

## Seedling Care and Planting Directions

*Once seedlings arrive, open the bundle and keep roots moist. Wear gloves when handling seedlings. Hand out seedlings with roots in half gallon baggies with moist shredded newspaper or plant in juice/milk carton for transplanting at home. For "How to plant" please see instructions with seedlings and in this guide*

*We recommend that you and your students wear gloves when handling plants, seedlings, and other organic materials. Organic materials may carry a fungus that can infect a cut, etc. This is a rare occurrence but can easily be avoided by wearing gloves. For more information, please see the SAFETY notice at back of this guide.*

Properly caring for seedlings during transportation, storage and planting is extremely important. The primary considerations are: (1) to keep the seedlings from drying out, and (2) prevent heating.

Transport seedlings in a covered vehicle or cover them with a tarp (preferably light colored) to prevent the wind from drying the seedlings. Do not park loaded vehicles in the sun because excessive heat can kill the seedlings. Also, large loads should be unloaded as you arrive at your destination or storage area because tightly packed trees may generate heat which can build up to lethal temperatures.

Seedlings should be planted as soon as possible. However, should storage be necessary, the following is recommended:

1. Open bundle and insure roots are moist. Roots and packing should be cool and damp to the touch, but need not be soaking wet. Add water, if necessary, to roots only (do not wet tops).
2. Cold storage at 35-40 degrees F for up to two weeks.
3. Basement or other cool enclosed area at 40-55 degrees F for up to one week.

Preparing the planting site properly is very important. Existing vegetation on the planting site may require site preparation to eliminate sod, weeds, brush, or undesirable trees in order to reduce competition for moisture and sunlight. Where heavy sod or dense weed growth exists plowing down sod, scalping sod with a mattock or spade, or killing vegetation with herbicides before planting is recommended. Use of herbicides should only be in accordance with the label. If the area to be planted has established young trees and shrubs that could crowd or overtop the seedlings-mechanical or chemical controls should be employed. Successful seedling survival and growth is dependent upon controlling competition from other vegetation for 1-2 years.

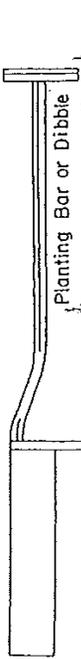
The planting method is another important variable. The hand tools primarily used for planting seedlings are the mattock and the planting bar. Many experienced planters due to speed and efficiency favor the planting bar. An experienced two-man crew can plant between 600-1000 seedlings per day. Planting bars are easily made in a machine or welding shop. Care must be exercised when using the planting bar. The hole must be deep enough to plant the seedling to proper depth and wide enough to receive roots without crowding. Be especially careful not to leave air pockets around the roots by insuring that the closing stroke of the bar is close to the seedling and by using sufficient pressure to insure good soil compaction. (See Illustration opposite side).

In sandy or loose soil, portable posthole diggers provide a planting method that prevents potentially crowded roots. With proper size auger, suitable holes can be dug for even large rooted hardwood seedlings. This method should not be used in heavy or clay soils because of the tendency to get a "pot bound" effect.

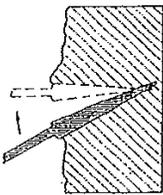
Shovels or spades are useful tree planting tools available to most people. While not as fast as a planting bar it is easier to assure proper planting depth.

The planter must be careful not to expose the roots of the seedlings to the sun, wind or air because the resultant drying may be fatal to the seedlings. Keep roots moist in a bucket or planting bag with water or moist medium during the planting process. (See illustrations on opposite side for helpful planting tips).

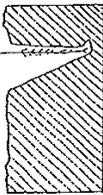
## BAR PLANTING



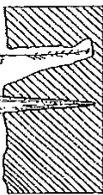
Planting Bar or Dibble



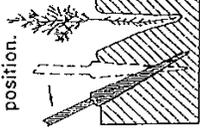
1. Insert bar at angle shown and push forward to upright position.



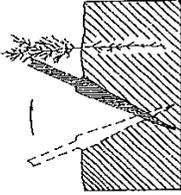
2. Remove bar and place seedling at correct depth.



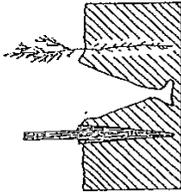
3. Insert bar 2 inches toward planter from seedling.



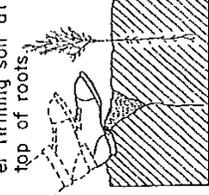
4. Pull handle of bar toward planter firming soil at bottom of roots.



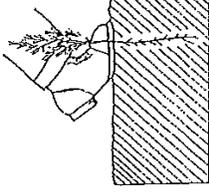
5. Push handle of bar forward from planter firming soil at top of roots.



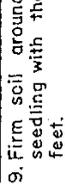
6. Insert bar 2 inches from last hole.



7. Push forward then pull backward filling hole.

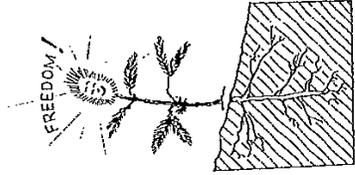


8. Fill in last hole by stamping with heel.



9. Firm soil around seedling with the feet.

## CORRECTLY PLANTED

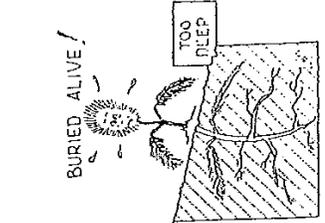
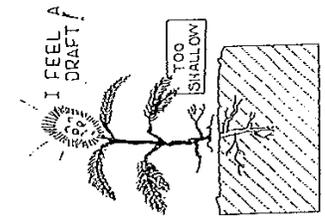
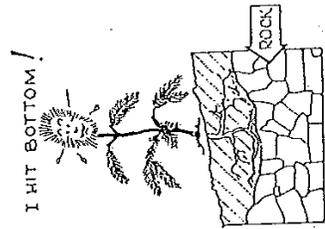
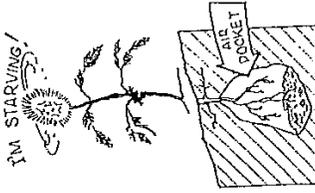
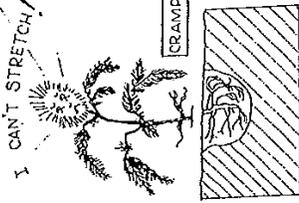
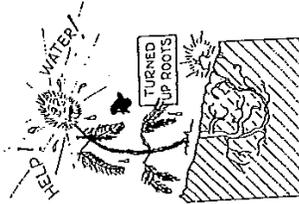


FREEDOM!

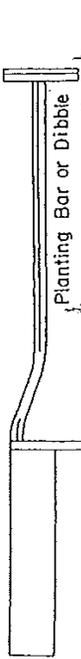
Set the tree in the ground to the same depth at which it grew in the nursery.

This depth can be determined by the change to a lighter colored bark where the stem was below the ground.

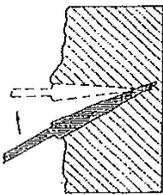
## AVOID THESE ERRORS IN PLANTING



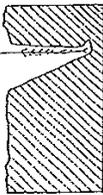
## MATTOCK PLANTING



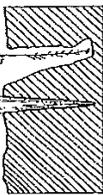
Planting Bar or Dibble



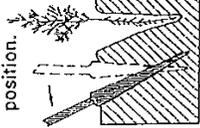
1. Insert mattock, lift handle & pull.



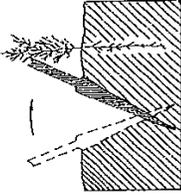
2. Place seedling along straight side at correct depth.



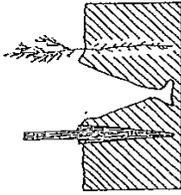
3. Fill in and pack soil to bottom of root.



4. Finish filling in soil and firm with heel.

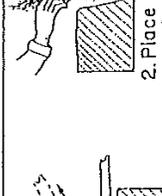
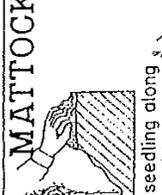


5. Firm around seedling with the feet.



6. Firm soil around seedling with the feet.

## MATTOCK PLANTING



7. Firm soil around seedling with the feet.

8. Firm soil around seedling with the feet.

9. Firm soil around seedling with the feet.

# Safety Note: Please Read

This information is generally given to those who work in nurseries or are avid gardeners and horticulturalists. This is being distributed as a courtesy so that caution is used to prevent an uncommon infection. Plants, seedlings, sphagnum moss, hay, soil, along with most organic matter, may carry a fungus known as “Sporotrix Shenkii” which could cause an infection called “Sporotrichosis.”

Sporotrichosis is a fungus borne infection that is **relatively *easy* to prevent** and ***easy* to treat if caught in the early stage of development**. It may be found in sphagnum moss, soil, humus, organic fertilizer, mushrooms, hay, bark, wood, flowers, leaf litter, pine needles, sawdust, seedlings, and even cacti.

The fungus, or its spores, invades the skin through puncture wounds or small cuts, cracks or nicks in the skin. It is also believed that the spores can become airborne, creating a risk of infection by inhaling the spores (this is even rarer). When infected with the fungus it causes small lesions on the skin that may resemble a pimple in the early stage. However, the lesions do not respond to normal treatment and are often misdiagnosed as other infections such as staph. If you have a minor infection that is not responding to treatment, you should see a doctor and inform him/her that you have been handling seedlings and may have come in contact with a fungus which can cause the disease known as Sporotrichosis.

## PREVENTION

- Everyone working with seedlings should protect their hands and arms by wearing protective gloves and long sleeves.
  - Use an antibacterial soap to wash hands and other exposed areas of the body often (Be sure to wash at each break and definitely when finished working with the seedlings for the day.)
- All scrapes, cuts or puncture wounds should be thoroughly cleaned and treated with a disinfectant such as Tincture of Iodine, then bandaged and kept clean.

(If working in a small or enclosed area with many seedlings and particulate organic matter, it is recommended that a dust mask be worn)

**If you do develop any infections that do not respond to normal treatment, be sure to see a doctor and insist on being tested for fungus infections which may be associated with the handling of seedlings or other nursery products.**