

## TEAK - HOW FAST CAN IT GROW AND HOW MUCH CAN IT PAY?

S. PARAMESWARAPPA\*

### Introduction

Teak (*Tectona grandis*) is one of the most ideal timber trees. The famous Burma Teak has almost become another name for the best quality timber found in the world. Burma and the Western Coast of India during the last century became centres of attraction for British Supremacy, also because of the teak. It is said that during the time of Shivaji, propagation of teak was encouraged. In Karnataka during the time of the Maharaja of Mysore seedlings of teak and other species were distributed.

### Distribution

The distribution of teak is largely determined by climate, geology and soil. Teak occurs naturally in portions of India, Burma, Laos, Indonesia (mainly Java) and Thailand. Teak was probably introduced in Java by Indian colonists in the 7th Century A.D. In the Philippines, Teak was also probably introduced. But it has been growing there for a long time. Teak has also been introduced in countries like Sri Lanka, Malaysia, Bangladesh, Pakistan, Indonesia, Zambia, Tanzania, Uganda, Ivory Coast, Ghana, Togo, Nigeria, West Indies, Honduras and Panama.

It was reported from Thailand that the world's largest tree measured 6.71 m in diameter and 46 m in height.

### Timber

The sapwood of teak is white to pale yellowish brown and heartwood is pale brown to dark golden yellow. Teak from Burma has chocolate brown colour and that from Thailand is greenish brown and almost black. Teak from India generally is light to dark brown. Teak earned world wide reputation as one of the excellent timbers for shipbuilding. The timber has matchless combination of qualities of resistance to termite, fungus and weather, lightness with the strength, attractive grains, workability and seasoning capacity without splitting, cracking, warping or materially altering shape.

### Plantation of Teak and its Growth

Chatu Menon of Malabar in Kerala is called the father of Indian Teak Plantations. Between 1842 and 1862 he raised more than a million well growing teak plants. The first plantation in Karnataka was established at Sakrebyle on the bank of river Tunga, in Gerusoppa and at Kadra in Uttara Kannada and also in Coorg, somewhere around 1852-1860.

Teak develops best on well drained fertile soils. In the Nilambur Valley of Kerala, there are some of the best alluvial pockets in India are still the best sites for teak. The primary factors for growth are

---

\* Principal Chief Conservator of Forests, Karnataka.

drainage and soil depth.

The fastest growth recorded in teak plantation in the world is from Chittagong District (Bangladesh) at Kaptai. Trees of 21 years age had average height of 29.3 m and average diameter of 30.0 cm; the stem timber volume was 34.09 m<sup>3</sup> and small timber volume was 8.86 m<sup>3</sup> per acre. In this place the teak grows faster than Nilambur first quality teak in general and carries higher volume per acre.

The highest growth under plantation condition in India was seen in the Indo-Gangetic belt of Haldwani Division. At 20 years of age the height growth was 23.1 m and diameter was 28.7 cm. From the general yield table in the first quality teak at 20 years of age, the average diameter is 27.2 cm and average height is 23.2 m. The number of trees per acre is 102. The total yield of stem timber is 28.04 m<sup>3</sup>; that means on an average a tree on first quality site at 20 years of age under natural conditions of growth will yield around 0.283 m<sup>3</sup> of timber on good sites.

#### Analysis of rate of growth

It is said that plantation teak grows slowly after an age of 15 years and besides the strength is not as good as in case of naturally grown teak. The slowing down of the rate of growth has also been observed in Burma.

It is generally seen that the effect of irrigation and fertilizer application in most tree species is very fast initially and thereafter it slows down. Therefore the initial response of fast growth which is being seen in the young plantation will not hold on for a long time. Secondly under natural conditions the best growth has been

seen on alluvial sites where the soils are very deep and moist, but not wet (Teak is very sensitive to poor drainage). It is really difficult to find large areas of alluvial formation in Southern India, therefore the present planting is being done in areas with heavy soils.

The initial fast rate of growth being obtained with fertiliser application and irrigation is bound to come down considerably after few years. There is need for caution about the over optimism regarding predicted high yields from teak plantations. At the best we may expect a tree to produce a maximum of 0.60 m<sup>3</sup> of timber in 20 years under best conditions of intensive management and there could be a maximum of 100 trees per acre.

Of late several commercial companies are floated and they are inviting investment by promising exorbitant returns. As regards the promises made by these companies on financial returns. I have a feeling that they are making exorbitant promises. However, as biological growth has its own limitations, we cannot expect to produce more than 0.60 m<sup>3</sup> of timber per tree at the end of 20 years. It may be possible to pay a sum of Rs. 50,000 to Rs. 1,00,000 depending on the price of teak then obtainable. Looking to the price of teak escalating from Rs. 700 to Rs. 50,000 in a course of 35 years (1960 to 1995) it may touch upto Rs. 85,000/- or Rs. 1,75,000/- per m<sup>3</sup> in another 20 years, which would provide a total income of Rs. 50,000/- to Rs. 1,00,000/-. Apart from this, these Teak Companies will also utilise the deposits made by the depositors in other profitable ventures which should be able to make profits, from out of which, they should be able to offer some returns to the investors.

1995]

Teak - How fast can it grow and...

565

They will also get some interim revenue from thinning of teak plantations in the 10th and 15th year. Hence, it is necessary

to separate the wood from the money, and the wood will be about 0.60 m<sup>3</sup> and the money returns could be anything.

### SUMMARY

The growth and yield of teak have been discussed in detail.

सागौन - कितनी तेजी से बढ़ सकता और कितना लाभ दे सकता है ?

एस० परमेश्वरप्पा

सारांश

सागौन की वृद्धि और प्राप्ति का विस्तार से विवेचन किया गया है ।

---