

A Case Study on Paradigm of Doubling Tribal Farmer's Income: Role of Forest Produce in Bastar Division

P.K. TIWARI¹, DIVYA TIWARI², B.P. MSHRA³, P.K. PANDEY⁴ AND M.B. TIWARI⁵

¹Asstt. Professor (Agri. Ext.), College of Horticulture & Research Station, Jagdalpur-494001, Bastar (C.G.)

²Asstt. Prof. (Hort.), Nalanda College of Horticulture, Noorsarai-803103, Nalanda (Bihar)

³Assoc. Prof. (Agri. Ext.), Deptt. of Agri. Extension, Banda Agriculture University, Banda (U.P.)

⁴Asstt. Professor (Agri. Ext.), College of Horticulture & Research Station, Jagdalpur-494001, Bastar (C.G.)

⁵M.A. (Sociology), S.G. College of Agirulcutre & Research Station, Jagdalpur-494001, Bastar (C.G.)

Abstract: The present paper attempts to examine the attitude of tribals towards collection of forest produce and role of forest produce to sustain their livelihood. The study was carried out in 9 villages of 3 blocks Jagdalpur, Bastanar & Darbha of District Bastar. To make the sample size of total 240 forest produce collectors; 20 respondents from each selected village were selected randomly for the current study. The pre-tested and validated schedule is used to collect the data and suitable statistical tools were used to analyze it.

The results show that most of the respondents 76.67 percent had the high attitude level towards collection of forest produces while 15.42 percent had the medium and 7.92 percent had low attitude level. Further, study revealed that the variables viz. Education, Annual Income, Share of forest produce in Annual Income, Economic Orientation, Knowledge Extent and Adoption Extent highly influenced the attitude of forest produce collectors. The respondents also reported that the constraints viz. market far away from their home; unorganized market; poor transportation facilities; non-availability of primary processing units; less marketable quantities due to more household consumptions; improper pricing by traders and kochiyas; lack of storage facilities were the major constraints which directly affect the process of collection of forest produces while the constraints viz. time-consuming activity; insufficient labour; area of collection far away from home; deforestation; forest fire; competition among the forest produce collector were indirectly affect the process of collection of forest produce.

It is concluded from the present study that the initiatives should be taken by the government-designated procurement groups and non-government organizations at root level of collection, processing and marketing of forest produce to help the forest produce collectors to ensure the significant enhance in their income from forest produce in Bastar division of Chhattisgarh.

Keywords: Forest Produce, Forest Federation, Illegal Trade, Community Forest, Market Access

INTRODUCTION

Past strategy for development of the agriculture sector in India has focused primarily on raising agricultural output and imposing food security. The strategy paid dividends as the country was able to address severe food shortage that emerged during mid 1960. During the last half a century (1965-2015), since the adoption of green revolution, India's food production multiplied

3.7 times while the population multiplied by 2.55 times. The net result has been a 45 per cent increase in per person food production, which has made India not only food self-sufficient at aggregate level, but also a net food exporting country. The strategy did not explicitly recognize the need to raise farmer's income and did not mention any direct measure to promote farmer welfare.

The experiences show that in some cases, growth in output brings similar increase in farmer's income but in many cases farmer's become did not grow much with increase in out put. The net result has been that farmers income remained low, which is evident from the incidence of poverty among farm households. The proportion of farm household suffering from poverty was quite high in some states.

Forests are associated with socio-economic and cultural life of tribals in India. The collection of Forest Produces by tribals was primarily for meeting their subsistence needs. These tribal groups inhabit wide ecological and geo-climatic conditions in different concentrations throughout the country. In India, over 50 million people are dependent on Forest Produces for their subsistence and cash income (Hegde et al., 1996). 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 out of which only 126 have developed marketability (Maithani, 1994). Thus, it can be depicted that NTFPs form one of the mainstays of income and sustenance for many tribal communities (Rao, 1987; Gauraha, 1992; Chopra, 1993; Mallik, 2000). 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 (Cottray *et al.*, 2003).

Forest & Tribals of Chhattisgarh

Some of the major tribes of Chhattisgarh include Gond, Baiga, Kanwar, Korba, Abhujh Maria, Muria, Halba, Bhatra and Dhurvaa tribes. Majority of the tribes of Chhattisgarh depend upon forestry, hunting, fisheries and some local cottage industries for their livelihood. They primarily dependent on forest produce, which they gather and sale or consume directly. These forest produces are used by rural communities as medicine and food. The major forest produces available and collected in the state are Tendu Leaves, Harra, Baheda Seed, Tamarind, Chironji Nut, Lac, Aonla Fruit, Mahul Leaves, Honey, Plash Flower and Seed, Mahua flower and seed, Sal seed, Kusum seed, Mango Kernel, Karanj

Seed, Kalmegh Leaves, Bael Fruit, Nagarmotha Roots, Van Tulsi Seed, Ber Fruits, Tikhur Tubers, Van Jeera Seed, Babool Gum, Neem seed and Charota Seed etc. Over 200 species of medicinal, aromatic and dye plants are found in abundance in forests of Chhattisgarh.

Around 50 per cent of forest revenues and 70 per cent of forest based export income of the country comes from forest produces. In some states of India, forest produces have contributed 30 to 70 per cent of the total income of households and majority of the forest dwellers depend on forests for 25 to 50 per cent of their food requirements. In many states forest produces contributes major proportion of the revenue to the State Forest Departments, like Orissa, Madhya Pradesh and Chhattisgarh (Ministry of Environment and Forests, 2008). Chhattisgarh is third largest state of India in terms of forest cover which is 5.6 million hectares which is 46.39 per cent of state and 8.06 per cent of the country. Madhya Pradesh and Arunachal Pradesh being at first and second in terms of forest cover (Forest Census, 2011). The Chhattisgarh Government has declared the state as "Herbal state" with an objective to conserve Minor Forest Produces resources including medicinal plants, cultivation of medicinal plants, non destructive harvesting, promote organized trade and promote Minor forest produce based industries for processing of Minor Forest Produce. About 50% villages are inside the 5 km from the border of forest in the state where tribals are residing and dependent on the forest to sustain their livelihood. Besides it, non-tribal, landless and economically poor communities are also dependent on forest. It is assumed that every year 7 crore mandays generated through the forest and approximately 2000 Crore rupees is earned by the minor forest produces (Forest Deptt., Govt. of C.G. Report, 2016).

The presence of abundant forest resources has made the forests a major source of livelihood (tribals have the usufruct right to collect forest produces from government forest). They collect a variety of forest produces from their own or forest lands to sustain their living. They almost never go to a mandi to sale goods, small quantities of forest produces and the large

distance to the mandies being the disincentives for them. Sometimes, they walk long distances to reach even a "Haat" to sale their collected forest produce.

Collection of Forest Produce, Marketing and Exploitation by Traders

The villagers collect the forest produces from forest areas and sale in the local haat-bazars or to the petty traders in the nearest town. Some petty traders purchase the forest produce from the villagers by visiting their homes at regular intervals. Main traders of forest produce collect this produce from petty traders or agents appointed by them for the purchase purpose at villages or haats level. The produce collected by the petty traders or agents of main traders is graded/primarily processed. The graded/primarily processed material is sold in nearby mandies or to the main traders at Jagdalpur, Bilaspur, Dhamtari and Raipurmarkets in Chhattisgarh. The main trader, if required, further processes/grades the material according to the market need and sale the same in bigger markets of the country. The main markets out side the state for the forest produce of Chhattisgarh are in Delhi, Uttar Pradesh, Maharashtra, Madhya Pradesh, West Bengal, Tamilnadu & Andhra Pradesh states. The mode of trade with main traders is based on traditional market linkage and fixation of rates is based on the samples sent to the customers.

For the unsuspecting tribals, the haat has also become a place of exploitation. Small traders, known as 'Kochiyas' moving from one weekly haat to another, take the advantage of the the innocence of the tribals and purchase their collected forest produces on their own terms and conditions & outwit them in pricing, grading, weighing and counting.

MATERIAL & METHODOLOGY

The district Bastar is comprises with 7 CDBs *i.e.* Jagdalpur, Bastar, Tokapal, Darbha, Bakawand, Lohandiguda & Bastanar. The study was carried out in Bastar district. However, stratified purposive sampling method was adopted for selecting the blocks, villages etc. A total of 12 villages were studied in three selected blocks

i.e. Jagdalpur, Darbha and Bastanar block in the year 2021-22. Four villages from each Block (CDBs) were selected randomly for the research work. Thus, the total 20 villages were selected randomly. To obtain the sample size of 240 forest produce collectors, the 20 respondents were selected randomly from each selected village in the locale of study. The survey of the selected villages, respondents and locale were done with the help of well structured schedule. The data collected from the respondents with personal interview method. The appropriate statistical tools were used to analyse the data.

RESULTS & DISCUSSION

Table 1: Attitude of respondent about collection of Forest Produces

N=240

S. No.	Categories	No. of respondents	Percentage
1.	Low Attitude (Below than 45.62)	19	7.92
2.	Medium Attitude (45.62 to 52.90)	37	15.42
3.	High Attitude (More than 52.90)	184	76.67
Total		240	100.00

Mean: 49.26 S.D.: 3.64 Min. Score: 34 Max. Score: 54

The results from the table-1; it is depicted that 76.67 per cent of the respondents were found having the high level of attitude towards collection of forest produces while only 15.42 respondents had medium. Further, only 7.92 per cent respondents were found having low level of attitude towards collection of forest produces. The mean score for attitude towards collection of forest produce was observed 49.26 with the range of minimum score 34 and maximum score 54 (Singh *et.al.* 2015) reported almost the similar results.

It is, therefore, it can be inferred from the results in table-1 that most of the respondents 76.67 per cent were found having high attitude towards collection of forest produce. It might be due to the fact that the forest produces provide them direct benefits in terms of money which fulfilled their routine daily need to sustain their livelihood. Hence, a special attention was given to collection of forest produces.

Table 2: Correlation Coefficient between various variables & forest produce

N=240

S. No.	Variables	Correlation Coefficient (r)
1.	Age	0.0683
2.	Education	0.2311**
3.	Family Size	0.1614*
4.	Housing Pattern	- 0.0630
5.	Land Holding	0.0329
6.	Annual Income	0.3818**
7.	Share of Forest Produce in Annual Income	0.2979**
8.	Social Participation	0.0861
9.	Occupation	0.1668*
10.	Farm Power	0.0763
11.	Farm Implements	0.0195
12.	House Hold Material Possession	0.1309*
13.	Transportation Facilities	0.1955*
14.	Communication Media	0.1259*
15.	Economic Motivation	0.3962**
16.	Scientific orientation (PHTs)	0.1116
17.	Extension Contact	- 0.1312*
18.	Credit Orientation	0.1345*
19.	Market Orientation	- 0.1014
20.	Knowledge Extent	0.2521**
21.	Adoption Extent	0.2416**

* Significant at 0.05 probability level = 0.113

** Significant at 0.01 probability level = 0.148

From the table 2; it is opined that the variables *viz.* Education, Annual Income, Share of forest produce in Annual Income, Economic Orientation, Knowledge Extent and Adoption Extent were found highly significant while the variables housing pattern, extension contact and market orientation were found negatively & insignificantly correlated with concern to their attitude regarding collection of forest produces. Further, the variables Family Size, Occupation, House Hold Material Possession, Transportation Facilities and Communication Media were found significantly and positively correlated with the attitude of respondents towards collection of forest produces.

Hence, it can be revealed from the results that the variables Education, Annual Income, Share of forest produce in Annual Income, Economic Orientation, Knowledge Extent and Adoption Extent highly influenced the attitude of farmers towards collection of forest produce. It can be inferred from the results that if enhanced the value of these variables, there will be increase

in the extent of attitude of respondents with concern to collection of forest produce.

CONSTRAINTS FACED BY THE RESPONDENTS IN COLLECTION OF FOREST PRODUCE

The respondents also reported that the constraints *viz.* market far away from their home; unorganized market; poor transportation facilities; non-availability of primary processing units; less marketable quantities due more house hold consumptions; improper pricing by traders and kochiyas; lack of storage facilities were the major constraints which directly affects the process of collection of forest produces while the constraints *viz.* time consuming activity; insufficient labour; area of collection far away from home; deforestation; forest fire; competition among the forest produce collector were indirectly affects the process of collection of forest produce.

COCLUSION

The majority of respondents 76.67 per cent were fall under the high level of attitude towards collection of forest produce. Among the 21 variables studied, the variables Education, Annual Income, Share of forest produce in Annual Income, Economic Orientation, Knowledge Extent and Adoption Extent found highly significant and positively correlated to enhance the extent of attitude towards collection of forest produce. Respondents were also reported that the certain constraints were affected the process of collection of forest produces.

Hence, it is concluded that in spite of the advantages of advanced techniques of process the forest produce, their adoption by respondents is not high due to limitations of availability of these technologies. The biophysical or geophysical constraints, labour, market constraints, financial and credit constraints, their social norms, inter-temporal trade-offs, policy constraints and constraints to technical know-how or skill also played a vital role to maximize the benefits from forests or forest produces.

SUGGESTIONS

The forests of Bastar have for long been a vital source of sustaining the many tribal groups who

live there. Lack of organized market and over dependence on local or petty traders has often led to forest produce collectors' exploration with most profits of trade accruing to the latter. The provinces lies on the government-designated procurement groups and non-government organizations to help them not merely to form effective organized market to sale their produce collected by them to ensure the significant enhancement in their income with the fulprove implementation of relevant legislation.

Reference

- Chand, Ramesh and S.K. Srivastava (2014). Chabges in rural labour market and its implecations for Indian Agriculture. *Economic and Political Weekly*. **Vol. XLIX(10)** March 8: 47-54 p.
- Chopra, K. (1993). The value of non-timber forest products: estimation for tropical deciduous forests in India. *Econ. Botany*, **47(2)**: 251-257.
- Cottray, O.; Miles, L. and Newton, A. (2003). African forests and livelihoods. UNEP-WCMC, Cambridge, UK, 8-10 p.
- Gauraha, A.K. (1992). Micro-economic analysis of a tribal village, *Ind. J. of Agril. Econ.*, **47(3)**: 446-447 p.
- Hegde, R.; Suryaprakash, S.; Achoth, L. and Bawa, K.S. (1996). Extraction of NTFPs in the forests of B.R. Hills and contribution to rural income. *Econ. Botany*, **50(3)**: 243-245 p.
- K. Narayanagowda; N.R. Gangadharappa; L. Ramkrishna Rao and Doddahanumaiah (2010). Knowledge level of watershed farmers about agro-forestry and silvi-pasture practices - A Study in Karnataka. *Ind. J. of Ext. Edu.*, **Vol. 46(1&2)**: 1-6 p.
- Maithani, G.P. (1994). Management perspectives of minor forest produce. *MFP Newsletter, Dehradun*, 11-13 p.
- Mallik, R. H. (2000). Sustainable management of non - timber forest products in Odisha: Some issues and options, *Ind. J. Agril. Econ.*, **55(3)**: 384-397.
- Natraju, M.S.; R. Shashidhar and S.M. Raghvendra (2013). Women Empowerment through National Aforestation Programme in Andhra Pradesh. *Ind. J. of Ext. Edu.*, **Vol. 49(1&2)**: 15-19 p.
- Rao, G. N. (1987). Significance of minor forest produce in tribal economy: A case study, *Kurukshetra*. **7**: 23-28.
- Shrey, Ravi and V.K. Chaudghary (2016). Constraints faced by tribals forest dwellers in collection, processing and markting of non-timber forest products in Dantewada district of Chhattisgarh. *Res. J. of Agri. Sciences*. **7(July)**: 52-54p.
- Shrey, Ravi; V.K. Chaudghary; A.K. Kostha; K.N.S. Banafar; M.L. Lakhera & Lalji Singh (2016). Socio-economic status of Non-timber forest products dwelling tribes and their constraints in Chhattisgarh. *Progressive Research - An International Journal*. **11(Special-II)**: 841-844 p.
- Dwivedi, R.P. and Ashutosh (2013). Trees under Agro-forestry: An analysis for Farmer's Preference For Tree Species. *Ind. J. of Ext. Edu.*, **Vol. 49(1&2)**: 83-87 P.
- Dwivedi, R.P.; K. Karemula & R.H. Rizvi (2013). Trees under Agro-forestry: An analysis for Farmer's Preference For Tree Species. *Ind. J. of Ext. Edu.*, **Vol. 49(3&4)**: 83-87 p.
- Report, (2016). Forest Deptt., Govt. of C.G. (online)
- Shukla, Niket and Dr. Sanjay, Pandey (2015). A study on marketing of forest produce of Chhattisgarh State. *IRJET*. **Vol.02(08)**: 1665-1671.
- Singh, Satyendra Kumar; R.K. Dohare; A.K. Singh; Prakash Singh and Sandeep Kumar Singh (2015). Awareness and Attitude of farmers towards Agro-forestry system. *Indian Journal of Extension Education*. **Vol. 51(1&2)**: 102-104 p.