

# BUCHANAN'S NATIVE PLANTS

## Organic Citrus Care

### Basic Care and Fertilization

- Citrus trees need to be planted in a well-drained, full sun location. If you don't have good drainage you should start by mixing in **Expanded Shale**, making it 10% of your medium.
- If you plan to grow the citrus in a container, **TGU or Nature's Way Citrus Mix** are excellent potting soils for this purpose.
- Make sure your citrus tree gets a minimum of 1" of precipitation each week, whether by hand or by nature. Water deeply each time you water, NOT in short spurts in which the water only goes down an inch or two each time. Cover the soil with 1-2 inches of **TGU Hardwood Mulch** to retain moisture and insulate from heat and cold. Refer to our "Planting a Tree or Shrub" handout for in depth planting tips.
- Always use a root stimulator, such as **Bush Doctor's Kangaroots**, when you first plant your tree. Follow manufacturer's directions.
- **Fertilize your tree three to four times a year between February and October.** The normal program is February, May, August, and October. Use a good granular fertilizer such as **MicroLife Citrus**. If you choose to use a liquid fish/seaweed product, such as **MicroLife Liquid Seaweed**, you will need to fertilize every two weeks for maximum effect.
- In winter, the tree's roots should be watered in deeply the night before a freeze in order to protect them from frost. When the tree is still small, it will be best to cover it with frost cloth as well. If you are growing the citrus in a pot, move the pot away from the North wind, water the roots and cover the tree with frost cloth. Small trees are especially susceptible to freeze damage.

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## Organic Citrus Care, continued

### Common Pests and Diseases

- ❖ **Leaf Miner.** This is the larval stage of a flying insect which lays its eggs inside the leaf of new growth on citrus trees. When the egg hatches, the leaf miner feeds on the leaf as it mines between the layers of the leaf before going into its next stage of development.
  - **Treatment:** *This insect is NOT very detrimental to the health or production of fruit for this plant.* If you are concerned about the appearance, spray with **Spinosad (Captain Jack's Dead Bug)** or **Neem** on a weekly basis starting at the first sign of new growth. You might also want to try sticky traps that attract and contain the moths that produce the leaf miner.
  
- ❖ **Whitefly, Scale, Mealybug, Aphids, Psyllids.** If you see any of these pests on your citrus, it is most likely due the plant having been stressed for some reason. Most common reasons for stress:
  - The plant has not been watered as thoroughly as needed.
  - The plant is in the wrong place with too little sun or poor drainage.
  - The soil has been depleted of organic matter and nutrients.
  - Weather event.
  - **Treatment:** Spray with Neem, Safer Soap, or All-Seasons Oil, if necessary. Strengthen the tree with this "sick tree treatment": Scratch greensand into the soil, apply a liquid seaweed product such as Ocean Harvest and top-dress with compost.
  
- ❖ **Black Sooty Mold.** This fungus occurs in concert with the pests listed directly above, as these pests release a sticky honey-dew that attracts the mold.
  - **Treatment:** Treat for insects as above.
  
- ❖ **Giant Swallowtail Butterfly -- Not Necessarily a Pest**

Citrus trees are host plants to Giant Swallowtail Butterfly caterpillars. The caterpillars (which look like giant bird droppings) feed on the citrus leaves before forming their chrysalis. This will not seriously harm your tree nor will it diminish fruit production. However, it will result in a truly beautiful butterfly.

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### Planting a Tree or Shrub

1. Make sure the planting site is appropriate for the species of tree or shrub being planted. Consider the mature height and width of the species, its light requirements and recommended soil conditions (pH, drainage, etc.). Be certain that foundations, power lines, cables, gas and water lines are not in the way.
2. Plant during the cooler part of the day. Examine the structure of the tree and choose the best orientation. Dig a hole that is at least 2-3 times the width of the root ball and the same depth as the root ball. Be sure the root ball is moist before removing it from the container. Examine the roots. Cut or unwind circling roots and spread the roots out evenly as you set the plant in the hole.
3. Backfill the planting hole with the native soil\* (soil that came out of the hole). Break up clumps and water as needed to settle the dirt. Do not compress the backfill soil as this can compact the soil and inhibit growth. Make sure the root flare (where the trunk begins to narrow just above the soil line) is not covered with soil. Add ½ inch or more **compost** to the top of the soil before applying 2-3 inches of mulch.
4. Light fertilization with an organic product like **MicroLife** is sufficient during the first year. It is important that energy is focused on developing a strong root structure, not on accelerated top growth during this critical period. That's why we recommend:
  - a. Root Activator: **Carl Pool Root Activator** or **Super Seaweed** provides enzymes that stimulate root growth.
  - b. **Mycorrhizal fungi** inoculant: Mycorrhizal fungi have a symbiotic relationship with the tree, attaching to the roots and sending out filaments that bring important nutrients to the roots, while the tree reciprocates by providing the mycorrhizae with sugars.
5. Add 2-3" **native hardwood mulch** around the base of the tree. Do not place the mulch directly against the base of the trunk, as that can promote insect infestation and disease.
6. Do not stake a tree unless it is top-heavy, very thin and leggy or is in a windy location. Do not keep a tree staked for more than a year. (Staking can weaken a tree.)

\* If the native soil is heavy clay, it can be amended with 10% **expanded shale** before using it to backfill.

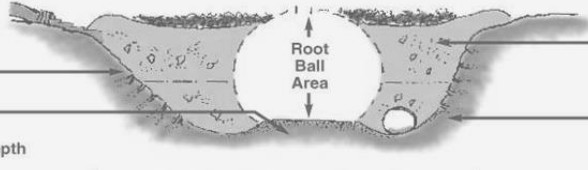
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## PLANTING TREES AND SHRUBS

### TYPES OF NURSERY STOCK

Bareroot	Container-Grown	Balled-in-Burlap "B&B"
 <p>Heel in plants if not planted immediately. Neatly cut away any broken or damaged roots. Soak for a few hours prior to planting to rehydrate.</p>	 <p>Plastic or metal containers should be removed completely. Carefully cut through any circling roots. Remove top half of pressed peat/paper containers.</p>	 <p>Cut balling ropes. Pull burlap down at least 1/3 of the way; slit remaining burlap to encourage root growth. If in a wire basket, cut away top section.</p>

### The Perfect Planting Hole



Partially backfill, water to settle soil, then finish backfilling hole

Widen and score hole wall

Leave solid soil pedestal

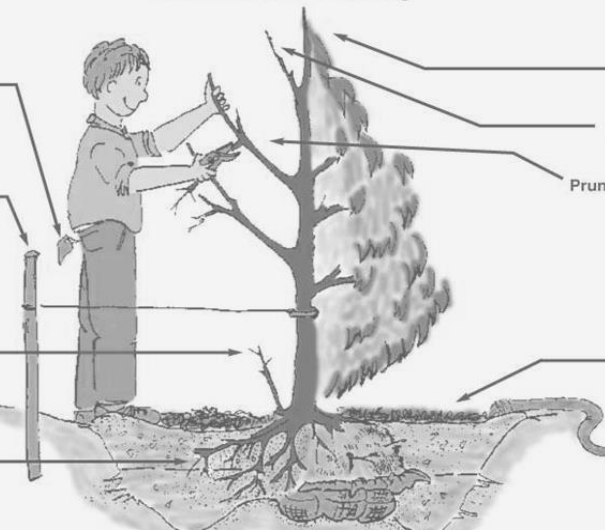
Do not dig deeper than root ball depth

Dig hole 2-3 times root ball width

Unamended backfill soil (No peat, bark, sand, etc.)

Area for water drainage (pipe or tile could be installed)

### Your Finished Planting



Remove tags and labels

Do not stake trunk unless the tree has a large crown, or the planting is situated on a windy site or where people may push them over

Stake for a maximum of one year

Prune basal suckers

Spread roots out over soil pedestal evenly before filling

Do not prune terminal leader or branch tips

Prune any codominant leaders or narrow crotch angles

Prune rubbing or crossed branches

Prune any broken branches

Note: Evergreens rarely require staking!

Add 2"-3" of mulch kept away from trunk

Soak soil well, making sure no air pockets form between roots, then apply mulch

Poster Design by:  
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## Tree Follow-up Care

1. **Watering** a new tree on a regular basis is critical to the health and survival of your tree. Watering rates will depend on the weather and soil conditions, from once a week during the winter to daily during hot and dry weather. Water slowly and deeply to ensure the water reaches the whole root ball and surrounding soil.

As your tree becomes established the rate of watering can be reduced, but supplemental watering is critical for the first year. Pay close attention during times of drought. Do not rely only on sprinkler systems, but deep water with a **soaker hose** or **bubbler attachment**. Avoid overwatering if the soil has poor drainage.

2. Besides correct watering, **mulch** is your best tool for helping a tree grow to healthy maturity. Maintaining a consistent 3-4 inch layer of quality mulch over the root zone from the trunk (but not touching the trunk) to 2 feet beyond the drip line insulates the roots from summer heat and winter cold. Mulch also conserves moisture, discourages weeds, encourages beneficial soil microbes and feeds your trees.
3. If needed, **fertilize** your trees in the spring and fall. If you have beds and/or lawn around your trees, the fertilizer you apply to them may also take care of your tree. Tree roots are particularly sensitive to the salts in chemical fertilizers so be sure to use a good organic fertilizer like **MicroLife (6-2-4)**. Never use “weed and feed” fertilizers near your tree.
4. Remember that trees and lawn grasses do not generally get along. They compete for food and water, depend on different sets of microbes in the soil, and the grass will eventually be starved for light. Consider groundcovers or attractive mulch instead.
5. When first planting a young tree, prune only torn or broken branches, co-dominant leaders and narrow crotch angles. Do not prune terminal leaders or branch tips. **Never prune the lower branches of a young tree.** Lower branches are left on the trunk of the tree to manufacture food (through photosynthesis) for the tree. Studies have shown that unpruned trees establish faster and have a stronger root system than trees pruned at the time of planting.
6. **Prune to shape a tree after 2-3 years when it is established.** Regular pruning can significantly improve the beauty and health of a tree. However, improper pruning can cause long-term problems. Thus it is best to consult a professional or research the subject thoroughly before proceeding.

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