

Planting Bare-Root Seedlings

Thank you for your purchase of seedlings from the Benzie Conservation District. The revenue generated helps to support our mission to preserve & enhance our county's natural resources.

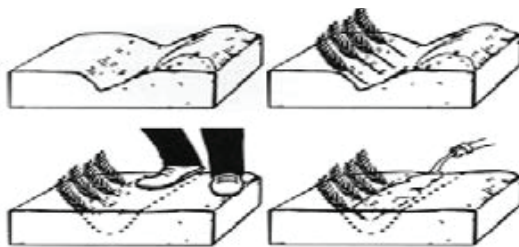
Keep Seedlings Moist and Protected!

Plants easily become damaged if roots lose moisture for even a short time.

- Keep roots wrapped in moist paper but do not saturate.
- Store seedlings up to 48 hrs in a cool, moist, shaded place.

If not able to plant within 48 hours, plants should be "heeled" in.

Do so by first digging a trench to accommodate roots. Unbundle seedlings, space them out in trench, cover roots with soil and water them in.



Preparing Your Planting Site

Competition from other vegetation may stress seedlings, causing lack of vigor and increased susceptibility to pests.

SMALL SITES Use a shovel to "scalp" or remove top 2 inches of surface and loosen underlying ground with hoe/shovel/pitchfork.

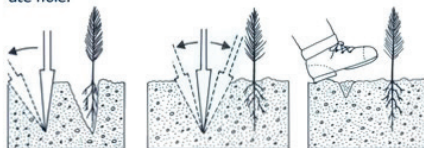
LARGE SITES Clearing larger areas may require tilling, herbicides, or the aid of a professional crew. Avoid chemicals with extended release as the residue left in soil can harm new plantings.



1. Use a planting bar to create a hole for the seedling by inserting the bar into the soil and pushing in one direction to create hole.

2. Insert seedling to proper depth (see Figure 2 below for proper planting depth).

3. Insert planting bar into the ground outside of the planting hole.



4. Push the planting bar away from the plant.

5. Push soil towards the planting hole by pushing the planting bar back and forth.

6. Restore soil surface by tamping around the seedling.

Illustrated Steps to Using a Planting Bar or Spade...

Selecting the Proper Plants, Sites and Tools

TOOLS While shovels are the most common planting tool, planting bars or "dibbles" are recommended for ease and efficiency. For large scale plantings, hiring a crew with a planting machine may be the best option. Please contact the district if you're interested in using our dibble or to obtain information about local planting crews.

PLANTS Consider the plants characteristics. Does it require sun or shade, dry or moist soil? What will the plant's size be at maturity? Is it sensitive to high winds?

SITES After choosing the ideal species, reassess desired planting location by following these rule of thumb.

- Do not plant under utility lines or within 10 ft. of over-head wires.
- Allow at least 10 ft. between your plant and any building/structure.
- Never plant near septic tanks or septic fields.
- If planting near roads where de-icing salt is used in the winter, choose salt tolerant species. Visit our website or contact the District for a list of appropriate plant species.



Suggested Landscape Uses

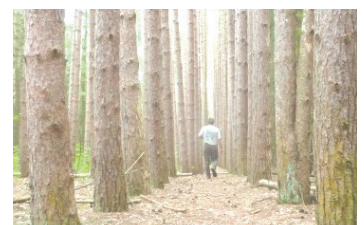
REFORESTATION Establishing plantations for timber production. Plant red pine and/or white spruce.

WINDBREAKS/PRIVACY SCREENS Plant red pine, white spruce, sugar maple, red maple, tulip poplar, dogwoods, service berry, witch-hazel—a variety of flowering/fruited shrubs on the home side row.

WILDLIFE HABITAT Enhancing cover and food for variety of wildlife species. Plants are interchangeable with recommended windbreak species.

• Windbreaks and wildlife habitat both follow the same planting design and are created using 3-10 rows of staggered plantings, starting with conifers and gradually adding descending rows of hardwoods and smaller trees and shrubs closest to the area being protected.

• Reforestation plantations are also planted in staggered rows of somewhat uniformly spaced trees. For more information, please contact the District to be connected to a specialist who will assist with planting needs.



Planting Steps

STEP 1 Plant on calm, cloudy days if possible.

STEP 2 Keep seedlings wrapped in moist paper/cloth/terra sorb (not submerged in plain water) until just before placing in ground.

STEP 3 Dig hole about 2x's the width and scarcely deeper than root system. Check to be sure hole is neither too small nor too roomy.

STEP 4 Hold seedling vertically, allowing roots to hang in hole. If roots are excessively long, bunched or bent, use sharp scissors/hand pruners to cut roots back to the depth of your planting hole.

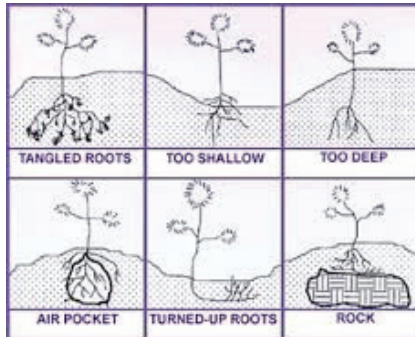
STEP 5 Root Placement Check:

- Must have adequate space and correct positioning to properly grow and thrive.

- Not enough room results in bent, crushed or J roots.

- Excess room creates air pockets that limit root absorption.

- Planted too deeply or shallow or at an angle can put additional stress on the seedling.



STEP 6 With seedling properly placed, water until soil is saturated. If settling occurs, add more soil and water. Test security by gently pulling seedling with 2 fingers. If plant pulls out of ground it was not secure enough. Be sure all seedlings are firmly planted to eliminate air pockets and ensure good soil contact with roots. However, be careful not to pack down soil to the point of extreme compression since roots do have to breathe!



Mulching

- Helps soil to retain moisture
- Prevents soil from freezing and overheating
- Reduces competition from unwanted vegetation

MULCH OPTIONS Chopped leaves, compost, newspaper, pine needles, straw, wood chips and bark.

- Lay mulch no more than 2 inches thick around base of plant but not in direct contact with the stem.
- For eroded sites or areas exposed to extreme wind and sun, or heavy browse by deer—small branches can be used as “brush mulching” which provides extra protection to young plants. These pruned branches should be arranged securely around the seedling so as to completely avoid leaning onto the small tree.

STEP 7 Provide browse protection with tree tubes or fencing.

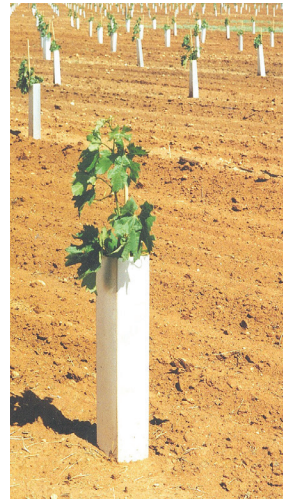
- For areas with high deer populations, a fence around the seedling may be necessary until the tree is established.

- Deer repellents are sprays that deter deer fairly well but need to be reapplied regularly.

- Mice and voles will chew on trees during the winter so trunk wraps are essential for limiting damage.

- Keep mulch pulled back 6 inches from trunk to reduce vole chewing.

- If using mouse bait at base of tree, keep chemical confined in bait trap or a semi-open empty soup can turned on its side.



STEP 8 Monitor and maintain. Vital to a plant's success is a favorable growing environment. Newly planted trees require care for the first 1-3 years. Keep area free of weeds/grass and water regularly (2 inches of water if no rain in a week). Monitor seedlings throughout the season to stay ahead of potential problems.

No Fertilizing

It is critical for bareroot seedlings to establish strong root systems in the first year. Nitrogen in fertilizer would work against this process by encouraging top growth, sending more of the plant's energy to its foliage instead of to its roots where it is needed. Wait until the third growing season and fertilize once during the first week of May.

Nutritional needs of established trees depend on its environment. Soil type, pH level, land use history and surrounding vegetation are all factors.

- DO NOT fertilize within the entire two years of planting.
- Consult an expert to determine best formula and application rate for your tree's specific requirements.



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