



HortNote No. 8

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BALLED & BURLAPPED AND CONTAINERIZED TREES FOR A CONSERVATION CHRISTMAS

Millions of conifers are harvested annually and used as Christmas trees. Some are trees growing on public forest lands, others are nursery stock cultivated on private tree farms. From an ecological standpoint, cut trees represent a renewable resource, and Christmas tree production results in the maintenance of thousands of acres of open land providing numerous conservation and economic benefits. An alternative to cut trees, popular in the eastern and southern United States, is the use of live, balled & burlapped (b&b) and containerized (potted) conifers as Christmas trees. This tradition can also be practiced in the western U.S., even harsh environments like Montana, Wyoming, Idaho, and North Dakota, given some planning and preparation. Although it may be a bit late this year to utilize a b&b or potted plant as a Christmas tree, it's an appropriate season to discuss this option in preparation for next year.

There are limitations to b&b and potted Christmas trees to consider before embarking on a buying spree. There is a limited period of time that they can be stored under warm indoor conditions. Balled & burlapped plants are heavy and cumbersome, and both b&b and potted Christmas trees require temporary storage until final planting in the spring. In general, potted plants are smaller than the average Christmas tree, but may be ideal when space inside the home is limited. The cost of b&b plants is several times greater than a comparably sized cut tree, and the additional effort transporting, handling, and planting them may prove more than most people are willing to expend.

In our region it is almost always necessary to dig the planting hole in the fall before the ground freezes. This can be a temporary storage site until spring when the plant will be moved to another spot, or the permanent planting location. A permanent location is preferred for b&b stock because burlap and string often deteriorate over the winter. Select a site that is appropriate for the species to be planted, allowing ample above- and below-ground room for mature plant size. Prepare the hole as if you were spring planting the tree. For information on planting, mulching, and staking b&b and potted plants, reference *Creating Native Landscapes in the Northern Great Plains and Rocky Mountains* or *Planting Guidelines for Containerized and Balled & Burlapped Stock* at <http://www.mt.nrcs.usda.gov/technical/ecs/plants/pmpubs.html>. Backfill the hole with a 1:1 or 2:1 peat moss, compost, or composted sawdust and sand mix. This material is easily excavated from the hole and can be readily removed or amended when the tree is finish planted in the spring. Save the original soil for final planting. It often helps to cover the entire hole with a tarp for future access should snow cover the site.

Tree selection begins by verifying that a reputable local nursery or garden center has b&b or potted conifers available for Christmas trees. Determine when the plant was dug and if it was root pruned or cultivated to encourage a well-branched, fibrous root system. Ideally, b&b stock should have been root pruned at least 1 year in advance of digging and dug the spring of the current year or earlier. Potted plants should **not** have been recently transplanted from the field into a container. It's difficult to check the root system of a b&b plant, but containerized stock can be easily removed from the pot and inspected. A well-rooted container plant will maintain the shape of the pot when the container is removed. Also, ask how the plants have been stored since summer. Plants should be properly hardened-off (acclimated) to

winter conditions by storage outdoors or in an unheated coldframe. Avoid trees with any signs of recent or active growth. Unlike a cut tree, a living tree should be closely inspected for any condition that might impact its survival, growth, and function in the landscape. Look for the presence of insects or disease, damage to the branches or trunk, general signs of stress, poor branch structure or plant shape, etc. Also consider the form and shape of the plant as it relates to its use as a Christmas tree. Does it offer the same aesthetic characteristics desirable for a cut tree? Determine if a guaranty is offered with the plant. Although it is not unreasonable for nurseries to offer limited or no guarantees on plants that they do not install, a guaranty lasting until active growth can be evaluated the next growing season is ideal.

Since the goal is to plant the tree and have it survive, the species has to be well adapted to the intended planting site. Because site and environmental conditions vary widely over the intermountain West and northern Great Plains, it's hard to produce a definitive list of conifers adapted to all sites. Some fairly well adapted species include Douglas fir *Pseudotsuga menziesii*, Colorado spruce *Picea pungens*, white spruce *Picea glauca*, Engelmann spruce *Picea engelmannii*, Black Hills spruce *Picea glauca* var. *densata*, Scotch pine *Pinus sylvestris*, ponderosa pine *Pinus ponderosa*, Austrian pine *Pinus nigra*, lodgepole pine *Pinus contorta*, white fir *Abies concolor*. Even Rocky Mountain juniper *Juniperus scopulorum* and eastern redcedar *Juniperus virginiana* may have some value as a live Christmas tree. When indoor space is limited, potted dwarf or standard conifers may fit the bill. Again, not all of these species are well suited to all sites in the aforementioned states. Check with your local nursery, garden center, arborist, Community Forester, or Extension Agent for adaptability.

Follow the same rules for handling and transporting a dormant balled & burlapped plant as actively growing stock. Avoid wind desiccation on the trip home, do not move the trunk and branches independently from the rootball or drop the rootball from any height. A properly acclimated conifer should be fully dormant when purchased. To avoid bud break and the initiation of active growth, limit the amount of time that the tree spends in a warm environment (above ~37°F) and held under long photoperiods (extended daylength caused by artificial lighting). This means storing the plant outside or in an unheated garage prior to placement in the house. Store the tree in a galvanized tub, keeping the rootball lightly moistened, but do not allow any water to pool in the tub. Once placed inside the house, the plant should be located in the coolest portion of the room as far away from heating vents and registers as possible. As a rule of thumb, do not keep the tree inside for more than ~5 days, keeping the thermostat as low as possible. If keeping the tree up longer is essential, move the tree to an unheated porch, or temporarily plant and decorate outside. A compromise might be to store the tree inside for several days, and then move the plant outside or to an unheated porch for several additional days (although you can imagine the work!). In the unfortunate event that the plant breaks bud while indoors, your only option is to maintain it in a warm environment all winter until it can be moved outdoors in the spring. Unfortunately, trees held indoors over the winter often die later in the next growing season or the following year.

As soon as possible after Christmas, move the tree to an unheated location, preferably outdoors to the hole that was prepared in the fall. Excavate the peat and sand mix, place the tree carefully in the hole at the correct planting depth, and backfill with the mix. If temperatures are above freezing, irrigate the backfill and moisten the rootball. Cover the top of the rootball and planting hole with up to 4 inches of coarse mulch. Depending on the size of the plant and location, it may be necessary to stake the tree to prevent wind damage. In the spring, remove the mulch, then carefully excavate the backfilled mix from the hole so that the burlap can be untied and removed or rolled into the bottom of the hole. Backfill with soil excavated from the original planting hole, and irrigate and finish planting as you would a newly purchased landscape plant.

A b&b or potted Christmas tree can represent a significant amount of work, but offers long-term aesthetic and conservation benefits for those willing to invest the effort.

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