



## Planting Tips

### Seeds or Plants?

You can obtain wildlife trees, shrubs and vines for planting on your property in a number of ways. You can gather and plant wild seeds from one part of your property or your friend's property to your project site. Or you can purchase and plant wild seed from many nurseries. But you'll need to know whether or not the seeds require a period of dormancy, or if they need scarification or stratification. Your local nursery staff can help you with this information and with the techniques required, or you can find the information at your local library in books on propagation or landscaping with native plants. **Note: Gathering wild plant seeds**

**from public roadsides, parks, wildlife areas or any other public property is generally illegal without proper permission.**



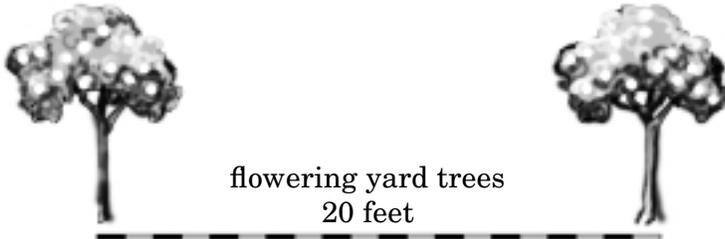
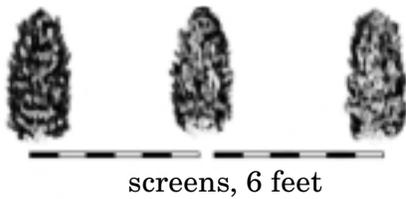
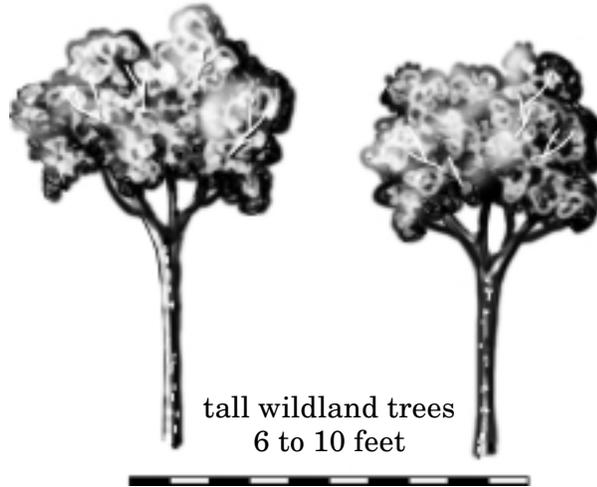
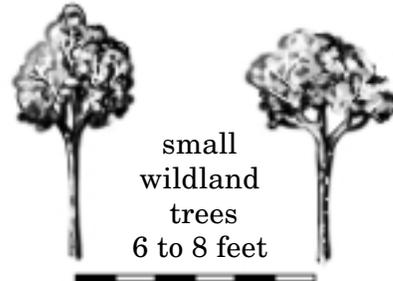
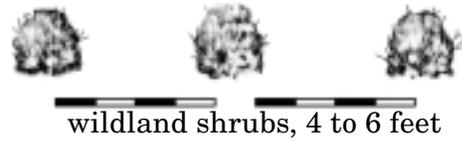
Another way of getting the plants you need for your wildlife project is to transplant wild trees, shrubs and vines from one part of your property or a friend's property to the area you are interested in enhancing. Dig these in early spring when the ground is workable, but before the plants break their dormancy. Transplanting can end in failure due to the disruption of the plant's established root system, so dig as large a root ball as you can carry. As a general rule, transplant survival will be more successful when done with smaller, younger plants. **Note: Any transplanting from public roadsides or other public lands is illegal.**

A more conventional route is to purchase young, bare root stock and plant these in early spring. DNR nurseries sell bare root native trees and shrubs in quantities of 500 seedlings per order. Other nurseries also sell bare root stock in large quantities. These are best for large-scale plantings.

Finally, if you just want to enhance the landscape around your house for wildlife, you can purchase potted trees and shrubs. These are much more expensive than bare root stock, but tend to be older and larger plants, so tradeoffs exist in cost, quantity and size of the plants. **Note: Make sure you purchase plants with the proper scientific name. Many cultivars and non-native plants are available at nurseries and these may cause problems on your land or the surrounding landscape. Read the labels and purchase with caution. Also be sure you are buying plants that were propagated rather than wild dug. Wild dug plants are often taken from wildlands where their removal degrades the area. They also may have decreased survival.**

Spacing of Plantings

Plants should be placed in groups with enough space to prevent severe competition among individuals. Consider the mature height and crown spread to prevent planting trees and shrubs too close to each other. As a rule of thumb, for agricultural shelterbelts or wildland clump plantings, space your shrubs about 4 to 6 feet from one another. For small trees such as crabapples and wild plums, space the trees about 6 to 8 feet apart from each other. For the taller trees, such as white spruce, plant the individual trees about 6 to 10 feet apart from each other. For landscaping projects around your house, you may want to provide a little more space so that the tree or shrub can reach its full form and shape. Nurseries suggest to plant small flowering trees about 20 feet apart and larger trees about 30 to 50 feet apart. However, trees used for screening as well as wildlife cover can be placed as close as 6 feet apart.



Also, keep shrubs about 8 to 10 feet from the house and large trees about 25 or 30 feet from the foundation. Otherwise, you could end up with severely cracked foundations as your tree grows.



large yard trees  
30-50 feet

### **Know Your Soils and Sun**

Know the soils and soil moisture levels on your property. Match these with the types of soil and moisture levels preferred by the trees and shrubs you are considering purchasing or transplanting. For instance, don't order a shipment of bog-loving tamarack for planting on your hilltop. Likewise, don't plant white oaks in a low, wet meadow. Most commercially-available trees and shrubs prefer well-drained, loamy soils. However, more nurseries are beginning to carry native plants adapted to shallow, dry, sandy soils or to wetland soils.



Match the site's exposure to sunlight with the plant's needs. Generally, the more sunlight the site has, the better the flowering and fruit development of many trees and shrubs; hence, the better feeding opportunities for wildlife. However, some native trees and shrubs are adapted to grow best in shade. Know your plant's needs.

### **Protect Your Investment**

You'll want to protect your investments. Since many of these wildlife trees and shrubs provide great browse for deer and rabbits, you can avoid future disappointment and frustration if you take an extra step when you're planting. Make small protective cages

using hardware cloth or chicken wire and wrap these around your newly-planted specimens, or use commercially-made tree guards. Make sure that you have done this before winter, a time when the browsers are most likely to damage your plants. A little extra effort now will protect your investment for years to come.



## Wildlife Plantings in Agricultural Areas

If you own a working farm, consider integrating wildlife plantings into your agricultural landscape. Try first to enhance existing cover, such as along fencerows, old windbreaks, edges of wetlands, or old groves.

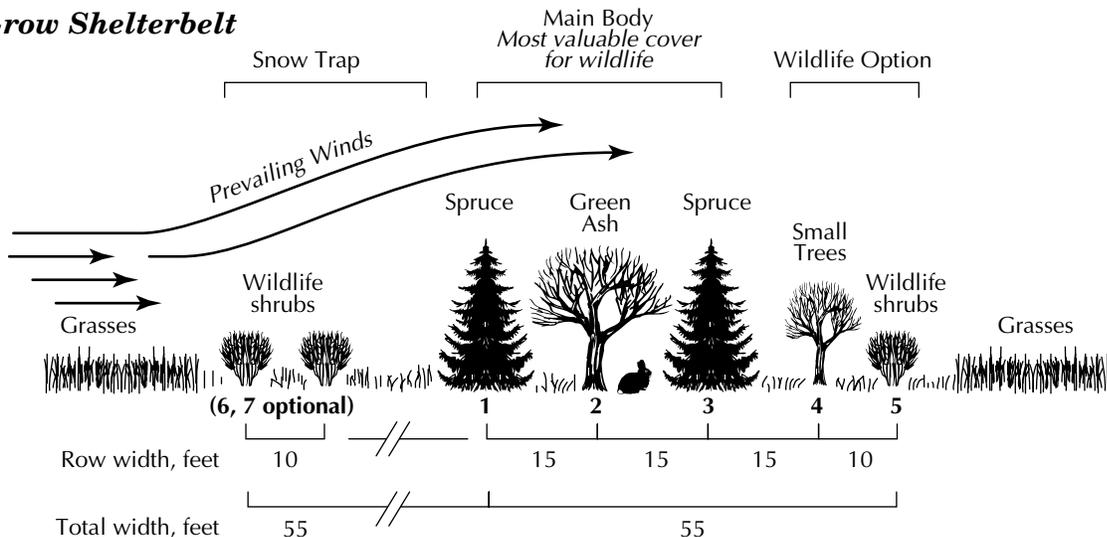
Plant your wildlife trees, shrubs, and vines near existing wildlife travel lanes or where good undisturbed nesting cover exists. If no wildlife travel lanes exist, create them between habitats or along fencerows. Plant your trees and shrubs to provide protection for wildlife from extreme exposure to mid-winter winds, as well as to protect songbirds and small mammals from roving farm cats, raccoons and other predators. Plant close to wetlands or food and watering areas to greatly enhance the diversity of wildlife. Plant some trees and shrubs within 100 yards of an existing field of grain, food plot or even corn stubble. This will provide easy access to food while reducing the exposure to severe winter weather. If an undisturbed pasture, field or grassland is located nearby, grassland birds will find secure nesting in spring and summer as well as a plentiful supply of insects.

If you are enhancing existing woody cover such as a fencerow or windbreak, be sure to

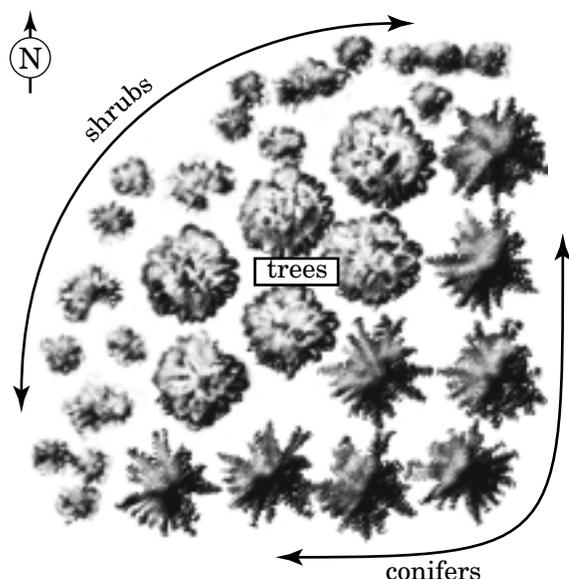
watch out for fast-growing “wolf” trees like boxelder or elm. These trees will out-compete your plantings for sun and nutrients in no time at all. Many Wisconsin deciduous trees and shrubs are prolific sprouters and in one year can grow 3–5 feet from cut stumps. Therefore, once you've cut unwanted trees and before you plant your new trees and shrubs, make certain that you treat all freshly-cut stumps with a recommended herbicide. Check with your local garden center or DNR Forester for recommendations, since the effectiveness of herbicides varies with the soil conditions. Always follow the herbicide label directions.

The arrangement of shrubs and trees in an agricultural wildlife planting can greatly affect its attractiveness to wildlife. Large-block naturalized plantings are a preferred design to long, thin, strip-like plantings. In snow country, add 1–2 rows of shrubs from the north and west side of the wildlife planting, about 35 feet from the interior trees and shrubs, to act as a trap for catching snow before it reaches the main body of the windbreak. This will increase the winter cover value of the windbreak and reduce tree damage from heavy snowloading. Plant the inner rows with a mix of small trees and tall conifers to provide shelter from weather. Plant these in staggered rows about 10–15 feet apart. It's advisable to plant one or two

### Seven-row Shelterbelt



### Clump planting for wildlife



more rows of shrubs on the downwind or protected side to provide resting and sunning areas, ground level shelter, seasonal food, and more diverse nesting habitat. Again, try to stagger these plants at odd intervals rather than planting them in a soldier-straight row. This will lend a more natural appearance to your landscape. By simply increasing the width of your agricultural wildlife planting, you can increase the nest density and nest success of wildlife living in the planting.

For more information on windbreaks for wildlife, read **Windbreaks that Work!** and **Woody Cover for Wildlife**. Both are available from your local DNR forester.

### Wildland Plantings

For those of you who own land not in agricultural production, consider working with your native landscape to enhance it for a wide diversity of wildlife.

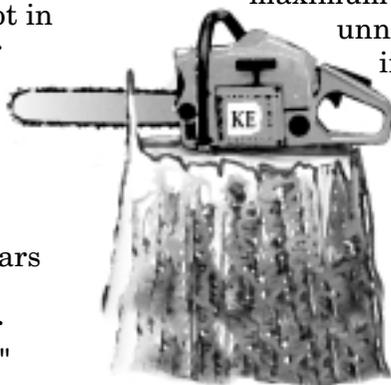
Often, this will mean getting out your axe, chain saw, pruning shears and herbicide sprayer before you even think about taking out your shovel. So many of our "wildland"

acres have been altered by the invasion of alien trees, shrubs and herbaceous plants that it is rare to find a site that is unaffected by these plants. One reason for the success of these aliens in capturing our native landscape is that they are very aggressive growers. They are adapted to living in disrupted soil. Since pioneer times, farming has caused the widespread breakup of the soil. Current human urban developments do the same. Also, some aliens tend to seed prolifically and their seeds are able to germinate under a wide variety of conditions. They are often rapid growers and soon out-compete the less aggressive, more beneficial native plants for the soil nutrients and sunlight they need to grow.

It is imperative, therefore, to tame, if not eradicate these aliens from your landscape. Get them out, if possible. They don't belong! Refer to **Invasive Species Control Recommendations**, available from the Bureau of Endangered Resources, WDNR, Madison, WI 53707-7921.

Once you have the aliens under control, then think about the types of native trees, shrubs and vines that normally would grow there. Consult with local DNR wildlife managers, foresters or park naturalists for assistance with this. Then, using this publication as a guide, select some of native plants that provide food and winter or nesting cover. Plant these in locations best suited to their needs. And definitely plant them as though they grew there naturally. Avoid straight rows. You can clump some shrubs for

maximum cover benefits, but don't make it unnatural in appearance. Also, keep in mind the mature height and crown-width of any tree seedlings you are planting. Try not to crowd them too closely or they will not grow well as they get older.



## ***Wildlife Plantings in Your Backyard***

When planting wildlife trees, shrubs and vines in your yard, you can lay out your plan in one of two ways: you can choose a very formal garden design, in which you place your plants in regimented rows that follow your property lines; or you can decide to lay out your plan in a very naturalistic design, with no straight rows but plenty of curving lines, clumps and uneven distribution of your plants. Although the aesthetics of the two designs vary with your personal taste, the wildlife benefits are similar for both designs.

Much interest and excitement in native landscaping is spreading throughout Wisconsin. Groups such as Wild Ones—Natural Landscapers, Ltd., P.O. Box 23576, Milwaukee WI 53223-0576, can offer you advice, assistance and inspiration in planning your native, naturalistic backyard landscape. Keep in mind, however, that some Wisconsin communities have "weed ordinances" that insist homeowners maintain their lawns at a given height. This is a greater concern when landscaping with prairie grasses and flowers than it is when planting trees and shrubs.

Since you are planting for wildlife, you can also plant with a mind for energy conservation as well. For instance, you may want to plant clumps of evergreens in the northwest corner of your property to shelter your house from winter winds. Plant deciduous trees to the south of your house so that in summer these trees will provide shade, while in winter the sun's rays can shine through the barren branches.

For maximum enjoyment of your labors, plant tall trees around the periphery of your yard. Place shrubs in front of the trees and plant flowers and ground cover in front of the shrubs. In this way you can view all the plantings while standing in the inner sanctum of your yard.

## ***Get Some Help***

Protecting newly planted seedlings from competition with aggressive, undesirable plants is the single most important thing you can do to protect your investment and to protect your plantings for wildlife. Weeds, grasses, and woody cover can soon overtake your plantings if you do not prepare the site properly. However, each planting situation is different. A large, native woodland restoration will be different from planting a shelterbelt, which in turn will be different from planting a backyard landscape. In some situations you can control for competition by simply mowing. In other situations, you may need to use an herbicide specific for your plantings and your soil conditions. Project requirements will vary across the state. You will need site-specific information about how to prepare your site for your planting project, what techniques (mowing, herbicides, controlled burns) to use to control competitive plants and how best to protect your plantings. Contact your local DNR forester or wildlife manager for specific advice; refer to **Getting the Help You Need** in this publication series.

## ***Planting***

Tree-planting time in Wisconsin begins in April. Wait until after the frost has left the ground, usually in late March, but plant before the buds break out and shoots grow long, usually in late May.

If you're only planting a few trees or shrubs, plant them by hand using a spade, #2 round shovel, or planting bar (dibble). For large plots, contact your local DNR forester or County Land Conservation Department (LCD) for recommendations about tree planting services. In Wisconsin, tree planting machines are available for a small rental fee from most county LCDs and are coordinated by your local DNR forester.

## ***Planting Bare Root Stock***

For bare root seedling trees and shrubs, cull out the weak seedlings that are scraggly, wilted, discolored and have thin stems. Inspect the roots before planting. Using sharp hand pruners, clip any broken or crushed roots; this will help them regenerate more quickly.

Be aware that bare root seedlings are very sensitive to handling, warm temperatures, and can quickly dry out. Arrange to plant your seedlings as soon as you get them to insure minimal damage and maximum growth potential. If you can't plant your trees and shrubs immediately, keep them temporarily in a cool, shaded storage place such as a cellar at about 35° F.

If you must wait more than a week to plant your trees or shrubs, then you should temporarily "heel in" the trees. To do this, dig a "checkmark" trench, as illustrated below. Dig it deep enough to hold all roots. Then lay the tree or shrub into the trench with the trunk or plant tops leaning at about a 45° angle. Gently spread the roots out into the trench and cover them completely with light soil. Water the soil thoroughly to make sure there are no air pockets.

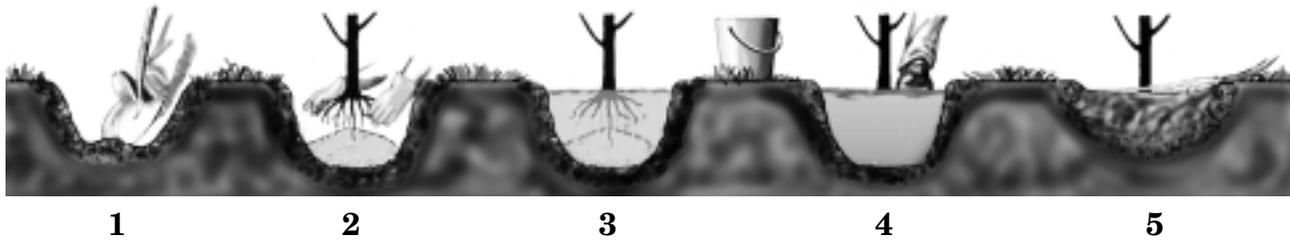
Otherwise, once you have your bare root stock and are ready to plant, keep the fragile, hair-like seedling roots covered with the bag to protect them, unless the temperatures reach 60° F or more. If this occurs, take off the bag, cool the roots with cold water and replace the bag again. As you plant, keep all roots moist by covering them with a damp burlap sack in a bucket to prevent the roots from being exposed to the drying air. Do not immerse roots in water, unless the nursery directions tell you differently.

For planting bare root stock by hand on a large scale, place one or two dozen plants in a large bucket with a damp burlap sack covering the roots. Keep excess stock in a cool, damp place until you have planted the first batch. Then take a shovel or a planting dibble and walk through your project area. Everywhere you want to place a tree, dig the shovel blade or dibble into the soil and briskly move the handle back and forth, creating a slot wide and deep enough so that you can spread the roots out well; for seedlings, this is about the width and depth of a shovel blade.

Set the plant at the same level or up to one inch deeper than the soil line at the nursery. Don't simply stick the seedling in the hole and cover it up. Rather, gently spread the roots out. Be sure to keep them from curling or bending. Pack the soil so there is no air space around the roots. Tamp down the soil with your foot to form a slight depression around the base of the tree to catch water.

If possible, water your plants well at the time of planting. If you can't because the site is so remote, don't worry. Spring rains usually provide all the moisture necessary for making wildland plantings a success.



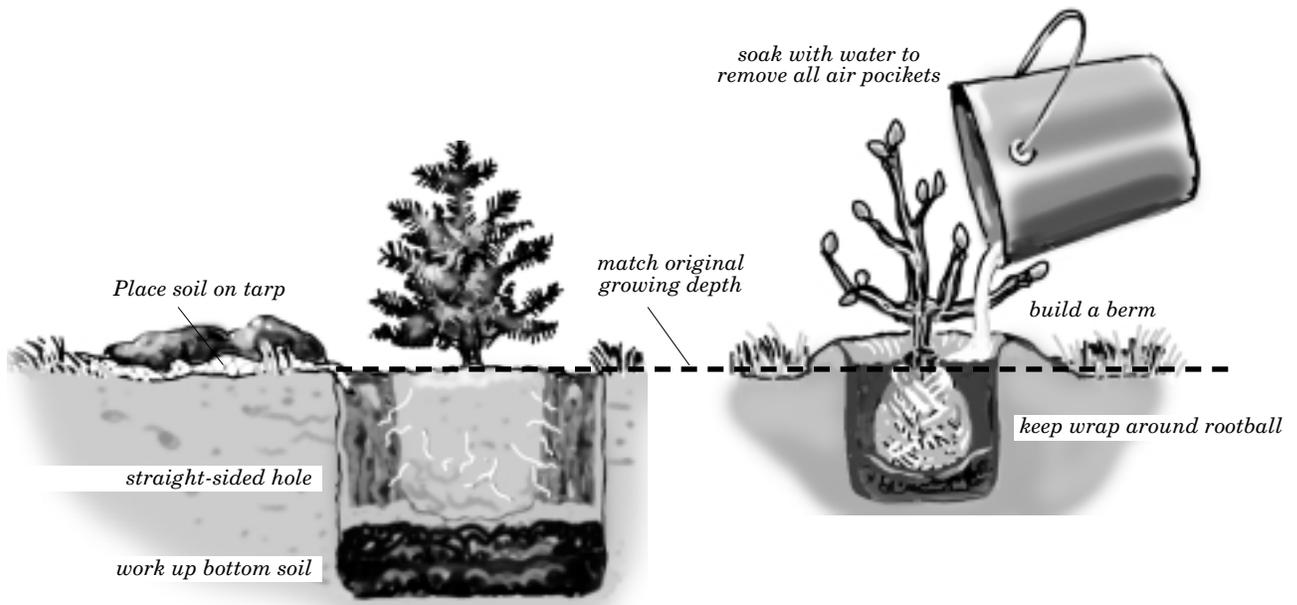


If you are planting bare root stock on a smaller scale, take greater care planting.

1. Remove all packaging material before planting. Inspect and prune all broken or crushed roots. Place a large piece of plastic on the lawn next to where you plan to dig the hole. Deposit the soil from the hole onto the plastic. As you dig, place the sod to one side, separate from the soil. Dig a hole about twice as wide and deep as the plant roots. Mix the soil with peat moss, composted manure or potting soil.
2. Place some of this mixture at the bottom of the hole, forming a mound of earth. Do not add any commercial fertilizer to this soil. Now, spread the roots down over the mound.
3. Trees should be set so that the mound pushes the trees up to the same depth at which they were planted in the nurseries. Shrubs should be set at either the same depth or slightly deeper than they grew in the nursery. Cover the roots and fill the hole about half-way up.
4. Tramp the soil down firmly with your foot and fill the hole with water to eliminate any air pockets.
5. After the water has soaked in, add the remaining soil to within 3 inches of the top. Tramp down this soil firmly to form a saucer-like depression and fill with water to settle the soil.

Mulch with compost, bark or straw. If properly mulched, you should only need to water your plants once a week for the first few weeks after planting and then every couple of weeks—or more frequently in hot, dry weather.

To promote rapid, healthy, vigorous growth, trim the crown. Leave the central trunk or leaders intact to ensure a high crown, but trim the side branches back by about one third. Prune damaged branches below the point of injury. This may seem a harsh measure to take, but you will be rewarded with rapid re-growth.



## ***Planting Container-Grown Stock***

For small scale backyard plantings, you may find excellent nursery specimens that are container-grown. This method allows for the development of a fairly large root system that has never been pruned or cut back. When planting potted trees and shrubs, it is very important to take time creating a top-quality hole. Here's how:

Place a large piece of plastic on the lawn next to where you plan to dig the hole. Deposit the soil from the hole onto the plastic. As you dig, place the sod to one side, separate from the soil.

Dig a hole twice the diameter of the container and deep enough to place the plant at the original growing depth. Make the sides straight, not sloped. Use either a yard stick or the container itself to check for proper depth and width as you dig. Make sure you work up the bottom of the hole with a shovel or garden fork.

Carefully remove the plant from the container. Inspect the root ball. If the roots are extensive and wind around in the pot, you may want to gently prune them back. Place the root ball in the hole. The top of the soil clinging to the plant (or the original soil mark) should be level with the soil in your yard.

Mix the soil on the plastic with peat moss, composted manure or potting soil. Backfill the hole with this mix.

Water the hole slowly and thoroughly to help settle the soil, eliminate air pockets and provide water to the plant.

Form a berm around the hole, using the soil mix. This will help contain the water each time you water your plant.

For container-grown plants, you only need to prune to achieve the desired shape since the root system has never been pruned or cut back.

## ***Planting Balled and Burlapped Stock***

Many larger trees and some shrubs are sold by nurseries balled in burlap. When you transport these from the store to your vehicle and then to your planting site, always carry the plants by the root ball—never by the trunk.

As with the container-grown plants, dig a hole twice the diameter of the root ball and deep enough to place the plant at the original growing depth. Create straight, unsloped sides.

Place the plant in the hole with the burlap still wrapped around the root ball. Be sure to remove any wire or nylon cord from around the trunk or the ball.

Mix the soil with peat moss, composted manure or potting soil. Backfill the hole with this planting mix while plunging the hose to the bottom of the hole to soak and settle the soil, working out any air pockets. Form a berm around the hole with the soil mix to aid in watering.



*Stake carefully to protect bark*

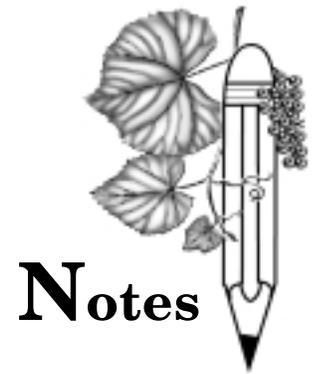
Stake and tie large trees to prevent wind from causing the tree to lean. Protect the tree bark from chafing by inserting the guy wires through pieces of old hose. Set this protective hose where the trunk touches the wire and anchor the wires to wood or metal stakes.

As with bare root plants, prune off one third of the side branches to help balance top growth and the root system.

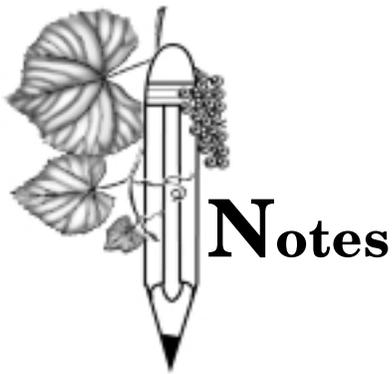
## ***Weed Control***

During the first few years, tree survival depends on controlling weeds, especially alien grasses, which compete with the growing tree for moisture and soil nutrients. Cultivate, hand mulch, manually pull or mow weeds around your seedlings or transplants. Within a few years, the newly planted area is often subject to invaders such as willow, elm, boxelder, honeysuckle, and buckthorn. Remove these undesirable trees and shrubs at the seedling stage with a sharp grub hoe. If you use an herbicide, follow label directions, make sure it is environmentally-safe, and use it sparingly. Contact your local DNR forester or wildlife managers for specific recommendations.

Armed with this knowledge of how and what to plant, you are well on your way toward making your property attractive to wildlife. Happy digging!



# Notes



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*Wildlife and Your Land* Staff: Mary Kay Salwey, Project Director; Janet L. Hutchens, Project Assistant; Todd L. Peterson, Bureau of Wildlife Management; Kelly Kearns, Bureau of Endangered Resources and Trent Marty, Bureau of Forestry. Graphics and layout: Kandis Elliot. Published by the Bureau of Wildlife Management, Wisconsin Department of Natural Resources, P.O. Box 7921, Madison, WI, 53707.



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PUBL-WM-223-98