

Planting Procedures for Woody Ornamentals in the Landscape

VIDEO SCRIPT

ORNAMENTALS BEING PLANTED. Proper planting is the first step toward healthy, vigorous growth of ornamental plants in the landscape. It assures rapid plant establishment by providing a favorable environment for the developing root system. However, proper planting involves much more than just digging a hole and sticking a plant in it. Give careful consideration to preparing the planting site, selecting and handling of different types of plant material, and the time of year for best plant establishment and growth. By taking a little extra time to plant properly, you can avoid costly maintenance problems later on.

EXAMINING NEW CONSTRUCTION SITE. Before planting, carefully examine the planting site for possible hazards to plant growth.

New construction sites frequently are littered with pieces of roofing, lumber, mortar, plastic and limestone or contaminated with chemical spills, like motor oil or gasoline, that can impair root growth and cause plant problems. Calcium leaching from mortar and limerock, for instance, can result in long-term nutrient deficiencies of acid-loving plants like azaleas.

REMOVING DEBRIS. Remove construction debris before planting. In some cases, it may be necessary to remove the top six to eight inches of contaminated soil and to replace it with new top soil.

BULLDOZER ONSITE. Soil compaction from bulldozers, graders, concrete mixers, trucks and other construction equipment is another hazard to plant growth. Compacted soils not only slow root growth but often are poorly drained. Some soils contain a layer of compacted clay, called a hardpan. Several inches beneath the soil, this causes poor drainage and a weak root system. A soil probe helps you determine the profile of the soil and possible drainage problems.

SOIL PROBE SHOWING SOIL PROFILE. Planting holes dug in poorly-drained clay soils become pockets of standing water after rain or irrigation. Plants often decline and die as the roots suffocate from lack of oxygen.

TRACTOR SUB-SOILING. Deep tilling or sub-soiling prior to planting is one possible solution to poorly-drained sites. Many landscape firms make deep tilling standard operating procedure when preparing new construction sites for planting. For small or confined areas, use a walk-behind tiller.

RAISED BED BEING PREPARED. On extremely heavy soils, the only solution may be to construct a raised bed of well-drained top soil 12 to 18 inches above the existing soil grade. Sub-surface drainage pipe is sometimes installed to insure good drainage.

SHAPING BEDS. Drainage patterns can also be influenced by the shape of the beds. Slope beds away from the foundation of buildings. Swails and valleys add interest to the landscape, but they should not result in standing water. Smooth grading assures good drainage.

TAKING A SOIL SAMPLE. As beds are prepared, take a soil sample to determine the lime and fertilizer requirements. Allow two to four weeks for the results. Take soil from 10 to 12 random spots in

the area to be tested and mix them together in a plastic bucket. Your local county Extension Office can offer advice and supplies needed for soil testing.

AZALEAS IN FULL SUN OR JUNIPERS IN SHADE. A thorough analysis of the soil on the site is important, but equally important for the success of the plants is the exposure of the site itself. Select plants for the site keeping in mind the light level and the amount of wind, heat, and cold that the plants might experience. These junipers, for instance, were well-planted, but they declined because they could not tolerate the environmental stresses imposed by the site. Avoid costly mistakes before planting by selecting plants that suit the environment of the site.

EXAMINE PLANTS BEFORE PLANTING. Before planting, examine plants to make certain they're healthy and free of insects and diseases. Examine the upper and lower leaf surfaces for signs of pests. Are the buds plump and stems flexible? Look at the root system for an abundance of small white roots on the outside of the root mass. A healthy root system is a good sign of a healthy top. Trees should have their trunks wrapped to protect them during shipment from the nursery. Pull back the wrapping and look at the main trunk for cold injury cracks, insect injury, or mechanical damage.

CARRYING A B&B PLANT. When carrying plants, always lift them by the root ball, not by the trunk, regardless of size. This is especially true for balled-and-burlapped plants. When plants are lifted by the main trunk, the root system can be damaged as the weight of the root ball pulls downward on the delicate roots. Large plants may require two or more people to carry them. For larger plant material, use special equipment, such as a tree dolly, to transport plants to the site. Carry containerized plants by the container instead of the top. Careful handling from the nursery to the landscape is essential to planting success.

LOADING A TRUCK. When loading a truck, do not drop or throw plants, because damage to the roots may occur. Avoid crushing the stems and damaging the branches. Some trees may require trunk wrapping to protect the bark from damage, and tying of the branches to prevent them from breaking during transport. Place a tarp over the plants to prevent wind damage.

WATERING PLANTS BEFORE PLANTING. When arriving at the job site, group the plants together before moving them to the planting beds and water them thoroughly. Moisture helps minimize transplant shock once the roots are removed from their container or covering. If plants cannot be planted right away, place them in a shaded, non-paved area, away from the direct wind and close to a water source, so they can be kept moist. Arrange the plants according to size and type so they can be easily maintained. Check the plants daily and water them as needed. If balled-and-burlapped must be held a week or longer, cover the root ball with sawdust or pine straw to help conserve moisture.

SPACING PLANTS IN THE LANDSCAPE PLANTING. Now that site changes have been made and healthy plants have been selected for the site, it's time to plant. Trees are usually planted before shrubs because of their larger size and handling requirements. Next, set shrubs on top of the planting bed at the proper spacing so you can get an overview of the bed and adjust the spacing if necessary. Then, one-by-one, set each plant aside while you dig its planting hole. It's important to dig the hole at least two times wider and six to eight inches deeper than the root ball of the plant. Research shows that a plant transplanted into a large hole grows bigger and stronger than one transplanted in a hole no larger than the root ball.

When digging in clay soils, the walls for the planting hole may appear shiny and compact, a process called "glazing." When this occurs, use a shovel or pick to roughen the wall of the planting hole in several spots to encourage root growth into the surrounding soil.

Now carefully remove the container from the root ball by supporting the soil with one hand, turning the plant upside down, and sliding off the container. If the outer roots appear matted, it's standard practice in the landscape industry to make several vertical cuts approximately one-fourth inch deep on several sides of the root ball. This encourages the roots to grow outward and allows water to penetrate the root ball.

Backfill the hole with six to eight inches of soil, then gently set the plant in the center of the planting hole, making certain the top of the root ball is level with the soil surface. Planting too deep or too shallow results in stunting or eventual death. Then backfill with additional soil after breaking apart clods or removing stones and other debris.

Some landscapers amend the backfilled soil with peat moss, composted animal manure or sand, depending on contract specifications and wishes of the client. The types of amendments used depends on the structure and texture of the soil on the site and the type of plant being grown. Other landscapers don't amend soils at all, based on planting research results from the University of Georgia. Check with your supervisor about the need for soil amendments before planting.

As the soil is added to the hole, use the back of your shovel to tamp it lightly to remove air pockets.

Some landscapers place slow-release type fertilizers in the planting hole. Slow-release fertilizer pellets or capsules do not burn the roots like granular fertilizers. Place them along the sides of the root ball just a few inches beneath the surface. Liquid fertilizers and liquid root promoters also can be used without injuring the roots.

Once the hole is filled and tamped, use your hand or shovel to shape a narrow ring of soil approximately 4 inches high along the perimeter of the planting. This helps funnel water to the root system when irrigating.

Apply a layer of mulch on the soil surface to help hold moisture, to control erosion and to prevent mechanical damage. Spread a three to five inch layer of mulch evenly over the planted area. Pine straw and bark mulches are commonly used in the Southeast. Last, but certainly not least in importance, is water. Water thoroughly by hand at planting time and again several hours later.

B&B PLANT IN HOLE. When planting balled-and-burlapped plants, cut the nylon cord or wire from around the base of the trunk and pull back the burlap from at least the top one-third of the root ball. If the native soil is a heavy clay, you may want to remove the burlap entirely to prevent it from holding excess moisture. Some plants are packaged in chemically-treated burlap that is slow to decompose. If so, cut or remove it to prevent it from slowing root growth. Check with your supervisor or nurseryman about the type of burlap used.

LARGE TREE IN WIRE BASKET. Large specimen plants transported in wire baskets are usually wrapped in degradable burlap. Cut the nylon straps from around the main trunk. It is not necessary to remove the burlap or wire basket when planting.

CUTTING BAG FROM FABRIC BAG GROWN PLANT. Some ornamental plants are grown in the nursery in fabric root control bags. When planting a bag grown plant, the bag must be removed. Otherwise, the roots remain trapped in the bag. Use a knife to slice the roots away from the bag, then slit the bag in several places and pull it downward away from the roots. If the plant is small enough, remove the bag entirely from the roots.

The planting process for B&B Plants and Bag-grown plants is the same as that described for container-grown plants.

STAKING A TREE. Trees taller than four feet planted in exposed, windy locations need some sort of staking or guying to hold them in place until established. Generally, trees having a trunk caliper between one and two inches can be supported by two wooden stakes placed at opposite sides of the planting hole. Hammer stakes into the ground below the depth of the planting hole so they are securely anchored. Use heavy wire, such as 12-gauge, to secure the tree to the stakes. Place the wire inside a piece of old garden hose where it touches the tree to prevent it from damaging the bark. If possible, run the wires just above the lowest scaffold branches to prevent them from slipping up and down on the trunk and injuring the bark.

WORKERS SPRUCING UP AND WATERING PLANTS IN A NEWLY INSTALLED LANDSCAPE. The first four to six weeks after transplanting is a critical time for newly installed ornamental plants. A thorough watering once a week, in the absence of rainfall, is essential during establishment. Avoid the application of pesticides, growth regulators, or fertilizers during the establishment period.

OVERVIEW OF WORKERS PLANTING A LANDSCAPE. Remember that your skill at transplanting determines the future quality and maintenance requirements of the landscape. As you can see the planting process involves far more than simply digging a hole and sticking in a plant. It begins with a thorough analysis of the site, a soil test, and bed preparation that assures good drainage and minimizes erosion. It includes the use of healthy pest-free plants and careful handling practices from the shop to the job site. Remember research provides us with a tested planting procedure that assures optimum growth: Dig a wide planting hole, plant no deeper than the plant was growing in the field or the container, tamp the backfilled soil to eliminate air pockets, shape a ring along the perimeter of the planting hole to aid in watering, apply mulch to the surface, water thoroughly.

NICE LANDSCAPE APPROXIMATELY ONE YEAR AFTER INSTALLATION SHOWING PEOPLE ENJOYING SURROUNDINGS. Proper planting results in a beautiful environment that everyone can enjoy, and a landscape that you, and your employer, can be proud of.

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