

Transplanting a Hemlock

What You'll Need

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| <ul style="list-style-type: none">• Work gloves• Sharp-bladed shovel• Large tub and small shovel for mixing soil amendments• Plastic bags for root balls if transplanting• Native soil from original growing site if transplanting• Good quality soil amendment such as Mr. Natural Woodland Soil Mix, Mr. Natural Worm Castings, or Mr. Natural Hen Manure• Ironite granules• Soil Moist or other water saver granules for water retention | <ul style="list-style-type: none">• Water• 1-gallon jugs for mixing initial watering solution• Espoma HollyTone (or other slow-release, acid-based fertilizer labeled for azaleas)• Miracle-Gro Quick Start liquid• Bayer Advanced Tree & Shrub (Imidacloprid) for 1 year of HWA protection• Shredded cypress mulch• Scissors, bamboo stakes, & velcro tape if not already attached |
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Sources: See the [Contacts](#) page of our web site for sources of HWA Imidacloprid treatment products. You can get most of the other items at stores such as Home Depot, Lowe's, Walmart, hardware stores and garden centers. In north Georgia, you can usually find Mr. Natural products at Anderson Feed and Supply in Dahlonega 706-864-3364, Ash Brothers Feed & Farm Supply in Cleveland 706-865-2124, and Little G's Garden Center in Cherry Log 706-273-2012. Elsewhere, check your local garden supply stores and on-line to see where they may be purchased. If you can't find Mr. Natural WSM, you can substitute Nature's Care compost or MiracleGro Moisture Control, available at places like Home Depot, Lowe's, Ace Hardware, or Walmart.

Call the Hemlock Help Line 706-429-8010 for more information.

Note: Stores/products mentioned above are provided as suggestions only and are not meant as endorsements.

Choosing the Tree – Choose trees that are healthy and have good structure. If a tree is lightly infested with adelgids, it's still OK because you'll treat it as part of the planting process. If you attempt to plant or transplant a sickly tree or one that is badly infested, it might not live.

Size – The planting size of a hemlock is limited only by the space available and your ability to lift the weight and dig an adequate hole. For transplanting trees, it is generally not recommended to move one that is more than about 5 feet tall because of the size of dirt ball needed for the tree to survive.

Timing – The best time to transplant a hemlock is early fall when the soil temperature is still warm enough to encourage root development but the air temperature is cooling down. Second best is late winter / early spring before the flush of new growth.

Choosing the Planting Site – Hemlocks can tolerate full sun if they have an adequate amount of moisture, but they prefer semi-shade or at least afternoon shade in a moist but well-drained (not soggy) location. The best setting is on a north- or east-facing slope, in a ravine, or near a stream.

1. Check for drainage patterns that would cause excessive dryness or soggy conditions. Avoid such areas if possible.
2. Note the texture and structure of the soil. Loamy soil or amended clay soil is best. Avoid sandy or pebbly soil.
3. If the goal is to have full, fluffy trees with branches to the ground, space them 15-20 feet apart. Hedge trees can be planted 3-4 feet apart.

*Note: Eastern hemlocks (*Tsuga canadensis*) require a pH range of 4.2 to 5.7. The soil in a woodland setting is normally acidic enough, but in a residential setting it may or may not be within the desired range. If you are in doubt about the pH of your planting site, contact your local Cooperative Extension Service agent about a soil test. If your soil is more alkaline than it should be, your Extension Agent can provide instructions for amending it. Never apply lime near a hemlock.*



Save Georgia's Hemlocks
Hemlock Help LineSM 706-429-8010
www.SaveGeorgiasHemlocks.org

Preparing for Planting

Note: Dig when the soil is either dry or just damp enough to make a clump when compressed. Don't dig when the soil is wet.

1. If you're going to transplant a tree, **prepare the new hole** BEFORE you dig up the tree you want to move.
2. **Dig a SHALLOW BOWL-SHAPED hole** 3 times the width of the container or root ball (i.e., you could place the pot or root ball in the hole 3 times in a triangle) but only 2-3" deeper than the root ball. Pile the removed dirt next to the hole.
3. **Combine the native soil** removed from the hole with soil amendment in a ratio of 1 part amendment to 2 parts native soil. Put 2-3 inches of this soil mix back into the bottom of the hole
4. **Prepare soil additives mix** and put in snack-size baggies. Use 1 teaspoon each of HollyTone, Ironite, and Soil Moist for saplings up to 3' tall; use 1 tablespoon of each ingredient for larger saplings.
5. **Prepare the initial watering mix.** For each gallon of water, add 1 capful of Quick Start liquid and 4 ounces of Bayer Advanced Tree and Shrub. Put the water in the container first; then add the other ingredients. Keep the initial watering mix out of the sunlight until you're ready to use it.

Digging Up a Tree to Transplant

1. **To cut the lateral anchor roots cleanly**, drive the shovel into the soil at a 45° angle to dig a circle around the tree that is as wide as the drip line. The depth of the root ball is based on the height of the tree.
If tree is 1-2' tall, dig 6" deep. If tree is 3-4' tall, dig 8" deep. If tree is 4-5' tall, dig 12" deep.
If the tree is growing on a hill, there are usually more or longer roots on the upside, so try to get as much of them as possible.
2. After making the initial circle around the tree, **continue digging** around the edges of the circle, pushing the shovel at a shallow angle to get underneath the feeder roots and free them and the rest of the root system from the soil beneath.

With each thrust of the shovel, it's helpful to rock the shovel back and forth to help separate the root ball from the surrounding soil.

3. Once you can feel that the root ball is free, open a bag on the ground next to the tree, ready to receive the root ball.
4. **Use both your hands to reach under it** and lift it out of the hole, being careful to keep the root ball intact as much as possible. Never pull it by the trunk to prevent tearing the root system.
5. **Place the tree in the bag** and tie the handles of the bag around the root ball, looping them just one time (not a square knot), to retain moisture.
6. Also **dig some native soil** from the original growth site to use for transplanting at the new planting site.
7. Then **re-contour the site** where the sapling was removed so as not to leave an unsightly or hazardous hole. Replace the needle duff and leaf debris and press it down to restore site to its original appearance.

Planting the Tree

1. Hemlock trees are shallow rooted, so the key to successful planting is to be sure the tree ends up "at grade," i.e., at the same level as it was originally in the ground.
2. Place the tree in the center of the hole, and gently spread roots out e sure the top of the root ball is **sitting at least 2 inches above the surrounding ground.**
3. **Refill the hole half way** with your soil mix from beside the hole.
4. **When the hole is half full**, sprinkle soil additives all around the roots of the tree out to the edge of the hole but *not* on top of the root ball.
5. **Fill hole the rest of the way** with **soil mix** so it just covers the root ball and none of the root ball is still visible. At this point, the top of the root ball should still be sitting about 2" above grade level. If it's not, add more soil mix under the root ball. Firm the dirt *gently* with your foot so air pockets are eliminated and the top of the root ball is now level with the surrounding ground. Don't create a watering saucer.

6. **Apply 2 – 3 inches of shredded hardwood mulch** (not pine straw or nuggets) around the tree to conserve moisture, keep the soil temperature stable, and prevent weeds. Spread the mulch from the trunk out to the drip line and then pull it back a few inches from the trunk to avoid introducing insects or fungal growth.

7. Immediately after planting, **water thoroughly** but slowly right at the base of the stem, giving about a gallon of the **initial watering mix** per gallon of root ball size. Two or three hours later, firm the dirt again with your foot to eliminate any remaining air pockets and **water again with plain water**
8. **Staking** is usually not necessary for a small tree up to 3 feet tall, but if wind is a problem or the tree is taller, place a bamboo stake in the soil next to the trunk and secure the tree *loosely*, 2/3 of the way up the stem, so it can still sway a few inches. Remove stake and velcro tape after the first year.
9. **During the establishment period** of up to a year, water with plain water once a week *if you don't have rainfall that week*. Keep the soil uniformly moist -- not too wet or too dry.
10. **Continue HWA protection**. If you're using Bayer Advanced Tree & Shrub, retreat every year in the spring. If you're using Imidacloprid 75 WSP powder or 2F / 2L liquid, retreat every 5th year in the spring. Call 706-429-8010 for instructions.
11. **Giving additional fertilizer** after planting is usually not necessary, but if it seems necessary, wait until at least two seasons after planting. Sprinkle close to the trunk and out to the drip line, and be sure to *follow the recommended dosage* on the product label as too much fertilizer can kill a plant. Do not apply lime anywhere near your hemlock.