about 42 thousand (50%) are male and about 41 thousand (50%) are female.

Table 4.1 Demographic particulars of Gadchiroli district

District	Population in thousand			Density (person/km)	Sex Ratio	Literacy (%)	Population growth since 2001-2011
Gadchiroli	Rural	Urban	Total	74	982	70.55	10.58
	954	118	1072				

4.8 Land utilization pattern

Table 4.2 reveled that out of total geographical area of district, net sown area is 148 ha, area sown more than once is only 49 ha because of very poor irrigation facilities and gross cropped area of the district is 197 ha.

Table 4.2 Land utilization pattern in Gadchiroli district

Sr. No.	Particular	Area (Thousand ha)	Percentage to total area
1.	Geographical Area	1492	100
2.	Cultivable Area	253	15.95
3.	Forest Area	1133	75.93
4.	Land under non-agricultural use	62	4.15
5.	Permanent Pasture	22	1.40
6.	Cultivable waste land	24	1.10

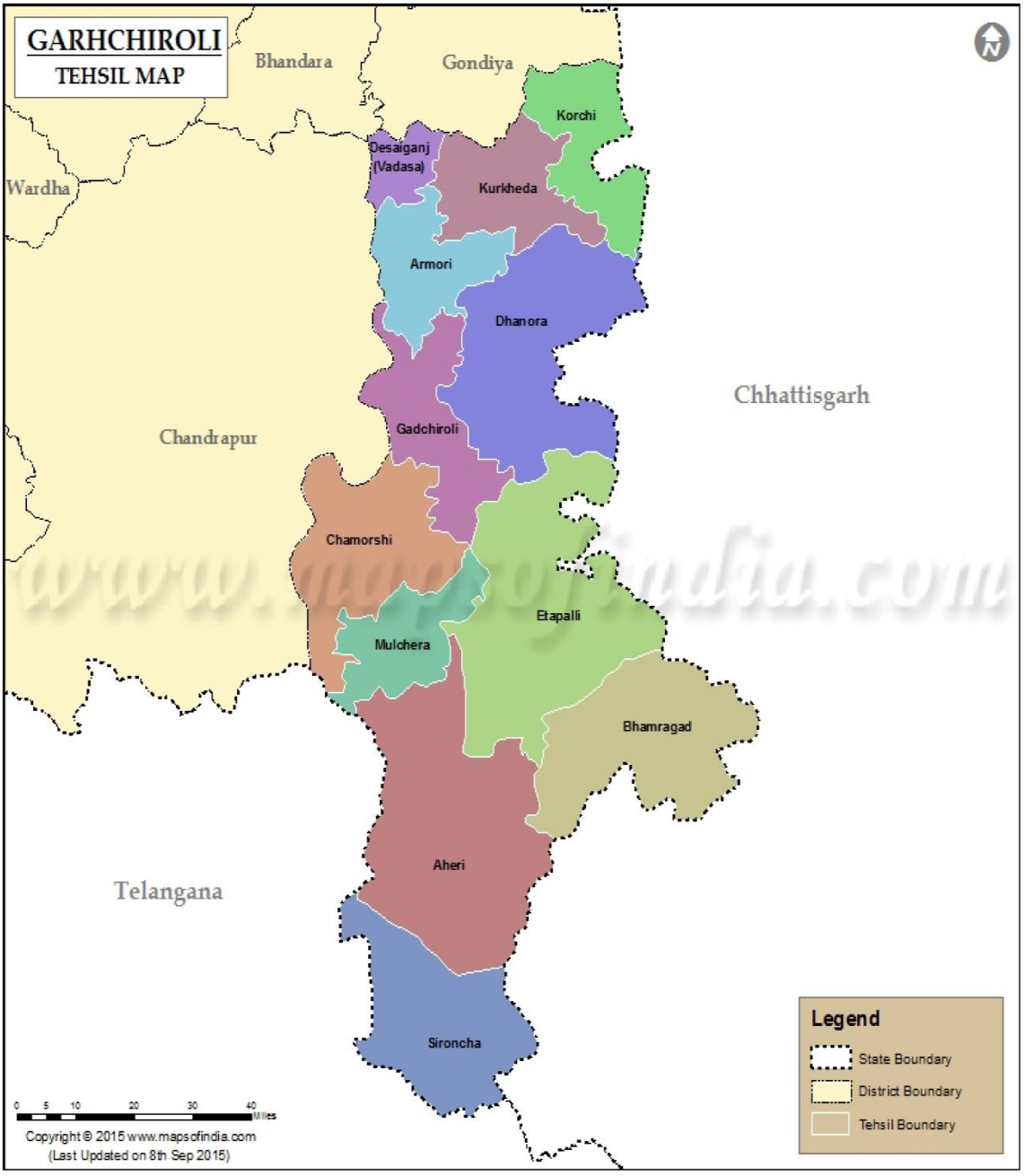


Fig. 1. Map showing tahsils of Gadchiroli district of Maharashtra

7.	Land under miscellaneous tree crops and groves	2	0.13
8.	Barren and uncultivable land	13	0.87
9.	Current fallows	11	0.73
10.	Other fallows	13	0.87

(District Socio economic Review 2009 of Gadchiroli District.)

4.9 Cropping pattern

Data on cropping pattern of Dhanora tahsil in Gadchiroli district presented in table revealed that paddy is important crop grown in the Gadchiroli district. Pulses like Tur, mung are also important crop of the district.

Table 4.3 Cropping pattern of Gadchiroli district

Sr. No.	Crop	Area (ha)	Percentage to total Gross Cropped Area (197 Thousand ha)
A.	**Kharif**		
1.	Paddy	149.60	75.63
2.	Pigeon pea	6.20	3.14
3.	Soybean	5.80	2.94
4.	Maize	2.30	1.16
5.	Sorghum	0.50	0.25
B.	**Rabi**		
1.	Wheat	1.60	0.81
2.	Gram	3.80	1.92
3.	Rabi sorghum	9.50	4.82
4.	Linseed	3.90	1.97

4.9 Marketing and Transportation

In Dhanora tahsil of Gadchiroli district, Adivacy cooperative society is functioning specially for marketing of minor forest produce. Because of poor transportation facilities bullock cart is main means of transportation of minor forest produce.

Plate. 2 Socio economic status of tribals at Dhanora tahsil

CHAPTER V

RESULTS AND DISCUSSION

The study was carried out with a view to study the “marketing analysis of minor forest product charoli (Buchanaria lanzan) and gum in Dhanora tahsil of Gadchiroli district” consisting of different tribal groups. This chapter presents and discusses the results obtained in this study.

5.1 Socio economic characteristics of selected tribals

The socio economic parameters of the tribals are studied with the help of size of land holding, education, family size, land use pattern and cropping pattern are discussed in the following paragraph.

5.1.1 Distribution of tribals according to size of holding

The distribution of tribals according to size of land holding was workout and presented in Table 5.1.1

Table 5.1.1 presents the distribution of tribals in the three categories i.e. small, medium and large according to their size of land holding. Out of total 60 selected tribals 78.33% belongs to small holding groups, 16.66% tribals belonged to medium holding group and only 5% tribals belongs to large group of land holdings.

Table 5.1.1 revealed that average size of land holding in case of small group, middle group and large group was 0.65 hectares, 2.32 hectares and 4.23 hectors respectively.

Table 5.1.1 Distribution of tribals according to land holding

Sr. No	Size of holding	Tribals selected	Average size of holding(ha)
1	Small	47 (78.33)	0.65
2	Medium	10 (16.66)	2.16
3	Large	3 (5.01)	4.23
4	Total	60 (100)	1.11

(Figure in parenthesis indicate the per cent to total)

5.1.2 Average family size and its composition

It is essential to study the average size of family to get an idea about per person income obtained from MFPs collection. The detailed of average size of family of sample tribals understudy is presented in table 5.1.2.

Family and its components are basically the functions of economic and social characteristics, custom and religious belief of society.

Table 5.1.2 Average size of family of selected tribals (in number)

Family size and its composition				
Particulars	**Small**	**Medium**	**Large**	**Overall**
Male	1.95 (42.39)	1.9 (46.34)	1.33 (36.36)	1.91 (42.75)
Female	1.76 (38.24)	1.8 (43.90)	1.66 (45.45)	1.76 (39.40)
Children	0.89 (19.35)	0.4 (9.75)	0.66 (18.18)	0.8 (17.84)
Total	**4.61 (100.00)**	**4.1 (100.00)**	**3.66 (100.00)**	**4.48 (100.00)**

(Figure in parenthesis indicate the per cent to total)

It is revealed from the Table 5.1.2 that at overall average number of family members were 4.48 which comprised of 1.91 males, 1.76 females and 0.8 children. The tribals were divided according to land holdings. In small tribal group the number of family members was 4.61 which comprised of 1.95 males, 1.76 females, and 0.89 children. In medium group of tribals the average number of family members was 4.1 which comprised of 1.9 males, 1.8 females, and 0.4 children. In case of large group of tribals average numbers of family members 3.66 which comprised of 1.33 males, 1.66 females and 0.66 children. In general, the size of family for group small, medium and large was 4.61, 4.1 and 3.66 members respectively.

5.1.3 Educational status of selected tribals

Education is the important factor affecting the standered of living of tribals .Table 5.1.3, indicate the distribution of tribals according to education.

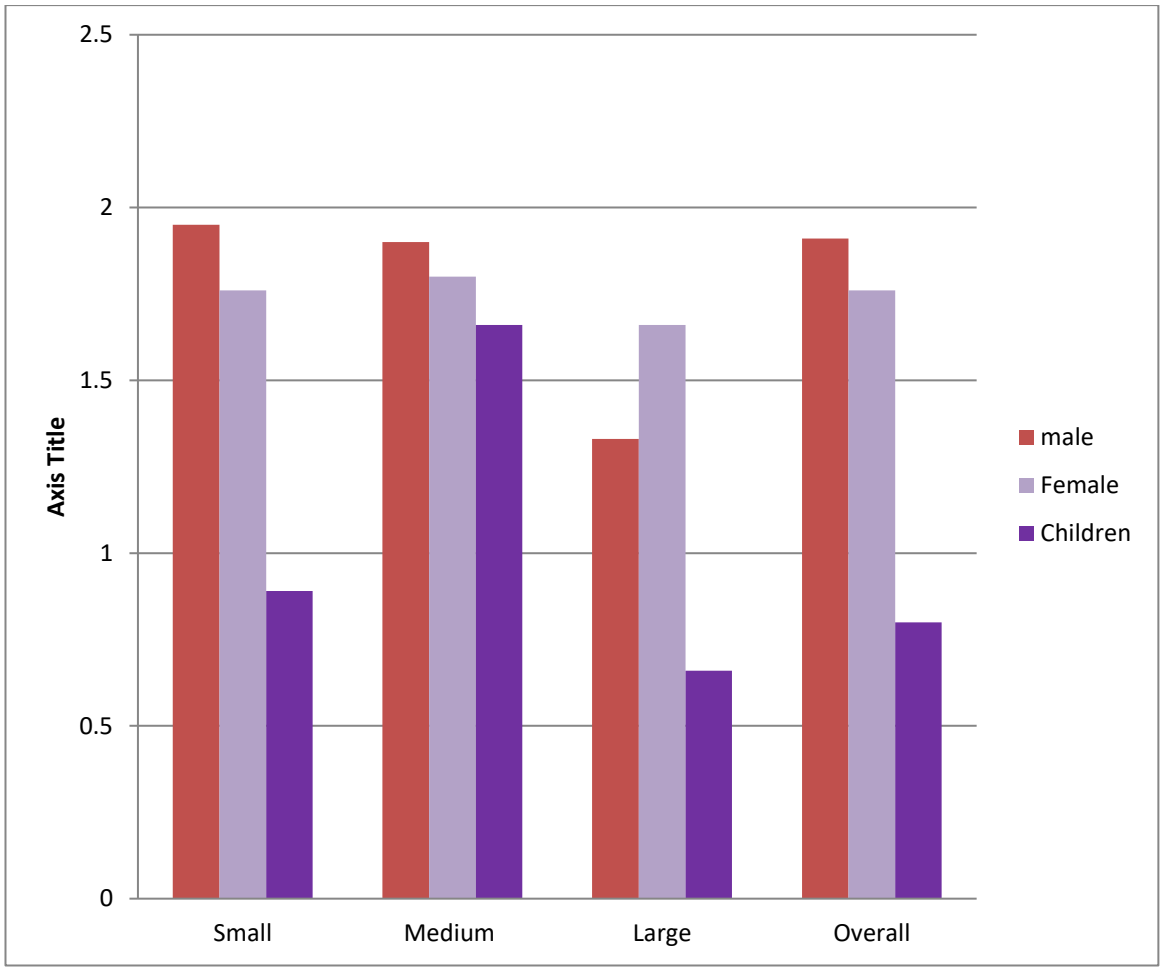


Fig. 2. Average size of family of selected tribals

Table 5.1.3 Distribution of selected tribals according to education level

Land holding size				
Particulars	**Small**	**Medium**	**Large**	**Overall**
Primary	1.04 (22.69)	0.8 (19.51)	0 (0.00)	0.93 (20.83)
Secondary high	1.68 (36.46)	1.8 (41.71)	1.33 (36.26)	1.68 (37.57)
Junior college	0.25 (5.53)	0.5 (12.19%)	1 (27.32)	0.33 (7.39)
UG college	0.02 (0.78)	0.1 (2.43%)	0.66 (18.21)	0.06 (1.48)
Illiterate	1.57 (34.54)	1.2 (24.16)	0.66 (18.21)	1.46 (32.73)
Total	**4.61 (100.00)**	**4.1 (100.00)**	**3.66 (100.00)**	**4.48 (100.00)**

(Figure in parenthesis indicate the per cent to total)

It is reveled from table 5.1.3 that overall average proportion of illiterate members was highest in small group of tribals i.e.34.54 per cent followed by medium group which accounts 24.16 per cent while it was lowest in large group i.e.18.21 per cent. Average proportion of primary school member was highest in small group (22.69 per cent) followed by medium group (19.51 per cent) while it was zero (0.00 per cent) in large group. Average proportion of secondary high school (5 to 10 standard) was highest in medium group (41.71 per cent) followed by small group (36.46 per cent) and lowest in large group (36.26 per cent). Average proportion of junior college members was highest in large group (27.32 per cent) followed by medium group it was 12.19 per cent and lowest in small group (5.53 per cent) The proportion of members from under graduate college was highest in large group (18.21 per cent) Followed by medium group 2.43 per cent and lowest in small group (0.46 percent).

5.1.4 Land utilization pattern of selected tribals

The information about land utilization indicates the area of land actually utilize in different purpose like crop production, irrigated and unirrigated etc. The land utilization pattern of selected tribals are presented in Table 5.1.4.

It can be seen from the information furnished in Table 5.1.4 that the size of land holding i. e. the land owned by farmer- borrower groups like small farmers, medium farmers and large farmers is 0.65 ha, 2.16 ha and 4.23 ha per farmer respectively. The categories of above size groups are based on the size of land holding which is ascending from small farmer to other group of farmers. The overall land holding of selected farmer- borrowers was found to be 1.11 ha. The overall current fallow land was 0.08 ha which accounts 8.04 per cent of total land holding.

Table 5.1.4 Land use pattern in study area (Ha)

Sr No	Land holding size				
	Particulars	**Small**	**Medium**	**large**	**Overall**
1	Total land holding	0.65 (100.00)	2.16 (100.00)	4.23 (100.00)	1.11 (100.00)
2	Permanent fallow	0.03 (4.63)	0.32 (15.10)	0.4 (9.44)	0.10 (9.29)
3	Operational land	0.58 (89.86)	1.61 (74.41)	3.43 (81.10)	0.91 (82.67)
a)	Irrigated	0.003 (0.55)	0.62 (38.89)	1.16 (33.98)	0.17 (19.12)
b)	Rain fed	0.58 (99.45)	0.98 (61.11)	2.26 (66.02)	0.74 (80.88)
4	Current fallow	0.007 (5.51)	0.22 (10.49)	0.4 (9.46)	0.08 (8.04)

(Figure in parenthesis indicate the per cent to total)

Due to the lack of irrigation facilities and resources, it seemed from the table 5.1.4 that the size of fallow land increased as per the size of land holding increased. The permanent fallow land possessed by large farmers 0.4 ha which accounts 9.44 per cent of total land holding area followed by medium group of farmers 0.32 ha (15.10 per cent) of total land holding area of medium farmer .

It can be revealed from Table 5.1.4 that, the average operational land was highest in large group 3.43 ha which accounts 81.10 per cent of total land holding area of large farmers. Followed by medium group 1.61 ha (74.41per cent) and lowest is in small group i.e. 0.58 ha.

5.1.5 Cropping pattern of selected area

Table 5.1.5 Cropping pattern of selected tribals

Cropping pattern of sample grower (area in ha)					
Sr No	**Particular**	**Land size holding**			
		Small	**Medium**	**Large**	**Overall**
1	**Kharif crops**				
A	Soybean	0.11 (17.18)	0.31 (14.15)	0.5 (8.96)	0.16 (14.41)
B	Tur	0.04 (4.68)	0.23 (10.04)	0.53 (9.49)	0.09 (8.10)
c	Paddy	0.4 (62.5)	1.09 (49.31)	1.83 (32.79)	0.59 (53.15)
D	Mung	0.02 (3.12)	0.09 (4.10)	0.58 (10.03)	0.08 (5.40)
	Total	0.56 (87.5)	1.7 (77.62)	3.42 (61.29)	0.9 (81.08)
2	**Rabi crop**				
A	gram	0.06 (9.38)	0.37 (16.89)	0.56 (10.03)	0.15 (12.61)
	Total	0.06 (9.38)	0.37 (16.89)	0.56 (10.04)	0.15 (12.61)
3	**Vegetable**	0.02 (3.12)	0.12 (5.49)	1.6 (28.67)	0.07 (6.30)
	Total	0.02 (3.12)	0.12 (5.49)	1.6 (28.67)	0.07 (6.30)
4	**Gross cropped area**	0.64 (100.00)	2.19 (100.00)	5.58 (100.00)	1.11 (100.00)
5	**Net cropped area**	0.56	1.7	3.42	0.9
6	**Area sown more than ones**	0.08	0.49	2.16	0.21
7	**Cropping intensity**	114.28	128.82	163.15	123.33

(Figure in parenthesis indicate the per cent to total)

Table 5.1.5 Described the cropping pattern of selected tribals and it was found that at overall level highest area was sown under paddy crop followed by soybean, gram, tur and mung.

In kharif season, the overall area allocated under paddy crop was 0.59 ha which accounts 53.15 per cent area under soybean was 0.16 ha which account 14.41 per cent, area under tur was 0.09 ha which accounts 8.10 per cent and area under mung was 0.08 ha which accounts

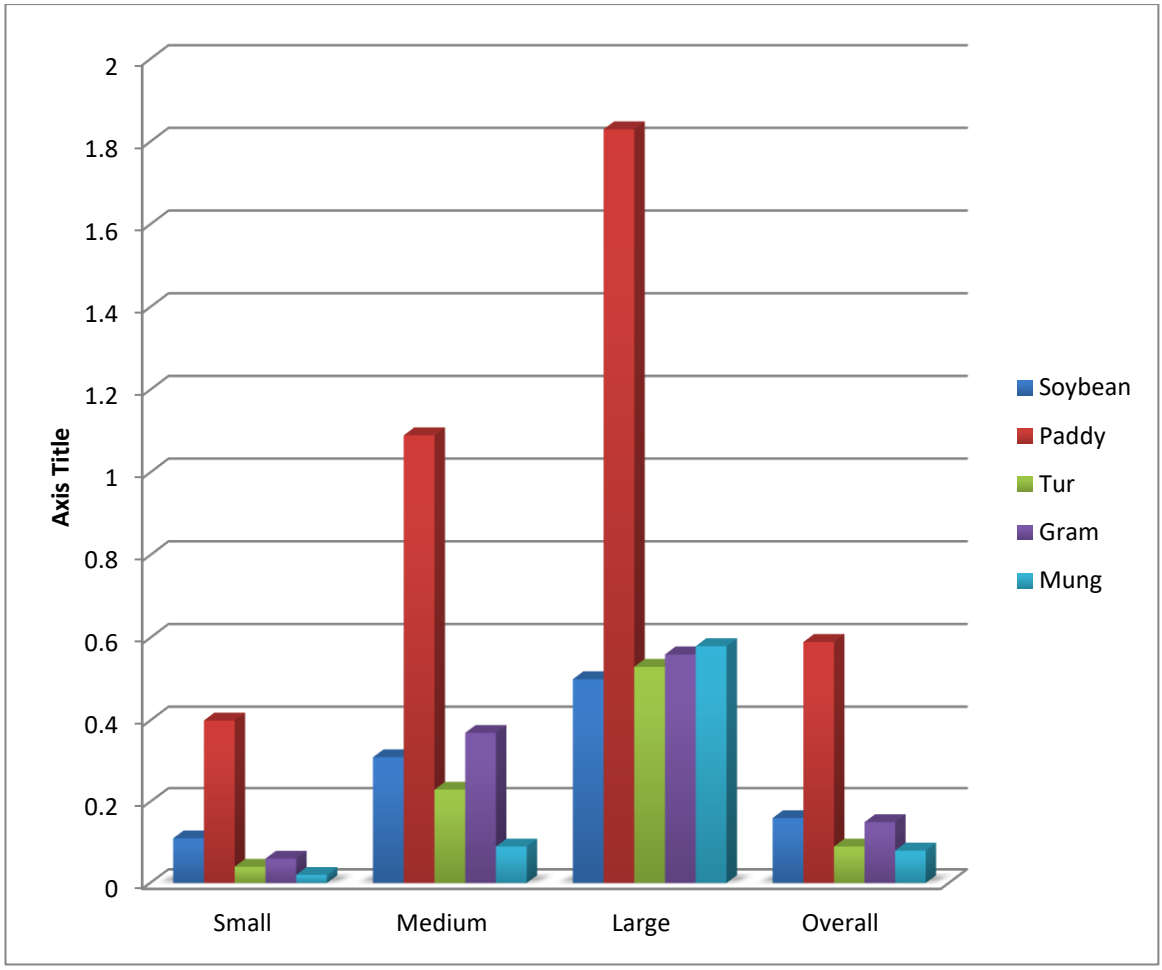


Fig. 3. Cropping pattern of selected tribals

5.40 per cent of the gross cropped area. In small, medium and large size group area under paddy was 0.4 ha which account 62.50 per cent , 1.09 ha which account 49.31 per cent and 1.83 ha which account 32.79 per cent respectively. Area under soybean was 0.11 ha which account 17.18 per cent, 0.31 ha which account 14.15 per cent and 0.5 ha which account 8.96 per cent respectively. Area under tur was 0.04 ha which account 4.68 per cent, 0.23 ha which account 10.04 per cent and 0.53 ha which account 9.49 per cent respectively. Area under mung was 0.02 ha which account 3.12 per cent, 0.09 ha which account 4.10 per cent and 0.58 ha which account 10.03 per cent respectively.

In Rabi season, gram was the important Rabi crops grown by the selected tribals. It was observed that at overall level the area under gram was 0.15 ha which 12.61 per cent was. In small, medium and large size group area under gram was 0.06 ha which account 9.38 per cent, 0.37 ha which account 16.89 per cent and 0.56 ha which account 10.03 per cent respectively.

The overall area allocated under vegetables was 0.07 ha which accounts 6.30 per cent. In small, medium and large size group area under vegetables was highest in large group that is 1.6 ha which accounts 6.30 per cent of gross cropped area followed by medium group 0.12 ha which accounts 5.49 per cent and lowest is in small group 0.02 ha which accounts 3.12 per cent of gross cropped area.

5.1.6 Livestock status

Table 5.1.6 revealed that, the livestock as an asset has the average value of one bullock, one cow, one calf, two bulffalo, two heifer, six goats, and four goat kids are Rs. 10316.67,Rs. 8736.84,Rs. 6175, Rs. 35600, Rs. 10040, Rs. 32000 and Rs. 9000 respectively.

Table 5.1.6 Livestock status of selected tribals

Sr. No.	Livestock status		
1	Bullock	Number Cost	1.00 10316.67
2	Cow	Number Cost	1.00 8736.84
3	Calf	Number Cost	1.00 6175
4	Buffalo	Number Cost	2.00 35600
5	Heifer	Number Cost	2.00 10040
6	Goat	Number Cost	6.00 32000
7	Goat kid	Number Cost	4.00 9000

5.2 Sources, season, uses of MFPs to tribal peoples

Information regarding sources, season and uses of minor forest products are presented in Table 5.2.1

Sr No	Source	Scientific name	Season	Use
	Forest			
A	**Flora**			
1	Bamboo	*Dendrocalamus strictus*	Sept-may	Basket making , support to horticulture crops, house construction
2	Gum	*Anogcissus latifolia*	March-June	Medicinal and home consumption
3	Grass			
I	Green		July-September	fodder
Ii	Dry		Oct-February	fodder
4	Mohaflower	*Madhuca indica*	April-may	Liquor
5	Moha fruit	*Madhuca indica*	May-June	Edible oil, medicinal use
6	Charoli	*Buchanaria lanzan*	April-may	Home consumption
7	Apta leaves	*Bauhina racemosa*	September	fodder
8	Teak leaves	*Tectona grandis*	April-may	Rooting
9	Palas leaves	*Butea monosperma*	Jan-February	Preparation of seedlings

10	Behada	*Terminaia tomentosa*	April-June	Medicinal purpose
11	Khair seed	*Acacia catechu*	Feb-may	Seedlings preparation
12	Tendu leaves	*Diospyros melanoxylon*	April-may	Bidi making
13	Karvand	*Carissa carandus*	April-may	Pickle, direct consumption
14	Jamun	*Syzygium cumini*	May-June	Juice, direct consumption and medicinal use
15	Tamarind	*Tamarindus indica*	Dec-June	Medicinal use, direct consumption
16	Aonla	*Phyllanthus emblica*	Nov-April	Medicine, pickle and direct consumption
B	**Fauna**			
1	Honey		April-June	Medicinal use and eating purpose
2	Horn		-	Decorative articles
3	Husk		-	Fertilizer
4	Bones		-	Fertilizer
5	Skin		-	Fertilizer

From table 5.2.1 it is revealed that, the sources of MFPs are forest and field from where the collectors, farmers, forest workers usually collect it. The main source of minor forest products was the forest which was divided into flora and fauna. Flora is related to the source of products from plant kingdom (Gum, Mohaflower, Apta etc.) where as fauna is related to source of products received from animals. It was also observed from table 5.2.1 that, the season of MFPs varies from product to product. However, the maximum quantity of MFPs was obtained during December to May. Various uses of MFPs were observed viz., in pharmaceutical industry for medicinal purpose and other industries like agro processing, consumption, propagation etc.

5.2.2 Distribution of selected minor forest products to different agencies

Agencies wise sale of MFPs in Dhanora tahsil of Gadchiroli district presented in table 5.2.2.

1) Collectors (tribals)

It is seen from table 5.2.2 that, total collection of 60 tribals was 641 kg of charoli, from that collectors were sold 291 kg (45.39%) to four self help groups , 209 kg (32.6%) of charoli to five wholesalers and 141 kg (21.99%) of charoli to eight retailers at average rate of 110 rupees per kg.

It was revealed from table 5.2.2 that, from total collection of gum that is 998 kg, collectors sold 508 kg (50.9%) gum to four selected self help group, 383 kg (38.37%) to five wholesalers and 108 kg of gum directly sold to the retailers at average rate of 233 rupees per kg.

Table 5.2.2 Agency wise sale of MFPs

			Charoli		Gum	
Sr No	**Name of agencies**	**No. of agencies involved**	**Quantity (kg)**	**Price/ kg**	**Quantity (kg)**	**Price/kg**
1	Collectors	60	641 (100)	110	998 (100)	233
2	Self help group	4	291 (45.39)	171.25	508 (50.90)	256.45
3	Wholesaler	5	209 (32.60)	170.45	383 (38.37)	264.23
4	Retailer	8	141 (21.99)	186.28	108 (10.82)	280.76

(Figure in parenthesis indicate the per cent to total)

2) Self help groups

It is observed from table 5.2.2 that, four self help groups were sold 291kg of charoli at average rate of 171.25 rupees per kg and 508 kg of gum at average rate of 256.45 rupees per kg.

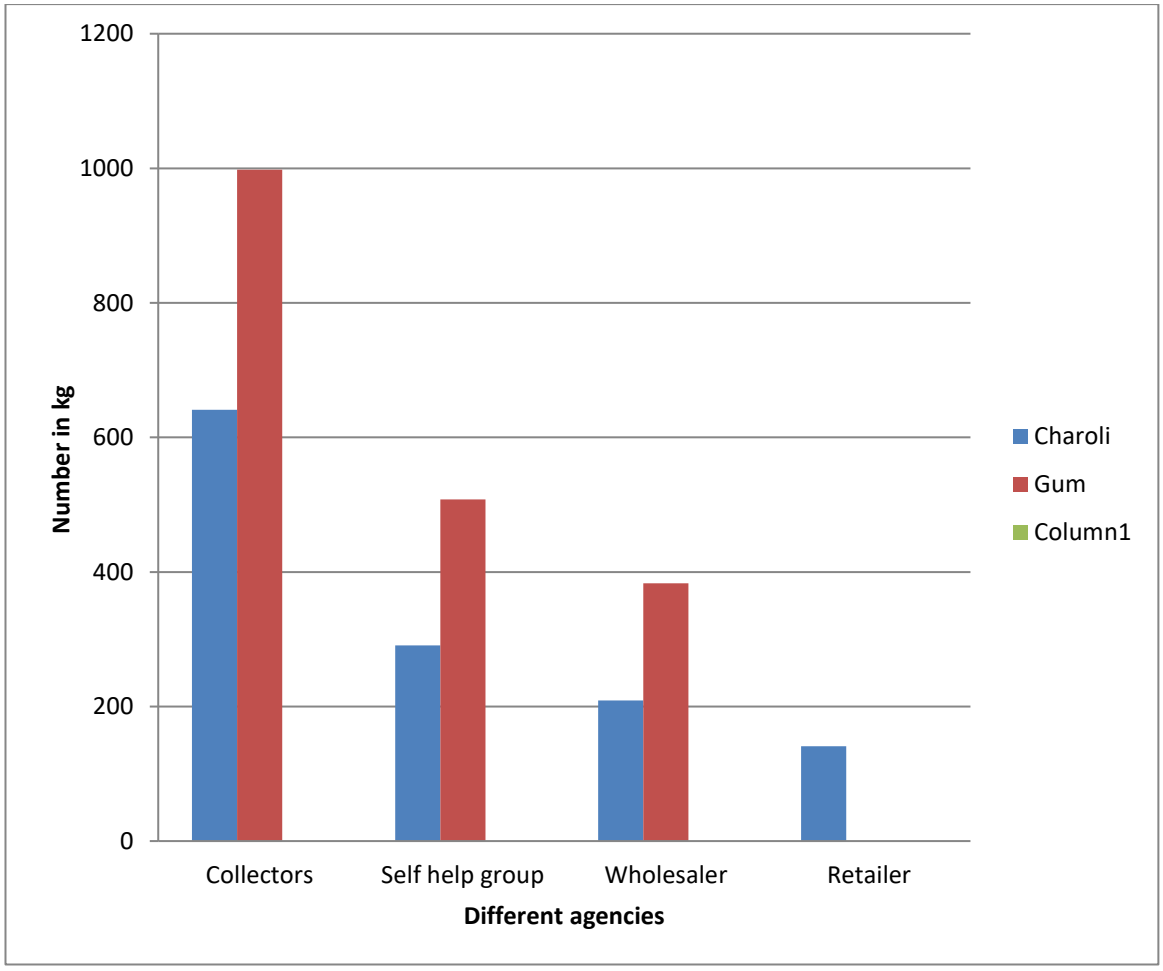


Fig. 4. Agency wise sale of minor forest products

3) Wholesaler

It is seen from table 5.2.2 that, five wholesalers were sold 209 kg of charoli and 383 kg of gum at average rate of 170.45 and 264.23 rupees per kg respectively.

4) Retailer

It is seen from table 5.2.2 that, eight retailers were sold 141 kg charoli at average rate of 186.28 rupees per kg and 108 kg gum at average rate of 280.76 rupees per kg.

5.2.3 Channel wise distribution of MFPs

Table 5.2.3 Marketing channel observed in study area

Sr. No	Channels			
	I	II	III	IV
1	Collector	Collector	Collector	Collector
2	SHG	Wholesaler	-	-
3	Retailer	Retailer	Retailer	-
4	Consumer	Consumer	Consumer	Consumer

Channel I: Collector → S.H.G. → Retailer → Consumer

Channel II: Collector → Wholesaler → Retailer → Consumer

Channel III: Collector → Retailer → Consumer

Channel IV: Collector → Consumer

During the study, it was observed that in channel I the minor forest products passes through collector to SHG to retailer to consumer. In channel II the products passes through collector to wholesaler to retailer to consumer. Whereas, in channel III the products passes through collector to retailer to consumer. And in channel IV, directly from collectors to consumer.

5.2.4 Marketing cost incurred by different agencies

Marketing of MFPs is estimated and presented in table 5.2.4.

Table 5.2.4 Marketing cost of MFPs and producer's share in consumer rupees

Sr.No	Item	Charoli	Gum
A	**Marketing cost incurred by producer**		
1	Loading and unloading	90	54
2	Cost of packing	67	35
3	Transportation	170	87
4	Weighing charges	1.5	1.5
5	Hamali	56	23
6	Miscellaneous	45	40
	Total	**429.5 (19.82)**	**240.5 (16.90)**
B	**Marketing cost incurred by SHG**		
1	Storing	120	59.5
2	Cleaning	500	230
3	Hamali	70	55
4	Weighing charges	1.5	1.5
5	Miscellaneous	45	76
	Total	**736.5 (33.96)**	**422 (29.63)**
C	**Marketing cost incurred by wholesaler**		
1	Storing	80	60
2	Transportation	423	420
3	Labour charge	120	60
4	Gunny bag	3	5
5	Weighing charges	1.5	1.5
6	Miscellaneous	65	35
	Total	**692.5 (31.93)**	**581.5 (40.83)**
D	**Marketing cost incurred by retailer**		
1	Transportation charges	120	70
2	Hamali	40	60
3	Other	150	50
	Total	310 (14.29)	180 (12.64)
	Total cost (A+B+C)	**2168.5**	**1424**
	Producer share in consumer rupee (%)	**59.05**	**79.42**

(Figure in parenthesis indicate the per cent to total)

It was seen from Table 5.2.4 that, total marketing cost required for charoli was 2168.5 rupees per quintal and for gum marketing cost was 1424 rupees per quintal.

It was also observed from table 5.2.4, charoli required highest marketing cost than gum because of high perishability of charoli pods. In case of charoli SHG incurred highest marketing cost Rs. 736.5 which accounts 33.96 per cent of total marketing cost of charoli. Followed by wholesaler which accounts 31.93 per cent of total marketing cost of charoli.

In case of gum, highest marketing cost incurred by wholesaler was Rs. 581.5 which accounts 40.83 per cent o followed by SHG which accounts 29.63 per cent of total marketing cost of gum.

5. 3 Employment and Income generated through minor forest produce

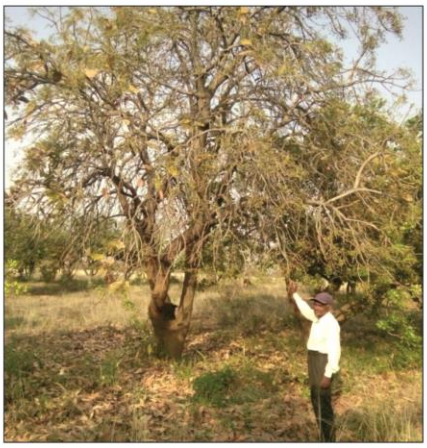
Details of employment and income pattern of selected tribals generated through MFPs

Table 5.3.1 Employment (days/ year) and Income (Rs/year) generated through minor forest produce

Sr. No	Particulars	Small	Medium	Large	Overall
	Employment				
A	Charoli	48.70 (38.73)	49.3 (39.88)	43.33 (38.81)	48.53 (38.92)
B	Gum	77.04 (61.27)	74.3 (60.12)	68.33 (61.19)	76.15 (61.08)
	Total	**125.74 (100.00)**	**123.60 (100.00)**	**111.66 (100.00)**	**124.68 (100.00)**
	Income				
A	Charoli	1209.57 (23.49)	1204 (23.84)	1053.33 (27.33)	1200.83 (23.63)
B	Gum	3939.36 (76.51)	3922 (76.16)	2800 (72.67)	3879.5 (76.37)
	Total	**5248.93 (100.00)**	**5266 (100.00)**	**3953.33 (100.00)**	**5180.33 (100.00)**

(Figure in parenthesis indicate the per cent to total)

It could be observed from Table 5.3.1 that the average total employment was available from MFPs collection for 124.68 days of which, employment from charoli collection was 48 .53 days i.e.38.92 per cent.



Collection of forest produce for additional income Tal: Dhanora

Selling of Charoli fruits at lekhamendha village market

Plate 3: Employment and Income Sources of tribals family

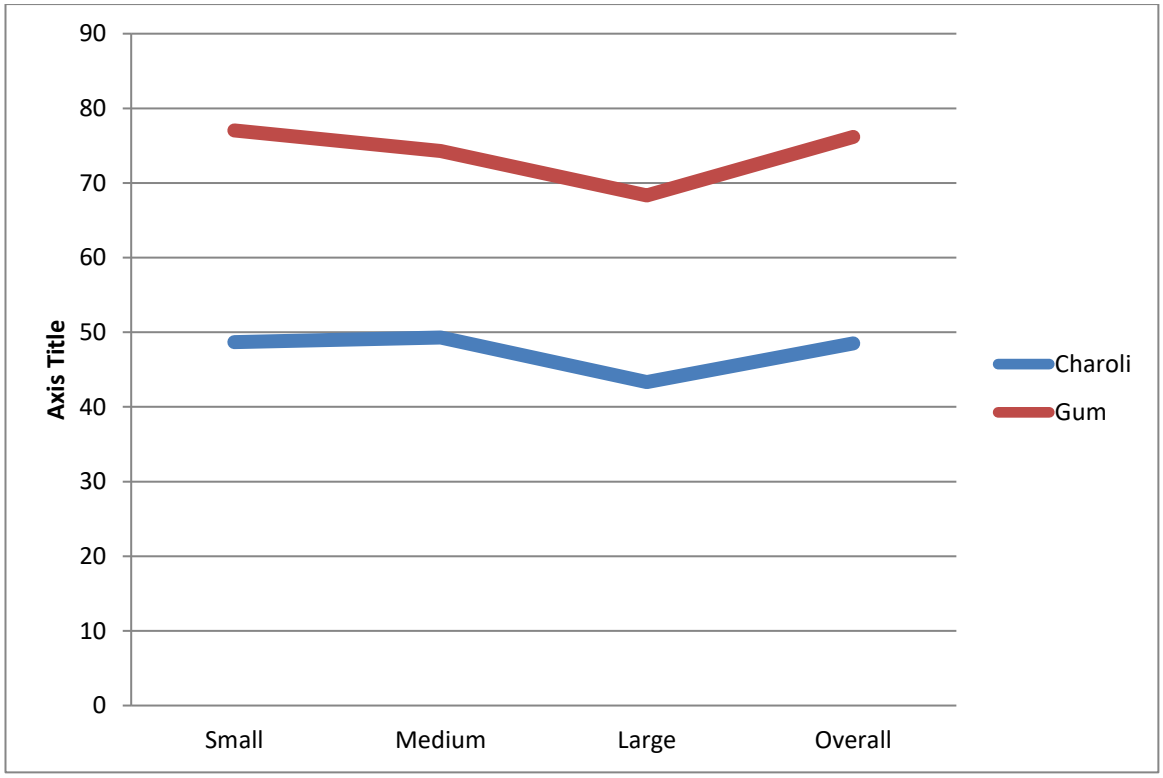


Fig. 5. Employment generated (days/year) through Charoli and Gum

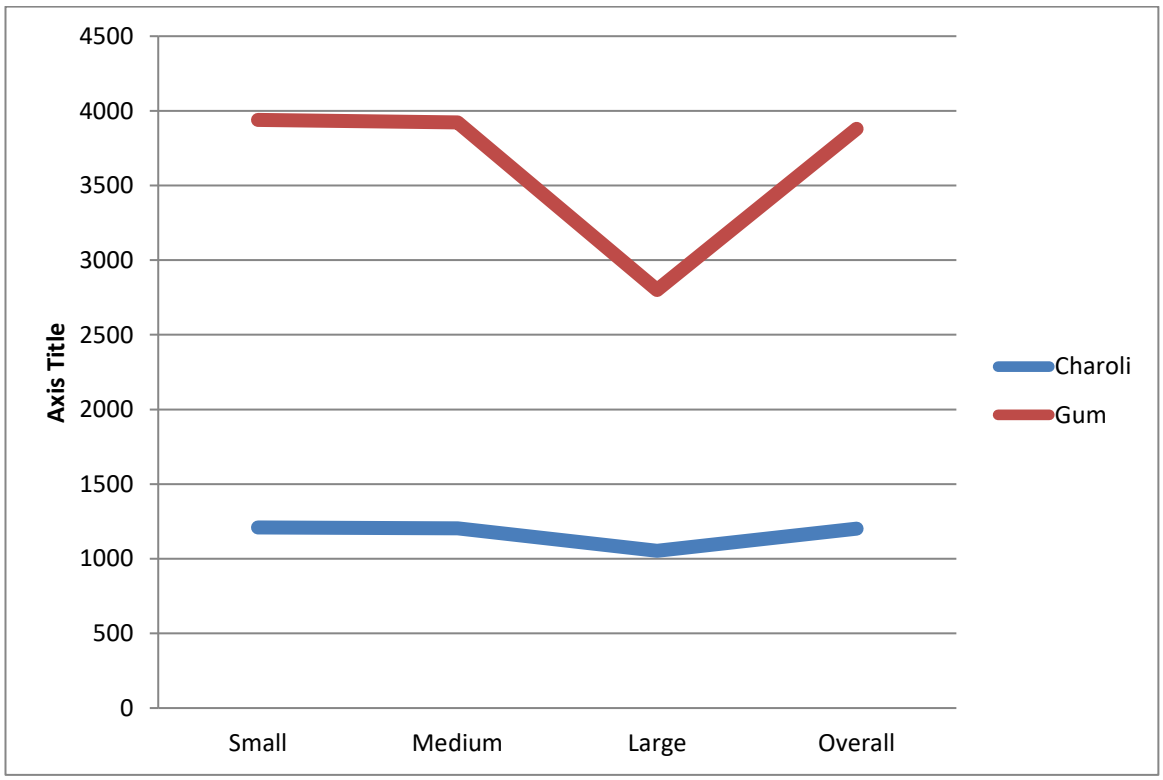


Fig. 6. Income generated (Rs. /year) through Charoli and Gum in one year

Employment generated from gum collection was 76.15 days which accounts 61.08 per cent.

Annual employment generated from MFPs was highest in small group that is 125.74 days followed by medium group 123.60 days and lowest for the large group 111.66 days. Out of total employment generated to the small, medium and large group, employment generated through charoli was 48.70 days which account 38.73 per cent, 49.3 days which accounts 39.88 per cent and 43.33 days which accounts 38.81 per cent respectively. And employment generated through gum was 77.04 days which accounts 61.27 days, 74.3 days which accounts 60.12 per cent and 76.15 which accounts 61.08 per cent respectively.

It may be concluded that the highest employment in respect of charoli and gum , found in small group i.e.125.74 days followed by medium group which accounts 123.60 days and lowest to the large group i. e.111.66 days.

It could be seen from table 5.3.1 that an average overall annual income per household obtained from charoli and gum was 5180.33 rupees. Overall average income from gum was 3879.5 per year i.e.76.37 per cent which was highest as compared with charoli 1200.83 which accounts 23.63 per cent.

The total income obtained from charoli and gum was highest in small group Rs. 5248.93 followed by medium group Rs. 5226 and lowest in large group Rs. 3953.33 per year.

5.4 Constraints in marketing of minor forest produce

Constraints occurred in the process of marketing of MFPs are presented in table 5.4.1. below. The table indicates that transportation was the main constraints faced by 30 percent of the sampled MFPs collectors followed by storage problem, time required, no primary processing unit and improper pricing of raw produce are amongst other constraints at 15, 13.33, 13.33 and 11.68 per cent respectively.

Table 5.4.1: Constraints faced by the tribals (collectors of MFPs) during marketing of MFPs

Sr. No.	Constraints	Frequency (N=60)	Percentage
1	Poor transportation facilities	18	30
2	Storage problem	9	15
3	Less quantity available	6	10
4	Lack of availability of timely market information	4	6.66
5	No primary processing unit	8	13.33
6	Improper pricing of raw produce	7	11.68
7	Time consuming	8	13.33
	Total	60	100.00

(Figure in parenthesis indicate the per cent to total)

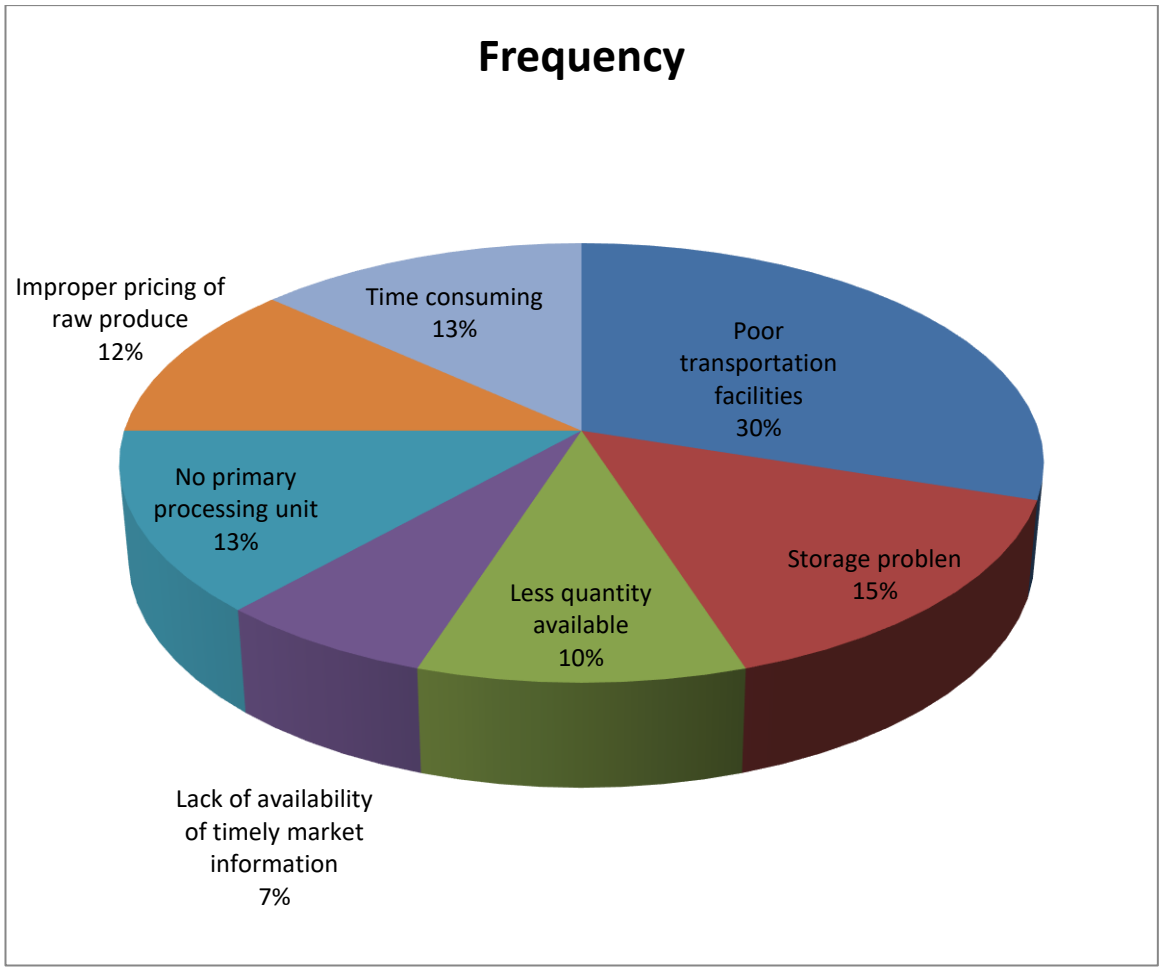


Fig. 7. Constraints faced by the tribals (collectors) during collection and marketing of minor forest products

CHAPTER VI

SUMMARY AND CONCLUSIONS

In India, Minor forest products are an important livelihood source for several communities, particularly those living in forest fringe villages. About 400 million people in India depend on MFP for sustenance and supplemental income. According to 2011 census, the tribal population in India was 104 million people which accounts for 8.6 percent of total population of the country. It is estimated that, there is one tribal man for every fourteen Indians. In India, about 53 per cent of total tribal population lives in rural areas and nearly 31 per cent of them are directly dependent on MFP for their livelihood.

Minor forest products are the non timber products of the forest viz, lac ,gum charoli, hirda, behda, medicines etc. non timber products hold great promise for revitalizing rural economic potential and have great importance to the tribal people as they have an employment opportunity or a medium to earn money.

In present study Dhanora is tribal dominated tahsil of Gadchiroli district which was selected purposively on the basis of maximum area under forest which is important source of income and employment generation to tribal people.

The data were collected with primary data for the present study. Primary data for general regarding of about, collectors, wholesalers, retailers. Primary data of sources, season, method of sale was collected from wholesalers, retailers, collectors.

For analysis of data, averages, ratio, percentage and other statistical tools were used. From the ongoing analysis following conclusion emerged from present study.

Conclusion

1) The average family size constituted about 4 members observed in study area.
2) The average Literacy per centage was 67.27.
3) In study area, the average area under rainfed agriculture (80.88 per cent) is highest than the irrigated agricultural land (19.12 per cent) because of poor financial condition
4) The average cropping intensity was 123.33 per cent observed in study area.
5) Paddy is majorly grown crop (53.15 per cent) observed in study area because of optimum water availability.
6) Following four channels of distribution of MFPs were identified in study area.

   A. Channel I: Collector → S.H.G. → Retailer → Consumer

   B. Channel II: Collector → Wholesaler → Retailer → Consumer

   C. Channel III: Collector → Retailer → Consumer

   D. Channel IV: Collector → Consumer

7. Out of total collection of charoli, tribals sold highest quantity to the self help group (45.39 per cent) followed by wholesaler (32.60 per cent) and lowest to the retailer (21.99 per cent). And from gum highest quantity sold to the wholesaler (50.90 per cent) followed by self help group (38.37 per cent) and lowest to the retailer (10.82 per cent).
8. The producer share in consumer rupee was 59.05 per cent for charoli and 79.42 per cent for gum.
9. Annual average employment generated through collection of charoli was 48.53 and from gum it was 76.15 days.
10. Time spends by tribals on collecting charoli and gum was inversely proportional to income generated through it.
11. The income generated from charoli was 1200.83 rupees per year and from gum it was 3879.50 rupees per year.

12. The major constraint for marketing of MFPs was not availability of transportation facilities identified in study area, which was 30 per cent.

Policy implications

There should be proper storage facilities at village level to save the collectors from distress selling of non timber forest products (NTFPs). Formulation of state level marketing board should to regulate and promote the purchase and sale of products within the state as well as outside the state at remunerative price.

CHAPTER VII

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APPENDIX

MARKETING ANALYSIS OF MINOR FOREST PRODUCT CHAROLI (*Bucharia lanzan*) AND GUM IN DHANORA TAHSIL OF GADCHIROLI DISTRICT

QUESTIONNAIRE

1. General Information of the Family

a. Head of the family :

b. Village :

c. Age :

d. Education :

e. Tribal :

f. Main occupation :

g. Secondary occupation :

2. Family size and its composition

Sr. No.	Name of family member	Age (Year)	Education	Relation with head	Occupation	
					Main	Sub-subsidy
i.						
ii.						
iii.						
iv.						
v.						
vi.						

3. Land utilization (Ac.)

Sr. No.	Particulars	Dry (Ac)	Irrigated (Ac)	Total (Ac)
1.	Total land			
2.	Permanent fallow			
3.	Operational holding			
4.	Net sown area (a)			

4. Livestock inventory

Sr. No.	Name	No.	Own/ Purchased year	Present value (Rs.)	Remaining life (yrs)	Remarks
1.	**Draft animals**					
a.	Bullocks					
b.	He-Bullocks					
2.	**Milch animals**					
a.	Cows					
i.	Cross bred					
ii.	Local					
b.	Buffalo					
3.	**Dry animals**					
a.	Cows					
i.	Cross bred					
ii.	Local					

b.	Buffaloes					
c.	Heifers					
i.	Cows					
ii.	Buffaloes					
4.	**Calves (below 1 year)**					
5.	Sheep					
6.	Goat					
7.	Poultry					
8.	Others					

5. Cropping pattern

Sr. No.	**Crop**	**Area (ha)**	
		Irrigated	**Rainfed**
	Kharif		
1.			
2.			
3.			
4.			
5.			
6.			
	Rabi		
1.			
2.			
3.			
4.			
5.			

6.			
	Summer		
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	Annual/perennial		
1.			
2.			

6. Collection of minor forest product

Sr.No.	Name of MFP	Per year collection	Rate/kg
1	Charoli		
2	gum		

7. Marketing channel

Sr no	Name of MFP	Marketing channel			Marketing cost
		SHG	wholesaler	retailer	
1					
2					

8. Employment and income generation

Sr. No.		Working members in family	Working days per year	Total income
a	**Male**			
1				
2				
3				
b	**Female**			
1				
2				
c	**Children**			
d	**Other**			

9. Constraints faced by the tribals during collection and marketing of minor forest produce

S. No.	Constraints
1	Poor transportation facilities
2	Storage problem
3	Less quantity available
4	Lack of availability of timely market information
5	No primary processing unit
6	Improper pricing of raw produce
7	Time consuming