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## **TREE PLANTING: AN ILLUSTRATED GUIDE**

### **For Balled and Burlapped Trees**

Step by step, this article will guide you through the planting process of a balled and burlapped (B&B) tree. Typically, the best time to plant trees is in the spring or fall, with spring being the optimum choice of the two. Ball and burlap trees are trees that have been grown in a nursery (field grown tree) and, when they reach the proper size, they are dug from the ground in the nursery usually using a mechanical tree spade. The root ball of the tree is then slipped into burlap and held inside a heavy gauge wire basket. When a field grown tree is dug, a majority of the root system that has developed will be severed from the tree. That is why the technique of planting ball and burlap trees is extremely important and the process should be addressed with care.

The depth of the tree, when planted compared to the final or existing grade of the soil, is the first crucial aspect of the planting process. The tree should sit at least 1" to 1 1/2" higher than existing grade but not more than 2" above existing grade. Once the hole is dug, measure the size of the root ball and then the depth of the hole. The hole should be 1" to 2" shallower than the height of the root ball in order to achieve the correct depth when the tree is lowered into the hole. For example, if the size of the root ball is 21", a good depth for your hole should be roughly 19" to 20" (Photos 1 and 2).



**Photo 1**



**Photo 2**

In our hard clay soils, it is easy to “glaze” the side of the planting pit with your shovel. Having sides of the planting pit that are solid and glazed makes root growth and penetration into the surrounding soil very difficult. Therefore, the edges of the planting pit should be scarified or roughened up (Photo 3).



**Photo 3**

To make sure the bottom of the planting pit is firm and to prevent the possibility of extreme settling of the root ball in the hole, it is a good idea to moderately tamp the bottom of the planting pit (Photo 4).



**Photo 4**

The entire wire basket around the root ball must be removed. In our alkaline soils, the wire simply does not break down the same way that it might in acidic soil. The long-term effects of leaving the wire baskets on the root balls can be devastating to the tree, often many years after planting. This process is fairly simple. First, have the tree sitting fairly close to the planting pit. Begin by taking the bottom 1/3 or “crown” of the basket off of the tree using a bolt cutting tool. Small (10”) bolt cutters work well (Photos 5 and 6).



**Photo 5**



**Photo 6**

You will have to roll the root ball slightly so that you are able to cut the entire crown away from the basket, leaving the upper 2/3 of the basket intact (Photos 7, 8 and 9).



**Photo 7**



**Photo 8**



**Photo 9**

This allows you to stand the tree up and lower the root ball into the hole. With the remaining portion of the basket intact, you can gently set the tree in the planting pit (Photo 10).



**Photo 10**

Be careful while handling the tree. You always want to handle the tree by the basket and not use the trunk of the tree itself as leverage; otherwise, disturbing or breaking of the root ball can occur. Once the tree is centered in the hole, double check the depth and height the tree actually sits according to the surrounding grade. A straight t-post placed across the hole works really well to help gauge if your hole has been dug to the correct depth (Photo 11).



**Photo 11**

After setting the tree in the hole, firm a small amount of soil along the edges of the base of the ball. This helps to stabilize the tree and keep it straight in the hole. Next, begin removing the remainder of the wire basket and twine that ties the basket to the tree (Photos 12 and 13).



**Photo 12**



**Photo 13**

Split the basket in half and remove the basket from the root ball of the tree (Photos 14 and 15) .



**Photo 14**



**Photo 15**

It is a good idea to fold and compact the basket and previously-removed crown and place them away from the work area for safety (Photo 16).



**Photo 16**

Once the basket has been removed, cut away or fold back the top 1/3 of the burlap (Photos 17 and 18).



**Photo 17**



**Photo 18**

After removing the burlap, begin backfilling the bottom 1/4 of the pit. Keep an eye on the trunk of the tree to be sure that it is straight up and down from several different viewpoints. While refilling the planting pit with the remainder of the soil, use the handle end of a shovel to tamp in the soil in order to remove all air pockets (Photo 19).



**Photo 19**

Continue to place soil around the edges of the planting pit to create a watering berm. This berm will allow you to capture water and deliver it directly to the root ball rather than having the water run onto the ground and away from the root ball (Photo 20).



**Photo 20**

Water inside the berm until it is full (Photo 21). Allow the water to soak into the planting pit. If the water seems to soak in pretty quickly, fill up the watering berm again.



**Photo 21**

Once the root ball or the inside of the berm has been watered thoroughly, check to see if there are any pockets or seep holes that will need to be filled with soil tamped in (Photo 22).



**Photo 22**

Now is an excellent time to add liquid fertilizers or root stimulants; be sure to follow the label directions for the product you are using (Photo 23).



**Photo 23**

After excess water has drained away, begin filling the bermed area with a 3” deep layer of wood chip mulch. The mulch helps to retain moisture, stabilize the soil temperature, and reduce weeds at the base of the tree (Photo 24).



**Photo 24**

Be careful not to place mulch directly against the trunk of the tree, as this can create rot in the trunk; pull away the mulch at the base of the trunk (Photo 25). It is never a good idea to allow turf grass or weeds to grow adjacent to a tree; this invites the use of a weedeater or a lawnmower to cause damage to the trunk of the tree.



**Photo 25**

The only pruning necessary at planting time is to remove any dead, broken or interfering branches (Photo 26). Single leader trees with co-dominant stems should not be purchased; however, if you do have a co-dominant stemmed tree, the weakest of the two leaders should be removed at planting time.



**Photo 26**

Thin-barked trees, during the winter of their first three years after planting, should be wrapped with a crepe paper type tree wrap (Photo 27). Tree wrap helps to prevent sunscald, an environmental injury to thin-barked trees caused by extreme temperature fluctuations in the winter. Secure the wrap with masking tape only, NOT staples or electrical tape. Tree wrap should be applied at Halloween and removed at Easter.



**Photo 27**

Finally, two stakes or steel t-posts should be driven in on opposite sides of the tree and in the ground outside the planting pit (Photo 28). Place the 1<sup>st</sup> stake on the northwest side of the tree (our prevailing winds are out of the northwest) and the 2<sup>nd</sup> stake on the southeast side of the tree. Cap the top of the t-posts with safety caps. Connect the stakes to the tree with a thin gauge wire which should run through a grommeted canvas strap. This prevents any wire material from touching the tree and causing injury as the tree grows. Flagging may be attached to the wires to increase their visibility. The stakes should be removed after they have been in the ground for at least 1 year but not more than 2 years.



**Photo 28**