



William T. Kemper Center for Home Gardening

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Planting Trees

Planting a tree is a relatively simple procedure. Your first consideration is to select a tree which is best suited for the planting site. To do this you must determine the shape, texture, leaf color and maximum height of the tree at maturity. Also consider all of the aesthetic factors that will ensure you have chosen a tree which will compliment the landscape and provide the look and feel you wish to create.

It is essential that you select a tree which will thrive in the conditions provided at the planting site. Some trees prefer full-sun, while others will flourish in areas which receive only filtered sunlight. Some trees require protection from wind and cold while many trees will withstand harsh conditions and exposure to the elements. Soil characteristics and drainage requirements of specific trees may also be a determining factor in the selection process. It is important that you select only those trees which are recommended for the part of the country in which you live.

Preparation for Planting

Nursery trees are packaged in four ways:

- 1) Bare rooted with no soil on the roots.
- 2) Balled and burlapped with a soil ball around the roots which is wrapped in burlap.
- 3) Container grown in plastic or metal containers.
- 4) Potted plants - plants grown in the field but transferred to pots before sales.

Bare Rooted Trees

These plants are normally available only during early spring. Bare rooted trees are generally less expensive, but more perishable if not planted quickly. Before planting, trim off any broken, twisted or discolored root tips. The roots should be soaked overnight or up to 12 hours before planting. If you cannot plant immediately, store bare root plants in a cool place out of sunlight and wind. Keep the packing material around the roots damp, but not soaking.

Determine the original soil line of the plant by the change in color on the trunk. Set the tree in the hole so the soil line is above the surrounding soil. Then spread the roots evenly radiating outward from the root crown.

Fill the space between and around the roots with soil, firming the soil gently as you fill the hole. Make certain that all of the roots are in contact with soil. Run water slowly over the root area to settle the soil and

eliminate air pockets.

After the soil is settled, check to see that the trunk has not become buried. If it is too low, gently grasp the trunk near the soil with a garden fork and lift the tree an inch or two higher than the proper level. Then let the tree settle back to the proper depth.

Ball and Burlap Planting

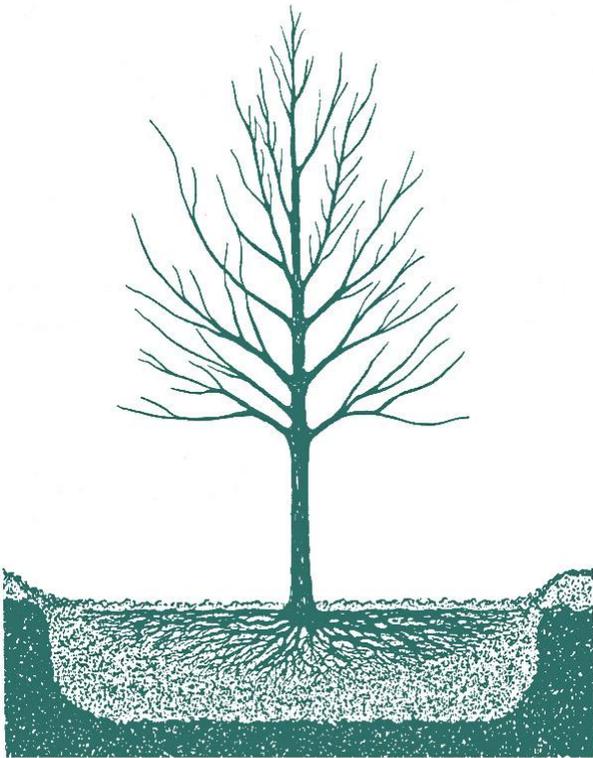
Trees and larger plants are usually sold balled and burlapped. You can plant them any time the soil is workable, but early spring from April through June or in the fall from late August into October is best. Keep the soil ball damp and place the tree in a sheltered location until you are ready to plant. Mulch over the root ball when storing through the winter months.

You can leave the burlap around the ball when planting, as it will decompose. If the root ball is wrapped with plastic burlap, remove the wrapping from the root ball before planting.

Set the wrapped root ball into the hole, making sure that the soil line is slightly higher than the surrounding soil. Untie and remove the twine from the root ball. Twine left tied around the trunk of the tree can strangle the plant after a few years of growth, so it is very important that it is removed.

Fill the hole with soil, firming it as you go. Then cut away any burlap from the trunk and be sure that all edges are buried well below the soil surface. This is important as wick action will dry out the root ball should burlap be exposed to the air.

If the soil line on the tree is buried, you can raise the tree by carefully placing a shovel beneath the root ball and prying up while lifting on the trunk. Raise it an inch or two and then let it settle back into the soil.



Container Grown and Potted Plants

You can plant container grown and potted plants any time the ground is not frozen. If you do not plant immediately, water and fertilize the plant regularly.

Remove the tree from the pot by gently knocking on the walls and bottom. If the tree is in a metal container, it may be necessary to cut the sides with metal cutters to remove it. Next, use your fingers to cut and fray the root ball. This will free the root system and encourage fresh root development after planting. Cut and remove some of the roots that are matted at the bottom or circling around the outside of the root ball. Removing one-fourth to one-half of the roots in the outer inch of the root ball of root-bound plants should not affect plant establishment: It should, in fact, stimulate the growth.

Set the tree carefully into the hole, making sure that the soil line of the tree is slightly higher than the surrounding soil. Then add soil gradually to fill the hole, firming it to insure good root contact.

Preparing the Planting Hole

The planting hole should be at least one foot wider than the plant's root system. Make the hole extra wide, but no deeper than the root ball. Plant the tree as close to the original nursery depth as possible. Deep planting can cause the plant to die slowly.

Set the plant in the hole and place the soil removed from the hole around the plant roots. It is no longer recommended to add large amounts of peat or compost to the planting hole, however, organic matter can be worked into the soil surrounding the plant. The diameter of this area may be 3 feet for small plants or up to 6-10 feet for large trees.

Water thoroughly to settle the soil and eliminate air pockets. Do not pack the soil with your foot as this may damage roots and compact the soil.

Building a Watering Basin

Building a shallow basin in the soil around the tree will allow water to soak down in to the root ball with a minimum of run-off. The basin diameter should be approximately twice the size of the root ball. Build a ridge around the edges, using the soil dug from the planting hole. The ridge will hold water to further settle the soil and provide roots with water.

Watering

The root ball will need more frequent watering than the surrounding soil for several weeks after planting. How often you should water depends on plant species, soil type, mulching practices, and natural rainfall. Expect to water once a week or every two weeks during dry spells; less frequently when it rains. When you do water, soak the entire root area of the plant well. Watering heavily and less frequently is preferred to frequent light waterings. If you find it difficult to know when to water, dig around the plants with a small trowel to determine the soil's moisture level. If the soil is dry 1 inch below the mulch, it is time to water. If the soil is still damp or wet, wait a few days and then test again.

Fertilizing

There is no reason to fertilize at the time of planting, but a water soluble starter solution can be used when growth begins.

Mulching

After planting, mulch around the plant to a depth of 2-4 inches. The mulch will help retain soil moisture, add organic matter as it decomposes, moderate soil temperature and reduce soil compaction. Be careful not to allow the mulch to touch the plant's trunk. Shredded bark and wood chips are excellent mulches.

Nursery grown trees are grown very close together. This practice sometimes keeps them from getting the light they need to develop strong side branches. The weak side branches that do develop are often trimmed off. This practice encourages growth in height at the expense of trunk development. So these trees often need to be staked in order to stand.

Sometimes thinning will be enough to reduce the weight and wind resistance of the top. Sometimes tilting the root ball slightly will be enough to help the tree to stand independently. You should try these methods before resorting to staking, as these will very probably provide a stronger tree. Should staking be necessary, here are some guidelines:

Staking to Support the Trunk:

- 1) Two stakes will reduce the likelihood of rubbing injury and uneven trunk development which may occur with one stake.
- 2) Tie the trunk to the stakes at only one level. The tie should provide some flexibility but not enough that the tree rubs against the stakes.
- 3) The tie should be within 2" of the stake top.
- 4) Stakes should be at a right angle to the strongest likely wind.
- 5) A 1" by 3" crosstie at or just below ground level will help to hold the stake assembly upright and keep it from working out of the ground in the wind.

Staking to Anchor Roots

Trunks of many trees will hold their tops upright as long as the roots are firmly anchored. You can anchor roots by driving two or three short stakes by the roots to hold them where they are. Then tie them to the trunk with loops of webbing or plastic tape. The ties should be removed after the first growing season.

Guy Wires

Large trees sometimes need stronger anchoring until the roots have established themselves securely into the surrounding soil. Use guy wires from a pin which is sunk into the ground to a soft collar which wraps around the trunk and then back to the ground on another side, for support. Guy wires going to three pins in the ground, spaced evenly, give good support to the tree trunk.