Chapter 1

Introduction

_Diospyros melanoxylon_ Roxb. (Common name Tendu or Kendu) an endemic plant of India and Ceylon is used in various ways. Besides being the source of Indian ebony, its wood is also utilized for making boxes, combs, ploughs and beams. The fruits are eaten and sold commercially. The bark is burnt by tribals to “cure” small-pox. The seeds are prescribed as cure for mental disorders, palpitation of heart and nervous breakdown. Above all, the leaves of this plant constitute one of the most important raw materials of the “_Bidi_” (Indian cheap smoke) industry. It is not only an extremely important non-timber forest product that serves as a big revenue earner for the state government but is also an important economic resource to the indigenous tribes and local population during the summer months when they have no other form of employment.

It occurs in the dry mixed deciduous forests of peninsular India, extending northwards to Bihar and eastwards to Orissa. Madhya Pradesh, Orissa, Maharashtra, Andhra Pradesh, Bihar, Rajasthan, Uttar Pradesh, Gujarat, Tamil Nadu and West Bengal, in that order, are the main tendu leaf producing states in India. Tendu trees grow largely
in government forests, waste lands and to some extent, in undeveloped private lands. Although tendu leaves are plucked from the trees and bushes of natural growth, lakhs of labourers get employment for about two months during the agricultural off-season in the summer in cultural activities like; pruning, pollarding and coppicing of tendu bushes, and in collection and processing of tendu leaves. The exchequers of the tendu leaf producing states get huge amount of revenue from tendu leaves which forms a substantial part of their total revenue from forests (Dawar, 1994).

The tree is usually kept reserved and is not felled except in clear-felling coupes, as in the coppice-with-reserves working cycle in India. The main source of production of bidi leaves is from the bushes arising from the root suckers; leaves of bigger trees are stiff and brittle and therefore not capable of producing trade leaves for wrapping bidis. The seedlings are normally planted at 2 m by 2 m. Where the objective of management is the production of leaves, heavy pruning is recommended as this promotes vegetative growth and the production of relatively large and thin leaves, although repeated pruning can cause stunted growth of trees. Plants up to 15 cm in girth are cut near the ground to encourage sprouting of coppice shoots, which gives best quality leaves after 40-50 days of operation.

Coppicing experiments in India show that best quality of trade leaves are obtained by coppicing flush to the ground level twice, 2 weeks apart, then coppicing flush to the ground only once. The tree also pollards well, although the growth of the pollard shoots is slow. Pollarding is done to obtain a good flush of tender leaves, and plants over 15 cm
girth are usually cut at 60-90 cm height. The quality of the leaves also depends on whether the frequency and intensity of pollarding impairs the vitality and growth of the trees. Management for small timber, poles or firewood requires a coppice rotation of about 30 years to give usable products. For ebony wood, a much longer rotation would be needed to give sufficient dimensions to the valuable heartwood.

The trade has tremendous socioeconomic value to the local population and is a source of income to them in the economically stretched summer months. Due to extreme exploitation of the collectors, who are mostly local indigenous people, the state governments have established state control over its collection and trade to earn revenue. The state and the central governments have continuously sought to empower the local populations, and several steps have been taken to establish ownership rights of the collectors over non-timber forest products. This has culminated in the 73rd constitutional amendment in 1996 that has given the ownership right over non-timber forest products to the Gram Sabhas (local groups or entities). There is an established network of selling agents composed of wholesalers and retailers. Some big companies also export some beedis (local cigarettes) to neighboring countries like Pakistan, Sri Lanka, Bangladesh, and Nepal and to distant countries such as the United States, France, African and West Asian countries.

Despite immense potential of revenue generation and socio-economic upliftment of rural population residing in forest fringe areas limited efforts have been taken up to systematically assess tendu leaf production and impact of silvicultural practices therein. Socio-economics of collection and trade of tendu leaves has also been inadequately
addressed to incorporate in the policy formulations. Thus, the present study was carried out to find out the silvicultural, social and economic implications of *Diospyros melanoxylon* Roxb. in Jharkhand. The state has an organized collection among the tribal community and a marketing channel of the state government (Jharkhand State Forest Development Corporation) for tendu leaf trade, which was viewed as the angle of empowerment/handholding, role transfer and ownership right to local community with respect to the 73rd constitutional amendment in 1996 as PESA (Panchayati Raj Extension to Schedule Area), Act.

The annual national production of *tendu* leaf is 50,00,000 quintals/year. Whereas the average annual production in Jharkhand is 4,74,900 standard bags/year which can be increased upto 7,95,875 standard bags (notified yield) per year. One of the biggest paradoxes of the *tendu* leaf is that the largest growing areas are also the major food scarce zones in the State. It is not only an extremely important non-timber forest product that serves as a big revenue earner for the state government but is also an important economic resource to the indigenous tribes and local population during the summer months when they have no other form of employment. It accounts for 75–80% of the total revenue from the forests. Since Bihar Kendu Leaves (Control of Trade) Act, 1973, and the formation of Bihar State Forest Development Corporation in 1987 (JSFDC in 2002), *tendu* trade has been a State monopoly for its collection, storage and sale. At present, the main objective of *tendu* leaf policy is to maximize revenues of the state. In December 1996 GoI passed a new law, the Provisions of the *Panchayats* (Extension to the Scheduled Areas) Act, 1996
(known in short as PESA), for tribal areas of Central India (called Schedule V areas). According to this law, the Gram Sabha/Panchayat, and not the government, owns NTFPs. It intends to enable tribal communities to assume control over their own destiny to preserve and conserve their traditional rights over natural resources. Prior to the enactment of Forest Rights Act, 2006, NTFP was not defined clearly in any Act, not even in PESA. On 6th September, 2012, the Ministry of Tribal Affairs, Government of India has published the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Amendment Rules 2012 which are legally more imposing/binding in nature. Limited efforts have been taken up to systematically assess tendu leaf production and impact of silvicultural practices therein. Socio-economics of collection and trade of tendu leaves has also been inadequately addressed to incorporate in the policy formulations.

Keeping the above facts in view, the present study entitled “Studies on Productivity, Silviculture and Socio-economics of Diospyros melanoxylon Roxb. in Jharkhand” with following objectives:

1. To study productivity and quality of tendu leaves in different Agro-climatic zones of Jharkhand,
2. To study various silvicultural operations in Diospyros melanoxylon Roxb. and their impact on production and yield, and
3. To assess the communities strength in ownership and trade of tendu leaves with special respect to PESA Act, 1996.