

[Article ID : 01/IV/11/0421]

GROWING CITRUS AS A BONSAI

Laishram Hemanta*, Mutum Preema Devi¹, Animesh Sarkar²,
C.S Maiti³, P Alila⁴ and S Romen Singh⁵

*^{2,3&4} Department of Horticulture, School of Agricultural Sciences and Rural Development
Nagaland University, Nagaland – 797106

¹Department of Pomology and Post-Harvest Technology,
UBKV, Pundibari, Cooch Behar, West Bengal -736165

⁵College of Horticulture & Forestry

Central Agricultural University, Pasighat, Arunachal Pradesh -791102.

*Corresponding author's email: hemanta.horti@gmail.com

Abstract

Growing of fruit plants apart from ornamentals in pots for aesthetic purpose has been gaining momentum. Growing citrus plants in shallow containers as bonsai is on demand in market nowadays. Bonsai is an ancient Japanese technique that takes normal tree seedlings and turns them into miniature pieces of natural art. By training and regularly pruning the branches and roots, the trees can be kept at a miniature size for decades (Castilo, 2019). Citrus plants produce fragrant white flowers and decorative yellow or orange fruit. The size of the fruit depends on the cultivar. The species and cultivars with small fruit and small leaves are preferred for bonsai. Especially popular are the bonsai orange tree and the bonsai lemon tree. Flowering bonsai trees are beautiful but fruiting ones like bonsai orange tree is one of the prettiest.

Introduction

Bonsai is an art which expresses in miniature the beauty of natural tree forms. The word 'Bonsai' is comprised of two words 'Bon' means a tray or shallow container and 'Sai' means to grow; thus bonsai means something growing in a shallow container or tree in a pot. The art of bonsai is only achieved by constantly bending, hold down, and cutting the branches. These miniature bonsai trees can maintain their sizes for years and years. Growing ornamental plants as bonsai is common but growing fruiting trees as bonsai is also gaining popularity. Among fruit trees, citrus plants are also suitable for bonsai. Among citrus, lemon, kumquat and calamondin orange are popular. The lemon tree is a popular citrus that can easily grow as a bonsai. This citrus fruit is sensitive to cold that thrives in full sunlight tree. Produce a rich dark green foliage and fragrant spring flowers. When pruned properly, lemon bonsai produces edible fruit, of a size proportional to the tree, which has the same qualities as their equal-size. Another citrus suitable for bonsai is orange tree. The miniature version of this citrus fruit is called the **calamondin orange** and it is very popular in the bonsai art form because of its evergreen leaves, its capability to flower in almost all parts of the year, and its beautiful little orange fruits which **are edible** as well. Specific guidelines and cares must be followed while growing citrus as bonsai like temperature, training & pruning, fertilization or nutrition, watering, insects, diseases and weeds. They should be watched with constant attention and affection like children.

Requirements including Tools and Equipments

- Plants
- Pots – square, round, oval, rectangular, heart, hexagonal or octagonal shape with a drainage hole at the bottom.
- Potting mixture



- Potting sticks
- Sieves
- Copper wire of 10-22 gauge
- Wire cutter
- Pruning knife
- Secateur
- Watering can
- Tub
- Turntable

Styles of Bonsai Suitable for Citrus

- Formal upright
- Informal upright
- Semi-cascade
- Slanting
- Windswept
- Forest
- Twin Trunk
- Multiple trunk
- Rock grown

Specific Bonsai Care Guidelines

Suitable citrus plants : Kumquat (*Citrus japonica*), Lemon (*Citrus limon*), Orange (*Citrus sinensis*), Lime (*Citrus aurantiifolia*) (Casandra, 2018). Meyer lemons, mandarin oranges and limes are smaller trees and easy to grow indoors (Castilo, 2019). Calamondin (*Citrus microcarpa*) is very popular in the bonsai art form because of its evergreen leaves, its capability to flower in almost all parts of the year, and its beautiful little orange fruits which are edible as well (Stockton, 2017).

Propagation : Seeds, cuttings, air Layering and grafting are the methods which can be adopted (Raj, 2006). But air layering and grafting are the best methods as they are faster.

Characteristics of ideal growing medium : Coarse, well drained medium which provide basic needs like water, oxygen and nutrition is desirable. Equal portion of soil, leaf mould and crushed bricks or sand is ideal medium. Top layer must have sufficient humus.

Placement : Citrus trees love heat and sun. In a warm climate, Citrus plants can be kept outside all the year round. In temperate climates, it should be placed in full sun from May to September. From autumn until spring the tree must be placed in the house or in a greenhouse. If it is kept in a warm room in winter, extra grow lights might be necessary.

Watering : The Citrus needs regular watering in summer, but tolerates temporary dryness. It does not tolerate constantly wet soil. If the soil is well-draining, the Citrus tree must be watered thoroughly as soon as the soil surface becomes dry. In winter it needs less water. Citrus plants prefer lime-free water. Best time for watering is morning or evening.

Nutrition : A special liquid fertilizer can be used for Citrus plants for fertilizing at least once a month except for winter months (Stockton, 2017). Sludge or well rotten cow dung slurry. Groundnut and cotton or neem cake one kg each is mixed in five litres of water which is allowed to rotten or ferment for about a month before diluting another five times. A mug of this is given twice in a month. A pinch of bonemeal and single super phosphate is also very beneficial (Raj, 2006).



Pruning and Training : New shoots are cut back leaving two leaves after four leaves have developed. Regular pruning is important in order to achieve some ramification. Training is done using wire which is possible throughout the year. Good care must be taken so that the wires don't cut into the bark. Copper wire is the best for shaping the trees. Thinning the branches and stems to increase indoor air circulation and light penetration in the tree, and sprouts & suckers that grow vigorously should be removed using sharp and sterilized pruning shears (Anonymous, 2014). The purpose of training and pruning is to develop a good attractive shape. Regular trimming and pruning also restrict growth and maintain proper balance between roots and shoots. In one trimming not more than one third portion of roots or shoots are cut.

Repotting : Repotting needs to be done every two or three years in spring with root-pruning. Citrus prefers a slightly acid soil mix, so some peat can be added.

Pests and diseases : Citrus trees are often attacked by spider mites, scale, mealy bugs, leaf-miner fly, weevils and borer, especially if they are placed in a warm place with insufficient light. Specific pesticide can be used and growing conditions should be improved.

Conclusion

Making bonsai can be a hobby and also a means to make money as they cost thousands of rupees. But we must remember that this is not an easy venture and needs time and tireless efforts. This is an art without end. Growing citrus as a bonsai requires a lot of knowledge, perseverance and experience and should be taken care like pets. Choosing the right method of propagation, style, proper nutrition, regular watering, shaping or training, pruning, trimming & pinching, repotting, insects and disease management need to be done with utmost care for a healthy and beautiful plant.

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