

# RAREFIND NURSERY'S TREE & SHRUB PLANTING GUIDE

## PUT THE RIGHT PLANT IN THE RIGHT PLACE

Avoid many problems by choosing plants that are well adapted to your site conditions. Is the site sunny, shady or windy? Most plants such as rhododendrons prefer an eastern or northern exposure, as exposures with afternoon sun in the winter can cause damage to broad-leaved evergreens. Exposure to wind for broad-leaved evergreens can cause bronzing, dried leaves and generally sad looking plants at the end of a hard winter. Plants which are deciduous or which have needle-type leaves are better suited for these locations. Of course, consider the ultimate size of the plant!

## CONSIDER SOIL TYPE AND DRAINAGE

Take a handful of moist soil and squeeze it. If the soil holds together in a solid mass, it is clay; if it crumbles easily it is sandy. If it is somewhere in between it is a loam. Dig a test hole as deep as the planting hole and fill with water. If the water drains away slowly (less than a few inches per hour), drainage is poor, and your choice of plants for that site may be limited unless you amend the soil (see Soil Amendments). If the water drains away quickly, as with sandy soils, organic material will help retain moisture.

## WHAT'S pH?

pH is the concentration of hydrogen ions, which make the soil either acidic or basic (alkaline). A pH of 7 is neutral, a pH of 3-4 is very acidic and a pH from 9-10 is very alkaline. Much of the Eastern US has naturally somewhat acidic soils, but it is a good idea to have your soil tested, usually by your county cooperative extension service. Many plants are tolerant of a wide pH range, while ericaceous plants such as rhododendrons, azaleas and blueberries prefer acid soil with a pH of 4.5 to 5.5. To lower pH, use sulfur, iron sulfate (also known as ferrous sulfate or copperas), or ammonium sulfate for rhododendrons and azaleas. Adding aluminum sulphate will make hydrangeas blue, but do not use for rhododendrons and azaleas, as aluminum is toxic to them. If you need to raise the pH, adding lime will make the soil more alkaline.

## SOIL AMENDMENTS

We are often asked whether to add peat moss or other soil amendments when planting. Peat moss is generally not necessary, (and is considered a non-renewable resource, since it is mined from peat bogs produced thousands of years ago.) If the soil is poor in nutrients, compacted or contains a lot of clay, add organic matter such as leaf compost or composted pine bark. Add only organic fertilizers such as bone meal, rock phosphate, Holly-tone or Plant-tone fertilizer to the planting hole. Chemical-based fertilizers may burn delicate new roots. Add composted organic matter. DON'T add sand. Sand + clay = cement! Gypsum may help loosen clay soils.

## HYDROPHILIC GELS

Much of the US recently experienced record-breaking droughts and watering restrictions. To help newly established plants survive, you may wish to use a hydrophilic gel (sold under brand names of Terrasorb™ and Soilmoist™) to help retain soil moisture. (You may be familiar with them already as they are used in disposable diapers!) Follow directions on the label. Remember, a little of the gel goes a long way. Too much can pop the plant out of the ground! If you are using a hydrophilic gel, mix it and any other soil amendments with the loose soil in the bottom of the hole.

## HOW BIG SHOULD I DIG?

The rule of thumb is to dig the width at least two times the diameter of the root ball, but only four inches deeper. Loosen the soil in the bottom of the hole, and roughen up the sides of the hole as much as possible, to allow roots to penetrate the surrounding soil.

## PLANTING DEPTH

Important! Almost all plants (except tomatoes) should be planted with the 'collar' (junction where the roots begin on the stem) level with, or a bit higher than the surrounding grade, depending on the type of soil. (See illustration 3, next page.) For well-drained soils, the top of the root ball should be slightly higher than the surrounding soil. For poorly drained soils, the plant should be planted several inches higher than usual. It may be better to make a mound and plant ON TOP of the ground, backfilling with better soil. Make a transition zone by mixing the two soils where they come together.

## LOOSEN THE ROOTS!

Very important! Ericaceous plants such as rhododendrons and azaleas have fibrous roots and can become pot-bound (that is, the roots become matted around the edges of the pot they're grown in). So it is critical to scratch and roughen up the matted root ball to loosen the roots so water can penetrate and roots can grow into the surrounding soil. Use a small hand tool because doing it by hand is inadequate. DO NOT BE TIMID! You will hurt the plant far more by being too 'NICE' to it. A post-mortem of dead plants often reveals that the roots were never disturbed before planting.

You can also 'butterfly' or quarter the root ball and spread the roots as near to horizontal as possible. Build a mound in the center of the hole and spread the roots over it. For non-ericaceous plants (most woody trees and shrubs) the roots should be loosened and spread out as much as possible, to allow the roots to penetrate into the surrounding soil. Be gentle when handling roots that are fleshy or brittle, such as magnolias. Cleanly cut off broken roots and any roots that grow backwards toward—or around—the trunk to avoid having them girdle the plant.

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## PLANTING!

Place the plant in the hole and fill the hole with water. Let the water drain away. If it drains away quickly and the soil seems very dry, repeat. Backfill (replace soil around plant) AFTER the water has drained away and settle the soil around the roots. With some of the extra soil, make a saucer to retain water around the plant.

## WHAT ABOUT MULCH?

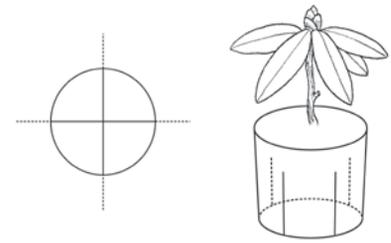
A layer of mulch helps to conserve soil moisture. Cover the exposed top of the root ball and surrounding area with two to four inches of mulch. Leaf compost, pine needles or composted wood chips are very good. Fresh chips can also be used, but supplemental nitrogen fertilizer should be applied to replace that used up by microbes during the process of decomposition. Do not make 'mulch volcanoes' (mulch mounded around the trunk of the plant). Remember that roots are meant to be wet (moist), and bark is meant to be dry!

## HOW MUCH WATER?

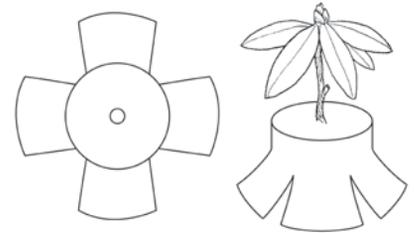
Watering newly established plantings: This depends on the time of year, the amount of rainfall, and plant requirements. Even drought tolerant plants need adequate watering until they are established. Planting in late spring or summer will require more attention to watering than planting in fall or early spring. In general, watering two to three times per week should be sufficient. Fewer deep waterings are better than frequent shallow watering. Do NOT keep the soil saturated, but do not allow it to become bone dry either. After a few weeks frequency of watering can be gradually reduced. Remember that most irrigation systems are intended for maintenance, not establishing new plantings.

## WINTER PROTECTION

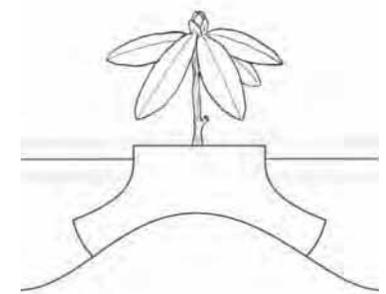
Broadleaf evergreens can be sprayed with an anti-transpirant such as Wilt-Pruf, once around November and once in February. This will help reduce moisture loss from the leaves when the ground is frozen and thus prevent winter damage.



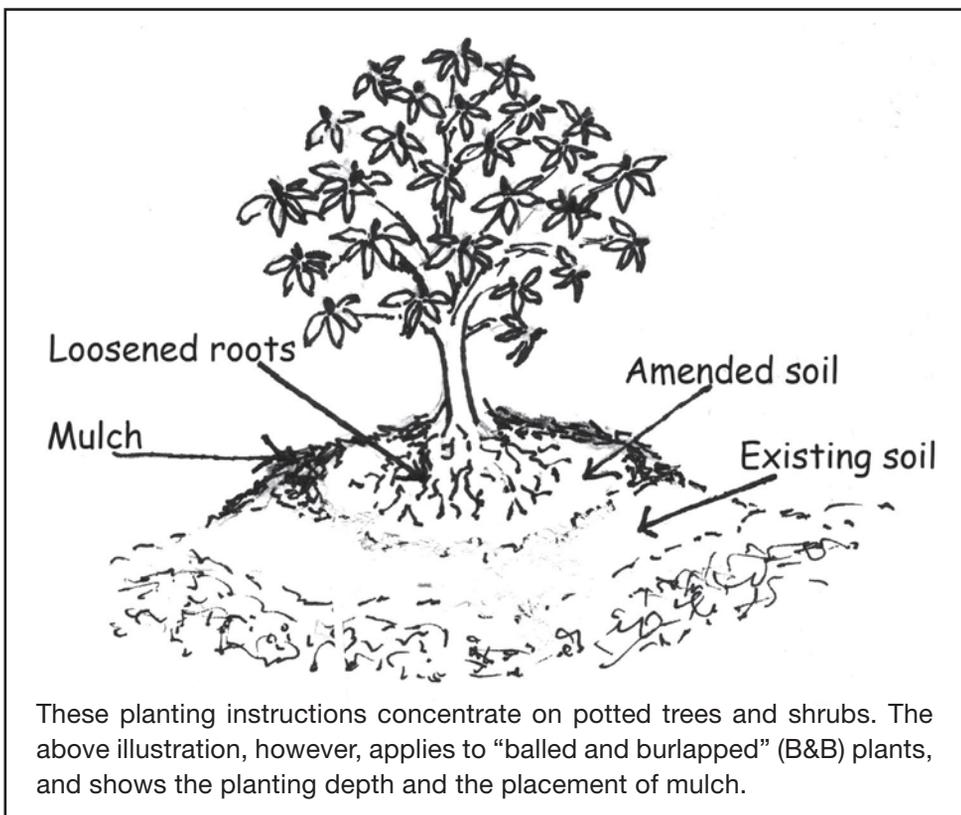
To "butterfly" the root balls of a potbound rhododendron or azalea, remove from pot; lay plant on its side; and make a deep "X" cut through the roots. Don't be timid. The illustration of upright plant at the right shows how deep the cuts should go.



After cutting into the root ball, spread the four quarters apart to loosen them.



Once you've roughed up and scratched apart any potbound roots, you're ready to plant. Build a mound in the center of the planting hole and spread the roots over it, as shown above. Depth of planting depends on soil type. For well-drained soil, the top of the root ball should be slightly higher than the surrounding soil.



These planting instructions concentrate on potted trees and shrubs. The above illustration, however, applies to "balled and burlapped" (B&B) plants, and shows the planting depth and the placement of mulch.