Planting and Caring for Your Seedlings

NEW YORK STATE
Department of Environmental Conservation

With the right amount of preparation and follow-up care, planting trees and shrubs can provide a lifetime of environmental, economic, and social benefits.

While there are many motivations to plant a tree, such as shade or beauty, the information in this guide is directed towards conservation plantings designed to improve habitat and ecosystem health.

Before You Plant

It's important to know if your site is appropriate for planting before you begin. If the property you are planting on is not your own, make sure you have permission from the landowner. Know where underground utilities are located, as they could be damaged or pose a hazard to you as you dig (call 8-1-1 or visit **www.digsafelynewyork.com** for more information). If you have overhead powerlines on your site, avoid planting tall trees underneath them and instead plant shorter-growing trees or shrubs.

Gather your tools and supplies before heading to your planting site. You'll need:

- **Gloves**
- **Pruners**
- **Shovel or spade**
- **Bucket of water**
- **Tree protection materials (see options under Seedling Protection)**

Planting Trees and Shrubs

Be sure to consider the time of year before purchasing your seedlings.
The best time to plant is early spring or late fall.

For bare-root seedlings:

- Your seedlings have their best chance of survival if you plant them in the ground right after receiving them.
- If seedlings can't be planted the same day, keep them in a refrigerator until they can be planted, but not for more than two weeks.
- Remove the seedlings from their package and place them in a bucket of water.
- Dig a hole as deep as and wider than the seedling's entire root system. For seedlings with lengthy roots and sites with rocky soils, it may be necessary to trim the roots back a bit. Do not trim more than 25% of the root system.
- Refill the hole while holding the seedling upright. Make sure that the roots do not fold up on themselves, and keep the root collar at the soil line.
- Firmly pack the soil around the seedling, then water until the surrounding soil is moist but not soggy.

For potted seedlings:

- Dig a hole as deep as and wider than the pot.
- Gently loosen the plant from its container by tapping all sides of the pot, and ease the plant out without yanking the stem.
- Loosen any roots that may be wrapping around the packed soil. Increase the depth of the hole or trim the roots as needed.
- Refill the hole while holding the seedling upright. Make sure the soil from the pot or the root collar is level with the soil line.
- Firmly pack the soil around the seedling, then water until the surrounding soil is moist but not soggy.

Protecting Seedlings

Young, newly planted seedlings are particularly vulnerable to damage due to their small size and minimal root systems. They are vulnerable to competition from more aggressive plants, particularly invasive species, and may be damaged by browsing wildlife (e.g., deer, rabbits, and mice). Until they become established, your trees and shrubs are unlikely to survive without added protection. The following actions will help your seedlings thrive and grow. After installing protection, check it often to be sure it is effective.

Weed Mats & Mulch

Weed mats, landscaping fabric, and mulch are helpful for preventing competing plant species from growing too close to your seedling. Surround your seedlings with one of these options, covering 1½ to 3 feet of ground around the plant base. If mulching, apply a 2- to 3-inch-thick layer, but make sure mulch isn't pushed against the trunk as it could encourage fungal growth. Periodically check to see if mats or fabric need to be straightened or cleared of debris, or if mulch needs to be added. This type of protection is only needed for the first 3–4 years and should be removed after the seedlings are well established, to allow native grasses and flowers to thrive.

Wood chips can be used as mulch material

An example of a weed mat

Tree Tubes

Tree tubes provide a physical barrier that significantly reduces browsing damage. They are particularly effective for deciduous trees and may also work for shrubs. Tree tubes should be at least 5 feet tall to prevent deer from damaging bark or nibbling branches, and flush with the ground to prevent rodents from getting underneath. It is ok for a tube to be taller than the seedling.

An example of a tree tube around a young tree

INSTALLATION

There are several different types of tree tubes. Make sure you follow the instructions for the type you've chosen.

The following are general instructions:

- Hammer a wooden stake firmly into the ground, 2–3 inches away from the seedling.
- Place the tube over the seedling, centering the seedling in the middle and making sure branches do not get caught or bent backwards. If needed, carefully prune off branches that will not fit within the tube. *See photos on page 6.*
- Press the tube down so it is flush with the ground.
- Firmly attach the tube to the stake.

Before pruning

After pruning

MAINTENANCE

- Remove debris from inside the tree tubes, including leaf litter, weeds, and any nests (e.g., rodents' or wasps').
- Straighten and hammer fallen, loose, or leaning stakes firmly into the ground.
- Make sure the tubes are still attached to stakes and flush with the ground.
- Remove the tube when the seedling's trunk is more than 2 inches wide at 6 inches from the ground.

Fence Rings

Fence rings are a good option for conifers and shrubs because they allow more space for lateral growth. They can be customized to protect single seedlings or small clusters of them.

INSTALLATION

- Create a ring around each plant or a small group of plants with 5-foot-tall mesh wire fencing.
- Secure the ring to the ground with wooden stakes. In areas with low windstorm and flooding potential, you can use sod staples.
- Make sure the fencing is flush with the ground.

MAINTENANCE

- Remove any debris that accumulates within the fence rings.
- Trim any weeds that grow taller than, or that have fallen on top of, the seedlings.
- Straighten and secure loose fence rings. Fence rings may need to be widened as side branches grow through them.
- The best time to remove the fence ring will vary, but longer-term protection is better. If the fence ring begins to interfere with growth and can no longer be widened, remove it.

Before maintenance

After maintenance

Perimeter Fencing

For large-scale shrub or conifer plantings, it may be more economical to fence the perimeter of the planting site rather than installing individual fence rings. For guidance on installing a perimeter fence effectively, please visit **https://on.ny.gov/2BcQfrh**.

www.mywoodlot.com/plant-trees

An example of a perimeter fence

Seedling Maintenance

Watering

Watering is best done in the morning or evening, not at the hottest part of the day. Plan on watering your seedlings until they are fully established, approximately 2–3 years. Water weekly from April/May through September, making sure the soil around each seedling is well moistened (if you notice signs of wilting, you may need to water more frequently). For evergreens, continue to water them until the ground freezes.

Removing Competing Vegetation

For conservation plantings, natural regrowth of native plants is a good thing! However, an overabundance of plants growing within the zone immediately surrounding your seedling (1–2 feet) can crowd or shade it. Native vegetation removal beyond this zone will only reduce the ecological benefits of your planting. Carefully pull or trim plants only as needed during the first few years while your seedlings are establishing.

Before removal

After removal

A Note on Mowing

Avoid mowing near the seedlings whenever possible. Mowing can easily injure or kill young trees and shrubs, both because seedlings can be overlooked in thick vegetation and because the force of material exiting a mower's chute can damage their trunks or stems.

Invasive Plants

Whenever possible, remove invasive plants that you find at your site.
For information on identification and removal visit **https://on.ny.gov/2BcQfrh**.

Assessing Your Seedling's Health

Regularly inspect your trees and shrubs. If you find any of the following, you should take action. You can find resources for diagnosis and care at **https://on.ny.gov/2BcQfrh**.

Missing or Shredded Leaves

This may be a sign of deer or rabbit browsing. Install and maintain seedling protection such as tree tubes and fence rings.

Bark Damage

This could be a sign of buck rub, beaver damage, or mower damage. Install and maintain seedling protection, and try to avoid mowing near the seedlings. Debris stuck inside tree tubes, such as fallen leaves, and too much mulch can cause mold damage. Periodically clean debris out of the tubes or check on your mulching to prevent this issue.

Wilted Leaves

This could be a sign of dry soil. Dig 3–4 inches into the soil near the plant. If it feels dry, water your plant more frequently.

Discolored Leaves or Unusual Growth

These may be symptoms of disease or insect damage. If the issue is widespread (affecting more than just a couple of branches), you will need to identify the cause to determine what action is required. Consulting with an arborist or someone familiar with tree diseases would be best, but there are many resources available online.

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Division of Lands and Forests

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For specific information about planting in your area, please contact your local DEC forestry office. Visit **https://www.dec.ny.gov/about/76070.html** to find the office nearest to you.