Drought Tolerant Trees for Ornamental Gardening

K. Kayalvizhi¹* and A. Sankari²

¹Dept. of Horticulture, Institute of Agriculture, TNAU, Kumulur, Tamil Nadu (621 712), India
²Dept. of Vegetable Science, HC & RI, TNAU, Coimbatore, Tamil Nadu (641 003), India

How to cite this article?

Abstract

Trees are woody perennial plant having an elongated stem, or trunk, supporting branches and leaves in most species. Trees play a significant role in reducing erosion and moderating the climate. They remove carbon dioxide from the atmosphere and store large quantities of carbon in their tissues. Trees and forests provide a habitat for many species of animals and plants. Trees provide shade and shelter, timber for construction, fuel for cooking and heating and fruit for food as well as having many other uses. Trees also provide aesthetic value to reduce the mental stress in human being. Trees create a visual impact in landscape features and give a sense of maturity and permanence to park and garden. They are grown for the beauty of their forms, their foliage, flowers, fruit and bark and their sitting is of major importance in creating a landscape.

Introduction

Trees are perennial plant having distinct trunk and crown at the top. These are the woody plant that regularly renews its growth (perennial). Most plants classified as trees have a single self-supporting trunk containing woody tissues, and in most species the trunk produces secondary limbs, called branches.

Logical meaning of each letter of tree is as follows,

T – Temperature and microclimate moderation;
R – Removal of air pollutants;
E – Erosion control;
E – Energy conservation.

Three Main Groups of Trees
1. Broad leaved
2. Narrow leaved or conifers
3. Palms and cycads

Trees Classification Based on Height
- Dwarf : 4 -10 meters
- Medium : 10 -15 meters
- Tall : 15 meters or more

Details of Trees Suitable for Dry Areas

1. Common Name : Rain tree
Botanical Name : Samanea saman
Family : Fabaceae
Description : Saman is a wide-canopied tree with a large symmetrical umbrella-shaped crown. It usually reaches a height of 15–25 m and a diameter of 30 m. The leaves fold in
rainy weather and in the evening, hence the names rain tree and five O’clock tree. The tree has pinkish flowers with white and red stamens, set on heads with around 12–25 flowers per head. These heads may number in the thousands, covering the whole tree (Figure 1).

2. **Common Name : Indian Almond**  
   **Botanical Name :** *Terminalia catapa*  
   **Family :** Combretaceae  
   **Description :** The tree grows to 35 m (115 ft) tall, with an upright, symmetrical crown and horizontal branches. It has corky, light fruit that are dispersed by water. The seed within the fruit is edible when fully ripe, tasting almost like almond. As the tree gets older, its crown becomes more flattened to form a spreading, vase shape. Its branches are distinctively arranged in tiers. The leaves are large, 15–25 cm (5.9–9.8 in) long and 10–14 cm (3.9–5.5 in) broad, ovoid, glossy dark green, and leathery. They are dry-season deciduous; before falling, they turn pinkish-reddish or yellow-brown, due to pigments such as violaxanthin, lutein, and zeaxanthin (Figure 2).

3. **Common Name : Camel foot tree**  
   **Botanical Name :** *Bauhinia purpurea*  
   **Family :** Fabaceae  
   **Description :** *Bauhinia purpurea* is a small to medium-size deciduous tree growing to 17 ft tall. The leaves are 10–20 cm long and broad, rounded, and bilobed at the base and apex. The flowers are conspicuous, pink, and fragrant, with five petals. The fruit is a pod 30 cm long, containing 12 to 16 seeds. Leaves are alternate (Figure 3).
<table>
<thead>
<tr>
<th>Common Name</th>
<th>Botanical Name</th>
<th>Family</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Common Name : Gulmohar</td>
<td>Botanical Name : <em>Delonix regia</em></td>
<td>Fabaceae</td>
<td>The flowers of <em>Delonix regia</em> are large, with four spreading scarlet or orange-red petals up to 8 cm long and a fifth upright petal called the standard, which is slightly larger and spotted with yellow and white. They appear in corymbs along and at the ends of branches. The naturally occurring variety <em>flavida</em> (Bengali: <em>Radhachura</em>) has yellow flowers. The pods are green and flaccid when young and turn dark-brown and woody. (Figure 7).</td>
</tr>
<tr>
<td>8. Common Name : Tree jasmine</td>
<td>Botanical Name : <em>Millingtonia hortensis</em> L.</td>
<td>Bignoniaceae</td>
<td>It is tall flowering tree white flower with fragrance (Figure 8).</td>
</tr>
<tr>
<td>9. Common Name : Ball badminton tree</td>
<td>Botanical Name : <em>Parkia biglandulosa</em></td>
<td>Mimosaceae</td>
<td>It is one of the ornamental trees. Flowers are ball like appearance (Figure 9).</td>
</tr>
<tr>
<td>10. Common Name : Copper pod tree</td>
<td>Botanical Name : <em>Peltophorum pterocarpum</em></td>
<td>Fabaceae</td>
<td>It bears yellow colour flower during March – April month (Figure 10).</td>
</tr>
<tr>
<td>11. Common Name : Poovarasu / Indian tulip tree</td>
<td>Botanical Name : <em>Thespesia populnea</em></td>
<td>-</td>
<td>It is one of the ornamental trees. Flowers are ball like appearance (Figure 9).</td>
</tr>
<tr>
<td>12. Common Name : Nettlinkam</td>
<td>Botanical Name : <em>Polyalthia longifolia</em></td>
<td>Annonaceae</td>
<td>It is a foliage tree and mainly suitable for avenue planting (Figure 12).</td>
</tr>
<tr>
<td>13. Common Name : Tamarind</td>
<td>Botanical Name : <em>Tamarindus indica</em></td>
<td>Fabaceae</td>
<td>It is suitable for roadside planting and absorbs the pollutants (Figure 13).</td>
</tr>
<tr>
<td>14. Common Name : Banyan tree</td>
<td>Botanical Name : <em>Ficus bengalensis</em></td>
<td>Moraceae</td>
<td>It is good shade tree, shelter for birds and suitable for making bonsai (Figure 14).</td>
</tr>
<tr>
<td>15. Common Name : Peepal tree</td>
<td>Botanical Name : <em>Ficus religiosa</em></td>
<td>-</td>
<td>It is suitable for roadside planting and absorbs the pollutants (Figure 13).</td>
</tr>
</tbody>
</table>
Family : Moraceae
Description : It is mainly suitable for bonsai making (Figure 15).

16. Common Name : Vaagai / Woman’s tongue tree
Botanical Name : Albizia lebbeck

Family : Fabaceae
Description : It is a flowering tree (Figure 16).

17. Common Name : Aacha tree
Botanical Name : Hardwickia binata

Family : Fabaceae
Description : It is mainly for timber value (Figure 17).

18. Common Name : Teak
Botanical Name : Tectona grandis

Family : Lamiaceae
Description : It is mainly used as wind break. Timber is more value (Figure 18).

19. Common Name : Indian blue gum
Botanical Name : Eucalyptus globosa

Family : Myrtaceae
Description : One of the largest and tallest trees in the world in its native Tasmania, Blue Gum is grown extensively worldwide as a forestry tree (Figure 19).

20. Common Name : Ironwood/ Casuarina tree
Botanical Name : Casuarina equisetifolia

Family : Casuarinaceae
Description : It is mainly for making topiary in gardens (Figure 20).

21. Common Name : Geiger tree
Botanical Name : Cordia sebestena

Family : Boraginaceae
Description : It is a flowering tree mainly used for ornamental purpose (Figure 21).
22. Common Name: Pride of India  
   Botanical Name: *Lagerstroemia speciosa* var. *rosea*  
   Family: Lythraceae  
   Description: It is a flowering tree mainly used for ornamental purpose (Figure 22).

23. Common Name: Pagoda tree/frangipani  
   Botanical Name: *Plumeria alba* / *Plumeria rubra*  
   Family: Apocynaceae  
   Description: It is a flowering tree mainly used for ornamental purpose (Figure 23).

24. Common Name: Earleaf acacia  
   Botanical Name: *Acacia auriculiformis*  
   Family: Fabaceae  
   Description: It is used for extraction of oil and border planting (Figure 24).

25. Common Name: Paradise tree  
   Botanical Name: *Simarouba glauca*  
   Family: Simaroubaceae  
   Description: It is mainly used for biofuel preparation (Figure 25).

**Conclusion**

Trees provide oxygen and limit carbon in the atmosphere. They reduce air pollution, provide food and shelter for wildlife, minimize erosion and maintain healthy soil, increase rainfall and absorb sunlight as energy. They effectively absorb harmful gases such as sulfur dioxide, carbon monoxide and nitrogen dioxide. These plants are all tolerant of dry conditions once established. The trees majority of perennial need extra water for the first year to get established.

**References**

