



# Extension Extra

ExEx 6019  
April 1993  
Horticulture

SOUTH DAKOTA STATE UNIVERSITY / U.S. DEPARTMENT OF AGRICULTURE

## Planting a Container Tree

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A common method of transplanting small trees, particularly those less than 6 feet tall, is from containers. While they may look the same at first glance, there are three different types of container trees sold.

**Container-grown** trees are grown in containers from the seedling stage on. This makes for less transplanting stress since the tree is planted with its original root system intact.

Some container trees are sold as **field-potted** trees. These trees were originally grown in a nursery field and later harvested with the original soil around the base.

**Containerized** trees are dug bare-root in the early spring and placed into a container using a special soil mix.

Each type of container tree has excellent survival, but they do differ slightly in their planting methods.

### When to Plant . . .

Since the root system of a container grown tree is not disturbed significantly at transplanting, they can be planted from spring till early fall.

Field-potted trees generally should be planted in the spring. These trees are growing in their original soil rather than a special soil mix; their growth may suffer if left in the container too long.

Containerized trees can be planted once the roots are established in their new container. Since most containerized trees are potted in early spring, they usually can be transplanted anytime after late spring.

### Before Bringing the Tree Home . . .

Carefully select the tree planting site. Too often people buy plants, then decide where to place them. When this happens, trees often are placed in locations they soon outgrow. Find out how large the tree will become at maturity and leave adequate space.

Stand over the spot you have selected for planting and look up to check for power lines. Do not plant tall tree species beneath power lines. Once the tree begins to grow into the wires, the trees will become a nuisance to the utilities, require frequent pruning or perhaps be removed.

Utilities also may exist beneath the spot you want to plant. Contact local utilities before planting to be sure the location you select is not directly over cable, phone or other utilities. Generally if you do not clear the location with the utilities before digging, you are responsible for all damages.

When selecting trees to purchase, look for trees with a straight trunk and good form. Do not be concerned about a small crook near the base of the trunk. This is where the trunk was grafted to the root system. This crook will disappear as the tree grows older.

Inspect the lower trunk for cracks and other wounds. These injuries often result in frost cracks and sunscald when the tree is older. Look at the pruning cuts along the trunk; the cuts should not be flush with the trunk nor leave a large stub.

The trunk should not wobble in the container.

## **After the Tree Is Home . . .**

First check your tree or shrub for tags. Wire or plastic tags can girdle branches or the trunk if left on too long. Remove the tags, but keep them in a safe place for future reference. You also may want to note, on the back of the tag, where and when the tree was planted.

While container trees are easy to store and hold for planting, some precautions should be taken. Keep the tree in a lightly shaded area, somewhere out of the wind. Check the tree daily to see if additional water is needed. Some container soil mixes are very porous so the water will drain out very quickly. Stick your finger in the soil near the edge of the container to test if it needs water. If the soil is dry about two inches beneath the surface, water the tree until water runs out the drainage holes near the bottom of the container. Do not water the tree again until the soil dries.

## **Preparing the Site . . .**

One of the most common tree planting mistakes is digging the hole too deep and not wide enough. The planting hole should be no deeper than the distance from the soil line on the trunk to the bottom of the container.

If the soil is a heavy clay, set the tree so it is slightly higher than the ground surface. The hole should be at least three times wider than the diameter of the container. The sides of the hole do not have to be straight but can be sloped.

If the soil is heavy clay, the sides of the planting hole may become glazed during the digging. Break up the sides of the hole with a rake or shovel. If this is not done, the new roots may not be able to penetrate the sides of the hole and instead may circle.

## **Planting the Tree . . .**

How a container tree is planted depends on whether it is containerized, field-potted, or container grown. In all cases, however, do not expose the root ball to the air any longer than necessary. Exposing the root's white growing tips to the air and sunlight can injure or kill them. Do not remove the tree from the container until you are ready to plant.

Containerized trees must be carefully removed from the container. Since the roots may have recently become established in the container, disturb them as little as possible. Cut the container away from the tree before gently pulling it out.

Field-potted trees often are sold in a biodegradable "peat" papier mache pot. While this type of container will decompose eventually, it is still best to remove the

container before planting. This will allow the roots to penetrate the new soil much sooner. If you do not want to remove the container, at least remove any of the pot that extends above the soil. Any of the container exposed to the air may act as a wick and dry out the soil sooner.

Remove container grown trees from the container by the same methods mentioned for containerized trees. Since container-grown trees have been in the same container for several years, the roots may be potbound and not come out of the container very easily.

If the roots are potbound and circling the container, carefully cut away the container, then pull the plant out. Separate and straighten some of the larger, girdling roots. Girdling roots may cause trees to experience decline and dieback after 20 years of growth. While it is important to separate some of the larger roots, do not disturb the entire root system. This will only slow the tree's recovery.

In addition to separating girdling roots, slit the bottom one-fourth of the soil ball in half with a vertical cut and the sides turned up. This is called butterflying and will improve the root establishment, particularly in heavy clay soils. Butterflying will prevent the roots from continuing to grow in a circle and girdle one another.

Begin refilling the hole using the same soil you took out. Do not add soil amendments like sand or gravel to the planting hole. These can disrupt water movement between the surrounding soil and the planting hole, leaving the new plant too dry or too wet. If you feel you must add amendments, only mix in leaf or garden compost. They should make up more no than 20% of the backfill (by volume). Be sure to thoroughly mix the compost and backfill soil before re-adding it to the hole.

Fill the hole about one-third full and then add water to let the backfill soil settle around the roots. Continue adding the backfill until the hole is two-thirds filled, then add water again. After the soil has settled, continue adding backfill until it reaches the root collar (old soil-line). Add water again and a little more backfill if the soil settles. When the soil has settled it should be at the root collar and the soil should slope slightly away from the tree.

Do not build a soil saucer around the trunk. While it is important to keep the present root area moist, it is equally important to water the soil extending out from the planting hole. New tree roots can grow from the planting hole into the surrounding soil within the first growing season if this soil is kept moist. The sooner the tree moves into the surrounding soil, the sooner the tree recovers from the transplant stress. However, be sure to check the moisture level of the soil ball and the surrounding backfill frequently. Depending upon the difference in soil texture between the two, the soil ball may dry out sooner.

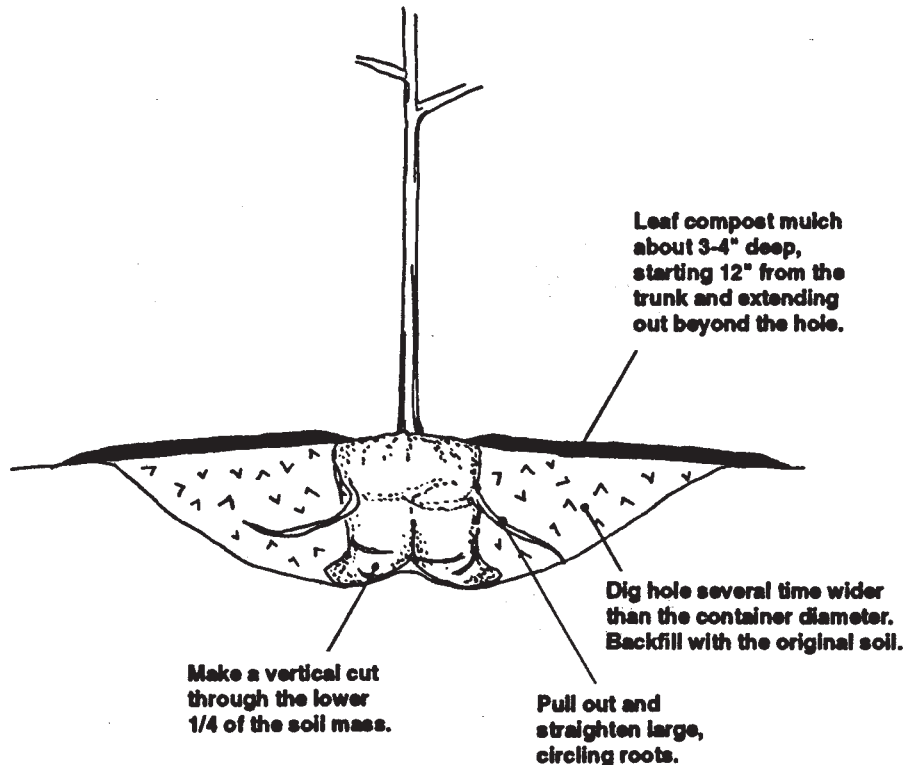
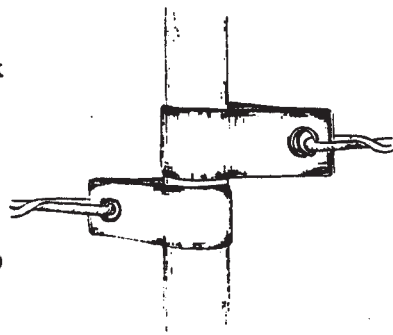
A mulch circle around the tree can double its growth and speed reestablishment. Mulch lightly with about three to four inches of a composted material. Incorporate this material into the upper one inch of the backfill and extend out as far as the edge of the planting hole. Do not apply the mulch too deeply as this may interfere with the exchange of air between the soil and the atmosphere. Leave a 12-inch circle free of mulch around the trunk to discourage rodents. If weeds are a concern, place a porous weed barrier fabric beneath the mulch to reduce weed growth rather than incorporating the mulch into the soil.

Do not wrap the trunk. The trunks of young trees often serve a similar function as the leaves, manufacturing food. Wrapping the trunk may slow the rate of recovery for the tree. If you feel you must wrap the trunk, be sure to remove the wrap before the second growing season begins. Wrap left on more than one growing season can girdle the trunk.

Instead of wrapping the trunk, consider one of the following methods to protect from rodents, rabbits, weedwhips, and mower damage. Slit a one foot length of plastic tile, and place it around the base of the trunk. Be sure the tile is at least several inches larger than the trunk. Or, use a ring of quarter-inch hardware cloth one to two feet high and several inches larger than the trunk. Whatever the method you choose, remove in a few years before it contacts the trunk.

If the tree was planted in a windy location you may want to stake and brace the tree for the first growing season. Do not stake the trunk too high (never higher than one-half its height) or too tightly.

Over-staking may prevent the tree from developing a strong trunk and support roots. Use a wide, belt-like strap, attached by wire to two stakes. Position the stakes at least two feet away from the trunk. Do not use the wire itself to support the trunk.



### After-planting Care . . .

Avoid pruning the tree heavily at planting. Confine pruning to removal of dead, broken, and misshaped branches. The more leaves the tree has, the more food it can produce and the faster new roots will develop. Do not prune the branches; doing so will slow the root's recovery. After the tree becomes established, usually in a year or two, you can begin pruning to shape the tree.

Fertilizing generally is not necessary until the tree has recovered from transplanting. This usually takes a year for container trees. If you want to add fertilizer at planting, use a slow-release, granular fertilizer mixed in with the backfill or use fertilizer briquettes.

Watering is the most important form of after-care. Newly transplanted trees often die from too little or *too much* water. Check the soil around the tree once a week during the growing season. The top two to three inches of soil should stay moist enough to form a ball when gripped in your hand. If the soil is dry, add more water to saturate the top six to eight inches, then do not water again until the soil dries.

### For More Information . . .

- ExEx 6018 -- Planting a Bare-Root Tree
- ExEx 6020 -- Planting a Balled and Burlapped Tree
- ExEx 6021 -- Planting a Tree With a Tree Moving Machine



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150 copies printed by CES at a cost of 10 cents each. April 1993.