

# Seedling Order Form

GEORGE O. WHITE STATE FOREST NURSERY

2018-2019



*Serving nature and you®*

Eastern redbud



## Plan Ahead and Order Early!

Although we accept orders from Sept. 1, 2018, through April 15, 2019, we always sell out of some species quickly. To get the plants you want, please send your order as soon as possible. Otherwise, you can select the option to have us substitute suitable species for you. Some species are in short supply and will only be available online. Check out our online catalog for all available seedlings.

**You can place your order online starting Sept. 1, 2018.**

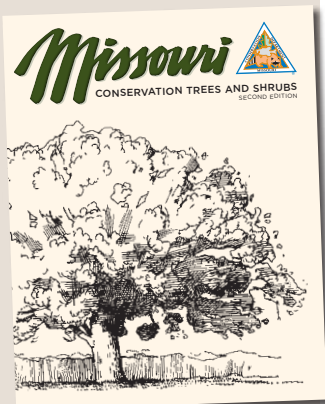
**B**efore undertaking any extensive planting project, consult the MDC regional office in your area.

### Free! Conservation Trees and Shrubs

For information on planting, care, and uses of conservation seedlings, order your free copy of *Missouri Conservation Trees and Shrubs*.

This 40-page guide includes detailed descriptions, illustrations, and range maps for 54 of the nursery's most popular species.

Write to MDC, *Missouri Conservation Trees and Shrubs*, PO Box 180, Jefferson City, MO 65102, or email [pubstaff@mdc.mo.gov](mailto:pubstaff@mdc.mo.gov).



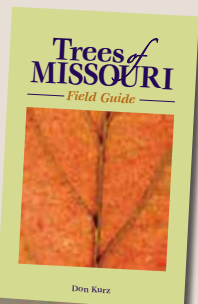
To purchase the following books, call toll-free 1-877-521-8632, or go to [mdcnatureshop.com](http://mdcnatureshop.com). Prices do not include shipping, handling, and tax.

≈ *Trees of Missouri Field Guide* (soft cover \$8.00)

≈ *Shrubs and Woody Vines of Missouri* (soft cover \$16.50)

≈ *Shrubs and Woody Vines of Missouri Field Guide* (soft cover \$8.00)

≈ *Tried & True Missouri Native Plants For Your Yard* (soft cover \$7)



## Three Ways to Order

Submit orders by internet, mail, or fax. **We do not accept phone orders.** If you order by mail or fax, **do not send payment with your order.**

## Mark Your Calendars

We invite you to our open house to see how we grow, store, process, and ship millions of seedlings annually. This year's open house will be held from 9 a.m. to 2 p.m. April 6, 2019. Due to limited capacity, we can only accommodate 275 people, so call 573-674-3229, ext. 0 to make a reservation. To help reduce waiting, you will be assigned a tour time when you register. Please come a little early or stay after your tour to visit a variety of booths we will have set up to answer questions about tree issues, forestry, conservation, and more. Smokey Bear plans to make an appearance, as well.

## Cost

Prices range from \$0.22 to \$0.90 per seedling. This is slightly more per seedling than last year. Historically, we adjusted seedling prices every four years, but it's been five years since the price of seedlings has changed. The increase will help the nursery offset rising operation costs. See pricing chart below. Sales tax of 6.100 percent will be added to all orders unless you provide a tax-exemption certificate. An \$8 handling charge is added to each order, no matter the number of seedlings. Out-of-state shipping is \$10 per 100 seedlings with a \$10 minimum.

Price per Seedling			
Species	Available in 10 only	Available in increments of 25	
		25-75	100+
Eastern white pine 2-0, Shortleaf pine, Loblolly pine, Pitch x loblolly pine	\$0.60	\$0.28	\$0.22
Norway spruce 2-0 and Eastern red cedar	\$0.90	\$0.44	\$0.36
Hardwood trees and shrubs	\$0.90	\$0.44	\$0.36
<i>Orders of multiple species of 10s or 25s cannot be combined for volume discount.</i>			

## Billing Card

After we process your order, we'll send you a billing card by mail or email. You should receive it within two weeks of submitting your order. If you do not receive a billing card, call 573-674-3229. Check your billing card when you get it. It will show the species available for pick up or delivery, the price per each bundle, and the total amount charged for your order.

**If a species is sold out when we receive your order, we will not bill you for that species.** If the sold-out seedlings become available later, we will try to notify you if time allows. For a recorded message about possible shipping delays and available inventory, call 1-800-392-3111 after Nov. 1, 2018.

## Payment

The billing card will have a due date, as well as information on how to pay for your seedlings. We accept check, money order, Visa, MasterCard, and Discover. (A convenience fee for any credit/debit card transaction is collected by a third-party vendor, Collector Solutions, Inc., not the Missouri Department of Conservation.) Please write your order number on your check. **All orders must be paid in full before they can be shipped or picked up.** If payment is not received within 30 days of the date the order was placed, the order will be canceled.

## Permit Card/Conservation ID Discount

The Conservation Permit Card replaces the old Heritage Card and is used as a single source for hunter education verification, permits purchased, and permit verification. If you lose your Hunter Education card, you can purchase the Permit Card to replace it if your hunter education certification can be verified through department records. The Heritage Card will remain valid, but, in order for it to be carried in lieu of paper or electronic permits, the Permit Card must be possessed. You also get a 15 percent discount on select retail merchandise sold at Conservation Department facilities with a Permit Card. With your Permit Card or Conservation ID number, you can receive a 15-percent discount, up to \$20, off your seedling order. The Permit Card costs \$2 and does not expire.

You can purchase a Permit Card online at [mdc.mo.gov/buypermits](http://mdc.mo.gov/buypermits), at a conservation service center, or a retail permit vendor. The card will be mailed to the address on file. It should arrive within four to six weeks of purchase.

## Order Changes and Refunds

To request an order change, contact the nursery, or if you have created a user profile online, please login and make appropriate changes. Adjustments or refunds will be made only at the discretion of the nursery. No refunds on orders cancelled after May 1, 2019. No refund of \$2.50 or less will be made. Please notify us promptly of any address change and include your order number. Once shipped, seedlings are nonrefundable.

## Delivery

You can have your trees shipped, or you can pick them up at the nursery. Allow a minimum of 3 weeks notice if you need to change your shipping date and/or address. Please select the delivery method and the week you want your trees delivered. There is no shipping charge added to orders delivered to a Missouri address. We ship with UPS only, and orders cannot be delivered to a post office (PO) box. We will ship orders late February through early May unless you make other arrangements. Most orders arrive within 48 hours after they leave the nursery, but this cannot be guaranteed. If any or all of your order has not arrived within seven days of your selected delivery date, please contact the nursery. Some states have quarantines

If you submit an order by mail, fax, or via the internet, you should receive a billing card from us within about two weeks. If you DO NOT receive a billing card from us, call the nursery at 573-674-3229 to inquire about the status of your order.

on incoming plants. It is the customers' responsibility to check for any type of quarantine that may be in place.

## Contact Information

George O. White State Forest Nursery  
Missouri Department of Conservation  
14027 Shafer Road  
PO Box 119  
Licking, MO 65542  
573-674-3229  
Fax: 573-674-4047

## Seedlings

We provide mainly 1-year-old bare-root seedlings. A few species are 2 years old, and they are noted as 2-0 in the pricing chart. The size of the seedlings varies greatly depending on the species. Seedlings are provided in a minimum quantity of 10 or any increment of 25 trees per species.

## Spacing of Seedlings

When planting seedlings, consider their primary purpose and the height and spread to which they will eventually grow. As a general rule, seedlings should be spaced as shown below:

Purpose	Spacing
Erosion control	3-6 feet
Reforestation	8-12 feet
Wildlife shrubs	3-6 feet
Windbreaks	5-12 feet

Quantity of Seedlings per Acre	
Spacing in feet	Seedlings per acre
3x3	4,840
4x4	2,722
5x5	1,742
6x6	1,210
7x7	889
8x8	681
9x9	538
10x10	436
12x12	302
15x15	194



# Conifer Species



Eastern red cedar



Eastern white pine



Norway spruce



Loblolly pine



Pitch x loblolly pine



Shortleaf pine



Bald cypress



# Hardwood Species



Black cherry



Black walnut



Cottonwood



Hackberry



Black gum



Mixed hickory



Price per Seedling			
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		25-75	100+
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Hardwood trees and shrubs	\$0.90	\$0.44	\$0.36
<i>Orders of multiple species of 10s or 25s cannot be combined for volume discount.</i>			

Species	Common Uses				Wildlife Benefits			Other Important Facts
	Wind Break	Erosion Control	Reforestation	Wetland Restoration	Food	Cover	Mature Height in Feet	
<b>Conifer Species</b>								
Eastern red cedar ( <i>Juniperus virginiana</i> )	✓			✓	✓	✓	60	Eastern red cedar's aromatic wood is valuable for closet lining and novelties. Excellent for wildlife and windbreak plantings.
Eastern white pine* 2-0 ( <i>Pinus strobus</i> ) (Average size 8-10 inches)	✓		✓			✓	80-100	A tall, stately tree with an attractive conical shape and branches nearly to the ground in open stands. Makes an excellent windbreak throughout the state. Adapts to a variety of sites, but prefers moderately moist, sandy loam soils. *White pine may have difficulty surviving with Missouri's dry climate and clay soils.
Loblolly pine ( <i>Pinus taeda</i> )	✓		✓			✓	90	Native throughout the southern United States. Introduced and grows well in southern Missouri. A fast-growing pine that is an important timber tree for lumber and pulp. Similar in appearance to shortleaf pine, but has longer needles and a larger cone. Grows on a wide variety of sites including poor, dry upland, and rich bottomland soils.
Norway spruce* ( <i>Picea abies</i> )	✓					✓	50	Excellent tree for windbreak and wildlife cover. Although not immune to deer damage, deer generally leave this evergreen alone. This fast-growing spruce grows best on well-drained soils and will tolerate a lot of shade. It will retain its dense drooping branches as the tree matures. *Norway spruce may have difficulty surviving with Missouri's dry climate and clay soils.
Pitch x loblolly pine ( <i>Pinus rigida x Pinus taeda</i> )	✓	✓	✓			✓	60	This hybrid pine combines the cold hardiness and drought tolerance of pitch pine with the larger mature size, moist soil tolerance, and fast growth of loblolly pine. Develops a dense, extensive root system that helps it adapt to extreme soil conditions. The long, naturally shed needles are used for pine straw mulch in the landscaping industry. Does best in full sun to partial shade.
Shortleaf pine ( <i>Pinus echinata</i> )	✓		✓			✓	80-100	Only pine native to Missouri. Grows to 2-3 feet in diameter. Does very well on dry, upland sites in the Ozarks. Probably should not be planted north of the Missouri River.
Bald cypress ( <i>Taxodium distichum</i> )	✓	✓	✓	✓			90-100	Large trees that may live more than 1,000 years. Commonly associated with southeastern swamps, but adapt easily to a wide range of sites. Young trees grow rapidly on good sites and may reach 20 feet in height in 10 years. Extremely durable wood.
<b>Hardwood Species</b>								
Black cherry ( <i>Prunus serotina</i> )		✓	✓		✓	✓	60	Found statewide on a variety of sites including moist, fertile bottoms and dry, gravelly upland soils. The lumber is second only to walnut in demand as a fine hardwood. The flowers are white clusters 2 to 4 inches long. The red-to-black fruits ripen in August and are abundant nearly every year. Numerous wildlife species eat the fruit. Leaves turn yellow to red in the fall.
Black walnut ( <i>Juglans nigra</i> )			✓	✓	✓		80-90	The "black gold" of Missouri. Valued for its lumber and nuts, it is extensively cultivated statewide. Grows rapidly on deep, rich, alluvial soils. Growth rates decline rapidly in poor soils.
Black gum ( <i>Nyssa sylvatica</i> )			✓	✓	✓	✓	65	Medium-sized tree found in southern Missouri, but can be planted successfully statewide. Grows on deep, moist soils and along streams. An attractive tree with shiny dark-green leaves, blue-black fruits, and brilliant red fall color. Older, larger trees often contain hollows that are used by cavity-nesting wildlife.
Cottonwood (cuttings) ( <i>Populus deltoides</i> )	✓	✓	✓	✓		✓	100	One of the largest and fastest-growing trees in the eastern United States. Grows best in deep, well-drained bottomland soils. Can reach diameters of 3-4 feet. Instructions for planting cuttings are on the back page.
Hackberry ( <i>Celtis occidentalis</i> )	✓	✓	✓	✓	✓		90	Common bottomland species found statewide. Does very well in prairie regions. Birds eat the fruit.
Mixed hickory ( <i>Carya spp.</i> )			✓		✓		70	This mix is dominated by shagbark, but also includes bitternut, pignut, black, and shellbark hickories. Good selection for wildlife and reforestation projects where a variety of nut sizes and tree forms is desired.





Shellbark hickory



Kentucky coffee tree



Black oak



Bur oak



Cherrybark oak



Northern red oak



Nuttall's oak



Overcup oak



Chinkapin oak



Pin oak



Post oak



Shumard oak



Swamp chestnut oak



Swamp white oak



White oak



Willow oak



Osage orange



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		25-75	100+
Hardwood trees and shrubs	\$0.90	\$0.44	\$0.36
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Species	Common Uses				Wildlife Benefits			Other Important Facts
	Wind Break	Erosion Control	Reforestation	Wetland Restoration	Food	Cover	Mature Height in Feet	
Shellbark hickory ( <i>Carya laciniata</i> )			✓	✓	✓		90	A large scaly bark hickory that grows best on rich bottomland soils. It produces the largest nut of any hickory. Not found naturally in the Ozarks, but will grow statewide.
Kentucky coffee tree ( <i>Gymnocladus dioica</i> )	✓	✓	✓				70-90	Medium to large tree preferring good soil. Found statewide, but most common in western Missouri. Large, persistent seedpods and short, heavy twigs make this legume distinctive in winter.
Black oak ( <i>Quercus velutina</i> )			✓		✓	✓	85	Found statewide, but most common in the Ozarks. Will grow on dry, poor upland sites, but grows best on well-drained soil. Good acorn producer.
Bur oak ( <i>Quercus macrocarpa</i> )		✓	✓	✓	✓		80	Large acorns with fringed caps are characteristic of this oak. Grows statewide on a variety of sites including dry uplands and moist lowlands. Reaches 3-4 feet in diameter.
Cherrybark oak ( <i>Quercus falcata</i> var. <i>pagodifolia</i> )		✓	✓	✓	✓	✓	100	Southeastern lowland oak that should be planted in Missouri Bootheel area. Prefers rich, well-drained bottomland soils. Large, fast growing, well-formed, and commercially important.
Chinkapin oak ( <i>Quercus muehlenbergii</i> )			✓		✓	✓	70	Found throughout Missouri mostly on dry upland woods, along bluffs, and in glades. It tolerates very dry, rocky soil, but will grow on a wide variety of sites. This tree is in the white oak group, has silver-gray bark, and long, thin leaves. The acorns are nearly black, about ¾ to 1 inch long and are a favorite food source for turkey and deer.
Northern red oak ( <i>Quercus rubra</i> )	✓	✓	✓		✓	✓	90	One of the most widespread and commercially important of the oaks. Found on a wide variety of sites statewide. Grows best in fertile, sandy loam soils.
Nuttall's oak ( <i>Quercus texana</i> )		✓	✓	✓	✓	✓	90-100	Relatively fast-growing oak that is found in the Southeastern lowlands. Does well on heavy, poorly drained clay soils. General appearance somewhat resembles pin oak. Probably should not be planted outside the Bootheel.
Overcup oak ( <i>Quercus lyrata</i> )		✓	✓	✓	✓	✓	70	Occurs naturally in southeastern Missouri and up the Mississippi River to St. Louis. Grows on wet, poorly drained sites and is one of the most flood-tolerant species. This slow-growing tree produces acorns that are almost enclosed in the cap.
Pin oak ( <i>Quercus palustris</i> )	✓	✓	✓	✓	✓	✓	70-80	This fast-growing oak grows naturally on poorly drained, heavy bottomland sites statewide. It is often used for landscaping as it will grow well on a wide variety of sites, from wet to dry. The small acorns are eaten by many mammals and birds, and they are an important winter food for migrating waterfowl.
Post oak ( <i>Quercus stellata</i> )			✓		✓	✓	70	A medium- to large-sized tree with a broad, rounded crown and stout, sometimes contorted branches. Distinctive cross- or ghost-shaped leaves. Grows in rocky upland woodlands and in flatwoods on broad ridges. Slow-growing, long-lived tree.
Shumard oak ( <i>Quercus shumardii</i> )	✓	✓	✓	✓	✓	✓	80-100	A large, commercially valuable oak found naturally in all but the northern third of Missouri. Frequently grows in association with northern red oak and white oak. Can be planted on a wide variety of sites.
Swamp chestnut oak ( <i>Quercus michauxii</i> )			✓		✓	✓	85	Also called cow oak and basket oak. A large well-formed tree, which grows in well-drained soils above the floodplain in southeastern Missouri. Able to withstand flooding for short periods during the dormant season.
Swamp white oak ( <i>Quercus bicolor</i> )		✓	✓	✓	✓	✓	70	A fairly fast-growing, medium-sized tree that may reach a diameter of 3 feet. Grows naturally in the northern two-thirds of the state along low hills and stream bottoms, but is adaptable to a wide variety of sites. Despite its name, this species does not naturally grow in swamps. The acorns are one of the favored fall foods for deer, turkey, and many other wildlife species.
White oak ( <i>Quercus alba</i> )			✓		✓	✓	85	Found statewide. This important hardwood lumber tree is often an excellent acorn producer. Does best on deep well-drained soils, but does well on dry, poor upland sites. Slow growth rate, but may live for hundreds of years.
Willow oak ( <i>Quercus phellos</i> )	✓	✓	✓	✓	✓	✓	70	This tree gets its name from the long, slender, willow-like leaves. Native to southeastern Missouri, but will grow statewide. Does best on poorly drained soils, but can be planted on a variety of sites. Fast-growing oak with small acorns.
Osage orange ( <i>Maclura pomifera</i> )	✓		✓		✓	✓	40-50	The familiar hedge or hedgeapple tree of Missouri's prairie regions. Hard, durable wood is used for fence posts. Has thorns.





Pecan



Persimmon



Red mulberry



River birch



Sandbar willow



Silver maple



Sycamore



Tulip poplar



Wildlife  
Shrubs



American beautyberry



Arrowwood



Carolina buckthorn



Blackberry



Black haw



Buttonbush



**Price per Seedling**

Species	Available in 10 only	Available in increments of 25	
		25-75	100+
Hardwood trees and shrubs	\$0.90	\$0.44	\$0.36

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Species	Common Uses				Wildlife Benefits			Other Important Facts
	Wind Break	Erosion Control	Reforestation	Wetland Restoration	Food	Cover	Mature Height in Feet	
Pecan ( <i>Carya illinoensis</i> )			✓	✓	✓		90	Most noted for edible nuts, but also is valued for wood. Does best on moist, well-drained river bottoms. Seedlings are grown from native wild seed.
Persimmon ( <i>Diospyros virginiana</i> )	✓	✓	✓	✓	✓		60-70	A small- to medium-sized tree whose fruit is valuable to people and wildlife. Among the hardest of North American woods. Male and female flowers are borne on separate plants, so plant several trees near each other.
Red mulberry ( <i>Morus rubra</i> )			✓		✓		50	Medium-sized tree found statewide. Prefers good soil, but can be found on poor sites. Many animals eat the fruit. Seedlings not guaranteed pure red native due to natural cross-pollination with the nonnative white mulberry.
River birch ( <i>Betula nigra</i> )	✓	✓		✓		✓	60	A small- to medium-sized streambank tree useful for bank stabilization. Peeling, flaking bark gives the tree an attractive appearance in winter. Grows statewide.
Sandbar willow (cuttings) ( <i>Salix interior</i> )		✓		✓		✓	30	Shrub-like, thicket-forming willow found statewide. Occurs on sand bars and muddy stream banks. Good soil binder and bank stabilizer that prevents erosion. Leaves and twigs are browsed by deer. Instructions for planting cuttings are on the back page.
Silver maple ( <i>Acer saccharinum</i> )		✓	✓	✓		✓	90	A large bottomland "soft" hardwood. Grown commercially for wood. Perhaps overused as a fast-growing shade tree. Because of the wood's brittleness, breakage in ice and wind is a problem.
Sycamore ( <i>Platanus occidentalis</i> )		✓	✓	✓		✓	80-100	A large bottomland, streambank tree. Can be used as a bank stabilizer along with other bottomland species. Shows a great deal of resistance to beaver damage and wet soil conditions.
Tulip poplar ( <i>Liriodendron tulipifera</i> )	✓		✓				90-100	One of the more valuable hardwoods. May reach diameters approaching 2 feet. Found naturally on moist, well-drained soils in southeastern Missouri. Planted widely as an ornamental.

**Wildlife Shrubs**

American beautyberry ( <i>Callicarpa americana</i> )		✓			✓	✓	10	This rapidly growing, rounded shrub has a 4- to 8-foot spread. Tops will sometimes die back in cold winters, but flowering is on new growth, so dieback or drastic pruning will not affect flowering. Flowers are white to pale pink. The large, pale-green leaves turn yellow in the fall. Showy, purple-blue fruits are attractive to birds and persist on the shrubs into late fall. Grows well in partial shade and on a wide variety of soil types.
Arrowwood ( <i>Viburnum recognitum</i> )					✓		16	This shrub is native to the south-central Ozarks but should do well statewide. It has showy clusters of white flowers in May-June, and the blue-black berries ripen in the fall. Many species of birds and mammals eat the fruit. This shrub attains a spread of 10 to 15 feet. Grows best on well-drained soils and will tolerate partial shade to full sun. Multiple plants are sometimes used for visual screens.
Blackberry ( <i>Rubus spp.</i> )					✓	✓	5	Found throughout the state in woods, open fields and glades. Provides habitat for many wildlife species. Edible fruit ripens in July. Stems have thorns.
Black haw ( <i>Viburnum prunifolium</i> )					✓	✓	20	This shrub is native statewide. Leaves are dark-green and flowers are rounded white clusters 2 to 4 inches across. Fruit is bluish-black clusters of ½-inch-long berries, each containing one large seed. A variety of animals feed on the fruits, leaves, and stems. Grows well in both sun or shade.
Buttonbush ( <i>Cephalanthus occidentalis</i> )		✓		✓	✓	✓	18	Found throughout the state in low, wet woods, swamps, and along borders of streams and ponds. The flowers are fragrant, white, round clusters about 1 to 1½ inches across and are a favorite nectar source for bees. Many birds eat the nutlets and nest in the branches. Does best on moist sites.
Carolina buckthorn ( <i>Rhamnus caroliniana</i> )	✓				✓		25	This shrub to small tree has leaves 4 to 6 inches long, oval, and are shiny bright green. The flowers are small and not showy, but the fruit turns orange in late summer to shiny black at maturity. The fruit is eaten by a variety of woodland birds, and deer will browse the twigs. It will tolerate a wide range of soils and grows well in the shade.





Deciduous holly



Flowering dogwood



Gray dogwood



Rough-leaved dogwood



Silky dogwood



Elderberry



False indigo



Green hawthorn



Nannyberry



Ninebark



Pawpaw



Redbud



Rose mallow



**Price per Seedling**

Species	Available in 10 only	Available in increments of 25	
		25-75	100+
Hardwood trees and shrubs	\$0.90	\$0.44	\$0.36

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	Wind Break	Erosion Control	Reforestation	Wetland Restoration	Food	Cover	Mature Height in Feet	
Deciduous holly ( <i>Ilex decidua</i> )	✓			✓	✓	✓	25	Also called possumhaw, this small- to medium-sized tree produces regular crops of brilliant red fruit on the female plant. The male and female flowers are borne on separate plants, so several trees should be planted near each other. After the leaves fall, the fruit is visible for long distances and helps feed birds in winter and early spring when other foods are depleted.
Flowering dogwood* ( <i>Cornus florida</i> )					✓	✓	40	It's the Missouri State Tree. The seedlings are grown from seed collected from native trees. * <i>The survival of this small-to-medium shade tree is very low. For best results plant in shade, not direct sunlight.</i>
Gray dogwood ( <i>Cornus racemosa</i> )	✓				✓	✓	10	Similar in appearance to rough-leaved dogwood, this tree is smaller and has smooth leaves. Found widely scattered statewide on both moist and rocky sites. Forms thickets by root suckers. Provides excellent wildlife food and cover.
Rough-leaved dogwood ( <i>Cornus drummondii</i> )	✓				✓	✓	20	This thicket-forming shrub found statewide on a wide variety of soils survives poor sites better than other dogwoods. Leaves are rough textured. It does not have large white flowers like flowering dogwoods, but small white flowers appear in May. The shrub has white berries and purple-to-red fall color.
Silky dogwood ( <i>Cornus amomum</i> )	✓			✓	✓	✓	9	This species, also called swamp or pale dogwood, is found statewide except in the lowlands of the Bootheel. Grows in moist ground along streams, rocky banks, spring branches, swamps, wet prairies, and low, wet woods. The flowers are similar to rough-leaved and gray dogwood. The blue fruit is eaten by many wildlife species. Leaves are longer and narrower than other dogwoods.
Elderberry ( <i>Sambucus canadensis</i> )		✓		✓	✓	✓	10	Found throughout the state in open woods, fencerows, roadsides, and along borders of streams and ponds. The flowers are large, showy, flat-topped white clusters that appear in late May to June. The dark-purple berries are edible and make an excellent jelly. Many species of birds and mammals eat the fruit, and deer browse the leaves and branches. Will tolerate both wet and dry sites.
False indigo ( <i>Amorpha fruticosa</i> )		✓		✓	✓	✓	12	Found statewide in moist ground along streams, rocky banks, and low, wet woods. The flowers are 2 to 6 inches long with dense clusters of purple tube-shaped flowers. This shrub is in the legume family, and the seeds are eaten by quail and other wildlife. Bees and butterflies are attracted to the flowers.
Green hawthorn ( <i>Crataegus viridis</i> )	✓			✓	✓	✓	25	Found scattered statewide, usually in low wet woods and wooded valleys. Does well in full sun on a wide variety of sites. Thorns are often absent on this species. White flower clusters appear in May. Leaves are dark-green. The bright-red berries, eaten by birds and mammals, persist well into the winter.
Nannyberry ( <i>Viburnum lentago</i> )	✓				✓	✓	18	Nannyberry is native to northeast Missouri but will grow statewide. The flowers are rounded white clusters 3 to 5 inches across. Fruit is dark-blue clusters of 3/8- to 1/2-inch-long berries each containing one large seed. A variety of animals feed on the fruits, leaves and stems. Grows well in both sun and shade.
Ninebark ( <i>Physocarpus opulifolius</i> )	✓	✓		✓		✓	8	A streamside shrub found over much of the state. Forms a massive root system quickly after planting, making it useful to control erosion on streambanks. It is also used as an ornamental. Its name is taken from the way the mature bark curls away from the stem resembling the number 9.
Pawpaw ( <i>Asimina triloba</i> )					✓	✓	20	This small tree has large, drooping, pear-shaped leaves that are slightly aromatic. Inconspicuous flowers are green upon opening but turn maroon as they develop. Edible yellow-green fruits are 3 to 6 inches long and ripen in September. Leaves turn bright yellow in fall.
Redbud ( <i>Cercis canadensis</i> )	✓				✓	✓	30	A small-to-medium understory tree with showy pink flowers in early spring. This legume is an attractive addition to wildlife or windbreak plantings.
Rose mallow ( <i>Hibiscus lasiocarpus</i> )				✓	✓	✓	8	This tall perennial is found in the south half of the state along sloughs, ponds, and streams. Excellent for wetland plantings, pond edges, and other wet sites. Plants die back to the root collar each winter. Large, showy white or sometimes pink flowers bloom from July through September. The seeds are eaten by ducks, quail, and many other birds.





Serviceberry



Spicebush



Aromatic sumac



Smooth sumac



Wild plum



Witch-hazel

### Price Per Seedling

Species	Available in 10 only	Available in increments of 25	
		25-75	100+
Hardwood trees and shrubs	\$0.90	\$0.44	\$0.36

Orders of multiple species of 10s or 25s cannot be combined for volume discount.

Species	Common Uses				Wildlife Benefits			Other Important Facts
	Wind Break	Erosion Control	Reforestation	Wetland Restoration	Food	Cover	Mature Height in Feet	
Serviceberry ( <i>Amelanchier arborea</i> )					✓	✓	25	The showy white flowers of this large shrub/small tree are the first to appear in Missouri woodlands each spring. Reddish sweet-tasting fruits are edible but quickly consumed by wildlife. Fall color varies from yellow to orange to red. Found statewide, grows best in partial shade along woodland edges.
Spicebush ( <i>Lindera benzoin</i> )		✓			✓	✓	12	Found naturally in the south half of the state in low or moist ground along streams, ravine bottoms, and low, wet woods. The flowers are small, yellow, and fragrant. Leaves are aromatic when crushed. Seed is bright red and is eaten by many birds and mammals. Will tolerate partial shade to full sun. This shrub will often grow as wide as it is tall.
Aromatic sumac ( <i>Rhus aromatica</i> )	✓	✓			✓	✓	8	A shrub found over much of the state, usually in thickets. Bright-red fruit ripens in late spring or early summer and is eaten by many birds. Also called fragrant sumac.
Smooth sumac ( <i>Rhus glabra</i> )					✓	✓	20	Thicket-forming shrub or small tree is found statewide in old fields, prairies, woods borders, and road rights of way. Was widely used by Native Americans and early settlers for medicinal uses. Provides excellent wildlife food and cover. Dark-green summer foliage is followed by scarlet fall color and red berries.
Wild plum ( <i>Prunus spp.</i> )	✓	✓		✓	✓	✓	25	A small thicket-forming tree. One of the first trees to bloom in the spring. Produces a bright-red edible fruit. Provides excellent food and cover for wildlife.
Witch-hazel ( <i>Hamamelis vernalis</i> )	✓	✓			✓	✓	10	Large shrub found in and along dry, rocky streambeds. Leaves are collected for medicinal uses. Shrub is valuable for wildlife food and cover, and for controlling erosion along streams.



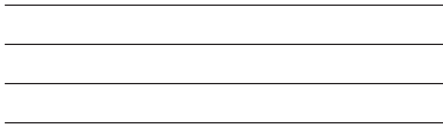




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## Beyond Belief: Trees Work Fact or Fiction

Which one of the following statements is fiction and which are true? See if you can pick the liar out of the bunch. Hint: Only one is wrong.

1. The forest products industry contributed over \$9 billion to Missouri's economy in the last year, which is more than the total net worth of George Lucas and Steven Spielberg combined.
2. The net cooling effect of a young, healthy tree is equivalent to 10 window unit air conditioners operating 20 hours a day.
3. The presence of street trees in a neighborhood increases the sale prices of houses by an average of \$8,000 each.
4. Your smartphone is comprised of 65 percent recycled wood products.

*Answer: 1-3 are true. Number 4 is total fiction.*

FOLD  
HERE

## Trees Work!

The Missouri Department of Conservation wants you to know how Trees Work! Many of us appreciate the beauty of an oak releasing its tender spring leaves or a maple shading our deck. But we are often unaware of the real and valuable benefits those trees provide for our health, families, wallets, and environment. The Trees Work campaign lets Missourians know all the ways trees and forests work for us in our everyday lives. It also provides information on how you can promote good forestry management regardless of how much land you own.

Did you know that being around trees lowers your blood pressure and pulse rate? Kids perform better on tests and have reduced symptoms of ADHD after spending time in nature. Neighborhoods with well-shaded streets can be up to 10 degrees cooler than neighborhoods without street trees. Trees provide wildlife habitat, wood products, and shade for our homes, but they also work in other incredibly important and surprising ways that make our lives better every day.

Visit [treeswork.org](http://treeswork.org) to learn more and get involved. Help us spread the message that trees work!





Dag Seagren, left, discusses management options with MDC forestry staff.

## Leaving a Legacy

### ***Planting Trees Now, Looking to the Future***

Every landowner who orders seedlings from the George O. White State Forest Nursery has a goal in mind. They might want to plant a few trees around their home to provide shade and enhance the look of their yard. Or they might need hundreds of seedlings to help reestablish a previously cleared wooded area. Seedlings can also be used for a variety of environmental reasons, such as creating windbreaks, controlling erosion, or even providing food and shelter for wildlife.

Brothers Dag and Lars Seagren are ordering their seedlings to build a legacy. Boone Creek Farm, their Texas County property, has been in the family for decades. The thousands of walnut trees recently planted on their acreage represent inspiration from the past and hope for the future.

“We started planting black walnut trees in 2016, but without any specific commercial or financial goal,” said Dag Seagren, whose parents purchased the property in 1976. “In this get-it-now, Amazon Prime culture, Boone Creek Farm is a deep dive into delayed gratification. And every day, it’s immensely rewarding.”

Dag says he’s motivated by “pioneer spirit.” He takes inspiration from frontiersmen like Daniel Boone, who were constantly challenged to solve problems, learning to adapt to whatever conditions they faced. As his family works the farm, he hopes they’ll grasp a sense of both history and potential, whether it’s looking at the nearby creek and imagining who navigated it 200 years ago or what the trees they’re planting now will look like in 80 years.

Dag also feels a strong connection to the time he spent as

a child on the property — trekking across the state to spend summer days at the family cabin and watching his father plant pine seedlings purchased from the state forest nursery.

“I want to create memories like that for our own children, and get them involved,” says Dag. “Boone Creek Farm is about getting them to put down their digital devices and connect with nature; to appreciate what this effort means for the environment and for their future.”

Someday, when the Seagrens’ walnut trees are big enough for harvest, Dag’s and Lars’ children will face some important decisions. But today, those trees are teaching them to invest in and be stewards of their land. The family’s pioneer spirit and entrepreneurial enthusiasm has spread to other activities. Boone Creek Farm has a sawmill and a kiln. They’re processing lumber, building furniture, growing grapes, making candles, and even blacksmithing.

“The trees from the nursery are a bargain, and it’s a place to start if you want to make an investment in your property,” said Dag.

The Seagrens are also exploring forest management options. For landowners with significant acreage, existing woodlands represent another opportunity for action. Anything a landowner does — planting seedlings, removing invasive species, timber stand improvement, or even a timber sale — should be based on the landowner’s goals for that property. These management practices can benefit wildlife, generate revenue, and help maintain a healthy forest. MDC recommends consulting with a professional forester for advice on managing woods.





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## How to Plant Cottonwood and Willow Cuttings

Cottonwood and willow have the ability to sprout roots and leaves from a stick-like cutting. The cottonwood cutting is typically 18 inches long, and the willow 12 inches. Most of the cutting needs to be in the soil, so only leave 2 to 4 inches (about 2 buds) out of the ground.

Also, the cutting must be planted with the buds pointed upward. All of the cuttings in a bundle point the same way, so you will only have to look carefully at one cutting per bundle.

