

## Timber Plants

General account with special reference to teak and pine

Wood suitable for carpentry and building is known as timber. It is of two types, hardwood (most dicots) and soft wood (gymnosperms and some dicots like Salix; Salmalia and Morus).



**Description:** Teak is a large tree which can attain a height more than 30 m. It has a simple root system. Colour of the bark varies from pale brown to grey. Leaves have some distinct features by which it can easily be identified. It bears a pair of leaves that stands at right angle to the next upper or lower pair

and in each pair, two leaves are situated at a node on the opposite side. Young leaves are red in colour but become dark green at maturity. These are broad towards apex, oval in outline, widest at the centre and bear small star shaped hairs. Inflorescence large, flowers are white in colour and become inflated at maturity. Fruit is fleshy and bears 1-4 seeds which are enclosed in a stony covering. Teak sheds leave from November to January. The flowers appear from June to September and fruits ripen from November to January

### Economic Importance



- Teak is considered a very valuable wood because of its ability to withstand weather. Teak is very stable, which means that it does not warp when subjected to variations in humidity and temperature.
- Wood is used on a very large scale in building ships, bridges, railway sleepers, furniture and cabinet work and for making high class models.
- It is also used for musical instruments including body of Harmonium, Violin keys and long neck of Sitar.
- Several types of plywood and blackboards are made from teak wood.
- Its wood-waste is used for making particle board, fibre board, chip board and plastic board.
- Leaves contain about 6% tannin and a dye; also used for thatching.
- Oily product obtained by distillation of wood chips applied to eczema.
- Kernels yield fatty oil which is used in scabies and to promote the growth of hair.
- Flowers used in biliousness, bronchitis, and urinary discharges. Both flowers and seeds considered diuretic.
- In Ayurvedic system, the wood is considered as a laxative, sedative for the uterus, good for piles, dysentery and leucoderma. Roots were used for urinary tract problems. Bark has been used to treat diabetes. Bark astringent used in bronchitis.
- Root bark used for colouring matting. Dyes are produced from the root bark and young leaves and employed for use in paper products and cloth manufacture. Dyes may be yellow-brown or red brown. Dye from leaves is used for dyeing cloth especially wool and cotton.



**Description:** *Pinus* is a tall evergreen tree giving rise to a series of widespread horizontal branches. In each year, a whorl of branches is produced in the axil of scale leaves. The branching is restricted to the upper part of the stem, thus giving the tree a pyramid-like appearance. The main stem is cylindrical and covered with scaly bark. The

branches are dimorphic, bearing two types of shoots: long shoots and dwarf shoots, or spurs or brachyblasts. *Pinus* exhibits two types of leaves, the scale leaves and the green acicular foliage leaves called needles. The plant has a tap root system which becomes elongated at maturity and possesses strong lateral roots. The plants are monoecious where the male and female cones are borne on separate branches in the same plant.

### **Economic Importance**

- The wood of several species of *Pinus* is used for heavy construction work such as railway wagon flooring, ship building, agricultural implements, doors, poles, frames, furniture, etc. Some of the species utilized for the purpose include *Pinus sylvestris*, *P. nigra*, *P. pinaster*, *P. roxburghii*, *P. wallichiana*, *P. halepensis*, etc. Because of excessive resins, *Pinus* wood is not much used for carpentry.
- Amber is a fossilized terpenoid resin obtained from *Pinus succinifera*. It is an exceedingly hard and brittle substance. The colour varies from yellow to brown and even black. It has been largely used for beads and other ornamental purposes. It is widely used for the mouthpieces of pipes and holders for cigars and cigarettes. A valuable varnish is also prepared from amber. Amber is also used in medicine and X-ray therapy.



- Resins are plant exudates. They make the wood resistant to decay. Conifers are the major resin yielders of the world. They are used in enamels, plasters varnishes, paper sizing, medicines, etc. Turpentines are oleoresins obtained almost exclusively from coniferous trees. Crude turpentine is obtained from the long-leaf pine (*Pinus australis*) and splash pine. In India, a very important pine resin is obtained by tapping the chir pine (*Pinus roxburghii*) and blue pine (*P. wallichiana*).
- Source of an oleoresin which yields turpentine oil. Indian turpentine oil has comparatively low pinene and high careen content and chiefly used as a solvent for paints and varnishes; also used in perfumery industry, in the manufacture of synthetic pine oil, disinfectants, insecticides, and denaturants.
- Pine oil from the wood, used in paints, varnishes, lacquers, pharmaceuticals, wetting agent in textiles, degreasing agent in leather manufacture, and as a synergist in insecticides.
- Young twigs, fresh needles, and cones yield Pine Needle Oil, used in soaps, bath preparations, room sprays, deodorants etc.
- Exhausted needles converted into pine wool, used for stuffing pillows, cushions and mattresses, also used for packing fruits.

## References

- [www.biologydiscussion.com](http://www.biologydiscussion.com)
- Studies In Botany (Vol-II) (Paperback, J.N.Mitra, Debabrata Mitra & Salil Chowdhury)

[The information, including the figures, are collected from the above references and will be used solely for academic purpose.]