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Washington Association of Conservation Districts
Plant Materials Center

Bareroot Planting Guide

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WACD Plant Materials Center
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CONSIDERATIONS:

TIMING

January through April is normally ideal for planting bare root plants. If possible, plant on cloudy, cool, humid days. An old adage is, "The best days for planting are the worst for the planter."

Avoid sunny, warm, dry, and windy conditions that desiccate seedling roots. Plant sensitive species like conifers in the early morning. Avoid planting when there is a risk of freezing the roots. If temperatures are above freezing, and the ground is workable, January and February are ideal times for planting bare root trees and shrubs. The most important thing to remember is to ***keep the roots damp*** *and plant before the tree or shrub breaks dormancy. Note that bare root plants are slow to "wake up." Expect to wait four to six weeks after planting until you see signs of growth.*

SITE

Consider objectives for planting. Are the plants to be used for landscaping? Gardening? A buffer strip? Soil stabilization? Food and/or habitat for wildlife?

How much sun exposure do the plants need? What soil type and moisture/drainage needs does the plant have? Where will they be planted? A slope? A riparian zone? Upland?

What competition will the plants have? Weeds? Wildlife browsing? Other vegetation?

SPECIES SELECTION

Some plants are not very tolerant of wet, heavy soils while some are better suited well-drained upland sites. Becoming familiar with the characteristics of a site may require careful observation over time. That information can then be used to determine what species will work best for both the conditions and the goals of the project. There is ample literature and information available on the internet and elsewhere detailing the adaptability of conservation species of the Northwest.

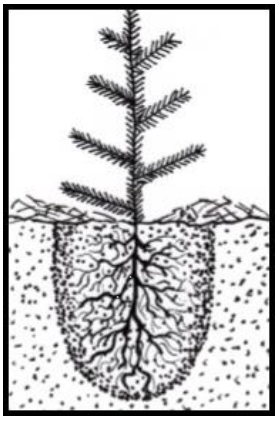
The PMC has a valuable Plant Selection Guide on its web site, http://www.wacdpmc.org/ The USDA Natural Resource Conservation Service also has the PLANTS web site that is a valuable source of information for conservation species throughout the country. Remember, a little planning can go a long way.

BEFORE PLANTING:

Store any plants in a refrigerated location, 30 to 40 degrees Fahrenheit, until ready to plant. Allow for ventilation around stored packages, mend any accidental tears to seedling bags with tape and allow ventilation around stored packages. Seedlings are perishable, so we recommend ***planting the seedlings as soon as you can after receiving them****— within 5 days of receiving them. Although, if necessary, they can be stored for longer.*

Until you are ready to plant, keep the roots of your plants covered in sawdust and/or other packaging and ***moist.*** *Place the root portion of the plant in water and let it soak before you plant - several hours for woody plants. Protect the seedlings from freezing temperatures. Be sure to defrost the sawdust/packaging before trying to remove it from the roots to avoid breakage. You can also prune out any damaged roots before planting.*

HOW TO PLANT:



STEP 1

Dig the planting hole as deep as the roots and at least twice as wide. The roots should be able to dangle and should not be bent, twisted or bundled. Loosen the sides of the hole with a shovel or spade fork, especially if your soil is heavy clay. Amend the removed soil with up to 20% garden compost, if desired.

STEP 2

Form a cone of loose soil in the center of the hole and spread the roots over it. Position the plant's height so that the crown (where the roots meet the trunk) is at or slightly below the soil surface. If the trunk has a conspicuous graft, it should be kept at least 1 inch above the soil surface. Make sure that the seedlings are protected from direct sunlight and wind before and during planting.

STEP 3

Slowly fill the planting hole and cover the roots with loose amended soil. Avoid large clumps, rocks and/or air pockets. It's beneficial to mix the amended soil with native soil along the sides of the planting hole as much as possible. Very lightly tamp down the soil around the tree, checking for any planting mistakes and securing the plant.

STEP 4

Slowly and deeply soak the area with water in order to settle soil and moisture. Newly-planted trees and shrubs need consistent deep watering for at least 2 years, if possible, to make sure they become established.

A thick layer of mulching helps to reduce weeds and water loss. After your plant is watered in and settled, you can build up a ring of sawdust, bark, wood chips or soil at the edge of the planting hole to form a saucer which will help hold surface water in the root zone. Mulching with 4 inches to 1 foot in radius of compost is ideal, but be sure to keep mulch at least several inches away from the crown to prevent rot.

Tree protectors, and other methods can prevent wildlife browse, depending on the site. Staking at planting time is not always necessary. Consider the stability of the plant and direction and strength of prevailing winds when determining whether or not to stake.

POTTING BARE ROOT PLANTS:

Pot bare root plants in good, nutrient dense potting soil and place them in a cool location such as a garage. The plants should get some light but should be protected from the extreme cold. If you want to put them outside, you can cover them in order to protect them from frost.

STEP 1

Make sure the container is large enough for at least two years' growth. Line its base with crocks, if desired. Dig a hole that is wide enough and deep enough to put the plant in without bending or crowding the roots.

STEP 2

Add the compost/potting soil and place the tree centrally. Place the plant in the hole at the same level it was grown by the nursery. You can find this level where the roots start and the top shoots begin (the crown). Do not plant the plant deeper than this line. Spread its roots so it is even and well balanced. Large clumps of soil should be broken up. Avoid rocks and air pockets. Make sure that the soil is allowed full contact with the bare boots, at all points.

STEP 3

Continue to fill the hole with good soil, while you are supporting the plant and keeping the roots spread. Leave room for watering. Gently work the soil in and around the roots; do not pack the soil. Water the plant thoroughly, making sure that the soil around the roots is moist.

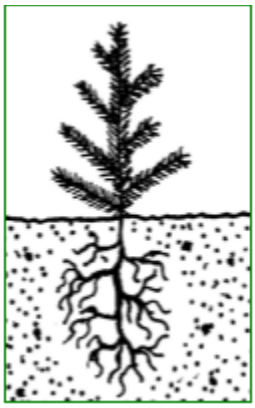
-Wait at least four weeks before you fertilize the plant, if you choose to do so. Young roots are easily damaged by too much fertilizer. Water the new plants until they get established—never let them dry out.

-Keep the plants out of extreme heat and cold. Store the plant in an area where it will receive partial shade during the day and place in an area such as a garage where it will not freeze at night.

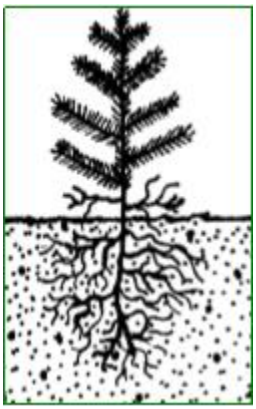
-Container-grown trees and shrubs can then go in the ground at any time of year as long as the soil isn't frozen or waterlogged. However, winter is the optimum season as the ground is damp and the plants have time to get established and settle their roots before they come into growth in the spring.

COMMON PLANTING MISTAKES:

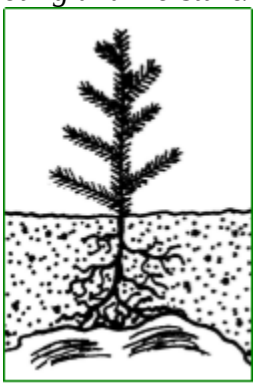
-Air pockets, which will dry out the plant, create extreme moisture stress and reduce the plants anchoring.



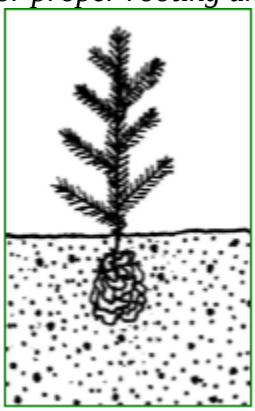
-Too shallow of planting, which will dry out the plant, provide less anchor and leave the plant susceptible to frost heave.



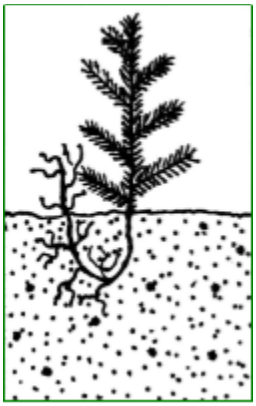
-On rock, which will prevent proper rooting and moisture/nutrient uptake



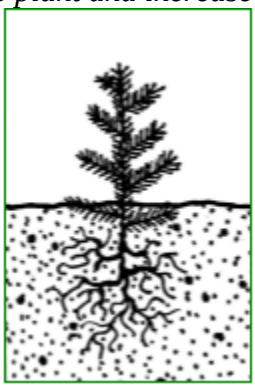
-*Bound Roots will decrease potential for proper rooting and limit moisture/nutrient uptake*



- *"J" Root planting will dry out the plant, provide less anchor and reduce moisture/nutrient uptake.*



-*Too deep of planting will suffocate the plant and increase chances of collar rot.*



QUESTIONS?

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