

How To Plant Seedling Trees

*Visit <http://www.youtube.com/conservevy> to view a video demonstration on “how to plant a seedling tree”

Planting is only one component of a much larger process. Three to five years of care is required for a seedling to be considered “established”. More than 90% survival can be achieved if all the recommendations are adhered to; less than 20% may survive otherwise. Please read and understand these instructions before planting your seedlings.

Care and Storage of Seedlings

Improper care of seedlings between delivery and time of planting is one of the greatest causes of mortality. Do not store seedlings in heated buildings, or where they are exposed to warm air, sun, or wind.

Potted trees should be watered frequently to keep soil moist. One method is to submerge the entire 30 seedling tray in water for 10-15 minutes.

Bare root bundles should be left intact and stored in a cool place (under 50 degrees F) if planting is to occur within 48 hours of delivery. If planting is not planned for more than two days, open the bundle, separate the seedlings and place them in a trench, cover the roots with loose soil, and fill the trench with soil. Keep the soil in the trench moist and protect the roots from exposure to air.

Preparing Seedlings for Planting

BARE ROOT: Create a slurry by mixing a shovelful of soil, or two tablespoons of polymer, in a five gallon bucket half-filled with water. Open the bundle and place seedlings immediately into the bucket, submerging the roots completely in the slurry. Plant as quickly as possible. (DO NOT STORE SEEDLINGS THIS WAY FOR MORE THAN TWO HOURS OR ROOT DEATH MAY OCCUR.)

POTTED: Remove tar paper completely if applicable. For styroblock seedlings, grasp main stem of seedling near soil level and pull gently while pushing up through slot in bottom of block. With pinyon, bristlecone pine and Douglas Fir, cut away the Styrofoam with a knife. Do not break the root ball or leave seedlings in sun or wind following removal from block or tar paper. Seedlings should be removed from the containers immediately prior to planting.

Hand Planting

BARE ROOT: Dig a round hole at least one foot in diameter. Make a small mound of soil in the bottom of hole. Take the seedling from the bucket of slurry and spread the roots out in all directions using the mound as a root support. Pull loose soil back over roots, filling the hole half way. Lightly tamp soil down or fill with water. Then, back fill the rest of the hole, tamp soil again or re-water. Do not compact the soil by tamping wet soil! SOIL COMPACTION ELIMINATES OXYGEN WHICH ROOTS NEED TO SURVIVE!

Be sure the seedling root collar (where it was planted in nursery) is at the finished soil level. Watering is the best method to settle the soil, eliminate air pockets, and provide moisture to the root system.

POTTED: Follow the same planting instructions as for bare root without the small mound of soil in the bottom of the hole and do not disturb the roots. Make sure the root ball does not become exposed after final watering.

Turn over
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Watering

Water each seedling with one to two gallons at planting time. Check soil moisture periodically by digging up soil near the plant. Mulch is highly recommended to conserve water. A drip system can also be installed. Typically, seedlings will need a *deep* watering every 5-7 days. **OVERWATERING WILL KILL YOUR SEEDLINGS!!**

Fertilizing

Fertilizer use on new seedlings is generally a poor idea. Do not put any manure in the planting hole. **DO NOT USE NITROGEN UNTIL THE ROOTS HAVE HAD AT LEAST ONE GROWING SEASON.** Nitrogen can be applied the second year at the rate of three pounds per thousand square feet of area to be covered.

Mulching

Mulch reduces weed competition and water loss from the soils. It allows rainfall to pass through to the soil, while restricting weed growth and permitting oxygen exchange between the air and the soil. Products include fabric weed barrier, wood chips, straw, peeler shavings, rotted sawdust, and corn cobs. Keep these alternative products less than three inches deep to avoid rodent problems.

Weed Control

Eliminate weeds around each seedling for at least two feet. This may be accomplished by using mulches, hand pulling, mowing (watch out for the seedling), hoeing, or chemically treating. Roundup herbicide can be sprayed, under low pressure, on weeds near seedlings. Cover seedling with a bucket or use another form of shield to keep spray off seedling. When hoeing, use care to avoid damage to shallow roots.

Wildlife Damage

Weed control will discourage rodents from chewing seedlings. Purchase commercial tree guards or use window screen to make a rodent guard. Use poison as a last resort. Eliminate pocket gophers by placing a half stick of chewing gum in the burrow. Deer or elk may need to be fenced out of the planting entirely. (an effective deer repellent can be made by mixing whole eggs with tap water to form a 20% solution; strain and spray on seedlings. Another homemade method, currently under research, is use a 6.2% hot sauce [Capsicum pepper concentrate]. If deer are really hungry, a combination of methods may be required.)

Common Causes of Seedling Mortality:

- Improper storage
- Roots exposed to hot, dry air
- Roots tangled or not spread out
- Seedlings planted too deep
- Seedlings planted too shallow
- Lack of water
- Low quality, high salt, water
- Seedling mowed off
- Grasshoppers
- Livestock trampling
- Rodents
- Deer and elk
- Sprayed with weed killer
- Weeds not eradicated before trees are planted
- Poor control of competing weeds/vegetation

***“There are two great times to plant trees:
The first was 20 years ago—the other is now.”***