

# Common Causes of Seedling Mortality from CSU Nursery

- Roots exposed to hot, dry air
- Roots tangled or not spread out
- Improper storage
- Seedlings planted too deeply
- Seedlings planted too shallowly
- Lack of water / moisture
- Low quality / high salt water
- Seedling mowed down
- Grasshoppers
- Livestock trampling
- Rodents
- Deer and elk browsing
- Weed killer spray
- Weeds not eradicated before trees are planted
- Poor control of competing weeds/vegetation

# Tree Program



## Maintenance Suggestions

### I. Water

It is the full responsibility of the landowner to see that proper water management is maintained throughout the life of a planting. Until the trees have developed a self-sustaining root system it is highly recommended maintaining a watering schedule of at least five to ten years. Cold Wyoming winds cause trees to lose moisture through transpiration so it is suggested to water trees occasionally during the winter, especially on dry years, when temperatures are above freezing (ideally when temps will be in the 50's or 60's). There is no need to use timer, just hook your line to a hydrant, and give the trees a good drink (a couple of hours) during the day. When finished, unhook the drip from the hydrant and drain.

Steps to insure best management practices of watering:

1. Timers- at the initial planting tree crew will program your timer specifically for your species and soil type. Keep your water on and let the timer do the job. Remove, drain, and store timers where they won't freeze at the end of any season. Make sure to pull the battery from your timer at the end of the season to prevent corrosion. The timers have a company warranty so keep the box and return to supplier for replacement in the event of malfunction.  
Filters- flush filters occasionally to clean out sand and deposits. Remove, drain, and store filters where they won't freeze at the end of any season.
2. Drip line maintenance- occasionally check that emitters are functioning properly by walking the tree rows and looking for non-functioning and/or blown emitters. This should be done at least twice in the first two weeks of installation and at the beginning of every watering season. Also check for damage to line from rodents or mowers. As the trees grow, the placement of the emitters needs to move away from the trunk and somewhere within the drip line of the branches.  
Splicing material for damaged drip line and emitters can be purchased at any lumberyard or store that carries drip supplies.

### II. Weed and Mow

It is suggested to pull weeds from around each seedling. Weeds compete for the seedlings moisture and will steal the necessary water seedlings need to thrive. Pull weeds before they become too large to avoid entangled roots, and be careful not to dislodge seedlings when pulling larger weeds.

Weeds and tall grasses do not actually protect the seedlings so be sure to mow between tree rows and around the outside edges of the planting to avoid encroachment and loss of air movement.

### III. Weed Barrier

Avoid accumulation of soil on top of the barrier which encourages weed growth. Secure loose barrier with wire staples or soil along the edges. Make sure the opening around the seedling is large enough so it will not rub against the bark. This is especially important as the caliper of the tree grows. It is suggested to make cuts in the barrier on at least three sides when it starts to encroach on the trunk to alleviate girdling.

### IV. General

Keep livestock out of plantings to avoid seedlings being trampled or eaten, and to avoid tears in the weed barrier. Order replacement trees anytime between October and March to fill gaps. Make regular inspections of your windbreak to detect problems early.