

# FACT SHEET

## Planting Bare Root Seedling Trees

The most economical tree to purchase is a bare root seedling. Bare root seedlings are usually one year old from the planted seed and are very small trees that sometimes look like a stick with roots. They are usually used for reforestation plantings or starting trees in a nursery field to be used for later balled and burlap sales. They are also planted in containers or bags for further growth and sold as container-grown trees. Bare root seedlings can be purchased in large quantities of one hundred or more from the Indiana Department of Natural Resources – Division of Forestry State Nurseries for reforestation and other conservation purposes. Local private nurseries also sell bare root seedlings. They are seldom used for landscape projects, but with patience can grow into useful yard trees. The windbreaks you may have seen around homes and farms are usually started with bare root seedlings. Large scale plantings are usually made with a mechanical tree planter pulled by a farm tractor. Hand planting is an alternative for smaller plantings or individual trees.

When hand planting, the most important thing to remember is to keep the seedlings shaded, cool and the roots moist at all times until they are in the ground. Dried out roots is the major cause of seedling death. Seedlings should be carried in a bucket along with wet burlap or water to keep the roots moist. Handle the roots as little as possible.

The “Hole” and the “Wedge” method are the most common ways for hand planting bare root seedlings. Both are illustrated below and both use the commonly owned round point or sand shovel.

### The Wedge Method

Step 1 – Insert the shovel vertically into the soil to its full depth and remove.



Step 2 – Insert the shovel at an angle to create a wedge of soil.



Step 3 – Lift out the soil wedge.



Step 4 – Place the seedling against the vertical side of the hole with all the roots pointed downward.

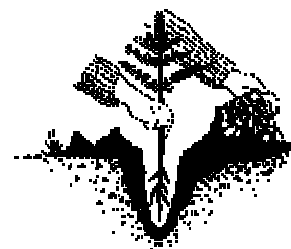


Step 5 – Replace the soil wedge and firmly press the soil with your foot to remove all air pockets. Do not stomp the soil.

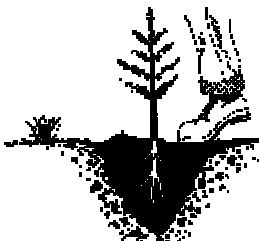
Figures and text courtesy of Nita Upchurch and the Iowa Department of Natural Resources.

### The Hole Method

1. Keep seedlings in a bucket of water to keep roots moist while planting. On hot or windy days, roots can dry out rapidly.
2. Dig the hole deeper and wider than the root system, insert the seedling and fill loosely with soil.



3. Firmly, yet gently, press the soil around the seedling to eliminate air pockets around roots. Do not stomp!



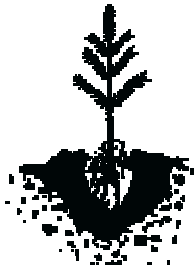
Planting

Depth

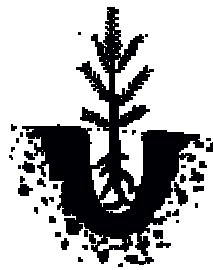
A properly planted seedling should have the root collar (zone between root and stem) even with ground level. Seedlings planted too deep, too shallow or J-rooted (tap root facing up) will not take full advantage of the seedling's capacity to produce roots and foliage. An improperly planted tree is much less likely to survive.

**Too Shallow**

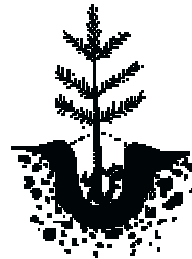
Some roots are exposed above ground level.

**Too Deep**

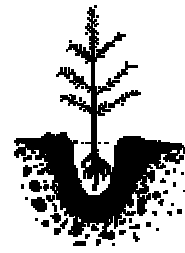
Much of the stem is underground level.

**J-Root**

Roots are forced into the hole, causing root ends to be facing up.

**Just Right**

Root collar is even with ground level; roots running down.



Courtesy Indiana Department of Natural Resources – Division of Forestry