



State Forest Nursery Seedling Catalog

# WISCONSIN

*"beginning tomorrow's forests today"*

FR-447

Booklet  
Online Only



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## Wisconsin State Nursery Program

*The mission of the state nursery program is: “to insure a consistent supply of high quality seedlings, of desirable forest species, at an economical price, to encourage reforestation in Wisconsin.”*

Wisconsin's forest nursery program has been a leader in the stewardship of natural resources since 1911, producing over 1.5 billion tree and wildlife shrub seedlings. Reforestation efforts utilizing state nursery stock have been instrumental in creating and enhancing the supply of raw material for the forest industry in Wisconsin. In addition, these forests improve wildlife habitat, prevent soil erosion, conserve energy, sequester carbon, and provide aesthetic beauty.

The Department of Natural Resources (DNR) currently operates three forest tree nurseries: the Wilson State Nursery in Boscobel; the Griffith State Nursery in Wisconsin Rapids; and the Hayward State Nursery in Hayward. Annually, 10 to 20 million seedlings are produced for reforestation projects on state, county, industrial, and private lands through-out Wisconsin.

Purchasers of state nursery stock agree to use these trees only for reforestation, wildlife habitat, and erosion control purposes. The state nursery program is financially self-supported from the sale of nursery stock. In addition, a 3

cent per tree surcharge on all state nursery stock sold contributes about \$300,000 annually for forestry education and public awareness in Wisconsin. State nurseries also support and are active in a wide variety of reforestation research projects and programs.



Griffith Nursery in the early 1950's



The white color of the shipping boxes keeps seedlings cooler and healthy longer

DNR foresters are an excellent source of information regarding species selection for your planting site, available cost sharing programs for tree planting, site preparation techniques, tree planter rental, development of management plans for your property, forestry tax law programs and other forest management topics. The addresses and phone numbers of Department of Natural Resources foresters are listed in this catalog.

This catalog has been produced to provide landowners with information to help them successfully carry out tree planting programs on their lands.

## GRADING GUIDELINES

*These general guidelines are used to grade tree orders and should be followed by landowners purchasing ungraded stock. Some variation of these guidelines from species to species may exist. Seedlings less than minimum size or which are damaged, are considered to be cull and should be discarded. Consult your local forester or nursery for further information.*

	Minimum Height From Root Collar to Bud	Minimum Root Length
1 - 0 Conifers	2 1/2"	6"
2 - 0 Conifers	3 - 4"	6 - 8"
3 - 0 Conifers	5 - 6"	8"
1 - 0 Hardwoods	5 - 6"	8"
2 - 0 Hardwoods	8"	8"

**Landowners should begin by developing a planting plan with the assistance of a professional forester and/or use the on-line tree planting plan development tool found at <http://dnr.wi.gov/forestry/Nursery/planform.htm>.**

# CONIFERS



White Cedar  
Balsam Fir  
Hemlock  
Jack Pine  
Red Pine  
White Pine  
Black Spruce  
White Spruce  
Tamarack

## White Cedar

*Thuja occidentalis*



Slow growing, small to medium size tree common in swamps in Northern Wisconsin but will grow well on uplands if competition is controlled. Full sun. Dense winter wildlife cover. Deer browse control needed for successful plantings. Used for fence posts. Good for windbreak, screening, erosion control.



## Balsam Fir

*Abies balsamea*



Slow growing, small to medium size tree common on heavier upland soils in Northern Wisconsin. Shade to full sun. Mainly pulpwood and Christmas tree use. Dense winter wildlife cover. 50 year life span but will regenerate naturally from seed.





## Hemlock

*Tsuga canadensis*

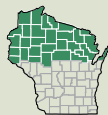


Slow growing, medium to large tree grows well on heavy moist soils. Needs some shade when young. Present mainly in Northern Wisconsin. Can provide dense winter wildlife cover. Deer browse controls are needed for successful plantings. Difficult to regenerate naturally.



## Jack Pine

*Pinus banksiana*



Fast growing, medium size tree that will grow in sandy droughty soils. Good wildlife habitat but deer browsing may be a problem when young. Used mainly for pulpwood. 50 to 70 year life span. Can be regenerated by seeding or planting seedlings. Needs full sunlight, will not tolerate competition.



## Red Pine

*Pinus resinosa*



Fast growing, large tree grows best in sandy well drained acidic soils. Full sun. Good for pulpwood and lumber. Few insect or disease pests. Difficult to regenerate from seed. Grass and brush control in new plantings is needed for success. Responds well to regular thinning over 100+ year lifespan.



## White Pine

*Pinus strobus*

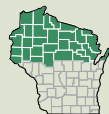


Fast growing, large tree grows best in moist sandy loam soils state wide. Full to partial sun. Good lumber tree. Blister rust, tip weevil, deer browsing considerations are needed for successful plantings. Can be regenerated from seed. Responds well to regular thinning over 200+ year lifespan.



## Black Spruce

*Picea mariana*



Slow growing, small to medium size tree common in swamps and other wetlands in Northern Wisconsin but will grow well on uplands if competition is controlled. Difficult to regenerate from seed. Full sun. Mainly pulpwood use. Dense winter wildlife cover.



## White Spruce

*Picea glauca*



Medium to large tree grows well on heavy moist soils. Partial shade to full sun. Good pulpwood, lumber if pruned. Good tree for windbreaks and visual screens. Dense winter wildlife cover. All state nursery stock is from orchards selected for fast growth. Difficult to regenerate from seed.



## Tamarack

*Larix laricina*



Fast growing, medium size tree that will tolerate poorly drained soils. Deciduous conifer. Full sun. Will grow on uplands if competition is controlled. Used for cabin logs, fence posts and pulpwood. Changes in water table levels if planted on some wet lands may kill this tree.



Seedlings listed in this catalog are all native to Wisconsin and are grown from seed at the state nurseries. They are all sold as 1, 2, or 3 year old bare root seedlings which are shipped in April and May each year. The price list insert shows the major species that are available for the year. Limited amounts of other species and ages may also be available.

The complete list can be viewed at:  
<http://dnr.wi.gov/forestry/nursery> or  
call 1-800-875-9050.



Seed orchards have been developed to produce seed for state nurseries which is genetically resistant to white pine blister rust



Irrigation at Hayward Nursery

*The shaded areas of the range maps indicate where in Wisconsin the species can be found naturally. Most species listed in this catalog can be successfully planted statewide.*



# HARDWOODS



**Bigtooth Aspen**  
**Quaking Aspen**  
**Basswood**  
**River Birch**  
**White Birch**  
**Yellow Birch**  
**Butternut**  
**Black Cherry**  
**Shagbark Hickory**  
**(Hard) Sugar Maple**  
**Red Maple**  
**Silver Maple**  
**Bur Oak**  
**Red Oak**  
**Swamp White Oak**  
**White Oak**  
**Black Walnut**

## Bigtooth Aspen

*Populus grandidentata*



Very fast growing, medium size tree found statewide but common in northern half. Grows best on moderately drained loam soils. Often found in patches or clones. Reproduces from root suckers and occasionally seed. Needs full sun. Excellent wild-life habitat. Used for pulpwood and lumber. 50 - 90 year life span.



## Quaking Aspen

*Populus tremuloides*



Very fast growing, medium size tree found statewide but common in northern half. Grows on most moderately drained soils. Often found in patches or clones. Reproduces from root suckers and occasionally seed. Needs full sun. Excellent wildlife habitat. Used for pulpwood and lumber. 35 - 70 year life span.



## Basswood

*Tilia americana*

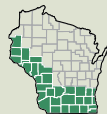


Fast growing, large tree grows on moist to moderately drained soils statewide. Will tolerate shade. Often found in multi-stemmed clumps of sucker origin. Often has branch-free trunks. Seed will stay dormant in the soil for several years. Used for pulpwood and lumber. 100+ year life span.



## River Birch

*Betula nigra*



Small to medium size tree grows in wet soils along waterways in some-times pure stands. Will tolerate periodic flooding. Has a shaggy golden bark. Needs full sun. Will reproduce from stump sprouts, or seed. Used for erosion control, firewood, and ornamental purposes.



## White Birch

*Betula papyrifera*



Medium size tree grows on moist to moderately drained soils statewide. Bright white bark that can be removed in sheets. Reproduces from stump sprouts or seed. Full sun. Used for ornamental plantings, firewood, pulpwood, and lumber. Has insect pests that kill trees during times of stress. 40-70 year lifespan.



## Yellow Birch

*Betula alleghaniensis*

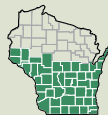


Medium to large tree found on moist to moderately drained heavy soils in the northern half of Wisconsin. Bark is golden and shaggy. Reproduces from stump sprouts and seed. Will tolerate some shade best in full sun. Used for firewood, pulpwood, quality lumber. 100+ year life span.



## Butternut

*Juglans cinera*



Fast growing, medium to large tree scattered throughout Wisconsin usually on well drained rich soils. Seldom found in pure stands. Deeply furrowed bark. Full sun. Edible nuts that squirrels love. Used for quality lumber. Susceptible to butternut dieback.



## Black Cherry

*Prunus serotina*

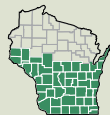


Fast growing, medium to large tree most common in southern half of Wisconsin but present statewide. Prefers moist to well drained rich soils but also found on other soils. Reproduces by stump sprouts and seed. Full sun. Edible fruit used by wildlife. Used for pulpwood, firewood, and quality lumber.



## Shagbark Hickory

*Carya ovata*



Medium to large tree most common in southern half of Wisconsin. Prefers well drained rich soils. Seldom in pure stands. Reproduces from stump sprouts and seed. Shaggy bark. Edible nuts used by humans and wildlife. Used for pulpwood, firewood, and quality lumber.



## Hard Maple (Sugar)

*Acer saccharinum*



Wisconsin's state tree. Large size tree common in northern Wisconsin but present statewide. Prefers moist to well drained rich soils. Reproduces from seed and stump sprouts. Will tolerate shade. Used for maple syrup, pulpwood, firewood, and quality lumber. Magnificent fall colors. 100+ year life span.



## Red Maple

*Acer rubrum*



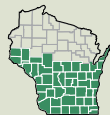
Fast growing, medium size tree that will tolerate poorly drained soils. Will do well on uplands if competition is controlled. Reproduces from stump sprouts and seed. Need to control deer browsing when young. Used mainly for pulpwood. Red to yellow leaves in the fall. 45-80 year life span.





## Silver Maple

*Acer saccharum*



Very fast growing, large tree adapted to wet heavy soil sites statewide especially along rivers. Reproduces from stump sprouts and seed. Bark in large loose plates when older. Full sun. Can produce heavy seed crops in early summer. Used for erosion control, ornamental planting, firewood, and lumber.



## Bur Oak

*Quercus macrocarpa*



Large tree grows best on moist to well drained soils statewide. Reproduces from stump sprouts and seed. Full sun. Acorns produced almost annually, fall with a cap attached, are preferred by wildlife. Used for ornamental planting, lumber and firewood. 100+ year lifespan.



## Red Oak

*Quercus rubra*

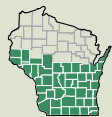


Fast growing, large tree grows best on moist to well drained loamy soils common statewide. Reproduces from stump sprouts and seed. Full sun. Acorns produced every 5-7 years, falls with caps off, preferred by wildlife. Good for ornamental plantings, lumber and firewood. 100+ year lifespan



## Swamp White Oak

*Quercus bicolor*



Large tree found in moist river drainages in southern half of Wisconsin. Tolerates periodic flooding. Reproduces from stump sprouts and seed. Full sun. Large acorns produced almost annually on a stem, fall with caps off, preferred wildlife food. Used for ornamental plantings, lumber and firewood. 100+ year lifespan



## White Oak

*Quercus alba*



Large tree grows best on moist to well drained loamy soils statewide. Grey flakey bark. Reproduces from stump sprouts and seed. Full sun. Acorns produced almost annually, fall with caps off, preferred wildlife food. Used for ornamental plantings, quality lumber and firewood. 100+ year lifespan



## Black Walnut

*Juglans nigra*



Fast growing, large tree best on rich fertile soil in the southern half of Wisconsin. Reproduces from stump sprouts and seed. Full sun. Edible nuts produced almost annually, used by humans and wildlife. Excellent tree for valuable high quality lumber. 100+ year lifespan.



# SHRUBS



**Common Winterberry**  
**Prairie Crab**  
**Red Osier Dogwood**  
**Silky Dogwood**  
**Cockspur Hawthorne**  
**Hazelnut**  
**Highbush Cranberry**  
**Juneberry**  
**Ninebark**  
**Wild Plum**

## **Common Winterberry**

*Ilex verticillata*

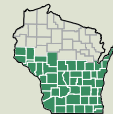


5' to 10' shrub found in the northern half of Wisconsin but will grow elsewhere. Often found with and looks like tag alder. Likes moist sites in full sun. Good for shoreline restoration projects. Red berries persist most of winter but are found only on female plants.



## **Prairie Crab**

*Malus ioensis*



5' to 15' small tree found mostly in the southern half of Wisconsin. Grows individually in full sun on moderate to well drained soils. Pink blossoms produce small hard green apples. May have spines on twigs. Good wildlife food. The only native crab apple in Wisconsin. Plant together in a clump.



## Red Osier Dogwood

*Cornus stolonifera*



3' to 10' shrub found mostly in southern half of state but will grow elsewhere. Likes moist sites in full sun. Red branches and stems prominent in winter. Cream colored flowers are followed by white berries ripening in September to October. Good wildlife food and cover. Plant together in a clump.



## Silky Dogwood

*Cornus amomum*



3' to 10' shrub found in southern half of Wisconsin but will grow elsewhere. Grows in clumps. Likes moist sites in full sun. Has red to yellow twigs. Pale blue to blueish white berries ripen in August to September. Good for wildlife cover and food. Plant together in a clump.



## Cockspur Hawthorne

*Crataegus spp.*



5' to 10' shrub found throughout Wisconsin. Likes well drained sites in full sun. Grows in clumps and as individuals. Has sharp thorns. Attractive white spring flowers produce hard marble size yellow, orange, or red fruit used by birds and other wildlife ripe in September. Plant together in a clump.





## Hazelnut

*Corylus americana*



3' to 8' shrub found throughout Wisconsin on a variety of sites. Grows in clumps in openings to complete understory in some woodlands. Likes full sun. Small hard-shelled nuts eaten by squirrels and birds ripe in September. Plant together in a clump.



## Highbush Cranberry

*Viburnum trilobum*



3' to 8' shrub found throughout Wisconsin on a variety of sites. Likes full sun but will tolerate some shade. White flowers in June produce soft red fruit that is persistent through winter. Used by birds and other wildlife. Plant together in a clump.



## Juneberry

*Amelanchier spp.*



6' to 20' small multi-stemmed shrub or tree found throughout Wisconsin on well drained sites. Full sun. White spring flowers produce edible purple fruit similar to blueberries in mid summer. Good wild bird food. Plant together in a clump.



## Ninebark

*Physocarpus opulifolius*



3' to 8' spiraea-like shrub found throughout Wisconsin on moderately dry to moist sites in full sun. Has brown exfoliating bark and small white flowers. Produces small red seed pods. Good wildlife cover. Plant together in a clump.



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## Wild Plum

*Prunus americana*



6' to 15' small tree found throughout Wisconsin on rich moist sites in full sun. Some twigs have spines. Will grow into thick patches. Yellow to purple 1 inch diameter fruit is edible. Good wildlife cover and food. Plant together in a clump.



Six year old white pine plantation

## PACKET DESCRIPTION AND USE

*"Packets" are available to meet special planting objectives. All of these packets contain 300 seedlings of a variety of species and amounts and meet the minimum order amounts. Packet contents are determined by the nursery and may vary each year depending on seedling availability.*

**Windbreak Packet:** Contains 300 conifers and is suitable for creating a windbreak. This packet is sufficient to plant a three-row windbreak about 800' long if an 8' x 10' spacing is used. Red pine and white spruce are in the northern version. White pine and white spruce are in the southern version of this packet. Plant the pine between rows of spruce in order to get fast early growth and maintain dense low branching years later.

**Moist Shoreland Packet:** Contains 50 conifers, 50 hardwoods, and 200 shrubs. This packet is for replanting or enhancing shorelands along lakes and rivers that have heavier soils and are moist. Full or partial sunlight is need for the seedlings in this packet. Shrubs should be planted together by species in clumps.

**Sandy Shoreland Packet:** Contains 25 conifers, 75 hardwoods, and 200 shrubs. This packet is for replanting or enhancing shorelands along lakes and rivers that have sandy, dryer soils. Full or partial sunlight is need for the seedlings in this packet. Shrubs should be planted together by species in clumps.

**Northern Forest Packet:** Contains 250 hardwoods and 50 conifers suitable for planting in northern Wisconsin on upland sites with loam to silt soils. This packet can be used to enhance existing woodlands by adding a wider range of tree species or replace species that have been lost. Seedlings in this packet will grow in partial shade.



The Hayward Nursery crew

**Central Hardwood Packet:** Contains 250 hardwoods and 50 conifers suitable for planting in central and southern Wisconsin on upland sites with loam to silt soils. This packet can be used to enhance existing woodlands by adding a wider range of tree species or replace species that have been lost. Seedlings in this packet will grow in full sun to partial shade.

**Bottomland Hardwood Packet:** Contains 300 hardwoods suitable for planting on central and southern Wisconsin sites that are periodically flooded and have loam to silt soils. Control of grass and brush competition is critical to the survival of these seedlings after planting.

**Savannah Packet:** Contains 200 hardwoods and 100 shrubs commonly found on presettlement savannas in southern Wisconsin. These seedlings should be sufficient for one to two acres of savanna.

**Deer Packet:** Contains 100 hardwood, 100 conifers, and 100 shrubs that will create a pocket of habitat that will hold deer on your property by providing food and cover requirements year around. Seedlings in this packet should not be mixed but planted in clumps of the same species. Plant in full sun for best growth. Deer browsing may need to be controlled for the first few years to allow seedlings to establish.

**Song Bird Packet:** Contains 100 conifers, and 200 shrubs. Conifers are desirable for creating winter cover and the shrubs (two species) provide both cover and food. Plant in full or partial sun. Seedlings in this packet should be planted in clumps of the same species.

**Grouse Packet:** Contains 100 hardwood, 100 conifers, and 100 shrubs that are important elements of good grouse habitat. These seedlings are suitable for planting in northern and central Wisconsin on sandy loam to silt soils in full sun. Plant seedlings in this packet in clumps of the same species.

**Turkey Packet:** Contains 150 hardwoods, 100 conifers, and 50 shrubs that are important elements of turkey habitat. These seedlings are suitable for planting in central and southern Wisconsin on sandy loam to silt soils in full to partial sun.

## **TREE SEED FOR DIRECT SEEDING PROJECTS**

*Tree seed is available for purchase through the state nurseries for direct seeding reforestation projects. Seed offered for sale varies by year and is dependent on availability. Order forms for seed are available through DNR foresters. It is very important that landowners considering a direct seeding project consult a professional forester for advice to determine seeding rates, species mixes, site preparation requirements, and other elements particular to this practice.*



## TREE AND SHRUB ORDERING INSTRUCTIONS

*Before ordering, please contact your local DNR forester if applying for federal or state cost sharing for tree planting.*

*For up-to-date information on planting, species availability and on-line ordering, visit us on the web at: <http://dnr.wi.gov/forestry/Nursery/Order/index.htm>. For species availability information call 1-800-875-9050.*

**1.** Legibly print your name, address, phone number, method of delivery, county and legal description where trees will be planted. (Look in your county plat book or Gazetteer if you don't know the section, township and range or call the county clerk of records.) Failure to supply this information will result in the return of your order for completion.

**2.** A minimum order is 1000 tree seedlings or 500 shrubs or one packet. Trees and shrubs may be purchased in increments of 100 of each species.

**3.** An ungraded (bulk) order is at least 3,000 trees of one species and age (no ungraded orders will be accepted for black walnut or wildlife shrubs). Bulk shipments are discount priced because these orders are not counted or graded at the

*• In Wisconsin, an average acre of forest has sequestered 160 tons of carbon dioxide by the time its 80 years old.*

nursery. The number of trees shipped for ungraded orders are based on bed-run inventories. Consequently, an ungraded order may contain 10% more or less than the number of seedlings ordered. These orders should be graded before planting according to the guidelines listed in this catalog. It is recommended that the 'cull' seedlings not be planted because of reduced survival and growth.

**4.** Please indicate a second choice to better insure your order can be filled. If you don't indicate a second choice, you won't receive a second choice if your first choice is sold out.



Seeding hardwoods at the Wilson Nursery

**5.** A 5 1/2% sales tax must be added to the nursery seedlings prices. If the seedlings are being used for silviculture purposes then your purchase may be tax exempt. Please submit Department of Revenue form 211 which can be downloaded from <http://www.revenue.wi.gov/forms/sales/s-211.pdf> with your order for tax exemption.

**6.** For orders submitted by January 31st, DO NOT SEND A PAYMENT at the time of ordering. A billing invoice and order confirmation will be mailed to you. Submit your payment in full within 30 days of the invoice date. Failure to receive a payment will result in cancellation of your order.



The Wilson Nursery grading crew

- Exception: For orders exceeding \$1000, customers may opt to pay only a 25% down payment with the balance due by March 15th.

For orders submitted on or after February 1st, full payment must accompany the order.

**Full payment is required to ship seedlings.** Make checks or money orders payable to: Department of Natural Resources. Cash is not accepted. Your canceled check will be your receipt. Checks returned for non-sufficient funds will be assessed a \$20 fee. Refunds of less than \$25 will not be made unless requested by phone or in writing by the purchaser.

**7.** Mail your order to: Griffith Nursery, 473 Griffith Avenue, Wisconsin Rapids, WI 54494.

*Notice: Under s. 28.06, Wis. Stats., this form is required to purchase trees and shrubs from the Department. Personally identifiable information provided on this form will be used to administer the program and may be made available to requesters under Wisconsin's Open Records law.*

- *By planting an acre of forest and maintaining it for 80 years, a household of four can offset four years of emissions*

**1.** Select your Preferred Method of Delivery on the order form. A delivery service, for a small fee, is provided to many counties (see the \* next to the county on the Forester's list to determine if available). If you check the "Ship by \_\_\_\_\_ County Truck" box, a local DNR forester will contact you about the time and location that your trees will arrive. Missing the scheduled delivery date, may require you to pick up your order at the designated nursery during regular business hours. If you check the "I Will Pick Up at the Following Nursery" box, the nursery will contact you to set a date for pick up.

**2.** Trees and shrubs from the State Nurseries are packaged in waxed cardboard boxes with plastic bags inside or in water resistant bags. The boxes are 30" long, 17" height, and 11" deep. Bags are the standard 50# dog food size. These containers may leak some water that was added when the trees were packed. Boxes and bags may weigh between 10# to 70# and may contain between 150 to 2000 seedlings depending on what was packed. Packages may contain more than one species and should be labeled accordingly. Trees and shrubs may be kept sealed in these containers for a week or more if they are kept cool and out of the sun. (They may be opened, watered, excess drained, and resealed if dryness is noted.)

**3.** A standard short bed pickup truck with a standard top-  
per will hold about 20 boxes. Large orders may be shipped

## SHIPPING INFORMATION

using refrigerated semi trucks. This is desirable because a low temperature is maintained during transit that helps maintain the viability of the seedlings. 53' semi vans will hold 560 boxes which are shipped on special pallets.

**4.** State nurseries normally operate Monday through Friday and are open for pick-up orders between 8:00 AM and 4:00 PM. It is helpful if you have your order number when you arrive.

**5.** State nursery stock is generally not shipped by commercial carrier because of the cost and the lack of temperature control during delivery.



Lifting 3-year old white pine at the Griffith Nursery  
spring of 2009

## HAND PLANTING USING A PLANTING BAR

This method is suitable for small seedlings on sites with rocks and roots.



### STEP 1

Insert planting bar at an angle, then push forward to an upright position.



### STEP 2

Place seedling at correct depth. Vertically insert bar 2" from seedling. Pull bar back, firming soil at bottom of hole.



### STEP 3

Push bar forward, firming the remainder of the hole.



### STEP 4

Fill remaining hole. Step on soil around seedling to firm.



## HAND PLANTING USING A SHOVEL

This method is suitable for larger seedlings on sites with few rocks and roots.



### STEP 1

Insert a sand shovel vertically into soil.



### STEP 2

Insert shovel at an angle to create a wedge of soil.



### STEP 3

Lift out soil wedge.

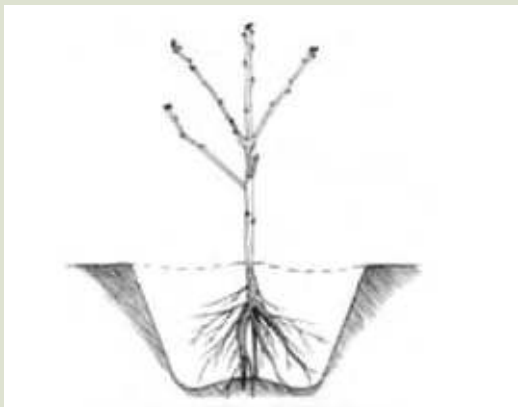


### STEP 4

Place seedling against vertical side of hole, replace soil wedge, then step on wedge to anchor it in place.

## HAND PLANTING USING AN AUGER OR SHOVEL

This method is suitable for large to very large seedlings on most sites. Be sure not to plant deeper than the root collar on the seedling.



**STEP 1** Using a shovel or auger, plant the tree in a hole deep enough and large enough to hold the roots of the tree.

**STEP 2** Place the tree in the hole so that roots are not doubled or bent. Use soil to help spread the roots.

**STEP 3** Fill in with loose dirt and pack to achieve good root-to-soil contact. Lightly depress surface soil for water penetration. Pack soil, removing air pockets.

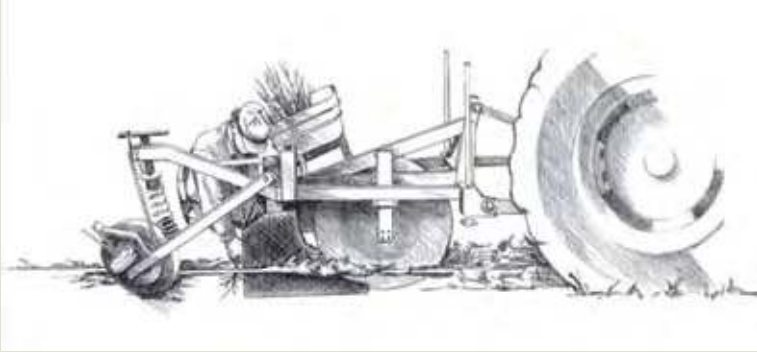


State nurseries provide a free seedling to all WI 4th grade students each year as part of Arbor Day Celebrations

- *Approximately four to seven pounds of carbon are sequestered annually during the first 50 years for each deciduous tree planted.*

*"Figures courtesy of Nina Upchurch and Iowa Department of Natural Resources".*

## MACHINE PLANTING



Tractor-drawn planting machines are limited to areas that can be worked with farm equipment. Average planting rates are 500-700 seedlings per hour. County Land Conservation Committees and other conservation groups often have tree planting machines to loan or rent; some may provide other assistance as well. Tree planting contractors are also available. Before starting, get instructions from the planting machine owner or a DNR Forester. Be sure the machine opens an adequate planting trench and that it packs the trees firmly. If planting is done by a contractor, be sure the operators are well trained and experienced. It is often a good idea to have someone follow the planter to fill in missing trees and to make sure seedlings are firmly packed in the ground.



The Hayward Nursery in its fall colors



Machine Planting

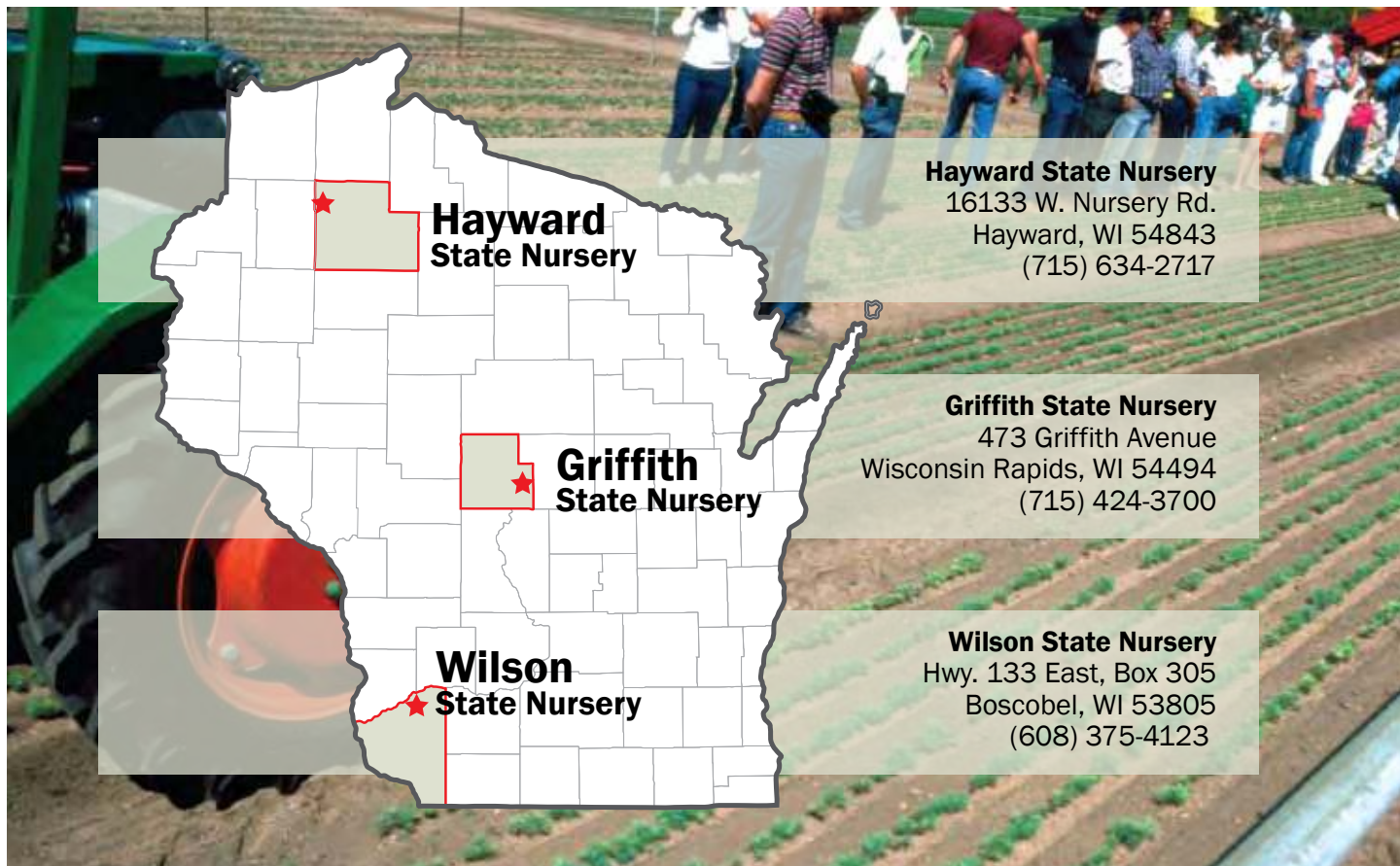
## WI DEPARTMENT OF NATURAL RESOURCES FORESTERS

• <b>Adams</b>	DNR Ranger Station, Hwy. 13, Box 100, Friendship 53934	(608) 339-3386
• <b>Ashland</b>	DNR, 620 Layman Drive, PO Box 709, Mellen 54546	(715) 274-6321
* • <b>Barron</b>	DNR, 127 South 4th Street, Barron 54812	(715) 637-6865
• <b>Bayfield</b>	DNR Ranger Sta, 203 E. Bayfield, Box 545, Washburn 54891	(715) 373-6165
* • <b>Brown</b>	DNR, 2984 Shawano Ave. , Green Bay 54313	(920) 662-5156
* • <b>Buffalo</b>	DNR, Courthouse, PO Box 88, Alma 54610	(608) 685-6223
* • <b>Burnett</b>	DNR Ranger Station, 26387 Lakeland Av S, Box 51 Webster 54893	(715) 866-8201
* • <b>Calumet</b>	DNR, 3369 W. Brewster St., Appleton 54914	(920) 832-2747
* • <b>Chippewa</b>	DNR, 711 N. Bridge, Chippewa Falls 54729	(715) 726-7885
* • <b>Clark</b>	DNR, 400 Hewitt Street, Room 106, Neillsville 54456	(715) 743-5134
* • <b>Columbia</b>	DNR, W7303 County Hwy CS, Poynette, 53955-9690	(608) 635-8113
• <b>Crawford</b>	DNR, 210 School Street, PO Box 186, Gays Mills 54631	(608) 735-4672
* • <b>Dane</b>	DNR Forester, 3911 Fish Hatchery Rd., Madison 53711	(608) 275-3234
* • <b>Dodge</b>	DNR Service Center, N7725 Hwy 28, Horicon 53032	(920) 387-7884
* • <b>Door</b>	DNR, 110 South Neenah Ave., Sturgeon Bay 54235	(920) 746-2876
• <b>Douglas</b>	DNR Ranger Station, County Hwy Y, Box 60, Gordon 54838	(715) 376-2299
* • <b>Dunn</b>	DNR, 921 Brickyard Road, Menomonie 54751	(715) 232-1516
* • <b>Eau Claire</b>	DNR, 1300 W. Clairemont, Box 4001, Eau Claire 54702	(715) 839-3782
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* • <b>Forest</b>	DNR, 404 N. Lake Street, Crandon 54520	(715) 478-3717
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* • <b>Green Lake</b>	DNR 363 Church Street, Montello 53949	(608) 297-2226



* • <b>Iowa</b>	DNR Service Center, 1500 N Johns Street, Dodgeville 53533	<b>(608) 935-3368</b>
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* • <b>Jackson</b>	DNR, 910 Hwy 54 E., Black River Falls 54615	<b>(715) 284-1432</b>
* • <b>Jefferson</b>	DNR Service Center, 2514 Morse St., Janesville 53545	<b>(608) 743-4830</b>
* • <b>Juneau</b>	DNR, 650 Prairie Street, PO Box 288, Mauston 53948	<b>(608) 847-9394</b>
* • <b>Kenosha</b>	DNR, 9531 Rayne Road, Sturtevant 53177	<b>(262) 884-2390</b>
• <b>Kewaunee</b>	DNR, 2984 Shawano Ave. , Green Bay 54313	<b>(920) 662-5156</b>
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* • <b>Marquette</b>	DNR 363 Church Street, Montello 53949	<b>(608) 297-2888</b>
• <b>Menominee</b>	DNR, Box 670, Keshena, 54135	<b>(715) 799-3896 ex 2266</b>
* • <b>Milwaukee</b>	DNR, S91 W39091 Hwy 59, Eagle, 53119	<b>(262) 594-6209</b>
* • <b>Monroe</b>	DNR, 820 Industrial Dr., Suite 4, Sparta 54656	<b>(608) 269-6901</b>
* • <b>Oconto</b>	DNR Ranger Sta., Box 96, Oconto Falls 54154	<b>(920) 846-2980</b>
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* • <b>Outagamie</b>	DNR, 3369 Brewster Street, Appleton 54914	<b>(920) 832-2747</b>
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* • <b>Waupaca</b>	DNR, Hartman Creek Park, N2480 Hartman Creek Road, Waupaca 54981	(715) 258-8432
* • <b>Waushara</b>	DNR 427 E. Tower Drive, Suite 100, Wautoma 54982	(920) 787-4686 ex 3026
* • <b>Winnebago</b>	DNR, 625 E. County Road Y, Oshkosh 54901- 9731	(920) 424-3056
• <b>Wood</b>	DNR, 473 Griffith Ave., Wisconsin Rapids 54494	(715) 421-7819



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