

Planting and Care Guide

For Your Bare Root Tree and Shrub Seedlings

When you receive your seedlings

When your seedlings arrive, open the box and confirm your order. Since things can shift around during the shipping process, now is a good time to check to make sure that the roots are still covered with moist shredded paper. If the roots are not moist, spray the roots with water and surround them with moist shredded paper.

Your seedlings will have the highest survival rate if you plant them as soon as possible after delivery. However, if immediate planting is not possible, follow a few simple steps to keep them safe while waiting for planting time.

- Store the seedlings in a cool area out of the sunlight. The ideal temperature range for storing seedlings and keeping them dormant is between 33 and 42 degrees Fahrenheit. If temperatures are still cold outside when you receive your seedlings, consider placing them in a shed or outbuilding. Just make sure that the building does not heat up during the day and the box does not sit in sunlight.
- If cold storage is not available, place the seedlings in a dark and cool place such as a basement. Ever so slightly open the bag to allow for minor circulation. Remember to check the seedlings every 48 - 72 hours to make sure the roots and shredded paper are moist. Gently spray with water and remoisten as needed.
- If you intend to take the seedlings out of their original packaging, it is important that the roots remain moist but not wet. A good method of storing is to take a bucket or tub and fill the bottom with 3 to 4 inches of water. Next, add shredded paper or sphagnum moss and mix well. The seedlings are then placed in the tub and the roots surrounded by the mixture. The idea is to keep the roots constantly moist but not wet or soaking in water. Please adjust the moisture content accordingly.
- If the seedlings will not be planted within 7 days of receipt and no cold storage is being utilized, we suggest you use a method called "heeling in". First, find a place that is a little more protected and out of direct sun if possible. Dig a trench deep enough that the roots fit in without bending them. Minimize breaking bundles and handling individual seedlings as much as possible. Place the bundles of trees in the trench and cover all of the roots with soil. Give the trench a thorough watering and let settle for a few minutes. Add a little more soil as needed to ensure the roots are fully covered and

firm the soil with your foot. Seedlings that are heeled in will keep for several weeks as long as they are watered thoroughly once the soil begins to dry out.

Site Selection and Seedling Preparation

Selecting the proper planting site is very important to the success of your tree or shrub seedling. For example, some species need full sun, while others thrive in a wet environment. Visit us online at www.chiefrivernursery.com where you will find specific information on each type of seedling that we sell. Review the recommended soil type, light and moisture requirements as well as a host of other information to make sure you have the right planting spot.

Preparation of planting site: When possible, remove an approximately 18" square of other vegetation surrounding the seedling planting site. To simplify this process, you can mow or trim the area and spray with a vegetation killer. Most over the counter products can be followed up with planting 1 to 3 days after spraying the area. Be sure to plan ahead and read the label to find out how long you should wait before planting at the targeted site. Without removing and keeping surrounding vegetation at bay, the seedlings will be forced to compete for soil nutrients and light and decrease the survival rate of your seedlings.

Preparation of seedlings: Preparing the seedlings on your day of digging is easy, but taking a couple of pointers into consideration will help set the stage for a successful planting day.

- It is recommended that immediately before planting, you soak the roots of your seedlings for 4 to 6 hours. This will allow the seedlings to take water up into their system and ensure full hydration before planting. If you allow the seedlings to soak longer than 4 to 6 hours, you increase the risk of oxygen deprivation to the roots which can cause harm.
- Plan on taking the seedling to the field in a container that keeps roots moist right up until the time of planting. Some will plan their planting so that it coincides with the end of the seedling soaking by taking their buckets out to the field with them. This is fine, but be sure to monitor the length of time the seedling roots are submerged. It is suggested that you take a container and surround the seedling roots with moist shredded paper or sphagnum moss so the seedlings do not inadvertently soak too long. It is not recommended to take the seedlings out to the field in the plastic bag that they

came in if it is a sunny day. The plastic bags can act as a mini greenhouse and expose the seedlings to extreme temperatures which is very undesirable.

Planting Your Trees and Shrubs

Weather: When possible, pick a calm, cool and cloudy planting day to minimize stress on the seedlings. Warm, sunny or windy days can dry out roots quickly. Seedlings exposed to these conditions may not have as high of a survival rate. It is critical that the roots remain moist up until the seedling is placed into the ground.

Planning: Thinking about your planting project before you go to dig can not only make you more efficient, but help you avoid unforeseen issues when you are out in the field. Visiting the planting site before your seedlings are delivered and even digging a couple of test holes before you jump all in is never a bad idea.

Planting methods: The method and speed at which you plant will depend on the size of the seedlings that you ordered and your soil type. Smaller seedlings will be able to be planted at a faster rate than their larger transplant counterparts due to the size of the root structure. Also, differences in soil types will play a factor. Sandy loam for instance will be easier and faster to work with than heavy clay.

Root Dips: Using a root dip is recommended when possible and even more important if you are unable to provide suggested follow up care. We carry two products, Super Gel and Super Spore. These products are mixed with water to create a slurry. The

When it comes to planting bare root seedlings, there are two primary methods; the hole method and the slit method.

Hole method: Using the hole method, simply dig a hole using a shovel and/or pick axe large and deep enough to accommodate the root structure of the seedling you are working with. Next, place the seedling into the hole, spreading the roots out as much as possible. Make sure that the roots do not bend or curl around inside of the planting hole. Break apart the soil that was removed from the hole and place around the root system up to the root collar of the tree. The root collar is a line of change in the texture and color of the bark of the tree which shows where the soil line was before the seedlings were harvested. Finally, water the seedlings in and make sure there are no air pockets or roots exposed.

Slit method: An alternative method, called the slit method, can greatly speed up the planting process for seedlings. The slit method involves driving a planting bar or spade into the soil. The implement is then rocked back and forth to create a V-shaped hole in the ground. The seedling is placed so that the root collar is at or ever so slightly below ground level when the hole is closed up. Make sure that when you place the seedling in the planting hole, the hole is deep enough so that the seedling will not experience an “L” or “J” root (roots that curl sideways or back up towards the top of the hole due to insufficient hole depth). Next, insert the planting bar or spade about 2 – 3 inches from the slit you just placed your seedling in. Pull the planting bar towards the seedling to close up the hole containing the seedling. Make sure that the slit is closed up as firm as possible so no air can reach the roots. Is it important to firm the soil around the newly planted seedling. Firm the soil around the roots so that it would take a moderate pull to dislodge the seedling from its planting site.

Follow up Care

Once your seedlings are planted in the ground, the focus should be on follow up care. Without proper follow up care, you will experience a higher mortality rate among your seedlings.

Watering: Watering your seedlings during the first year of growth is the most important step to ensure their survival. Deep watering once every week to ten days is more beneficial than frequent light watering. Deep watering is achieved when the soil at and around the root zone is thoroughly watered, not just the surface. This forces the roots to grow deeper in search of moisture and sets them up for success when you are no longer providing follow up care. The exception to this rule would be when temperatures are warmer than 85 degrees for days in a row, the planting site is in an area with high exposure to hot sun or wind or drought conditions exist. In these circumstances, deep watering can be implemented every 4 to 6 days for best results.

Mulching: When possible, it is recommended that you mulch a twelve inch ring around your seedlings by using a 2 to 3 inch layer of wood chips. This helps contain moisture around the root zone and also works to moderate the soil temperature around the seedlings. A ring of mulch also helps keep the weeds at bay and leads to less competition during the critical establishment period.

Fertilization: We do not recommend fertilizing your seedlings during the first year as it is not typically necessary. After the first year, small applications of slow release fertilizers with equal parts nitrogen, potassium and phosphorus will aid plant growth. A 10-10-10 type fertilizer

would be a good place to start for hardwood and shrub seedlings. Applications of acid based fertilizers can be beneficial to conifer seedlings. Just be sure not to fertilize too late in the growing season. Late fertilization can force the trees to continue growing when they should be naturally preparing themselves for the colder months ahead. Generally speaking, no fertilizing should be done after August 15th on your young trees.

Keep competition at bay: After planting, it is a good idea to mow, trim or spray the area immediately surrounding each seedling. This keeps grasses and weeds at bay and allows the seedling to flourish without so much competition. This step is more important than some think and taking it will result in faster growth and higher survival rates.

Keep the critters away: While some trees like Blue Spruce and Eastern Red Cedar are naturally deer resistant, others may be susceptible to deer and rabbit browsing. There are many methods of control including fencing around seedlings, tree shelters and animal repellents. Consider using our Super Repeller product to help keep unwanted guests away. Visit www.chiefrivernursery.com for more information and to place your order.

Summary

Like anything else, the more consideration and effort you put into something, the better results you will get out of it. The same is true of the preparation, planting and follow up care of your seedlings. While there are many customers who plant their trees and leave them, the ones who use the proper methods experience the quickest growth and highest survival rates among their seedlings. If you ever have any questions regarding seedling storage, planting techniques or correct follow up care, please email us at info@chiefrivernursery.com or call us at 800.367.9254.