

READ THIS FIRST

A guide to provide your trees and plants with the best chance at survival.



HANDLING, PLANTING AND CARE FOR SEEDLING TREES



**WEST GREELEY
CONSERVATION
DISTRICT**



FOR MORE INFORMATION VISIT: WGCD.ORG
For direct assistance, contact: liz.schneider@wgcd.org

WHAT DO I NEED TO BE WORRIED ABOUT?



Frost

We can get late frosts here in Colorado, even if the weather seems to be getting “nice.” A late frost can pop up on us when we least expect it. Waiting until late May is highly encouraged. Any plants showing new green leaves or buds can be seriously set back but most likely will be killed!

1. LIGHT FREEZE:

29°F to 32°F - Tender plants are killed.
AKA: Seedling trees or young plants.
Anything with new leaves or buds -
Danger

2. MODERATE FREEZE:

25°F to 28°F - Destruction to most vegetation. Mature trees that have started budding can be set back by this, causing serious damage and death to young plants.

3. SEVERE FREEZE:

24°F or Colder - Heavy damage will occur.
Protection Tip: Wrap, mulch, water, installation of tree guards and burlap wraps can help reduce damage.
Watch the weather - Plan ahead!



Water

Newly planted trees and shrubs need regular waterings - the first 5 years require the most **TLC!** (Tender Loving Care)

PLEASE SEE “WATERING IS IMPORTANT” SECTION FOR WATERING GUIDE!



Wind Protection

1. Protecting your trees from harsh open winds can help them survive.
2. Planting trees in an area with protection is the best way to ensure they can live but this isn't always an option.
3. Use wind fences, tree guards, tree stakes (for over 5ft. tall trees), tree wrap, wood pallets, straw or hay bales to help protect trees.
4. During windy times, plants will require more water!



Fertilizer

Allowing trees and shrubs to adapt to the new soil is best. Utilizing regular soil sampling will determine if you really need fertilizer or a soil amendment.

1. IF YOU APPLY FERTILIZER:

Increase watering frequencies and amount of water using low dosage fertilizer or non burning fertilizer is best. Always break up fertilizer tablets.



Animal Protection

1. Don't let Bambi eat your baby trees!
2. There are a variety of tree guards that can be used to protect against animal damage
3. Repellants are also available in powders, liquid and pellets.
4. Fencing out livestock and other wild animals can be very helpful here.

BARE ROOT BUNDLES

Helpful tools and supplies

5 gallon bucket(s), dibble bar, sharpshooter shovel, garden hose, drip systems are highly encouraged to give your plants slow waterings, rabbit cages, bamboo sticks, fabric mulch, soil moisture meter

Not planting the plants today? Caring for them is important! Improper care of seedlings before planting is one of the greatest causes of seedling death

Seedling trees go through a lot of stress with packing and shipping. Give them extra tender loving care and protection. Keep plants inside and protected until last frost of the season. Never expose roots to direct sunlight or direct airflow. Work quickly and think ahead. Small, frequent waterings are required.

1. Protect from wind and direct sunlight. Keep in cool dark area. Keep away from wild and domestic animals.
2. Bare roots should be planted ASAP!
3. Preparing a mud slurry bucket for planting today or using bulk moist peat moss to keep roots damp while waiting for proper planting time. Preparing a mud slurry bucket, take a 5 gallon bucket and fill halfway full of soil. Add water until the soil in the bucket is moist like a good mud pie. Open bare root bundle and place roots into the bucket and push trees down so the entire root system is covered in the muddy mixture. Cover the roots and up to the root collar on the tree. Mud slurry bucket's should be planted within 24 hours from preparation with trees if trees are left in the bucket of slurry any longer trees can begin to mold and decrease survivability. Bulk Peat Moss –Use a small tarp and lay out tarp and spread bulk peat moss densely on half of the tarp. Dampen down the peat moss and open bare root package and lay roots on top of the damp peat moss... cover all roots and root collar with peat moss and leave tree trunk outside of the tarp area. Fold tarp over the top of the covered roots. Keep peat moss damp by lightly sprinkling daily, keeping the tarp and plants in a garage or shed is going to be the best option for protection.
4. Maintain adequate moisture on the roots of the bare root plants and ensure that they don't dry out, dry roots = dead plants. Multiple packages of bare roots = multiple packages to prepare and ensure they stay moist. Keep plants inside your garage or shed; where it is cool and dark.

Handling and preplanting instructions

As you prepare for planting ensure you have all supplies needed for planting. Prepare soil by removing any weeds/grasses that can interfere with tree growth. Rototilling, or discing is recommended for site preparation. Ensure soil is loosened to allow for the tree roots to be able to penetrate soil profile. After you perform your site prep – Lay fabric mulch and ensure it is secured. Fabric staples can help secure loose areas in the fabric as well as burying the sides by shoveling soil on top of the fabric. Measure and mark out for planting based on recommended plant spacing. Prepare 5 gallon bucket with mud slurry – fill 5 gallon bucket half way with soil and add water until soil is moist but not 100% saturated. Open bare root bundle and place bare roots into the soil mixture and ensure you cover all the roots. Push trees down into the mud mix and cover from the root collar – right above where the roots end down. Don't allow seedlings to be exposed to direct air or sunlight. Protect them. Keep moist. Do not plant until after the last frost of the season.

Planting instructions

1. Using a box knife cut an X into the spot you want to plant your tree, cut the fabric mulch and gently roll open the opening you just cut. Tuck cut piece of fabric underneath itself.
2. Using a dibble bar or a sharpshooter shovel dig a hole, a little wider and a little deeper than the root mass of the plant you are getting ready to plant. Place soil beside hole.
3. Place plant into hole and fill in around the tree with soil you removed from the hole in step 2. You want the tree buried from the root collar down, don't over bury the plant and don't leave roots exposed and unburied.
4. Lightly pack soil around roots as you fill in the hole and lightly pack around the base of the tree to remove excess air from the root area. Patting with hands or lightly stepping can help pack soil.
5. It's time to water, give each plant a deep watering – a drip system is the best option for highest plant survival rate and makes things easier on the plant owner. If you don't have a drip system use a garden hose with a delicate "shower" head and slowly give the plant some water. Sandy soils will always require more water, and clay soils will always require less water due to water holding capacity. Ensure that soil is moist and not creating pooling, standing water can be just as bad as not enough water.
6. Place rabbit barrier over plant and stake into place using bamboo stick, weave through netted barriers and if you are using solid barriers use zip ties or something similar to secure barrier to bamboo sticks.
7. Don't use fertilizer when you initially plant, you want the trees to adapt to their new home and become big and strong. Wait at least 2 years before using fertilizers to ensure best root structure.
8. Check plants regularly and test soil with a soil moisture meter to ensure adequate soil moisture levels are maintained.

After care instructions

Regularly check soil moisture near seedlings, using a soil moisture meter is recommended to ensure adequate soil moisture year around. Seedlings need water year around and plan to water during dry weather- including dry Fall and Winter months. Ensure the base of the tree has enough soil around it and debris are removed. Weeds need to be maintained around seedlings, at least 2 feet all directions from plant. Utilizing wood chip mulch directly around the seedling can help protect it. Assuming you planted the tree into fabric mulch will save water and reduce weed issues. Wood mulch can be used directly around tree where the hole was cut into the fabric mulch. This protects that exposed soil and can protect the base of the tree. 3-4 inches of wood mulch around the tree is perfect. The mulch will deteriorate and will need to be replaced on an ongoing basis. After the first two years have passed you can begin fertilizing your plants based upon your soil sample test results. Slow release fertilizers are recommended. If soil erosion happens and soil is moved from around the tree be sure to replace soil. Trunk wrap can be used on damaged trunks or trees that are subject to sunscald or frost-crack. Pruning can be done during dormancy to remove dead branches, or shape tree and maintain health. Pruning is best done during dormant periods and can cause harm at other times.

TUBES, PLUGS, CELL GROWN, TRAYS OF PLANTS AND POTTED STOCK

Helpful tools and supplies

Dibble bar, sharpshooter shovel, garden hose, drip systems are highly encouraged to give your plants slow waterings, rabbit cages, bamboo sticks, fabric mulch, soil moisture meter, plug auger for hand drill, hand drill

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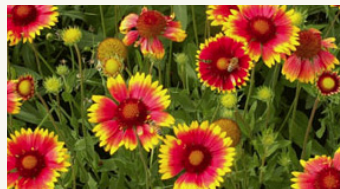
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BLACK-EYED SUSAN



BLANKET FLOWER



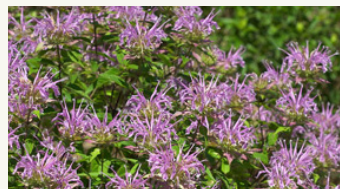
COLORADO BLUE COLUMBINE



PURPLE CONEFLOWER



ROCKY MOUNTAIN PENSTEMON



WILD BERGAMOT

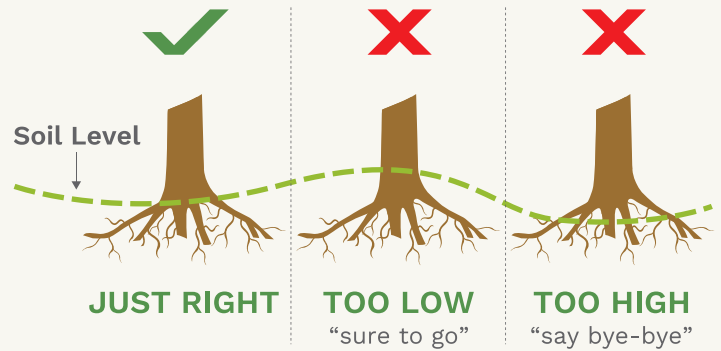
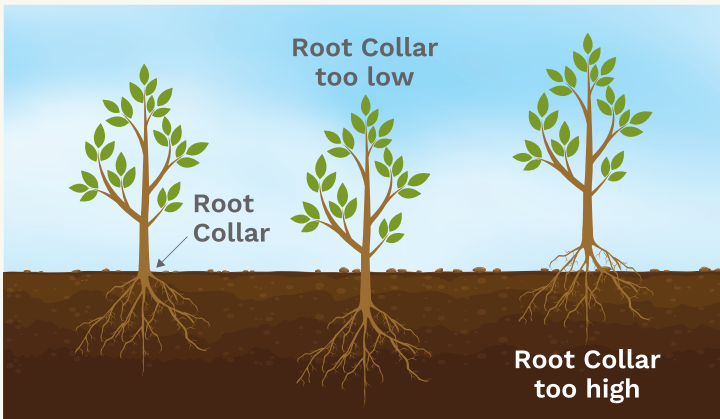
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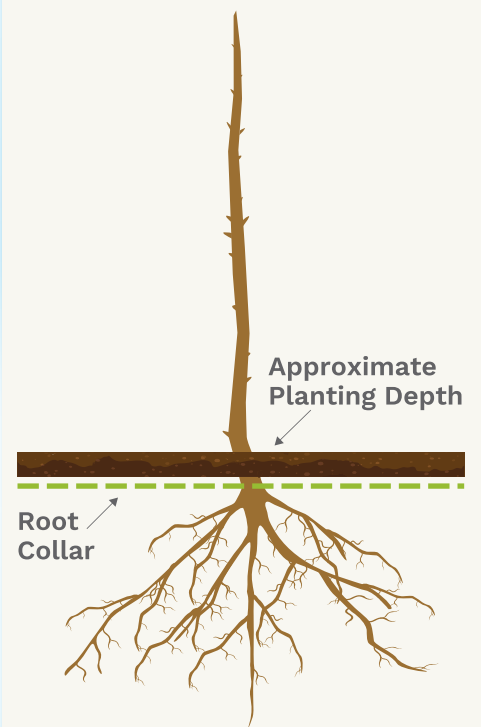
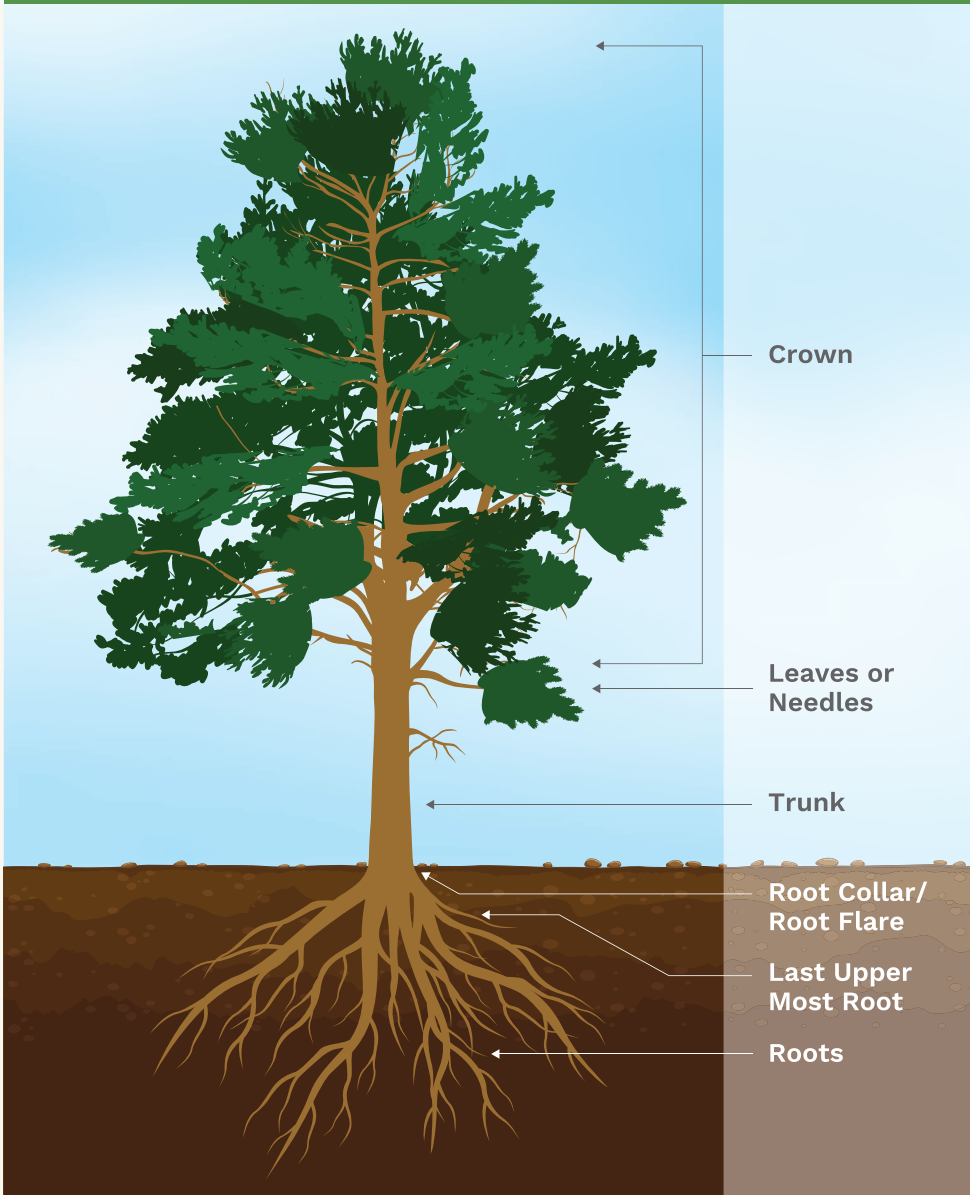
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PLANTING DEPTH



TREE TERMINOLOGY



| WINDBREAK SPACING GUIDE | Small bunch grasses or bunch type perennials | Large grasses, spreading grasses, forbs and spreading perennials | Shrubs under 20' tall | Small trees 30' tall or less | Medium trees 30' tall to 70' tall | Large trees 70' or taller |
|---|--|--|-----------------------|------------------------------|-----------------------------------|---------------------------|
| Windbreak spacing | 1/2' to 2' | 2' to 4' | 4' to 6' | 4' to 6' | 6' to 8' | 10' to 14' |
| Plant groupings | 2' to 3' | 4' to 6' | 6' to 8' | 6' to 15' | 30' to 40' | 40' to 50' |
| Minimum spacing from wall of building | 2' to 3' | 4' to 6' | 6' to 10' | 8' to 10' | 15' | 20' |
| Minimum spacing from corner of building | 2' to 3' | 4' to 6' | 6' to 10' | 6' to 8' | 20' | 15' |

Windbreak row spacing is 8 to 15 feet between each row. Please consider your method of weed management for the windbreak to ensure your tractor, mower, etc can easily fit between rows without running over trees.

WATERING IS IMPORTANT

- First 5 years TLC is a must!
- Water only when air temp is 40 degrees F.
- Slow soak is best for trees: Let water slowly penetrate the top 12 inches of soil.
- Apply about 10 gallons of water per month per inch diameter of tree: measure 6 inches above ground and from there measure diameter of tree trunk. This is just a general rule and assuming NO precipitation.
- Weekly waterings are ideal, even in the WINTER!

| Tree Diameter | Gallons of Water |
|---------------|------------------|
| 2" | 20 |
| 1" | 10 |
| 1/2" | 5 |
| 1/4" | 2.5 |
| 1/8" | 1.25 |

COLORADO TREE COALITION GUIDELINES FOR CARING FOR YOUNG TREES

MULCH: Add 3-4 inches of organic mulch that covers the planting circle to retain moisture. Keep the the mulch away from the trunk to prevent decay and girding roots. Mulch gradually deteriorates and should be maintained at the death of 3-4 inches, but not more.

WATER: Thoroughly water mulched area and ground out as far as the branch tips – using a slow-release watering device such as a 5-gallon bucket with holes to minimize runoff. Trees should receive about 10-15 gallons once or twice a week during growing season and when the ground is thawed. Water monthly in winter when temperatures are 50 degrees or above.

PROTECT THE TRUNK: Properly maintaining mulch around the tree minimizes damage from lawn equipment. Wrap young, smooth-barked trees in the winter months to prevent sunscald or frost crack injuries. In areas with deer, protect up to the first branch by staking a wire cage 3 feet out from the trunk.

CHECK ROOT COLLAR: Replace soil eroded from the tree roots if roots become exposed. If soil and mulch have raised the surface level above the root flare, rake the soil gently down to it.

PRUNE: Only remove dead and broken branches at planting time. After tree is established and seasonally dormant, remove crowded, rubbing, weak or damaged branches.

FERTILIZE: Avoid applying fertilizer at planting time or during the first year. After that, fertilize only if soil tests indicate deficient nutrients. The best time is late May or early June to make additional nutrients available during the primary growing season.

| Type of Care | Timeline | | |
|-------------------|------------------------------------|---|--|
| | At Planting | Years 1-3 | Years 4-10 |
| Mulch | 3-4 inches, not against the trunk | Check and adjust level in the Spring | Check and adjust level in the Spring |
| Water | 10-15 gallons | 10-15 gallons weekly | 15+ gallons weekly |
| Protect Trunk | As needed | Check in Spring and Autumn | Check in Spring and Autumn |
| Check Root Collar | Uncover at planting | Clean every year | Clean every year |
| Prune | Prune only dead or broken branches | Prune lightly when established to build structure & maintain health | Every 3 years, when dormant |
| Fertilize | None | In Spring, as dictated by soil testing | In Spring, as dictated by soil testing |