



# Planting and Care of Fine Hardwood Seedlings



Hardwood Tree Improvement and  
Regeneration Center

Northern Research Station  
USDA Forest Service

Department of Forestry and Natural Resources  
Purdue University



## Resources and Assistance Available for Planting Hardwood Seedlings

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### Introduction

Preparing for and implementing a successful tree planting involves several steps, ideally starting almost a year before the seedlings are planted. A publication by Meilan (2006) in the series *Planting and Care of Fine Hardwood Seedlings* (Pijut 2007) outlines the considerations and schedule of activities that precede planting, and follow-up activities to help the plantation become established and thrive. Part of this planning process is finding sources of materials, information, and assistance. Planning, site preparation, planting, weed control, pruning, thinning, and managing the financing of each of these activities requires access to materials, advice, and assistance. This publication will provide resources to help landowners interested in planting trees for conservation purposes find seedlings, tools and materials, professional advice and assistance, and the possibility of some financial incentives. The resources and contact information provided will emphasize hardwood seedling planting in the Central Hardwood Region (Pijut 2003) and should not be considered an exhaustive list. Some of the local advice and assistance contacts listed in this publication can provide more details on assistance available in your area.

### Professional Advice and Assistance

An important part of a successful tree planting program is obtaining professional advice and assistance to help plan and implement the planting project. A study of tree plantings in Indiana found that tree plantings installed by professional foresters performed significantly better than plantings installed by the landowner (Jacobs et al. 2004). Professional foresters provide expert advice in the planning process, and have experience using the correct tools, materials, and techniques in the installation and maintenance of plantings. That experience helps the landowner avoid mistakes that can result in poor performance of the plantation, or outright failure.

Several sources of professional assistance are available. Most states in the region have agencies that provide forest management and tree planting assistance to private landowners. Many of these

agencies can provide on-site consultation, plan preparation, and referrals to public or private sources of seedlings and tree planting contractors. These services from the state forestry agencies are generally free, but there may be a long wait to get access to the services. See Table 1 on page 9 for a listing of the Central Hardwood Region state forestry agency contacts for tree planting services, or visit the National Association of State Foresters website to find the State Forester for your state (<http://www.stateforesters.org/SFlist.html>).



Most states also have private professional foresters (often referred to as consulting foresters), industry foresters, and professional tree planting contractors who can provide a variety of tree planting and plantation management services for hire. Local lists of these professional contractors can be obtained from state forestry agencies, Cooperative Extension Service offices, and local Soil and Water Conservation District offices. A national listing of consulting foresters is available from the Association of Consulting Foresters of America, Inc, 312 Montgomery Street, Suite 208, Alexandria, Virginia 22314, Phone: 703-548-0990, Fax: 703-548-6395, email: [director@acf-foresters.org](mailto:director@acf-foresters.org) or from the Association of Consulting Foresters website (<http://www.acf-foresters.org>). Many of these contractors can provide the full range of services associated with planting and maintaining hardwood

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seedlings. This group possesses experience and understanding of the local conditions for tree planting, and has access to equipment and weed control materials that may not be available to the landowner.

If you would like to plant the seedlings yourself, professional foresters can give you guidance on selecting the correct species for your site and planting objectives, seedling spacing and arrangement, site preparation and weed control, and proper planting techniques for the tools you have available. Landowners can obtain additional information on tree planting from the Natural Resources Conservation Service (NRCS) Electronic Field Office Technical Guide [eFOTG] (<http://www.nrcs.usda.gov/technical/efotg>). The NRCS eFOTG contains standards and specifications for tree planting, and may include job sheets with technical guidance on tree planting. In addition, landowners can contact the local NRCS office to obtain copies of the eFOTG information, soil maps, and detailed soils information for your property. The NRCS may also be able to provide you with recommended tree species by soil type and seeding information for cover crops, as well as technical assistance with erosion control issues. You can find the nearest NRCS office in the phone book under US Government Offices, Dept. of Agriculture, or visit their web site (<http://www.nrcs.usda.gov>). Detailed

soils information is available from the NRCS Web Soil Survey (<http://websoilsurvey.nrcs.usda.gov/app>) or download soils information at the NRCS Soils Data Mart (<http://www.soildatamart.nrcs.usda.gov>).

The County Cooperative Extension Service can provide access to publications providing practical information for planning and planting hardwood seedlings, as well as direction to local sources of assistance. Check your local phone listings for the county office location and number. Contact information for cooperative extension programs around the nation can be obtained at: <http://www.csrees.usda.gov/Extension/index.html>.

Be aware that planting seedlings can be a major commitment of time and energy, and results may vary depending on the quality of planning and work done. It can also be a highly rewarding activity yielding both tangible and intangible benefits for many years. Be sure to get professional help with planning and planting to increase your chances of success.

## Financial Incentives for Tree Plantations

Another topic to explore early in the planning process is access to financial assistance and incentive programs for tree plantings. Several federal and state programs may be available to landowners who meet program eligibility requirements and are willing to design and install their plantings to program specifications. In addition, some local government entities and non-government organizations may also provide assistance for tree plantings that coincide with the goals of their organization. Many of these programs will not cover costs incurred before you have been approved for funding, so exploring these options early in your planning process is important.

Two Purdue University publications provide a detailed review of agencies, organizations, and related programs that may provide financial incentives or assistance for tree planting (McGowan et al. 2001; Rathfon et al. 2002). These publications, as well as the others mentioned in this publication, are available as free online documents at the Purdue University Department of Forestry and Natural Resources Extension publications website (<http://www.agriculture.purdue.edu/fnr/Extension/extpubs.htm>), or can be ordered for a fee from the Cooperative Extension Service, 1-800-EXT-INFO. These documents outline programs in Indiana, but many of the federal programs are consistent across the region.

The primary contact points for the programs are the local district or extension forester associated with the state forestry agency, and the local NRCS office. The foresters can provide an overview of programs currently available and guide you to the particular programs that may meet your needs. The NRCS office will help you determine your eligibility for federal programs, assist you with the application process, and provide details on program requirements. Program eligibility requirements and funding levels can change from year to year. In addition, new programs may be added and old ones discontinued, so checking with your forester or NRCS office regularly is advised. Acceptance of financial assistance may have income tax implications as well, so ask the program manager how the funds will be considered for tax purposes.

Tree planting expenses may be eligible for advantageous tax treatment in the form of tax credits and amortization of expenses. Explanations and examples of options for the tax treatment of tree planting expenses can be found in the publication by Hoover (2004). Another source of general tax information for forest and tree plantation owners is the National Timber Tax website (<http://www.timbertax.org>).

Several states in the Central Hardwoods Region offer property tax reduction programs for landowners who plant conservation tree plantings,



or practice sustainable forest management on their property. Consult your state forestry agency about eligibility and application procedures. Some of these programs are paired with financial assistance for tree planting and forest management as well as technical assistance, so they can be advantageous to the landowner in multiple ways. Some of these programs also offer group certification of sustainable forest management. This certification could be an important advantage for marketing forest products, as more forest product users are looking for materials from certified sustainable sources.

Some states are planning or have already initiated carbon offset programs. The premise is that certain land management activities take carbon dioxide (CO<sub>2</sub>) from the atmosphere and lock it up (sequester) as plant material or organic matter. Companies that produce carbon dioxide as part of their operations may agree, or be required to cap their CO<sub>2</sub> emissions at a certain level. If they exceed that level of emission they are allowed to purchase carbon credits from entities that are actively sequestering carbon to offset their emissions. The Chicago Climate Exchange is one of the market places where these transactions occur. As an example, a landowner who plants 20 acres of trees could have the quantity of carbon sequestered by that planting verified by the Exchange and offer the carbon for sale to CO<sub>2</sub> emitters needing offset credits. The income from this carbon will be dependent on the market value of carbon at the time of sale, minus any costs associated with the transaction. Most private landowners will need to go through an aggregator to sell their carbon, since the exchange has minimum required quantities for trading purposes. Aggregators combine carbon from several landowners to meet the minimum volume requirements for trading on the exchange. A non-profit organization that is acting as an aggregator is the Delta Institute. They can help landowners with the administrative procedures required to sell their carbon. Contact the Delta Institute at:

**Delta Institute**

53 West Jackson Boulevard  
Suite 230  
Chicago, Illinois 60604  
Phone: (312) 554-0900  
Fax: (312) 554-0193  
E-mail: [delta@delta-institute.org](mailto:delta@delta-institute.org)  
Web: <http://www.delta-institute.org>





**Figure 1.** Bare-root ash seedlings are lifted from nursery beds and packaged for shipment when dormant. (Photo courtesy of John Seifert)



**Figure 2.** Containerized conifer seedlings showing the intact root system and soil plug. (Photo courtesy of Mel Baughman, Univ. of Minnesota)



**Figure 3.** Large containerized hardwood seedling. (Photo courtesy of Ron Rathfon)

Other aggregators may be available in your area. Check the Chicago Climate Exchange listings to see who can help you market the carbon sequestered by your tree plantation or forest land. Information on trading CO<sub>2</sub> can be obtained from the Chicago Climate Exchange at:

#### **Chicago Climate Exchange**

190 South LaSalle Street, 11th Floor

Chicago, Illinois 60603 USA

Phone: (312) 554-3350

Fax: (312) 554-3373

E-mail: [info@chicagoclimateexchange.com](mailto:info@chicagoclimateexchange.com)

Web: <http://www.chicagoclimateexchange.com/info/contact.html>

### **Sources of Seedlings**

Planting stock for hardwood reforestation projects is usually bare-root seedlings or, less frequently, containerized seedlings of a variety of sizes (Fig. 1-3). Two publications (Jacobs 2003; Pijut 2003) in the *Planting and Care of Fine Hardwood Seedlings* (Pijut 2007) provide a discussion of seedling quality and production techniques, and considerations for selecting and planting seedlings. Terminology used in the advertisement and sale of seedlings is detailed in the publication by Woeste and Woeste (2006) from this series. Selection and ordering of seedlings is normally completed in the summer or Fall before the year of planting. Ordering as soon as possible may be important, as demand for seedlings often exceeds supply. It is also recommended to have a list of second choices for each of the species you intend to plant. This allows you to make suitable substitutions if the nurseries have sold out of your first choice of species.

Seedlings are available from a variety of public and private nurseries across the Central Hardwood Region. Consider the seed source of the seedlings when ordering. Seedlings from populations not climatically adapted to your planting area may not perform well or survive extremes of temperature. Species native to your area and produced from local seed sources are often the best choice for planting, since they are biologically and climatically adapted to the local environment. Exotic (non-native) plant species have been used extensively for conservation plantings, but some of these species have become weeds that are competing with native plants. With a large number of excellent native tree species for timber and wildlife management, there is no need to risk the problems exotic species can cause. Pijut (2005) provides growth, site characteristics, and native range information for tree species commonly encountered in the region.



Many of the states in the Central Hardwood Region have state operated nurseries that offer seedlings to landowners for conservation and reforestation plantings. The state operated nurseries will usually provide seedlings at an attractive cost for reforestation efforts in the state. Some state programs provide free seedlings for specific uses. State nurseries often use local seed sources, so the trees you purchase should be climatically adapted to your area. Some nurseries provide “improved” or “genetically selected” seedlings providing improved growth, form or disease resistance. Contact information for the state nursery programs in the Central Hardwood Region can be found in Table 1 on page 9.

Private nurseries can also provide seedlings for tree plantations. Large orders of seedlings may be purchased at prices competitive with some state nurseries. Private nurseries may have different species, sizes of stock, or special services not available from state nurseries. Private nurseries in your area can often be located by contacting your area extension or district forester, Cooperative Extension Service office, or by contacting trade groups such as, private nursery associations in the state where you live. Ornamental tree nurseries in your area may also be able to provide information on availability of seedlings for tree plantings. The Reforestation, Nurseries, and Genetics Resources website (<http://www.rngr.net>) maintains a list of plant material suppliers, both public and private, that can be searched by location or product types.

### Equipment and Supplies

The type of equipment and supplies needed for a successful tree planting will depend on factors such as, the type and size of seedlings to be planted, soil and site conditions, weed control techniques, and practices required to protect seedlings from wildlife damage. If you hire a tree planting contractor, they may be able to provide most or all of the tools and materials needed for the planting and follow-up maintenance work. If you decide to do the work, you may need some specialized equipment and supplies not readily available at the local hardware or garden store. Some of the items you may need include tree planting bars (Fig. 4), seedling planting bags, stakes or flagging for plantation layout, herbicide sprayers (Fig. 5), herbicides or pesticides, tree tubes, weed barriers, and fencing. These and other related items are available from forestry equipment companies.



**Figure 4.** Tools for hand-planting tree seedlings. (Photo courtesy of Ron Rathfon)



**Figure 5.** Backpack sprayer for weed control treatments. (Photo courtesy of Ron Rathfon)





**Figure 6.** Tree tubes used to protect seedlings in a regeneration opening. (Photo courtesy of Ron Rathfon)

Three of the largest suppliers are:

**Forestry Suppliers Inc.**

205 West Rankin Street  
P.O. Box 8397  
Jackson, MS 39284-8397  
Phone: (800) 647-5368  
E-mail: sales@forestry-suppliers.com  
Web: <http://www.forestry-suppliers.com>

**Ben Meadows**

Mail Orders: P.O. Box 5277  
Janesville WI USA 53547-5277  
Phone: (800) 241-6401  
E-mail: mail@benmeadows.com  
Web: <http://www.benmeadows.com>



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**Figure 7.** A mechanical tree planter suitable for planting large bare-root seedlings. (Photo courtesy of Ron Rathfon)

**Bailey's**

*Southeastern Division*  
196 Edwards Dr.  
Jackson, TN 38301  
Phone: (800) 322-4539  
E-mail: [Baileys@Baileys-Online.com](mailto:Baileys@Baileys-Online.com)  
Web: <http://www.baileys-online.com>

Herbicides, pesticides, and fencing materials may also be available from local agricultural supply stores, and nurseries or garden stores. Be aware that some herbicides and pesticides are only available to licensed applicators, and all herbicides and pesticides should only be applied as indicated on the label.

Tree tubes or shelters (Fig. 6) can be used to protect seedlings from wildlife and herbicide damage. Some suppliers of tree tubes are:

**Summit Environmental Group, LLC**

P.O. Box 12267  
Toledo, OH 43612  
Phone: (888) 720-0185  
Fax: (419) 720-0187  
Web: <http://www.summitenvironmental.net/id30.htm>

**TREE PRO**

3180 West 250 North  
West Lafayette, IN 47906  
Phone: (800) 875-8071 or (765) 463-1011  
Fax: (765) 463-3157  
E-mail: sales@treepro.com  
Web: <http://www.treepro.com>

**Treesentials Company**

60 E. Plato Boulevard, Suite 130  
Saint Paul, MN 55107  
Phone: (800) 248-8239  
E-mail: [info@growtubes.com](mailto:info@growtubes.com)

Some county Soil and Water Conservation Districts have equipment such as, tree planting machines, seeders, or drills that can be rented for local use. Mechanical tree planters (Fig. 7) that are pulled behind a tractor can be purchased from several sources. Check with the manufacturer of the tree planter to determine the recommended minimum horsepower required to pull the machine. Two manufacturers of tree planting machines are:

**R.A. Whitfield Manufacturing Co.**

6431 Mableton Parkway, S.W.  
P.O. Box 188  
Mableton, GA 30126  
Phone: (770) 948-1212  
Fax: (770) 948-0155  
E-mail: [treesone@mindspring.com](mailto:treesone@mindspring.com)  
Web: <http://www.whitfieldforestry.com>

**Trees Are Us**

Tree Planters, Custom Planting & Weed Barrier Machines  
7355 Gage Road  
Hemingford, NE 69348  
Phone: (308) 487-3995

There are many companies that sell products related to tree planting and maintenance. Your local forestry contacts can provide you with more information on special products that may be helpful to you in planting and maintaining your trees.

**Organizations for Tree Planting Enthusiasts**

Tree planting and plantation management can become a fulfilling and enjoyable personal pastime or business venture. For those landowners interested in more intensive management and a greater depth of information and involvement, several organizations exist that can provide a venue for information gathering and sharing, knowledge and experience networks, and a chance to see how others have used tree plantings to meet their property objectives.

This listing is not definitive, but should help you find a place to connect with other landowners, resource professionals, and business entities who are interested in hardwood tree planting and plantation management.

**The American Chestnut Foundation**

469 Main Street, Suite 1  
P.O. Box 4044  
Bennington, Vermont 05201  
Phone: (802) 447-0110  
E-mail: [chestnut@acf.org](mailto:chestnut@acf.org)  
Web: <http://www.acf.org>

**American Forests**

P.O. BOX 2000  
Washington, DC 20013  
Phone: (202) 737-1944  
Web: <http://www.americanforests.org>

**American Tree Farm System**

1111 19<sup>th</sup> St., N.W., Suite 780  
Washington, D.C. 20036  
Phone: (202) 463-2462  
E-mail: [info@treefarmssystem.org](mailto:info@treefarmssystem.org)  
Web: <http://www.treefarmssystem.org>

**The Forest Stewardship Council Family Forest Alliance**

Phone: (612) 333-0430  
E-mail: [Katie@dovetailinc.org](mailto:Katie@dovetailinc.org)  
Web: <http://www.fscus.org/>

**National Arbor Day Foundation**

100 Arbor Avenue  
Nebraska City, NE 68410  
Phone: (888) 448-7337  
Web: <http://www.arborday.org>

**National Woodland Owners Association**

374 Maple Ave. E., Suite 310  
Vienna, VA 22180  
Phone: (800) 476-8733  
E-mail: [info@woodlandowners.org](mailto:info@woodlandowners.org)  
Web: <http://www.woodlandowners.org>

**The Walnut Council**

Wright Forestry Center  
1011 N. 725 W.  
West Lafayette, IN 47906-9431  
Phone: (765) 583-3501  
Web: <http://www.walnutcouncil.org>

There are many state and local organizations in the Central Hardwood Region that are interested in tree planting and forest stewardship. Your local foresters and the offices of the Cooperative Extension Service and Soil and Water Conservation District can provide contact information for groups you may be interested in contacting.

Resource Conservation and Development Councils are locally led groups that work on community development and natural resource issues. Many of these councils have active forestry, wildlife, or natural resources committees that participate in a wide variety of education or development programs.

The US Forest Service offers several programs and information sources for management of tree plantings and private forest lands. Below is contact information for these entities:

**Cooperative State Research, Education, and Extension Service (CSREES)**

Web: <http://www.csrees.usda.gov/Extension/index.html>

**Directory of Soil and Water Conservation Districts**

Web: <http://www.nacdnet.org/directory/index.htm>

**Directory for Resource Conservation and Development Councils**

Web: <http://www.rcdnet.org/Directory/login.php>

**US Forest Service Landowner Assistance Programs**

Web: <http://www.fs.fed.us/spf/coop/programs/loa>



## Conclusion

There is an abundance of information and assistance available to landowners interested in planting trees for conservation purposes. Planning ahead, seeking professional assistance, and knowing where to find the tools and materials will increase your chances of having a successful planting. It can be as simple as contacting a professional forester to take care of the entire planting process, or you can become as involved as your time and energy allow. In either case, enjoy the many benefits tree plantings provide now and in the decades to come, through carefully planning and implementing your project.

## Literature Cited

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- Jacobs, D.F., A.L. Ross-Davis, and A.S. Davis. 2004. *Establishment Success of Conservation Tree Plantations in Relation to Silvicultural Practices in Indiana, USA*. *New Forests* 28(1):23-36.
- Hoover, W.L. 2004. *Financial and Tax Aspects of Tree Planting*. USDA Forest Service, North Central Research Station and Purdue University, Department of Forestry and Natural Resources, West Lafayette, IN. FNR-214. 7 p.
- McGowan, B.J., B.K. Miller, and J.R. Seifert. 2001. *Forestry and Wildlife Management Assistance Available to Indiana Landowners: Providers, Organizations, and Programs*. Purdue University Cooperative Extension Service, West Lafayette, IN. FNR-87. 16 p.
- Meilan, R. 2006. *Planning the Tree Planting Operation*. USDA Forest Service, Northern Research Station and Purdue University, Department of Forestry and Natural Resources, West Lafayette, IN. FNR-223. 4 p.
- Pijut, P.M. 2003. *Planting Hardwood Seedlings in the Central Hardwood Region*. USDA Forest Service, North Central Research Station and Purdue University, Department of Forestry and Natural Resources. FNR-210. 8 p.
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Pijut, P.M. 2007. *Planting and Care of Fine Hardwood Seedlings*. USDA Forest Service, Northern Research Station and Purdue University, Department of Forestry and Natural Resources, West Lafayette, IN. FNR-235.

Rathfon, R., W.L. Hoover, D. Ernst, and A. Pursell. 2002. *A Landowners Guide to Sustainable Forestry in Indiana, Part 8: Help!*, Purdue University Cooperative Extension Service, FNR-187. 9 p.

Woeste, K. and V.S. Woeste. 2006. *A Guide to Legal and Genetic Terminology Used in the Sale of Hardwood Seedlings and Planting Stock*. USDA Forest Service, Northern Research Station and Purdue University, Department of Forestry and Natural Resources, West Lafayette, IN. FNR-222. 8 p.

## Additional Resources

These sites are good general reference for tree planting and forestry topics:

*Forest Landowners Guide to Internet Resources:*

### States of the Northeast

Web: <http://na.fs.fed.us/pubs/misc/flg>

### USDA Forest Service Cooperative Forestry

Web: <http://www.fs.fed.us/spf/coop>

### Community Forestry Resource Center

Web: <http://www.forestrycenter.org/index.cfm>

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**Table 1. State Forest Agencies and State Seedling Nurseries for the Central Hardwood Region.**

State Forestry Agency	State Nursery Addresses (Unless otherwise noted, the website for the state forestry agency provides the link to the nursery program)	State Nursery (Phone numbers)	Seedling Types Available <sup>1</sup> .
<i>Alabama Forestry Commission</i> Phone: (334) 240-9300 <a href="http://www.forestry.state.al.us">http://www.forestry.state.al.us</a>	No state nursery – list of private nurseries at their web site.		
<i>Arkansas Forestry Commission</i> Phone: (501) 296-1940 <a href="http://www.forestry.state.ar.us">http://www.forestry.state.ar.us</a>	<i>Baucum Nursery</i> 1402 Hwy 391 N North Little Rock, AR 72117	(501) 907-2485	HD, CO, BR, IMP
<i>Connecticut Forestry Division</i> Phone: (860) 424-3630 <a href="http://www.dep.state.ct.us/burnatr/forestry">http://www.dep.state.ct.us/burnatr/forestry</a>	No State Nursery – list of private nurseries under “Plants” in the “Natural Resources” section of the web site.		HD, CO, SH, BR
<i>Georgia Forestry Commission</i> Phone: (800) GA-TREES, (428-7337) <a href="http://www.gatrees.org">http://www.gatrees.org</a>	<i>Flint River Nursery</i> 9850 River Road Byromville, GA 31007	(229) 268-7308	HD, CO, SH, BR, IMP
<i>Illinois Division of Forest Resources</i> Phone: (217) 782-6302 <a href="http://dnr.state.il.us/conservation/forestry">http://dnr.state.il.us/conservation/forestry</a>	<i>Mason State Nursery</i> 17855 N. County Road 2400 E. Topeka, IL 61567	(309) 535-2185 Contact a district forester from the state web site.	HD, CO, SH, BR
	<i>Union State Tree Nursery</i> 3240 State Forest Rd. Jonesboro, IL 62952	(618) 438-6781 Contact a district forester from the state web site.	HD, CO, SH, BR
<i>Indiana Division of Forestry</i> Phone: (317) 232-4105 <a href="http://www.in.gov/dnr/forestry">http://www.in.gov/dnr/forestry</a>	<i>Vallonia State Nursery</i> 2782 W. Co. Rd. 540 S P.O. Box 218 Vallonia, IN 47281	(812) 358-3621	HD, CO, SH, BR, IMP
<i>Iowa Bureau of Forestry</i> Phone: (515) 242-5966 <a href="http://www.iowadnr.com/forestry">http://www.iowadnr.com/forestry</a>	<i>State Forest Nursery</i> 2404 South Duff Avenue Ames, IA 50010	(800) 865-2477	HD, CO, SH, BR
<i>Kansas Forest Service</i> Phone: (785) 532-3300 <a href="http://www.kansasforests.org">http://www.kansasforests.org</a>	Kansas Forest Service 2610 Claflin Rd. Manhattan, KS 66502-1798	(785) 532-3315	HD, CO, SH, BR, CT
<i>Kentucky Division of Forestry</i> Phone: (502) 564-4496 <a href="http://www.forestry.ky.gov">http://www.forestry.ky.gov</a>	<i>John P. Rhody Nursery</i> P.O. Box 97 Gilbertsville, KY 42044	(270) 362-8331	HD, CO, SH, BR
	<i>Morgan County Nursery</i> 438 Tree Nursery Road West Liberty, KY 41472	(606) 743-3511	HD, CO, SH, BR
<i>Maryland Forest Service</i> Phone: (410) 260-8531 <a href="http://www.dnr.maryland.gov/forests">http://www.dnr.maryland.gov/forests</a>	<i>John S. Ayton State Tree Nursery</i> 3424 Gallagher Rd. Preston, MD 21665	(800) 873-3763	HD, CO, SH, BR
<i>Michigan Department of Natural Resources</i> Phone: (517) 373-1275 <a href="http://www.michigan.gov/dnr">http://www.michigan.gov/dnr</a>	No public nursery sales program. Contact the DNR for list of private nurseries.		
<i>Minnesota Division of Forestry</i> Phone: (651) 259-5300 <a href="http://www.dnr.state.mn.us/forestry">http://www.dnr.state.mn.us/forestry</a>	<i>General Andrews Nursery</i> P.O. Box 95 - Seedling Sales Willow River, MN 55795	(800) 657-3767	HD, CO, SH, BR, IMP
<i>Mississippi Forestry Commission</i> Phone: (601) 359-1386 <a href="http://www.mfc.state.ms.us">http://www.mfc.state.ms.us</a>	<i>Waynesboro Nursery</i> 1063 Buckatunna-Mt. Zion Rd. Waynesboro, MS 39367	(601) 735-9512	HD, CO, BR, CT, IMP
<i>Missouri Department of Conservation</i> Phone: (573) 751-4115 <a href="http://www.mdc.mo.gov/forest">http://www.mdc.mo.gov/forest</a>	<i>George O. White State Forest Nursery</i> 14027 Schafer Rd. Licking, MO 65542	(573) 674-3229	HD, CO, SH, BR, IMP
<i>Nebraska Forest Service</i> Phone: (402) 472-4975 <a href="http://www.nfs.unl.edu">http://www.nfs.unl.edu</a>	<i>Trees are available from local Natural Resource District offices</i> <a href="http://www.nrdnet.org/trees">http://www.nrdnet.org/trees</a>		



**Table 1. State Forest Agencies and State Seedling Nurseries for the Central Hardwood Region. (continued)**

State Forestry Agency	State Nursery Addresses (Unless otherwise noted, the website for the state forestry agency provides the link to the nursery program)	State Nursery (Phone numbers)	Seedling Types Available <sup>1</sup> .
<i>New Hampshire Division of Forests &amp; Lands</i> Phone: (603) 271-2214 <a href="http://www.dred.state.nh.us/divisions/forestandlands/bureaus/index.htm">http://www.dred.state.nh.us/divisions/forestandlands/bureaus/index.htm</a>	<i>New Hampshire State Forest Nursery</i> 405 Daniel Webster Hwy. Boscawen, NH 03303	(603) 796-2323	HD, CO, SH, BR
<i>New Jersey Forest Service</i> Phone: (609) 292-2531 <a href="http://www.state.nj.us/dep/parksandforests/forest">http://www.state.nj.us/dep/parksandforests/forest</a>	<i>New Jersey Forest Tree Nursery</i> 370 East Veterans Highway Jackson, NJ 08527	(732) 928-0029	HD, CO, SH, BR
<i>New York Division of Lands &amp; Forests</i> Phone: (518) 402-9425 <a href="http://www.dec.state.ny.us/website/dlf/privland">http://www.dec.state.ny.us/website/dlf/privland</a>	<i>Saratoga Tree Nursery</i> 2369 Route 50 Saratoga Springs, NY 12866	(518) 581-1439	HD, CO, SH, BR
<i>North Carolina Division of Forest Resources</i> Phone: (919) 733-2162 <a href="http://www.dfr.state.nc.us">http://www.dfr.state.nc.us</a>	<i>Claridge Nursery</i> 762 Claridge Nursery Road Goldsboro, NC 27503	(888) 628-7337	HD, CO, SH, BR, CT
	<i>Linville River Nursery</i> 6321 Linville Falls Hwy. Newland, NC 28657	(828) 733-5236	HD, CO, SH, BR
<i>Ohio Division of Forestry</i> Phone: (877) 247-8733 <a href="http://www.dnr.state.oh.us/forestry">http://www.dnr.state.oh.us/forestry</a>	<i>Marietta State Nursery</i> P.O. Box 428 Reno, OH 45773-0428	(877) 691-8733	HD, CO, SH, BR, IMP
<i>Oklahoma Forestry Services Division</i> Phone: (405) 522-6158 <a href="http://www.oda.state.ok.us/forestry-overviewhome.htm">http://www.oda.state.ok.us/forestry-overviewhome.htm</a>	<i>Oklahoma Department of Ag Forestry Services</i> 830 NE 12th Ave. Goldsby, OK 73093	(800) 517-3673	HD, CO, SH, BR, CT
<i>Pennsylvania Bureau of Forestry</i> Phone: (717) 787-4777 <a href="http://www.dcnr.state.pa.us/forestry">http://www.dcnr.state.pa.us/forestry</a>	<i>Penn Nursery</i> R.R. 1, Box 127 Spring Mills, PA 16875	(814) 364-5150	HD, CO, BR, IMP
<i>Pennsylvania State Game Commission</i> Phone: (717) 787-4250 <a href="http://www.pgc.state.pa.us">http://www.pgc.state.pa.us</a>	<i>Howard Nursery</i> Pennsylvania State Game Commission 197 Nursery Road Howard, PA 16841	(814) 355-4434 E-mail: HowardNrsrySales@state.pa.us	HD, CO, SH, BR
<i>Tennessee Division of Forestry</i> Phone: (615) 837-5520 <a href="http://tennessee.gov/agriculture/forestry">http://tennessee.gov/agriculture/forestry</a>	<i>East Tennessee Nursery</i> P.O. Box 59 Delano, TN 37325	(877) 868-7337	HD, CO, SH, BR, IMP
<i>Virginia Department of Forestry</i> Phone: (434) 977-6555 <a href="http://www.dof.virginia.gov">http://www.dof.virginia.gov</a>	<i>Augusta Forestry Center</i> P.O. Box 160 Crimora, VA 24431	(540) 363-7000	HD, CO, SH, BR
	<i>Garland Gray Forestry Center</i> 19127 Sandy Hill Rd. Courtland, VA 23837	(804) 834-2855	HD, CO, SH, BR
<i>West Virginia Division of Forestry</i> Phone: (304) 558-2788 <a href="http://www.wvforestry.com">http://www.wvforestry.com</a>	<i>Clements State Tree Nursery</i> 101 Allison Drive West Columbia, WV 25287	(304) 675-1820	HD, CO, BR
<i>Wisconsin Division of Forestry</i> Phone: (608) 264-6294 <a href="http://www.dnr.state.wi.us/org/land/forestry">http://www.dnr.state.wi.us/org/land/forestry</a>	<i>Griffith State Forest Nursery</i> 473 Griffith Ave. Wisconsin Rapids, WI 54494	(715) 424-3700	HD, CO, SH, BR
	<i>Hayward State Forest Nursery</i> 16133 W. Nursery Road Hayward, WI 54843	(715) 634-2717	HD, CO, SH, BR
	<i>Wilson State Forest Nursery</i> 5350 Highway 133 East P.O. Box 305 Boscobel, WI 53808	(608) 375-4123	HD, CO, SH, BR

<sup>1</sup>Abbreviations used: Hardwood Trees (HD); Coniferous Trees (CO); Shrub Species (SH); Bare-root Seedlings (BR); Containerized Seedlings (CT); Seedlings Advertised as Improved are Available for Some Species (IMP).

## *NOTES*





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