



TRENDS IN GROWTH OF COLLECTION AND SALES OF 'TENDU LEAVES' IN CHHATTISGARH STATE, INDIA

Leelesh Kumar Sahu, Mohamed Arshad Ayub and Om Kumar Netam

Department of Agricultural Economics, College of Agriculture, I.G.K.V., Raipur (Chhattisgarh), India.

Abstract

The growth rates in collection, sales and wages of tendu leaves in Chhattisgarh State for the period 2001-2014 were estimated. The growth pattern was examined by fitting on exponential function ($Y=AB^t$). The collection of tendu leaves was showed downward growth trend, in the sales it was showed upward growth trend and in wages it was also showed the upward growth trend. Result indicates the trend of collection of tendu leaves in the state. Tendu leaves sales registered a significant positive growth rate at 5 per cent level of probability in Chhattisgarh State, India. This was due to increase consumption and usage averseness among the consumers and improved marketing channel for tendu leaves in the region as well as policy implication on cereals. The result clears that state has higher potentiality of collection and marketing (sales) of tendu leaves in the state.

Key words : Trend, growth, sales, collection and tendu leaves.

Introduction

Tendu (Indian Ebony) leaves are one of the most important NTFP species in central India. The leaves of Tendu are used for wrapping bidi (Indian smoking tobacco). An estimated 350000 tons of leaves worth US \$2000 million, is collected annually throughout the forest of India. The state of Madhya Pradesh is the major tendu patta producing state (25% of the country's total production) followed by Chhattisgarh (20%), Orissa (15-20%) and Maharashtra (10%). Due to exploitation of the collectors by the traders, the state reserved the rights of collection and trade of the tendu leaves by declaring the product as a nationalized item, Madhya Pradesh was first to nationalized tendu leaves collection in 1964 followed by Andhra Pradesh (1971) and Orissa (1973). Madhya Pradesh the government distributes 100% benefit to the collectors from the sale of tendu leaves in form of direct payment as well as bonus. Whereas, Orissa govt. recently declared sharing of 50% of the tendu leaves grant for pluckers and binders' welfare fund and rest of the grant for infrastructure development of the districts of tendu leave collection. On the other hand, Andhra Pradesh does not have any benefit sharing arrangements and provides only wage rates to the collectors. Tendu leaves collection and bidi rolling is estimated to provide 106 million person

days of and 675 million person days respectively, which is worth Rs. 4515 million. In spite of its lucrative business the trade is declining due to fall in demand following health concern, rising prices of raw materials and heavy taxation policy.

Chhattisgarh is a pioneer State of India, producing the best quality Tendu (*Diospyros melanoxylon*) leaves. The tendu leaves are used as Beedi (cheap cigarette) wrappers. The production of Tendu leaves in Chhattisgarh is approximately 16.44 lacs standard bags annually, which is nearly 20% of the total Tendu leaves production of the country. One standard bag of Tendu leaves in Chhattisgarh comprises of 1000 bundles of 50 leaves each. The collection season is from third week of April to last week of May.

The collection and sale of non-timber forest products (NTFPs) forms a significant part of the livelihoods of forest fringe communities in India, with an estimated 10-27 crore people involved in it. The leaf of tendu (*Diospyros melanoxylon*), which is used to roll beedis (Indian cigarettes) is one of the most socially and economically important NTFPs. Its collection provides employment to at least 75 lakh leaf pluckers, largely in central India.

Materials and Methods

In the present study secondary data were considered for analysis of growth pattern in collection and sales of tendu leaves. Data were collected from office of CG MFP Federation.

Computation of compound growth rate

To compute the growth rate of area, production and productivity of paddy in the state the exponential function of the following form were used:

$$Y = A B^t$$

Taking log on both sides

$$\log Y = \log A + t \log B$$

Assuming $\log Y = y$

$$\log A = a$$

$$\log B = b$$

We get,

$$Y = a + b t \quad (t = 1, 2, \dots, n)$$

After regression between y and t , we have value of a and b .

$$a = \text{Constant}$$

$$b = \text{Coefficient}$$

$$\text{As } b = 1 + r$$

$$\text{Hence, } r = b - 1$$

$$r = \text{Compound growth rate}$$

$$= (\text{antilog of } b-1) \times 100$$

$$t = \text{Time variable } (t = 1, 2, \dots, n)$$

$$b = \text{Regression coefficient}$$

y = Index number of collection and sales of tendu leaves.

Results and Discussion

Compound growth rates in collection, sales and wages of tendu leaves in Chhattisgarh State for the period 2001-2014.

To examine the growth rates in collection, sales and wages of tendu leaves in Chhattisgarh State for the period 2001-2014, by using exponential form, estimated results was presented in table 1, which indicates that the collection of tendu leaves in Chhattisgarh State was showed a downward growth pattern and registered a non significant negative growth rate for the period of 2001-2014 at 5 per cent probability level. Figure 1 indicate the downward trend of collection of tendu leaves in the state. In the sales of Tendu leaves, it was showed a upward growth pattern and registered a significant positive growth rate

Table 1: Trend in collection, sales and wages for tendu leaves.

Items	Particulars	Chhattisgarh
Collection	R ² (%)	25
	GR(%)	-1.35
	P-Value	0.07
Sales	R ² (%)	61
	GR(%)	9**
	P-Value	0.0009
Wages	R ² (%)	67.11
	GR(%)	7.44**
	P-Value	0.0003

*Significance at 5% level of probability.

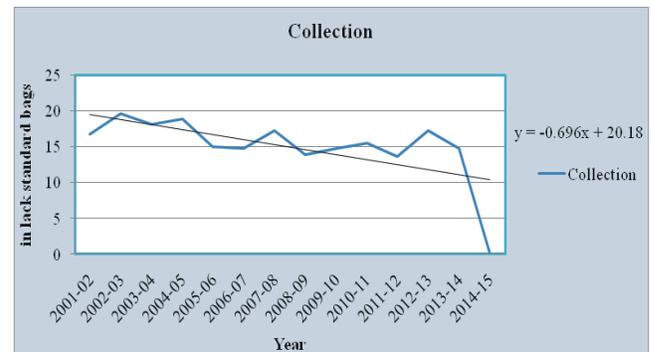


Fig. 1 : Trend of collection of tendu leaves.

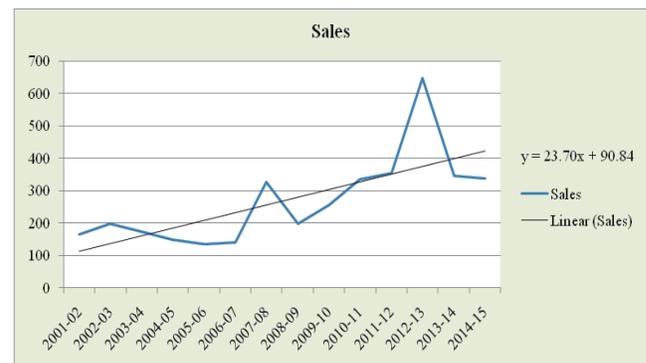


Fig. 2 : Trend of sales of tendu leaves.



Fig. 3 : Trend in wages of tendu leaves collectors.

at 5 per cent level of probability in Chhattisgarh State. This was due to increase consumption and usage averseness among the consumers and improved marketing channel for tendu leaves in the region as well as policy implication on cereals. The result clears that state has higher potentiality of collection and marketing (sales). Figure 2 indicate the trend of sale of tendu leaves in the state.

Wages for collection of tendu leaves registered a positive growth rate in Chhattisgarh State, India. In wages of tendu leaves collection, it was observed significant positive growth rate at 5 per cent probability. Increase in wages was due policy implication by governments and labour rights as well as increased standards of human

leaving. Figure 3 indicate the trend of wages of labours for the collection of tendu leaves in the state.

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