



ENVIRONMENTAL EDUCATION SERIES

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Correct Installation And Establishment Of Ornamental Plants

Dave Williams
Extension Horticulturist

When appropriate landscape plants are correctly installed, the risk of direct pest problems, as well as indirect pests brought on by environmental stresses, is reduced. Correct planting takes more effort than simply digging a hole and dropping in the plant. Many landscape plant losses, even losses many years after planting, can be traced to incorrect planting.

Planting Individual Trees And Shrubs

When planting trees and shrubs, provide as large an area as possible for initial root development by digging a large hole. The hole does not have to be deep; in fact, a very deep hole can cause harm to the tree or shrub. The hole should be dug to a depth that allows the root ball to extend 1 inch above the soil surface, and should be as big around as five times the diameter of the root ball.

Gently remove container plants from their containers. Cut the container if necessary. If the plant is root-bound (roots circling the outside of the root ball), score the roots from top to bottom about 4 times, cutting about 1/4 inch deep with a knife, or gently massage the root ball until roots point outward (Figure 1). This stimulates new root growth into the surrounding soil. Root-bound plants which are planted without treating the root ball may be stunted or discolored for years.

Place the tree or shrub into the hole, turning its best side to the front. Using only the native backfill, add soil back to the hole until it is 1/2 to 2/3 full (Figure 2). Amendments are not needed in individual plantings and appear to even hinder root growth. Water in the backfill soil around the root ball. Add soil to ground level and thoroughly water again (Figure 3). A small dike may be formed around the edge of the planting hole to hold water around the root ball.

For bare-root plants, soak roots in water. When planting, spread the roots in the hole and gradually add soil. Firm the soil, being careful to avoid breaking roots. Fill the hole with water, and allow it to drain. Then fill the hole with soil, and water again thoroughly.

For burlapped plants, cut any wire or string around the plants' stems. Do not remove the burlap or serious root damage may occur. However, if the burlap is tied around the stem or otherwise reaches above the soil line, fold the burlap back so it will be buried by soil. Burlap which is allowed to remain exposed after planting can act as a wick, causing the root ball to dry out. From this point, follow the same procedure for filling the hole as that described for container plants.

Once plants are installed, add a 2 or 3 inch deep mulch (Figure 3). Mulch is beneficial to plants at most stages of development but is particularly important for new plantings. Mulch conserves soil moisture, prevents soil crusting, and suppresses weeds. As a result, more water is made available for use by the landscape plant, which helps reduce stress conditions in the first year planting.

Stake plants only if necessary to keep them upright and in place. If staking is necessary, take care to allow a few inches of free movement. Do not strangle the tree or shrub with guide wires. Use pieces of hose around the wire where it rubs the plant. Plants naturally sway as they grow. If this swaying is confined by staking, plant growth is slowed.

Water is most important for growth in a new planting. The plants were grown in potting mixes or very well drained soil, and were, therefore, watered frequently in the nursery. For the first few months, water plants frequently in the area over and beyond the root ball. This will provide the water to areas where it is taken up by plants until the roots begin to establish in the surrounding soil. Be conscious of plants that have been in the ground for less than one year, and water them thoroughly during extended dry periods.

Planting Shrubs And Herbaceous Plants In Prepared Beds

Shrubs, herbaceous perennials, and flowering annual plants are typically planted in beds. Bed preparation differs somewhat from planting in individual holes. Bed areas are usually tilled or spaded, typically to a depth of 8 to 12 inches. Contrary to the individual planting, soil amendments, such as peat or compost at a

rate of 1 part amendment to 3 parts native soil, are beneficial to annuals and perennials because they provide a more uniform root environment across the bed area. This type soil amendment also enables plants to respond more positively to water and fertilizers when they are applied.

Annual bedding plants and non-woody perennials benefit from fertilizer incorporated in the bed as it is being tilled. Lime may also be needed to bring the pH range of the soil to a better range for your plants. Fertilizer needs and soil pH range should be determined by a soil test. During the growing season, these herbaceous plants will benefit from periodic applications of fertilizer, which should also be based on results of the soil test.

The hole for the shrub planted in a bed area should be a few inches wider in diameter than the root ball. Scoring the root ball of the shrub is also an important task. As with individual plantings, bed areas should be mulched. Watering is also needed during dry periods.

Once woody landscape plants have become well established in a site, they require relatively little fertilizer. Generally, only a small amount of nitrogen is needed during the growing season.

Likewise, in most instances, little water beyond that supplied by rainfall is needed to maintain a healthy plant once the plant root system is established in the native soil. However, under conditions of prolonged drought, even established landscape plants may require supplemental water.

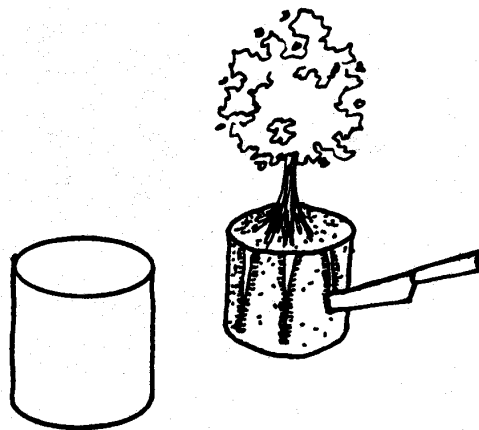


Figure 1. Score root ball of container plants by making 4 or 5 vertical cuts $\frac{1}{4}$ " deep.

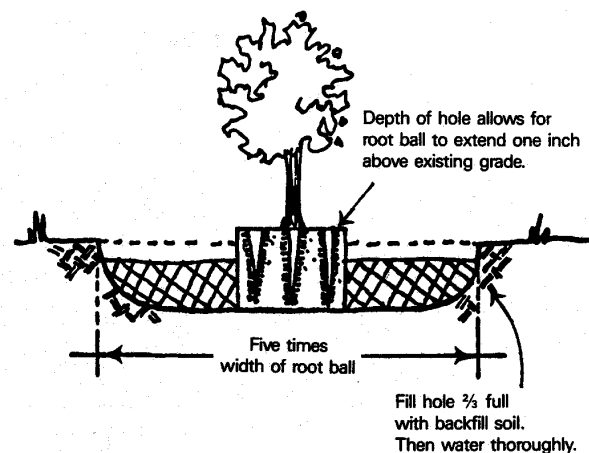


Figure 2

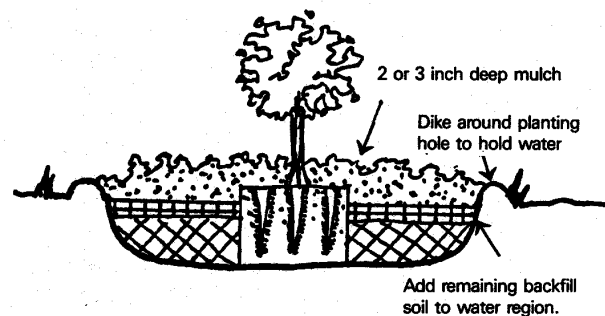


Figure 3

For more information, call your county Extension office. Look in your telephone directory under your county's name to find the number.

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