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Drought Tolerant Trees for Ornamental Gardening

K. Kayalvizhi^{1*} 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

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Corresponding Author

K. Kayalvizhi

e-mail: kkayal.flori@gmail.com

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Abstract

Tree is a woody perennial plant with 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).

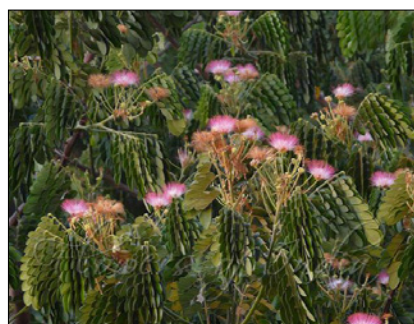


Figure 1: Rain tree



Figure 2: Indian Almond



Figure 3: Camel foot tree

4. Common Name : Neem
 Botanical Name : *Azadiacta indica*
 Family : Meliaceae

Description : Neem is a fast-growing tree that can reach a height of 15–20 m and rarely 35–40 m. It is evergreen, but in severe drought it may shed most or nearly all of its leaves. The branches are wide and spreading. The fairly dense crown is roundish and may reach a diameter of 20–25 m (Figure 4).

5. Common Name : Pongam
 Botanical Name : *Pongamia pinnata*
 Family : Fabaceae

Description : It is a legume tree that grows to about 15–25 m (50–80 ft) in height with a large canopy which spreads equally wide. It may be deciduous for short periods. It has a straight

or crooked trunk, 50–80 cm (20–30 in) in diameter, with grey-brown bark which is smooth or vertically fissured. Branches are glabrous with pale stipulate scars (Figure 5).

6. Common Name : Golden shower
 Botanical Name : *Cassia fistula*
 Family : Fabaceae

Description : The golden shower tree is a medium-sized tree, growing to 10–20 m tall with fast growth. The leaves are deciduous, 15–60 cm long, and pinnate with three to eight pairs of leaflets, each leaflet 7–21 cm long and 4–9 cm broad. The flowers are produced in pendulous racemes 20–40 cm long, each flower 4–7 cm diameter with five yellow petals of equal size and shape. The fruit is a legume, 30–60 cm long and 1.5–2.5 cm broad, with a pungent odor and containing several seeds (Figure 6).



Figure 4: Neem



Figure 5: Pongam

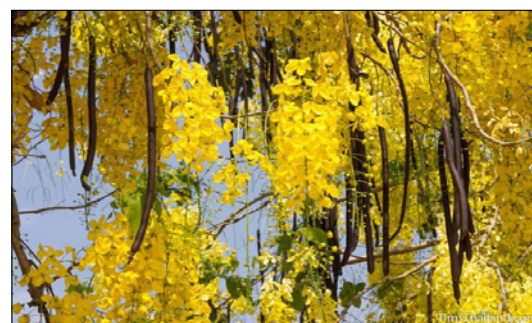


Figure 7: Gulmohar

7. Common Name : Gulmohar

Botanical Name : *Delonix regia*

Family : Fabaceae

Description : The flowers of *Delonix regia* 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 *flavida* (Bengali: *Radhachura*) has yellow flowers. The pods are green and flaccid when young and turn dark-brown and woody (Figure 7).



Figure 7: Gulmohar

8. Common Name : Tree jasmine

Botanical Name : *Millingtonia hortensis* L.

Family : Bignoniaceae

Description : It is tall flowering tree white flower with fragrance (Figure 8).



Figure 8: Tree jasmine

9. Common Name : Ball badmitton tree

Botanical Name : *Parkia biglandulosa*

Family : Mimosaceae

Description : It is one of the ornamental trees. Flowers are ball like appearance (Figure 9).



Figure 9: Ball badmitton tree

10. Common Name : Copper pod tree

Botanical Name : *Peltophorum pterocarpum*

Family : Fabaceae

Description : It bears yellow colour flower during March – April month (Figure 10).

11. Common Name : Poovarasu / Indian tulip tree

Botanical Name : *Thespesia populnea*

Family : Malvaceae

Description : Leaves are heart in shape. Tall growing in nature (Figure 11).

12. Common Name : Nettilinkam

Botanical Name : *Polyalthia longifolia*

Family : Annonaceae

Description : It is a foliage tree and mainly suitable for avenue planting (Figure 12).



Figure 10: Copper pod tree



Figure 11: Poovarasu / Indian tulip tree



Figure 12: Nettilinkam

13. Common Name : Tamarind

Botanical Name : *Tamarindus indica*

Family : Fabaceae

Description : It is suitable for roadside planting and absorbs the pollutants (Figure 13).

14. Common Name : Banyan tree

Botanical Name : *Ficus bengalensis*

Family : Moraceae

Description : It is good shade tree, shelter for birds and suitable for making bonsai (Figure 14)..

15. Common Name : Peepal tree

Botanical Name : *Ficus religiosa*

Family : Moraceae

Description : It is mainly suitable for bonsai making (Figure15).

16. Common Name : Vaagai / Woman's tongue tree

Botanical Name : *Albizia lebbek*



Figure 13: Tamarind



Figure 14: Banyan tree



Figure 15: Peepal tree

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).



Figure 16: Vaagai / Woman's tongue tree



Figure 17: Aacha tree



Figure 18: Teak

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).



Figure 19: Indian blue gum



Figure 20: Ironwood/ Casuarina tree



Figure 21: Geiger tree

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).



Figure 22: Pride of India



Figure 23: Pagoda tree/ frangipani



Figure 24: Earleaf acacia



Figure 25: Paradise tree

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).

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

- Hasan, R., Noriah, O., Faridah, I., 2018. Choosing Tree for Urban Fabric: Role of Landscape Architect. 6th AMER International Conference on Quality of Life Pulau Perhentian Resort, Malaysia, 03-04 March 2018 and published in Environment Behaviour Proceeding Journal. 3(7), 199-207.
- Hussaina, M.A., Yunos, M.Y.M.A., Othuman Mydinb, M.A., Nangkula, U., Nor A., I., 2015. Assessment the function of trees as a landscape elements: case study at melaka waterfront. Journal Teknologi (Sciences & Engineering) 75, 9 (2015) 39-45.
- Velmurugan, M., Anand, M., Davamani, V., Rajamani K., Pugalendhi, L., 2020. Landscape Value of Trees. Biotica Research Today 2(7), 693-695.

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,