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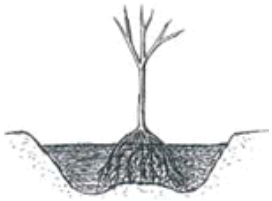
# Guide to Native Riparian Trees and Shrub Planting

## When to Plant Trees/shrubs and Shrubs

Climate plays a deciding role when determining the appropriate planting time. Newly planted trees/shrubs do best when exposed to moderate temperature and rainfall and need time to root and acclimate before the onset of intense heat and dryness in summer or the freezing temperatures of winter. In temperate Oregon, late winter/early spring (Feb-March) is a great time to plant trees and shrubs.

## How To Plant Trees and Shrubs

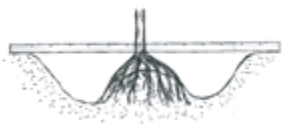
- As a general rule, dig the hole at least twice as wide as the root ball (container), and no deeper than the height of the root ball. The most common mistake when planting a tree/shrub is a digging hole which is both too deep and too narrow. Too deep and the roots don't have access to sufficient oxygen to ensure proper growth; too narrow and the root structure can't expand sufficiently to nourish and properly anchor the trees/shrub/shrub.
- When digging in poorly drained clay soil, it is important to avoid 'glazing', which occurs when the sides and bottom of a hole become smoothed forming a barrier through which water has difficulty passing. To break up the glaze, use a fork to work the bottom and drag the points along the sides of the completed hole.
- Raising the bottom of the hole slightly higher than the surrounding area allows water to disperse, reducing the possibility of water pooling in the planting zone.



- The soil that you dig out of the hole is what you use to backfill around the root ball. No soil amendments are recommended when planting native trees/shrubs; therefore, no compost, peat moss, or shredded pine bark should be added to the backfill.

## Planting Balled and Burlapped Trees and Shrubs

- Balled and burlapped (B & B) treesshrubs, although best planted as soon as possible, can be stored for some time after purchase as long as the ball is kept moist and the tree/shrub stored in a shady area. *B & B trees/shrubs should always be lifted by the ball, never by the trunk.* The burlap surrounding the ball of earth and roots should either be cut away completely (mandatory, in the case of synthetic or plastic burlap) or at least pulled back from the top third of the ball (in the case of natural burlap). Any string or twine should also be removed. Backfill soil is then placed in the hole surrounding the tree/shrub just to the height of the ball or slightly lower to allow for some settling. Be careful not to compress the back fill soil,as this may prevent water from reaching the roots and the roots from expanding beyond the ball.



## Planting Container TreesShrubs

- Container trees/shrubs (though subject to greater heat and drying conditions than B & B) can also be stored for a brief period of time after purchase as long as the soil in the

container is kept moist and the tree/shrub stored in a shady place. The pprocedure for planting container trees/shrubs is similar to that for B & B trees/shrubs. In the case of metal or plastic containers, remove the container completely. In the case of fibre containers, tear the sides away.

Once carefully removed from the container, check the roots. If they are tightly compressed, or 'potbound', use your fingers or a blunt instrument (to minimize root tearing) to carefully tease the fine roots away from the tight mass and then spread the roots prior to planting. In the case of extremely woody compacted roots, it may be necessary to use a spade to open up the bottom half of the root system. The root system is then pulled apart, or 'butterflied,' prior to planting. Loosening the root structure in this way is extremely important in the case of container plants. Failure to do so may result in the roots 'girdling' and killing the tree/shrub. At the very least, the roots will have difficulty expanding beyond the dimensions of the original container. To further assist this, lightly break up even the soil outside the planting zone. This allows roots that quickly move out of the planting zone to be more resilient as they anchor into existing surrounding soil conditions.

Once the tree/shrub is seated in the hole, the original soil is then back-filled into the hole to the soil level of the container. Again, remember not to overly compress the back-filled soil, especially by tramping it with your feet. Compress gently using your hands instead.

## Planting Bare-Rooted Trees and Shrubs

- Planting bare-rooted trees/shrubs is a little different, as there is no soil surrounding the roots. Most importantly, the time between purchase and planting is a more critical issue. Plant as soon as possible. Care should be taken to ensure that the roots are kept moist in the period between purchase and planting. Prune broken or damaged roots, but save as much of the root structure as you can.
- To plant, first build a cone of earth in the center of the hole around which to splay the roots. Make sure that, when properly seated on this cone, the tree/shrub is planted so that the 'trunk flare' is clearly visible and the 'crown', where the roots and top meet, is about two inches above the soil level. This is to allow for natural settling.

## Maintaining Your Plants to Healthy Maturity

- Be sure to clear invasive weeds from the proposed planting area prior to digging or planting.
- For the first week after planting, lightly water the tree/shrub every day (about one pint of water each day). The second week, water every other day with about one quart of water. During week three, water every third day with two quarts of water. Week four and beyond, water once a week if needed. The goal is to wean the trees and shrubs slowly off of supplemental irrigation, and get the root system large enough for the them to thrive on natural rainfall**.** New plants will require thorough irrigation at least once every two weeks for two to three years during the dry season (June-Oct)
- Invasive weeds will need to be removed once every month or two (depending on size of plants and aggressiveness of weeds) for at least two years after planting.

## Riparian Plant Spacing Guidelines

| Plant Purpose | Spacing Plants | Plants per Acre |
|---|---|---|
| Streambank stabilization | 2' X 2' | 10,890 |
| Riparian plantings (Shrubs) | 4' X 4' | 2723 |
| Riparian Plantings (Trees) | 8' X 8' | 680 |

*Adapted from Benton Soil &Water Conservation District

Information has been adapted from various resources, including:

- http://aggie-horticulture.tamu.edu/extension/homelandscape/trees/shrub/planting.html
- http://www.trees/shrubhelp.com/howto/howto-plant-a-trees/shrub.asp