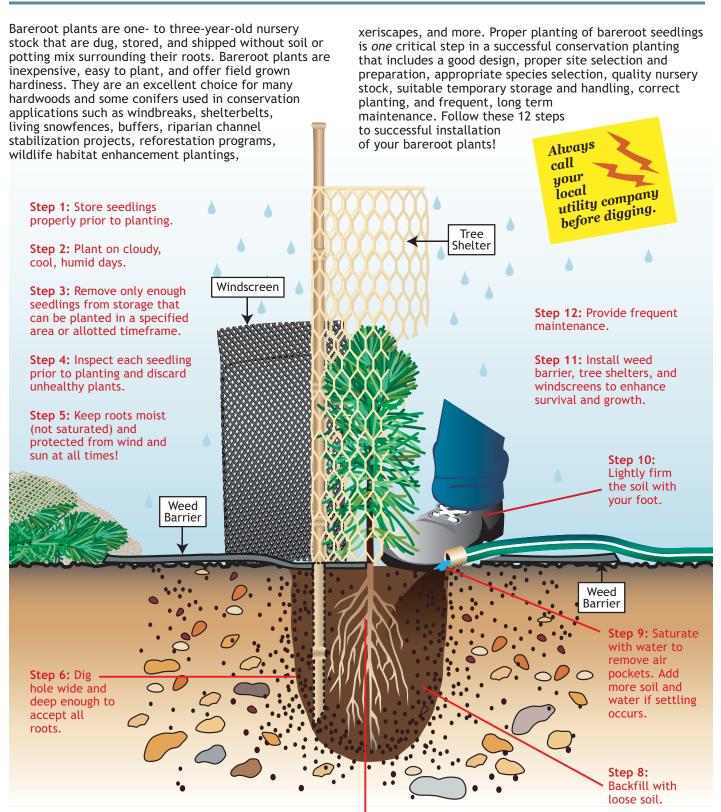
Hand-Planting Guidelines for Bareroot Trees and Shrubs



Step 7: Properly place the seedling in the hole, roots vertical and fully extended, root collar at or slightly below grade.







Hand-Planting Guidelines for Bareroot Trees and Shrubs

Step 1

Store seedlings properly before planting. Ideal storage is 33 to 35°F, 95+% relative humidity, in a wind-protected, shaded area with the roots moist. Keep roots wrapped in moist burlap, peat moss, shredded paper, etc., to prevent drying.

Step 2

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.

Step 3

Remove seedlings from storage only as needed. Plant seedlings as quickly as possible after removal from storage. Do not leave roots exposed to drying conditions even briefly. Do not leave roots exposed when taking breaks, repairing equipment, preparing a hole, etc.

Step 4

Cull unhealthy plants. Even quality bareroot stock deteriorates quickly without strict environmental control. Discard seedlings with dark molds, seriously damaged roots or shoots, or wrinkled, water-soaked bark.

Step 5

Keep roots covered and protected at all times. Root systems should never be exposed to drying conditions, even briefly. Conifers are particularly sensitive. Dip roots in water for a few seconds after removal from storage. Keep roots covered with moist (not saturated) peat moss or burlap until directly before placement in the planting hole. Conversely, never leave seedlings in standing water.

Step 6

Prepare an adequate planting hole. The hole should be two times wider and slightly deeper than the seedling root system. Holes too narrow or too shallow result in the problems depicted in Figure 1. Break through hard or plow pans if present.

Step 7

Place seedling in hole. Hold the seedling vertically in the hole with roots hanging straight down and the root collar (stem:root system interface) at or just below grade. Adjust the size of the hole if any conditions depicted in Figure 1 exist.

Step 8

Backfill the hole. Holding the seedling in place, gently backfill the hole with loose (not clumpy) soil. The final planting depth should place the root collar at or slightly below grade. Soil amendments are generally unnecessary although additions of peat moss to sandy soils improve waterholding capacity.

Step 9

Saturate the hole. Use 3 to 5 gallons of water (more if necessary) to saturate the backfill and remove air pockets. Add water until a soupy consistency. If settling occurs, add more soil and water. If supplemental water is unavailable, firm the soil as described in Step 10.

Step 10

Lightly firm the soil. After draining, lightly firm soil with your foot or hand to assure good root:soil contact and to secure the seedling in place. Never heel or stomp the backfill; it damages roots and soil structure.

Step 11

Provide tree protection.
Tree shelters, windscreens, and weed barriers enhance seedling survival and growth.
Use ventilated tubes to provide animal protection.
Screens or shingles on the southerly and windward sides of seedlings provide sun and wind protection during early establishment. Woven fabric controls weeds that compete for moisture, nutrients, and sunlight.

Step 12

Monitor and maintain.
Monitor weeds, soil
moisture, and general plant
health. Provide weed
maintenance, supplemental
irrigation, and plant care as
needed over the growing
season.

- Before digging, always contact your local utility company to locate underground utilities!
- Always make sure that a plant's mature size will be appropriate for the site.
- Do not locate plants where they may eventually interfere with overhead power lines, pedestrian or vehicular traffic, or buildings.

For additional information, contact your local nursery, county Extension Agent, or USDA Service Center.

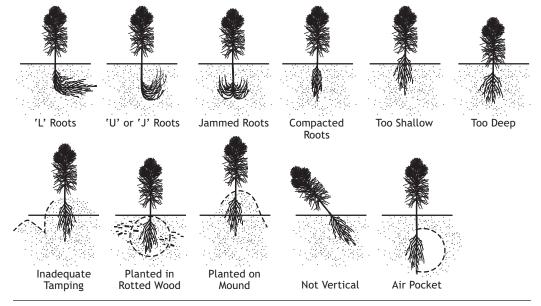
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Illustration by: Mary Myers, USDA-NRCS

Figure 1. How NOT to Plant A Bareroot Seedling



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