

BONSAI

Bonsai is an art of growing and training of a plant to a miniature form having a natural look of old age. It was originated from China, but it was called as the Japanese art. It involves techniques of extreme dwarfing. The optimum size of bonsai may be only **30 to 60 cm in height**, but miniature sizes of below 25 cm have also been preferred. Bonsai of minimum 10 years old are period, but of 100 and even 200 years of age are available and are highly valued as ‘venerable’ specimens.

Bonsai requires special types of containers. They should be usually shallow with 5 to 7.5 cm deep (except for cascade type of bonsai for which deep pots can be used). Round, hexagonal or square shaped containers with 25 to 30 cm diameters are preferred. Containers with specific colours like mosaic, sky blue, terra cotta, grey or jungle green are well suited for bonsai culture. Plants adaptable for extreme dwarfing like juniper, pine, elm, maple, cypress are suitable materials for bonsai culture. But in tropical places like India, the tree species like Manilkhara, Sapota, Bassia, Tamarind and *Ficus* spp. and shrubs like West Indian cherry are well suited.

Trunk and branches may be bent, forced and tied by coiling them with heavy wire. This wire is removed after several months when training to shape has been accomplished. The bonsai plants may be trained to different shapes like twisted trunk, upright, S-shaped, semi-cascade, cascade, slanting or any other formal shape. Planting of both tips and roots is usually done at planting time and periodically pinching the tip and removing the excess side shoots are essential to maintain the general outline of design. Annually, the plants are either repotted or lifted from the pot, root pruned and reset.

The bonsai plant is fed sparingly of week fertilizer solution containing major and minor nutrients. Sometimes extracts of oil cakes may be also added. Similarly, the plant is given only minimum requirements of moisture. It is advisable to water twice a day to plants kept in shallow containers and once a day to plants kept in deeper pots.

Selection of hardened woody plants that have been subjected to adverse conditions is a good starting point. Such kind of planting materials may be collected from rock crevices or from the walls of any buildings. Old seedlings kept in containers from any nursery or cutting, grafted plants or layers may be also utilized in bonsai culture.

Where it succeeds?

- Under open sunny conditions
- Under air conditions
- As indoor near windows only.

Rules for Bonsai making

For trunk

- Height can be 6 times the caliper of the trunk.
- Should lean towards the viewer.

- It should anchor the plant.
- Roots should radiate.
- No eye poking roots.
- Should taper as it ascends
- Should not move back

For Branches

- Should not cross the trunk
- No eye poking branches
- First branch should be at one third height of the tree
- No belly branches
- Should be opposite
- Should diminish in size as it ascends
- Secondary branches are to be alternate

Principles of Bonsai

- Small leaves or needles
- Shorter internodes
- Attractive bark or roots
- Branching characteristics

To enhance the age, expose the one third of the roots

- Before potting, the twisted and tangled roots are to be straightened.
- Upper branches should not overshadow the lower branches.

Plants suitable for Bonsai making

1. *Ficus benjamina*
2. *Ficus Carmona microphylla*
3. *Ficus nerifolia*
4. *Ficus retusa*
5. *Ficus virens*
6. *Ficus pelkan*
7. *Ficus parasitica*
8. *Ficus krishna*
9. *Ficus elastica*
10. *Ficus trangularis variegated*
11. *Ficus mysorensis*
12. *Ficus nooda Variegated*
13. *Ficus tomentosa*
14. *Ficus saliscifolia*
15. *Ficus jaquinifolia*
16. *Ficus long Island*
17. *Ficus marginata*

18. *Ficus lipstick*
19. Bougainvillea
20. Bottle Brush - Red / White / Lavender
21. Black Olive
22. Brazilian Raintree
23. Cashew
24. Casuarinas
25. Chinese Banyan
26. Chinese Mini Orange
27. Duranta Gold
28. Duranta Variegated
29. Golden Cypress
30. *Hamelia patens*
31. *Hibiscus rosea sinensis*
32. Inga Dulse Variegated
33. Jackaranda
34. Jasmine Kamini
35. *Juniper chinensis*
36. Karonda
37. Lavender Brown
38. Lavender Green
39. Badam
40. Mango
41. *Murraya exotica*
42. *Murraya paniculata*
43. Neem
44. Pine
45. Pomegranate Mini
46. Powder Puff - White / Pink / Red (Calliandra)
47. Poinsettia Mini
48. Kumquat
49. Sapota
50. Scheffleura Variegated
51. Silver Oak
52. Surinam Cherry
53. Tamarind
54. Wood apple
55. West Indian Cherry
56. *Wrightia religiosa*

Styles of bonsai

Formal Upright

It is one of the most natural styles where the trunk is perfectly straight. The branches should alternate left to right to suggest age. The bottom third branches are removed and the remainder is drawn downward.



Formal upright style

Informal Upright

This style is characterized by a lightly curving trunk displaying the harsh elements of nature. This can be achieved with ease using wire and/or cords. It is as appropriate for conifers as with deciduous trees.



Informal upright style

Broom

It has a straight trunk that begins to divide and subdivide into many branches. The characteristics are its thick and finely branched crown. Some trees for this style are Beech, Elm, False cypress and Maple.



Broom style

Slanting

It is so called because the general slope of the trunk is highly pronounced. The branches should lie horizontal or droop slightly downward. The surface roots have an unstable appearance but have a well anchored impression.



Slanting style

Windblown

It is rare in nature. This kind of tree is found on cliffs or mountains. The trunk, branches and twigs are trained in a single direction to give the affect of a strong wind and storm.



Windblown style

The Clasped-to-Stone

It is a much loved but difficult to create style. The size and shape of the rock should complement the plant that is set on a gravel or water dish. A whole chapter could be spend on this style.



Clasped-to-stone style

Agrotechniques for Bonsai

1. Propagation

2. Season
3. Potting and repotting
4. After care
5. Container
6. Planting media

Propagation

Through seeds, cuttings, layering or grafting

Seeds: Pines and Junifers

Cuttings: Ficus, Pomegranate, Mulberry and Bougainvilleas

Layers: Jasmine, Ixora, Bougainvilleas and Pome granate

Grafts: Mango, Sapota, Citrus

Season

1 July - August

2. Febraury - March

Best time is before opening of the buds

Potting and repotting

- 1/3 of the roots can be trimmed
- Long tap roots are to trimmed
- Excessive branches are to thinned out
- Balanced nutrition and adequate watering is must
- Potting is not advisable during winter or hot months
- Repotting is done after 2-3 years

After care

Pinching - Once or twice

Pruning - For its shape

Training - Desirable shape

It is achieved through copper wire or polythene tape. It is to be removed once the shape is attained.

Containers

- Mostly terracotta or ceramic
- Small in size
- Square/round/rectangle/oval in shape
- Preferred is oval / rectangle

In round / square the plant is to be in the centre

In others placed in the sides of the containers.

Planting Media

Media consists of

Loam soil	2 parts
Leaf mould	1 parts
Coarse sand	little

Media can be covered with moss and one or two pebbles can be placed to give a natural look.