

Selecting Landscape Trees

with Special Comments on
Invasive and Native Plants



Figure 1.
Trees have many roles in this home's landscape. They are used extensively for accenting and shading the home. They help create a background for other plantings and help provide a screen or barrier along the property lines. Low-growing trees can be used as foundation plants near the home, and unusual trees are often used as specimen plants like those on each side of the front steps. Trees also are used to provide a haven to attract wildlife.

Trees are among the most beautiful, useful, and permanent products of nature. Selecting the right tree or trees for the home landscape is an important decision. Your choice will impact not only you, but also those who inherit or buy your property in the years to come. Because trees are considered to be a more permanent part of the landscape and can take years to achieve the needed effect, planting trees is one of the first priorities when installing a new landscape or renovating an old one.

Trees come in a variety of shapes, sizes, colors, and textures. Many provide special features during the year like flowers, fruits, or leaf colors. Selecting the right tree for you and your landscape situation will involve many factors. For some, a tree that brings back childhood memories will go to the top of the list. For others, choosing a tree that will grow quickly and provide shade will be the top choice. Some may want an evergreen that acts as a windbreak against cold winter winds. Others may need a small or narrow tree to fit into a confined space. Whatever your reasons for choosing a tree, these pillars of the landscape will play a major role in the long-term beauty and success of your landscape, so choose wisely.

This publication will provide information to help you make the right tree choices. Whether you are planning a new landscape or renovating an established landscape, this publication contains plant characteristics and cultural information on many kinds of trees that grow well in Mississippi.

What Is a Tree?

For the purposes of this publication, a tree is a small to large, woody plant that commonly has a single trunk. However despite this definition, trees can be grown as multi-trunk shrubs, or multi-trunk shrubs can be grown as single-trunk trees through pruning. Crape myrtle is a good example of a plant used as a tree or shrub, depending upon the pruning technique. Some may start as shrubs when young but grow to trees with age. In addition, some trees are small.

The authors' choice to exclude some species or include others by this definition was somewhat arbitrary as the distinction between trees and large shrubs based solely on size is not absolute. For this reason, there may be plants included or excluded from this publication that other authors consider trees.

Tree Selection Checklist

When choosing a tree for your landscape, there are many things to consider. It is always better to evaluate your landscape situation before you go shopping, so you can fit the tree to the site rather than trying to change the site to fit the tree.

Use the checklist below to help you assess the landscape location where the tree will be planted. Then select a tree or trees from the table that fit your particular landscape situation. Explanations of the topics follow the checklist.

- Function or role
- Height and width
- Amount of light
- Climatic zone
- Soil conditions
 - ▶ Fertility needs
 - ▶ Soil pH
 - ▶ Light (sandy), medium, heavy (clay)
 - ▶ Available water (quality of drainage)
- Form
- Texture
- Seasonal interest or color
- Risk analysis

Function or Role

Determine what function or role the tree will play in your landscape. For example, do you need a small, flowering tree to accent the front door? Or do you need an evergreen tree that could screen an unsightly view? Common examples of functions or roles that trees play in our landscapes include:

- Foundation plants (Figure 1)
- Hedge, screen, and background plants (Figures 1 and 2)
- Energy conservation, which includes managing wind, heat, and cold (Figure 3)
- Erosion control
- Container plants (Figure 4)
- Border and edging plants (Figures 1 and 2)
- Specimen plants
- Accent plants (Figure 1)
- Sound barriers (Figure 2)
- Wildlife habitats (Figures 1 and 2)



Figure 2.
This backyard landscape illustrates many of the uses of trees, including background, screen, wildlife habitat, shade, and accent plantings. The large hedge along the left side of the driveway could be small trees that serve as a sound barrier or a screen.

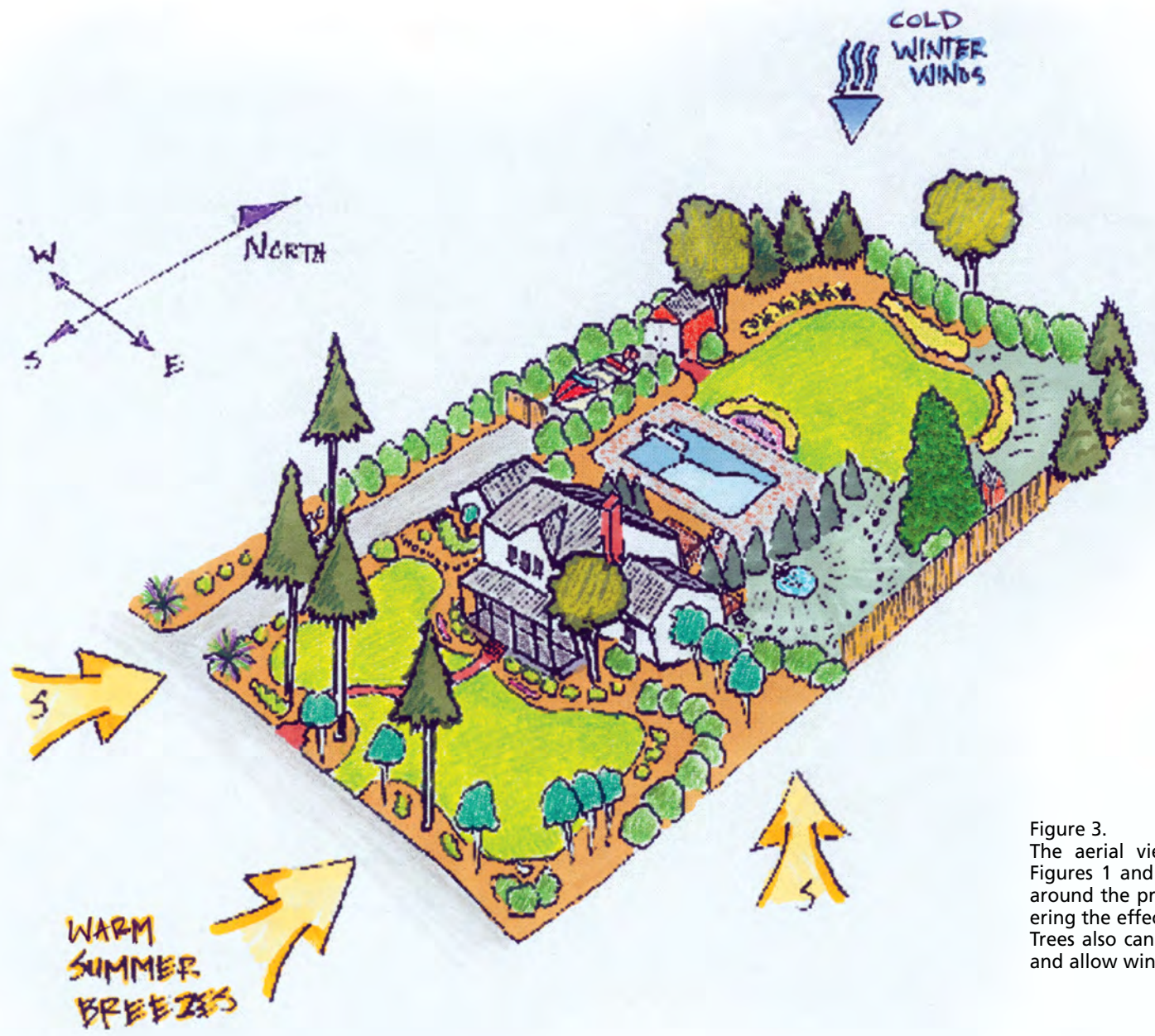


Figure 3.
The aerial view of the landscape depicted in Figures 1 and 2 shows how trees can be placed around the property to conserve energy by buffering the effects of winter wind and summer sun. Trees also can be used to direct summer breezes and allow winter sun to reach the home.

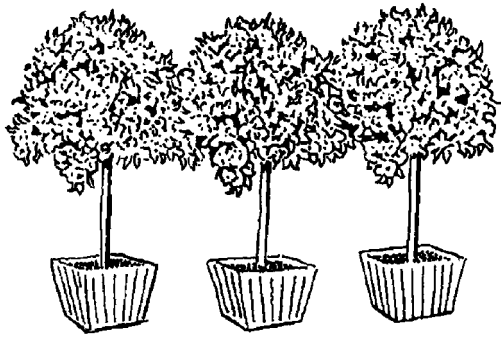


Figure 4. Container plants.

Height and Width

Knowing the mature size of a tree is very important. Size includes not just height, but also the mature spread or width of the tree. Both these should be considered before choosing a tree for a particular location in the landscape. Be aware that some trees' canopy can be quite narrow in spread when young, but become more open and spreading as they mature. Choosing a plant that will become too large for the space available is a common mistake.

Always make sure you select a tree that will not grow into utility lines or other overhead obstructions. Also, avoid planting trees in areas where there are underground utility lines or septic field lines. Planting a tree that will ultimately outgrow its space will eventually lead to problems when it blocks walkways or driveways, encroaches on other property, or becomes a hazard because of close proximity to homes or other structures.

Light

It is important that you know the light conditions of the different areas where you will be placing trees. Choose plants that grow well in those light conditions.

Full sun is at least 6–8 hours of direct sunlight. For sunny areas, choose plants that require full sunlight to grow.

Full shade areas receive no direct sunlight. In these areas, the shade could be the result of trees, buildings, or other structures. Filtered shade refers to the shade provided by a thin canopy of trees, which results in filtered or spotted areas of light on the forest floor. Choose plants that grow in shade for these areas.

Part sun areas receive direct sunlight for at least half of the day. Fitting plants to this type of light situation can be challenging. Some shade plants will tolerate full sun in the morning if given afternoon shade. Some sun plants will grow fine in situations of some early morning or late afternoon shade. Refer to the comments section of Table 1 for further information on specific light requirements for plants in this light category.

Climatic Zone

The U.S. Department of Agriculture has categorized the climates of the United States, Canada, and Mexico into numbered zones based on average low winter temperatures. The zone numbers range from 1 to 11. Each decrease in a zone number means the average low winter temperature is 10 degrees colder. The map of Mississippi in Figure 5 shows the USDA zones for Mississippi. All of Mississippi is within Plant Hardiness Zones 7 and 8. These are the average low winter temperature ranges for each zone and sub-zone:

Zone	°F Range
7	10–0
7a	5–0
7b	10–5
8	20–10
8a	15–10
8b	20–15

Remember that a plant hardiness rating does not guarantee a plant's ability to grow well in an area. For example, plants suited for drier areas of the southwest in Zone 7 may withstand the winter temperatures here but not grow well because of diseases associated with our higher humidity. A plant's hardiness zone rating **ONLY** indicates its ability to withstand a certain winter low temperature.

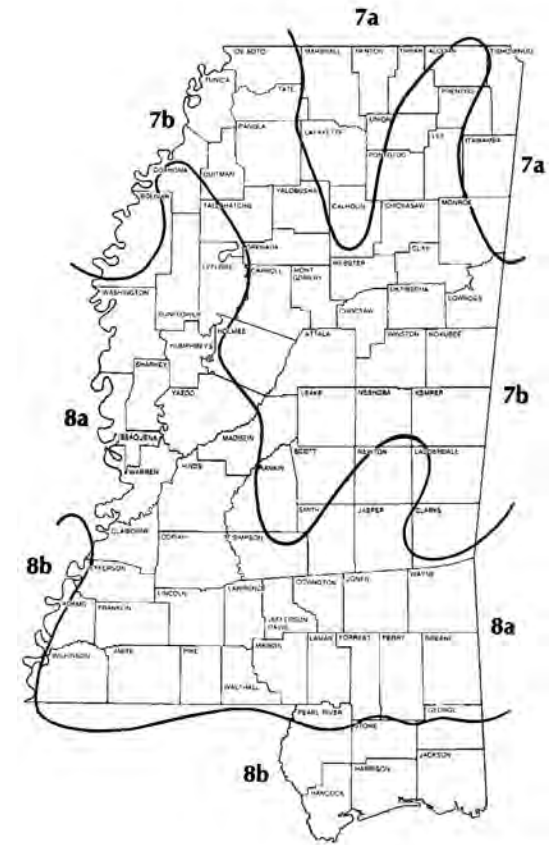


Figure 5. Zones of plant cold-hardiness for Mississippi.

Soil Conditions

Determine the fertility needs of the planting site before selecting plants or planting. Take a representative soil sample of the area being planted and submit it to the MSU Soil Testing Laboratory for analysis. Remember: it is much easier to choose a plant to fit your soil conditions than to change the soil conditions to fit the plant.

The soil analysis will also include a pH level, or measure of the alkalinity or acidity of the soil. Plants will grow best within certain pH ranges, so selection of plant material depends on pH (unless you can amend the planting site). Soil pH affects the availability of plant nutrients. Hollies, purple leaf plums, and Southern red oaks are examples of trees that will grow in acid soils. Examples of trees that will grow in alkaline soils are Southern catalpa and Eastern red cedar. Table 1 lists the pH range of specific plants.

Soils can be described as light (sandy), medium, or heavy (clay). Medium soils are best for proper growth of most landscape plants. Sandy or clay soils can be amended with organic matter to improve the water-retaining qualities of sandy soils and the drainage of clay soils, making these soils more conducive to plant growth. Adequate soil drainage is important for the growth of most plants. However, some plants like drier conditions and some plants like wetter conditions (bottomland or wetland plants). Comments on soil requirements or tolerances have been made for many of the plants in Table 1.

Form

Form is the shape of the plant. Make sure the plant will fit into the required space and that its form complements the surrounding plantings and the area. See Figure 6 for examples of plant forms. Certain small trees can have a shrubby form. Some trees may have different forms depending upon age. This is true of some shade trees that may have a pyramidal form when young, but develop a broad, rounded canopy when mature.

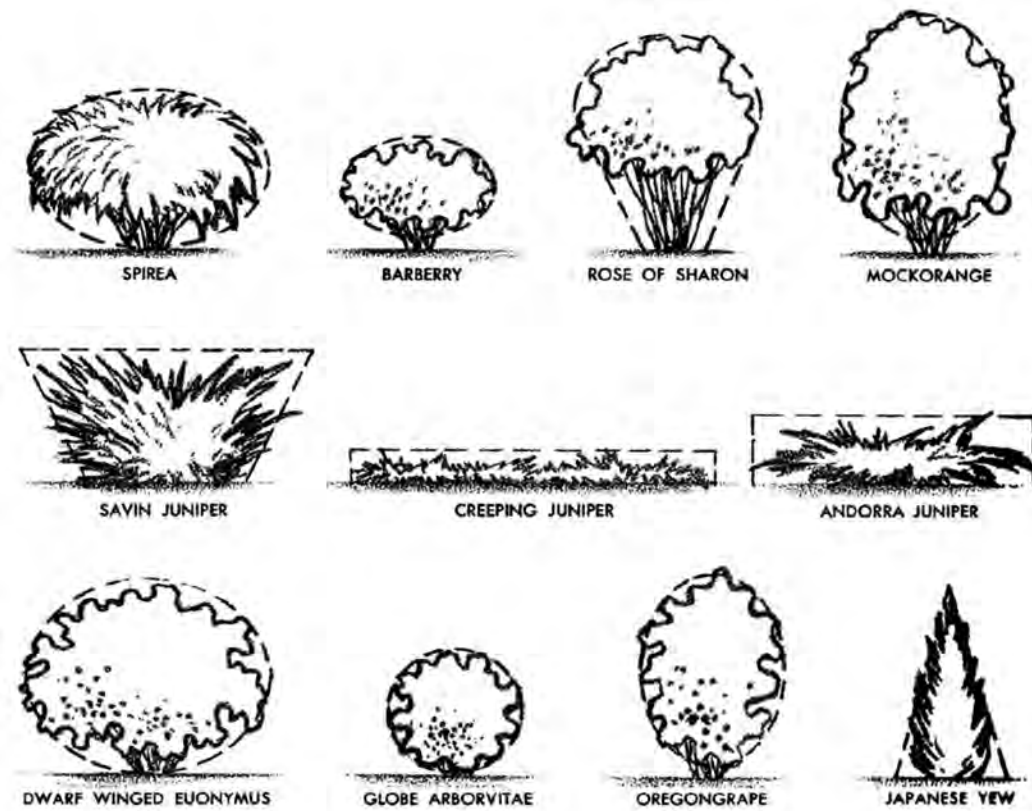


Figure 6. Examples of plant form.

Texture

Texture refers to the fineness or coarseness of plants. For example, large-leaved trees, as a rule, are considered coarse-textured. Examples include loquat, Southern magnolia, and sycamore. Fine-textured plants include pine, Leyland cypress, and Arizona cypress. In most cases, plants with fine textures should be used in greater numbers in the landscape than plants with coarse textures.

Seasonal Interest or Color

These are the characteristics of the plant that contribute to its overall appeal. Special physical features that make the plant attractive through the seasons could include fruit, flowers, foliage, bark, or branching structure. The comments section of the table includes information on seasonal interest or color.

Risk Analysis

When choosing plants, it pays to determine the risks the plant may or may not bring to your landscape. Take the following into consideration when choosing plants:

- Does it attract stinging insects like bees or wasps?
- Does it produce messy fruit or other plant parts in the landscape?
- Does it produce fruit that may cause slipping, particularly on walkways?
- Does it produce thorns, spines, or prickles that can cause harm?
- Are leaves sharply pointed, which may cause harm?
- Is it poisonous to children or pets?
- Does it cause allergies?
- Does it have aggressive growth characteristics that crowd out its neighbors?
- Is it invasive?

Eradication of invasive plants costs millions of dollars every year in the United States. A number of plants can be invasive in landscapes. An invasive plant species, by federal definition, must be exotic and have a negative economic or health impact. Invasive plant species can

increase maintenance costs and cause problems in surrounding landscapes. Some invasive plants and potential alternatives are listed in Table 2.

Avoid invasive species whenever possible. Keep in mind that some invasive plants are regulated and illegal to move into the landscape. Remember that invasive plants in one area may not be invasive in another. The comments column in Table 1 provides cautionary statements about potentially invasive plants not discussed in Table 2. Before purchasing plants, be informed about which species are invasive in your area. In addition, new species can escape cultivation.

Some gardeners may prefer native plants, instead of exotic or invasive species. Native species are noted in Table 1 of this publication. However, remember that some native species can also be aggressive in the landscape. Despite occasional problems, choosing a native plant could amount to savings in plant purchases and preservation of natural resources, as well. The comments section also offers other information concerning the risk factors for plants.

Shopping Tips

Local vs. Online

Plant shopping at your local nursery, garden center, or online can be an exciting but sometimes confusing experience. Always check your favorite nursery or garden center first to see if you can buy the plants locally. You will usually be able to buy a larger plant for your money than you could if purchasing the same plant online. Also, you have the benefit of talking to a real person and seeing and inspecting the real plant. The only downside of shopping locally is that the number of different plants offered may be less than what you could order online. If you have found a plant online that is not found locally, request that your nursery or garden center order the plant for you.

Container vs. No Container

Plants come in various packages (Figure 7). Trees are typically sold in containers or pots of various sizes. These can range from 1 gallon up to many gallons. Trees also can be sold ball and burlapped, more commonly referred to as B and B. These plants have their roots with attached soil wrapped in burlap or a burlap-type material. Trees also can come with soil and roots contained in a wire basket. Whether B and B or wire basket, as much of the packaging as possible should be removed after the tree is in the planting hole and before backfilling with soil. Plants also can be bare-root and packaged in boxes, paper, or plastic wrapping. Obviously, those plants with roots surrounded by soil have a higher survival rate than those offered bare-root. Bare-root plants can, however, be cheaper, and if you handle them properly, can be a very good choice.

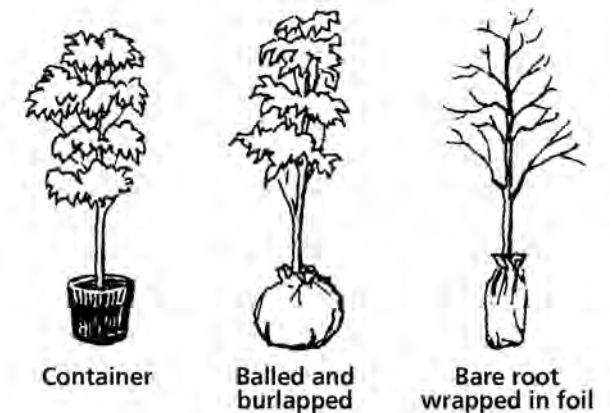


Figure 7. Plants are sold in various packages.

Small Plants vs. Large Plants

Remember that small container plants will grow and are cheaper than large container plants of the same type. So if cost is a consideration and you have the patience, purchasing smaller trees is more economical. If you want the space filled sooner and a more established look to your landscape, and you can afford the extra cost, by all means purchase a more mature plant in a larger container.

Low Maintenance vs. High Maintenance

We all want more leisure time, so it is important to select a plant that doesn't require too much maintenance in terms of pruning, spraying, watering, and disease and insect management. It is worth the extra effort to learn about the requirements of your selection before you make your purchase. Talk with nursery workers and gardening neighbors, or consult other resources.

Shop for Quality!

Always inspect your plant selection for signs of insect or disease damage. Make sure the plant shows no signs of mechanical damage to the bark or branches. Mechanical damage is caused by machinery or rough handling of the plant.

Select trees that have a good framework of strong branches. Look for plants with healthy green foliage and a full canopy. If it is a deciduous tree purchased while dormant, look for an overall good branching structure. Avoid plants that have exposed roots circling the top of the pot or protruding from the pot's drainage holes. These plants are root-bound, which indicates they have been held too long in the same pot (Figure 8).



Figure 8. Avoid root-bound, overgrown plants.

Protecting Plants until Planting Time

It is always better to have your planting area prepared before bringing home your plants so you can get them into the ground immediately. If this is not the case, a temporary holding area (Figure 9) should be provided for the plant until planting can occur. Do not allow plants to dry out; maintaining adequate moisture is very important. The holding area should be in an accessible area for easy watering. Also make sure the area is partially shaded and protected from drying winds. Check the plants daily to make sure the roots are kept moist.

If it will be more than 3 or 4 days before you can plant, provide additional protection. Group the plants close together and mulch around the packaging (container, B and B, wire basket, bare-root) with compost, pine needles, or shredded pine bark to keep the roots moist until planting. If the plant is bare-root, open the packaging to make sure the roots are moist before you cover them with mulch.



Figure 9. Protect plants before planting by shading them and mulching the roots in sawdust or another suitable material.



The following tables list ornamental landscape trees by height group and scientific name with information on foliage type, hardiness zone, plant height and width, plant spacing, pH range, and nativity for each, along with special comments.

TABLE 1. Ornamental landscape trees by height group

Small	10-16
Medium	17-23
Large.....	24-33

TABLE 2. Invasive landscape trees and suggested alternatives for each	34
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TABLE 1. Ornamental landscape trees by height group.

Small Trees — Less than 20 feet

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Native ⁴	Comments
Amur Maple	<i>Acer ginnala</i>	D	3–8	F–P	15'–20'	15'–20'	12'–15'	6.0–7.5		Can be invasive by reseeding. A few cultivars sold, including dwarf and red-leaved and -fruited forms. Growth rate is medium.
Japanese Maple	<i>Acer palmatum</i>	D	5–8	F–P	15'–25'	15'–25'	13'–20'	6.0–7.5		Has the effect of a miniature tree. Poor drainage reduces growth. Shade reduces intensity of leaf color. Many cultivars available. Growth rate is slow.
Bloodgood Japanese Maple	<i>Acer palmatum</i> 'Bloodgood'	D	5–8	F–P	15'–25'	15'–25'	13'–20'	6.0–7.5		See Japanese Maple. A small tree. New foliage is brilliant red. This deepens to dark red in sun. Most brilliant of red cultivars. Growth rate is slow.
Burgundy Lace Japanese Maple	<i>Acer palmatum</i> 'Burgundy Lace'	D	5–8	F–P	10'–12'	12'–15'	13'–20'	6.0–7.5		See Japanese Maple. Very slender branches with deeply lobed leaves that appear palmately (like the hand) compound. Red leaves appear lacy. Growth rate is slow.
Dissectum Atropurpureum	<i>Acer palmatum</i>	D	5–8	F–P	6'–10'	8'–14'	13'–20'	6.0–7.5		See Japanese Maple. Like 'Dissectum' but leaves bright red in shade.
Dissectum Japanese Maple	<i>Acer palmatum</i> 'Dissectum'	D	5–8	F–P	6'–10'	8'–14'	13'–20'	6.0–7.5		See Japanese Maple. This plant sometimes referred to as Threadleaf. Many cultivars in this group. Branching habit is more weeping. Leaves almost fern-like in texture. Growth rate is slow.
Oshio-Beni Japanese Maple	<i>Acer palmatum</i> 'Oshio-Beni'	D	5–8	F–P	15'–20'	15'–20'	13'–20'	6.0–7.5		See Japanese Maple. Leaves slightly redder than 'Bloodgood.' Growth rate is slow.
Bush's Buckeye	<i>Aesculus x bushii</i>	D	6–9	F–P	15'–25'	15'–25'	8'–10'	6.0–8.0	X	Natural hybrid between <i>A. glabra</i> and <i>A. pavia</i> , occurring where both species exist in proximity. Flowers pink. Growth rate is fast.
Flame Buckeye	<i>Aesculus pavia</i>	D	6–9	F–P	10'–20'	10'–20'	5'–8'	6.0–7.0	X	Fruit is poisonous to livestock and humans. New growth is coppery in color. Not easily transplanted. Flowers red. Grows to be a small tree. Growth rate is fast.
Painted Buckeye	<i>Aesculus sylvatica</i>	D	6–9	F–P	6'–15'	4'–10'	5'–12'	6.0–7.0	X	Native to east-central United States as far west as Alabama, but not Mississippi. Flowers yellow-green with red. Growth rate is medium to fast.
Tag Alder	<i>Alnus serrulata</i>	D	5–9	F–P	6'–20'	6'–20'	6'–10'	5.5–7.0	X	Shrub to small tree. Has catkins in spring followed by dark green foliage through summer. Tolerant of very wet soils. Growth rate is medium.
Downy Serviceberry	<i>Amelanchier arborea</i>	D	4–9	F–S	15'–25'	15'–25'	10'–20'	6.0–7.0	X	Variable tree with many cultivars. Flowers white in spring. Fruit edible. Growth rate is medium.
Devils-walkingstick	<i>Aralia spinosa</i>	D	4–9	F–S	10'–20'	5'–10'	5'–10'	5.5–7.0	X	Colonial tree and difficult to contain in landscape. Leaves very large. Fruit dark purple in top of stems. Stems very spiny. Growth rate is slow (old wood) to fast (suckers).
Strawberry Tree	<i>Arbutus unedo</i>	BE	7–8	F–P	10'–15'	8'–12'	6'–10'	5.0–6.0		Sometimes grown as a shrub. A few cultivars. Bark similar to Mountain Laurel, with which it is related. Growth rate is slow.

Small Trees — Less than 20 feet

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Native ⁴	Comments
Common Pawpaw	<i>Asimina triloba</i>	D	5–8	F–S	15'–20'	15'–20'	10'–15'	6.0–7.0	X	Can get much larger in good conditions. Ripe fruit edible; related to tropical soursop. Typically occurs wild in rich, damp woods. Often colonial from suckers. Growth rate is medium.
Eastern Baccharis	<i>Baccharis halimifolia</i>	SE	5–9	F	5'–12'	5'–12'	5'–10'	5.5–7.0	X	Shrub and later a small tree. Dioecious with female silvery pappus the somewhat attractive feature. Very common and aggressive by reseeding, a problem in landscapes. Growth rate is fast.
Japanese Camellia	<i>Camellia japonica</i>	BE	7–9	F–S	10'–15'	6'–10'	4'–6'	4.5–5.5		Commonly grown as shrub. Provide protection from sun in middle of day. Compact in full sun; more open with more shade. Many selections available. Growth rate is medium-slow.
Buckwheat-tree	<i>Cliftonia monophylla</i>	B	7–9	F–P	6'–12'	4'–10'	3'–8'	5.5–7.0	X	White or pink flowers in racemes. Have seen pink flowered forms in MS coast wetlands. Shrub eventually grows to a tree with age. Tends to grow in high organic wetland soils. Growth rate is medium.
Pagoda Dogwood	<i>Cornus alternifolia</i>	D	3–7	F–P	15'–25'	15'–25'	10'–20'	5.5–6.5		Native to eastern North America, but rare in Mississippi. Similar to Silky Dogwood, except leaves alternate. Prefers well-drained soils. Growth rate is slow to medium.
Silky Dogwood	<i>Cornus amomum</i>	D	4–8	F–P	6'–10'	6'–10'	4'–8'	5.5–7.0	X	Small white flowers in clusters followed by dark bluish fruit. Wetland shrub or small tree in the wild. Growth rate is medium to fast.
Bentham's Cornel	<i>Cornus capitata</i>	BE	8–9	F–P	10'–20'	8'–15'	6'–10'	5.5–7.0		Shrubby at first followed by a small tree. Flowers cream followed by red fruit. Growth rate is slow to medium.
Gray Dogwood	<i>Cornus racemosa</i>	D	3–8	F–S	10'–15'	10'–15'	10'–15'	5.5–6.5	X	In poor soils may not reach 6 feet. Sprouts and suckers freely. More tolerant of adverse conditions than Flowering Dogwood. Growth rate is medium to slow.
Fragrant Winterhazel	<i>Corylopsis glabrescens</i>	D	5–8	F–P	8'–15'	8'–15'	6'–10'	5.5–7.0		Flowers fragrant. Related to Witchhazel. Shrubby at first, but can be grown as a small tree. Growth rate is slow to medium.
Common Smoketree	<i>Cotinus coggygria</i>	D	5–8	F	10'–15'	10'–15'	10'–15'	5.5–7.0		Typical forms grown are purple. Several cultivars available. Growth rate is medium.
Parsley Hawthorn	<i>Crataegus marshallii</i>	D	7–11	F–P	10'–15'	10'–15'	8'–12'	5.5–7.5	X	Attractive (foliage, flowers, fruit, bark) small tree, often found under larger trees in low woods. Growth rate is slow to medium.
Riverflat Hawthorn	<i>Crataegus opaca</i>	D	7–11	F–P	10'–15'	10'–15'	8'–12'	5.5–7.5	X	Attractive (foliage, flowers, fruit, bark) small tree, often found under larger trees in low woods. Often grown for (haw) fruit. Growth rate is slow to medium.
Littlehip Hawthorn	<i>Crataegus spathulata</i>	D	6–9	F–P	15'–20'	10'–15'	8'–12'	5.5–7.5	X	Attractive (foliage, flowers, fruit, bark) small tree, often found under larger trees in woods. Fine-textured foliage. Growth rate is slow to medium.

Small Trees — Less than 20 feet

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Native ⁴	Comments
Common Quince	<i>Cydonia oblonga</i>	D	5–8	F	15'–20'	8'–15'	10'–12'	6.0–6.5		Shrub to small tree primarily grown for fruit. Several cultivars. Flowers white to pink in spring; generally smooth. Growth rate is medium.
Blue-bean	<i>Decaisnea fargesii</i>	D	6–7	P–S	10'–15'	10'–15'	8'–12'	6.0–7.0		Related to Akebia, so not a true bean (Fabaceae). Leaves large with a tropical effect. Fruit blue, bean-like; an interesting feature for the landscape, but may not be easily established. Growth rate is medium.
Eastern Leatherwood	<i>Dirca palustris</i>	D	4–9	P–S	3'–6'	3'–6'	3'–6'	6.0–7.5	X	Rarely seen in Mississippi, wild or in landscapes. Very small tree with leathery branches. Flowers and fruit not showy and prefers damp, rich years. Growth rate is slow.
Paperbush	<i>Edgeworthia papyrifera</i>	D	7–9	P–S	3'–4'	3'–4'	3'–4'	6.0–7.0		Unusual, coarse, small tree when grown on single trunk. Flowers very early before leaves develop. Prefers rich, moist soils. Another one for the collector. Growth is slow.
Loquat	<i>Eriobotrya japonica</i>	BE	7–10	F–P	15'–25'	15'–25'	8'–12'	6.0–8.0		Hardest of tropical fruits. Fruits are tasty, but only south since plants usually don't bear in Zone 7b. Drought resistant. Excellent for city tree plantings. Growth rate is medium.
Eastern Wahoo	<i>Euonymus atropurpureus</i>	D	4–9	F–S	15'–25'	12'–20'	10'–15'	6.0–7.0	X	Rare in Mississippi, wild or in landscapes. Typically a wooded, floodplain species in the wild. Small tree at maturity. Fruit similar to Strawberry Bush. Growth rate is slow to medium.
Winterberry Euonymus	<i>Euonymus bungeanus</i>	D	4–7	F–S	18'–24'	18'–24'	10'–20'	6.0–7.0		Small tree when mature. More open canopy when grown in shade. Fruit similar to other Euonymus. Growth rate is slow to medium.
Spreading Euonymus	<i>Euonymus kiautschovicus</i> 'Sieboldiana'	D	5–8	F–S	18'–24'	18'–24'	10'–20'	6.0–7.0		Aside from minor features, very similar to Winterberry Euonymus. This form is a small tree, unlike many cultivars of Spreading Euonymus. Growth rate is medium.
Pineapple Guava	<i>Feijoa sellowiana</i>	BE	8–10	F–P	10'–15'	10'–15'	8'–12'	5.5–7.5		Typically grown for fruit with several cultivars, but a fair, small landscape tree with silver-underside foliage. Fruit usually do not reach maturity in Zone 7. Growth is slow to medium.
Common Fig	<i>Ficus carica</i>	D	7–11	F–P	10'–20'	10'–15'	10'–15'	5.5–7.5		Another plant typically grown for fruit, but interesting in the landscape. Bark smooth, grayish; branches often curled. Selective pruning keeps plant in bounds. Several cultivars; refer to Extension publication IS1457. Growth rate is medium to fast.
Carolina Buckthorn	<i>Frangula caroliniana</i>	D	5–9	F–P	15'–20'	10'–15'	10'–15'	6.0–8.0	X	Formerly <i>Rhamnus caroliniana</i> . Small tree generally of alkaline soils. Dark green foliage. Bark smooth with white patches. Growth rate is medium.
Franklin Tree	<i>Franklinia alatamaha</i>	D	5–9	F–P	10'–20'	6'–15'	6'–15'	5.5–6.5	X	Originally found in Georgia, but now apparently extinct in the wild. Related to <i>Camellia</i> . Not easy to cultivate. Could be a shrub, but treated here as a small tree. Growth rate is medium.

Small Trees — Less than 20 feet

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Native ⁴	Comments
Vernal Witchhazel	<i>Hamamelis vernalis</i>	D	4–8	F–P	6'–10'	10'–15'	7'–10'	6.0–7.0	X	Shrubby when small. Difficult to move as a large plant. Trunk and bark are landscape features. Does not flower well in deep shade. A few cultivars. Growth rate is medium.
Seven-son Flower	<i>Heptacodium miconioides</i>	D	5–8	F–P	15'–20'	8'–18'	5'–15'	6.0–7.0		Interesting leaves with bark similar to Bush Honeysuckle, with which it is related, but flowers much later. Shrubby when young. Not common in landscapes. Growth rate is medium.
Rose-of-Sharon or Shrub Althea	<i>Hibiscus syriacus</i>	D	5–8	F–P	8'–12'	6'–10'	5'–8'	6.0–7.0		Long cultivated with many cultivars. Shrubby tree that may reseed in landscape. Growth rate is medium.
Nellie R. Stevens Holly	<i>Ilex</i> x 'Nellie R. Stevens'	BE	6–9	F–P	15'–25'	15'–20'	10'–15'	6.0–6.0		Hybrid between English and Chinese holly. Female clone. Large leaves. Can plant closer for screening. Growth rate is medium to fast.
Yaupon Holly	<i>Ilex vomitoria</i>	BE	7–10	F–S	15'–20'	10'–15'	5'–8'	5.0–6.0	X	Highly desirable native shrub or tree. Dioecious. May be "poodled" or espaliered. Yellow fruit form available. Fruits on 2-year-old wood. Several dwarf shrubby forms available. Growth rate is medium to fast.
Weeping Yaupon Holly	<i>Ilex vomitoria</i> 'Pendula'	BE	7–10	F–P	15'–20'	10'–15'	10'–15'	6.0–8.0	X	Accent plant usually grown alone. Shrubby young, but a small tree form with age. Fruits on 2-year-old wood. Will tolerate dry conditions. Growth rate is medium.
Florida Anise-tree	<i>Illicium floridanum</i>	BE	6–9	P–S	6'–10'	5'–8'	5'–8'	5.5–6.5	X	Shrub to small tree generally of low ground, particularly along creeks. Flowers showy red. Several cultivars, including dwarf forms. Growth rate is medium.
Blue Point Juniper	<i>Juniperus chinensis</i> 'Blue Point'	NE	4–9	F	8'–12'	5'–8'	5'–8'	6.0–8.0		Relatively popular juniper. Upright pyramidal form with blue foliage. Junipers have some deer resistance, but have seen small native junipers browsed (not consumed) by deer. Growth rate is medium.
Blue Column Juniper	<i>Juniperus chinensis</i> 'Columnaris'	NE	4–9	F	20'–24'	5'–10'	5'–10'	6.0–8.0		All leaves are juvenile; that is, they are sharp-pointed. Growth rate is medium.
Hetz Chinese Juniper	<i>Juniperus chinensis</i> 'Hetzii'	NE	5–9	F	10'–15'	10'–15'	10'–15'	6.0–8.0		Typically grown as a shrub, but like many other larger shrub junipers, can become a small spreading tree. Similar to Pfitzer juniper except branches at 45-degree angle and not horizontal. Growth rate is medium to fast.
Keteleer Chinese Juniper	<i>Juniperus chinensis</i> 'Keteleeri'	NE	4–9	F	15'–20'	6'–15'	7'–10'	6.0–8.0		Free fruiting. Dioecious. Larger fruit than most junipers. Growth rate is medium.
Irish Common Juniper	<i>Juniperus communis</i> 'Hibernica'	NE	4–9	F	5'–15'	2'–4'	3'–5'	6.0–8.0		Dense upright, spiny juniper with formal columnar shape. Have seen a low-growing variety, <i>depressa</i> , which is native to much of North America, in the northwestern United States. Growth rate is medium.
Hillspire Juniper	<i>Juniperus virginiana</i> 'Hillspire'	NE	3–9	F	15'–30'	5'–15'	10'–15'	6.0–8.0	X	Takes pruning well. Upright compact form of the native. Often used for nursery spirals and other clipped forms. Growth rate is medium.

Small Trees — Less than 20 feet

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Native ⁴	Comments
Mountain Laurel	<i>Kalmia latifolia</i>	BE	4–9	P–S	15'–20'	10'–15'	8'–12'	4.5–6.0	X	Numerous cultivars, but not easily found in Southern nurseries. Usually grows on rocky sites in wild. Magnificent display of color in spring. Interesting bark feature when mature. Growth rate is slow.
Common Crapemyrtle	<i>Lagerstroemia indica</i>	D	7–9	F–P	15'–25'	10'–20'	10'–15'	5.0–6.0		Easily propagated. Easily transplanted in very large sizes. Often grown as shrubs, but some cultivars can be grown as small trees with proper pruning. Many cultivars. Growth rate is fast.
Hybrid Crapemyrtle	<i>Lagerstroemia indica</i> x <i>L. fauriei</i>	D	7–9	F–P	5'–35'	5'–35'	10'–25'	5.0–6.0		Many cultivars (refer to Crapemyrtle Extension publication P2007 for more information), often with Native American tribal names. Larger cultivars can easily be grown as small trees for bark and flower features. Growth rate is fast.
Spicebush	<i>Lindera benzoin</i>	D	4–9	P–S	6'–12'	6'–12'	6'–12'	5.5–7.0	X	Native understory shrub, or tree with age, usually in rich, wet woods. Fruit red, spicy. Related to sassafras. Several species, one endangered in Mississippi. Growth rate is slow to medium.
Lily Magnolia	<i>Magnolia liliflora</i>	D	5–8	F–P	8'–12'	8'–12'	8'–12'	5.5–6.5		Also known as <i>Magnolia quinquepeta</i> . Flowers generally purple and relatively closed, upright. A few cultivars. Growth rate is slow to medium.
Star Magnolia	<i>Magnolia stellata</i>	D	4–9	F–P	15'–20'	10'–15'	10'–15'	5.5–6.5		Popular white-flowered magnolia. Flowers early, showy. Several cultivars, some pink-flowered. Growth rate is slow.
Sargent Crabapple	<i>Malus sargentii</i>	D	4–8	F–P	8'–12'	10'–15'	15'–20'	5.0–6.5		Slightly susceptible to scab and fire blight. Dense branching crab that may grow twice as wide as tall. Growth rate is medium to fast.
Banana Shrub	<i>Michelia figo</i>	BE	7–10	F–P	6'–10'	6'–10'	7'–10'	5.0–6.5		A small tree with age. Variety <i>skinneriana</i> very similar and increasingly common. Chlorosis of foliage a problem where soil pH is not at proper levels. Flowers very fragrant. Petals have maroon border. Fragrance that of very ripe bananas. Very sensitive to poorly drained soils. Often referred to as <i>Michelia fuscata</i> or <i>Magnolia fuscata</i> . Growth rate is slow.
Southern Waxmyrtle	<i>Myrica cerifera</i>	BE	7–11	F–P	10'–15'	10'–15'	10'–15'	4.0–6.0	X	Now <i>Morella cerifera</i> . Typically a plant of wet, acidic soils, but very tolerant of most growing conditions. Early settlers boiled leaves and fruit to get wax that they used to make bayberry candles. Not particularly long-lived. Greatest success comes in transplanting smaller plants. Easily transplanted in the 3- to 4-foot height range. Natural form will become a small tree, but some cultivars are smaller forms. Growth rate is fast.
Parrotiopsis	<i>Parrotiopsis jacquemontiana</i>	D	5–7	F–P	8'–12'	5'–10'	8'–10'	6.0–7.0		Another Witchhazel relative. Shrub, eventually to a small tree. Not common in landscapes. Growth rate is slow.
Fraser Photinia	<i>Photinia x fraseri</i>	BE	7–9	F–P	10'–20'	5'–10'	5'–10'	6.0–7.0		Hybrid photinia. Susceptible to leaf spot. Commonly sold for screening and new red growth. Growth rate is medium to fast.

Small Trees — Less than 20 feet

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Native ⁴	Comments
Feverbark	<i>Pinckneya pubens</i>	D	7-9	P-S	10'-20'	5'-15'	10'-15'	5.5-6.5	X	Native to low woods from Florida to South Carolina. A few cultivars. Not easily cultivated, especially in Zone 7. Grown for pink sepals. Growth rate is slow to medium.
Oriental Arborvitae	<i>Platycladus orientalis</i>	NE	6-11	F	18'-25'	10'-15'	5'-10'	6.0-7.0		Formerly <i>Thuja orientalis</i> . Many cultivars, including the commonly sold golden forms. Some relatively formal and generally smaller than the standard form. Growth rate is slow to medium.
Purpleleaf Plum	<i>Prunus cerasifera</i>	D	4-8	F-P	15'-30'	15'-25'	10'-15'	5.5-6.5		Best leaf color in full sun. Prune to reduce crossing branching. Tree is short-lived. Growth rate is medium.
Flowering Peach	<i>Prunus persica</i>	D	5-9	F	15'-30'	15'-25'	7'-10'	6.0-7.5		Usually grown for fruit (refer to Extension publication IS1434 for more information). However, some cultivars are grown as ornamentals, which are generally dwarf and/or double flowering. Well-drained soils are essential to reduce root rot problems. Growth rate is slow to medium.
Chinese Flowering Quince	<i>Pseudocydonia sinensis</i>	D	5-8	F	10'-20'	5'-10'	5'-8'	5.5-6.5		Grown for its fruit, but the bark alone is worth planting. Early spring color. Susceptible to fireblight. Growth rate is medium.
Wafer-ash	<i>Ptelea trifoliata</i>	D	3-9	F-P	15'-20'	5'-15'	5'-10'	5.5-6.5	X	Shrub to small tree more for the collector. Related to Citrus. Growth rate is slow to medium.
Bristly Locust	<i>Robinia hispida</i>	D	5-8	F	6'-10'	5'-8'	4'-6'	6.0-7.0	X	Unusual native of the east-central United States. Colonial shrub to small tree with hanging 2- to 4-inch clusters of pink, pea-like flowers. Branches covered with red bristles. Growth rate medium to fast, particularly for suckers.
Smooth Sumac	<i>Rhus glabra</i>	D	3-9	F-P	10'-20'	10'-20'	4'-6'	5.0-6.0	X	Suckers freely forming large clumps. Leave texture fine on coarse stems. Withstands wide range of growing conditions. Tolerant of city conditions. Growth rate is medium to fast.
Pussy Willow	<i>Salix caprea</i>	D	4-8	F-P	15'-25'	12'-15'	8'-10'	6.5-8.0		Female catkins are the familiar pussy willows. Can be used as a cut flower. May have problems with high humidity of the Deep South. Growth rate is fast.
American Elder	<i>Sambucus canadensis</i>	D	4-9	F-P	5'-12'	5'-12'	5'-12'	5.5-7.0	X	Now considered a variety of Common Elder (<i>Sambucus nigra</i>). Sometimes grown for fruit, but seldom grown as an ornamental. Purple- and lace-leaved forms of Common Elder more popular. Grows on wet sites in the wild. Shrub to small tree. Growth rate is medium to fast.
Common Elder	<i>Sambucus nigra</i>	D	5-7	F-P	5'-12'	5'-12'	5'-12'	5.5-7.0		Purple- and lace-leaved forms more popular, but unfortunately not well-adapted for Mississippi. Species a shrub to small tree, but some cultivars only shrubs and much shorter. Growth rate slow to fast depending upon cultivar and conditions.
Silky Stewartia	<i>Stewartia malacodendron</i>	D	7-9	F-S	10'-15'	10'-15'	8'-12'	4.5-6.5	X	Native shrub to small understory tree with showy flowers. Bark not as showy as other <i>Stewartia</i> species. Growth rate is slow.

Small Trees — Less than 20 feet

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Native ⁴	Comments
Mountain Stewartia	<i>Stewartia ovata</i>	D	5–8	F–S	10'–15'	10'–15'	8'–12'	4.5–6.5	X	Native to the eastern United States. Shrub to small understory tree with showy flowers. Bark not as showy as other Stewartia species. Growth rate is slow.
American Snowbell	<i>Styrax americanus</i>	D	5–9	F–P	6'–10'	5'–8'	4'–6'	5.5–6.5	X	Native wetland species. Flowers white and showy. Growth rate is slow to medium depending on landscape conditions.
Bigleaf Snowbell	<i>Styrax grandifolius</i>	D	7–9	F–P	8'–15'	8'–12'	6'–12'	5.5–6.5	X	Native upland, typically understory species. Flowers white and showy. May not be easy to transplant. Growth rate is slow to medium depending on landscape conditions.
Blackhaw Viburnum	<i>Viburnum prunifolium</i>	D	3–9	F–P	12'–15'	8'–12'	5'–10'	5.5–7.0	X	Usually a small understory tree. Easily transplanted. Flowers white. Bark corky. Growth rate is slow to medium.
Rusty Blackhaw	<i>Viburnum rufidulum</i>	D	5–9	F–P	10'–20'	10'–20'	10'–15'	5.5–7.0	X	Another small understory tree. Very similar to Blackhaw Viburnum. Growth rate is slow to medium.
Lilac Chastetree	<i>Vitex agnus-castus</i>	D	7–9	F–P	8'–10'	8'–10'	10'–15'	6.0–8.0		Often pruned into a single- or multi-trunked tree. Escaped in the U.S. and have seen it escaped in western Texas. Popular plant in old gardens. Foliage has pungent odor when crushed. Growth rate is medium to fast.
Chastetree	<i>Vitex negundo</i>	D	6–8	F–P	10'–15'	10'–15'	8'–15'	6.0–7.0		A few cultivars, but cutleaf forms usually sold. Fine-textured foliage. Growth rate is fast.
Hercules-club or Toothache Tree	<i>Zanthoxylum clava-herculis</i>	D	7–10	F–P	25'–30'	20'–25'	15'–20'	6.0–8.0	X	An unusual tree with spiny bark. Larger than Prickly-ash (<i>Zanthoxylum americanum</i>). Typically a tree of alkaline sites. Leaf texture fine. One for the collector.
Chinese Date or Jujube	<i>Ziziphus jujuba</i>	D	6–9	F–P	15'–20'	10'–15'	10'–15'	6.0–7.0		Sometimes grown for fruit, but rarely seen in cultivation. Spiny, small tree. Growth rate is slow to medium.

¹ BE = Broadleaf Evergreen; D = Deciduous; NE = Needled Evergreen; SE = Semibroadleaf Evergreen; and V = Variable.

² F = Full Sun; P = Part Sun to Part Shade; and S = Shade.

³ Heights provided in this table are general ranges, and some species may get larger over many years, as observed in record champion trees.

⁴ Native refers to species that are native to the southeastern United States.

Medium Trees — 20–40 feet

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Native ⁴	Comments
Florida Maple	<i>Acer barbatum</i>	D	6–9	F–S	20'–25'	15'–25'	15'–25'	6.0–8.0	X	Better suited to Southern climate than sugar maple. Chalkbark maple (<i>Acer leucoderme</i>) is also better suited in the South. Growth rate is medium.
Paperbark Maple	<i>Acer griseum</i>	D	5–8	F–P	20'–35'	10'–30'	15'–30'	5.5–7.5		Exfoliating bark. Growth rate is slow.
Chalkbark Maple	<i>Acer leucoderme</i>	D	5–9	F–P	25'–30'	15'–25'	15'–30'	6.0–8.0	X	Bark whitish. Better suited to Southern climate than sugar maple. Florida maple (<i>Acer barbatum</i>) is also better suited in the South. Growth rate is medium.
Boxelder	<i>Acer negundo</i>	D	3–9	F–P	30'–50'	30'–50'	17'–25'	6.0–8.0	X	Wood weak and subject to wind damage. Tolerates dry soils, but usually found on flood plains. Fast grower. Short-lived tree. Has compound leaves. Growth rate is fast.
Shantung Maple	<i>Acer truncatum</i>	D	4–8	F–P	20'–25'	20'–25'	17'–25'	6.0–8.0		Painted maple is subspecies mono. Not common. Growth rate is slow.
Ohio Buckeye	<i>Aesculus glabra</i>	D	4–7	F–S	20'–40'	20'–40'	10'–30'	6.0–8.0	X	Rare in Mississippi and grows on damp, high-pH soils. Flowers are white to cream; tree larger than red buckeye. Growth rate is medium.
Charlotte Mimosa	<i>Albizia julibrissin</i> 'Charlotte'	D	7–9	F–P	20'–30'	20'–30'	23'–35'	5.0–7.0		See Mimosa in Table 2. May escape cultivation via seed dispersal and become invasive. Reported to be resistant to mimosa wilt. Not easily found in the nursery. Growth rate is medium to fast.
Rubra Mimosa	<i>Albizia julibrissin</i> 'Rubra'	D	7–9	F–P	20'–30'	20'–30'	23'–35'	5.0–7.0		See Mimosa in Table 2. Seed may revert to wild form and become invasive. Deep rose flowers. Growth rate is medium to fast.
American Hornbeam	<i>Carpinus caroliniana</i>	D	4–9	F–S	20'–30'	20'–30'	15'–25'	6.0–7.0	X	More tolerant in the South compared to many other <i>Carpinus</i> . In wild, typically grows on flood plains in shade. Bark smooth, ridged; sometimes called muscledwood.
Southern Catalpa	<i>Catalpa bignonioides</i>	D	6–9	F–P	30'–40'	30'–40'	20'–30'	7.0–8.0	X	Often raised for worms used for fish bait that feed on leaves. Flowers white with yellow and purple spots in throat. Growth rate is medium to fast.
Chinese Catalpa	<i>Catalpa bungei</i>	D	5–8	F–P	20'–30'	20'–30'	10'–20'	6.0–7.0		Similar to native catalpa, but smaller. Flowers rose to white. Growth rate is medium to fast.
Chinese Catalpa	<i>Catalpa ovata</i>	D	5–8	F–P	20'–30'	20'–30'	10'–20'	6.0–7.0		Similar to native catalpa, but flowers yellowish-white and fruit very slender. Growth rate is fast.
Eastern Redbud	<i>Cercis canadensis</i>	D	4–9	F–P	20'–30'	25'–35'	10'–15'	5.5–8.0	X	Short-lived tree. Not well adapted to coastal areas. Grown as small tree for flowers in spring. A few cultivars and varieties. Growth rate is medium to fast.
White Flowering Eastern Redbud	<i>Cercis canadensis</i> 'Alba'	D	4–9	F–P	20'–30'	25'–35'	10'–15'	5.5–8.0	X	See Eastern Redbud. Growth rate is medium to fast.

Medium Trees — 20–40 feet

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Native ⁴	Comments
Forest Pansy Eastern Redbud	<i>Cercis canadensis</i> 'Forest Pansy'	D	5–9	F–P	20'–30'	25'–35'	10'–15'	5.5–8.0	X	See Eastern Redbud. Growth rate is medium to fast.
Texas Redbud	<i>Cercis canadensis texensis</i>	D	6–9	F–P	15'–25'	15'–25'	8'–15'	5.5–8.0		Native to Texas and Oklahoma. Similar to Eastern Redbud; leaves tend to be very glossy. Slightly smaller than Eastern Redbud. Growth rate is medium to fast.
Desert-willow	<i>Chilopsis linearis</i>	D	7–9	F	15'–25'	10'–15'	8'–15'	6.5–8.0		Native to the Southwest. Not a true willow (<i>Salix</i>) and does not like wet soils. A few cultivars available. Beautiful, fine-textured tree, but may not be easily cultivated in the Southeast. Growth rate is medium
Chinese Fringetree	<i>Chionanthus retusus</i>	D	6–8	F–P	15'–25'	15'–20'	15'–20'	6.0–7.0		Similar to White Fringetree, but shorter petals and probably less showy. Can grow to be a small tree. Growth rate is slow.
White Fringetree	<i>Chionanthus virginicus</i>	D	4–9	F–P	25'–30'	25'–30'	20'–25'	6.0–7.0	X	Also known as Grancy Gray-beard. Popular shrub or small tree with age. Male and female trees. Growth rate is slow.
Drummond's Dogwood	<i>Cornus drummondii</i>	D	4–9	F–P	20'–25'	10'–20'	10'–20'	5.5–7.0	X	Similar to Silky Dogwood, except fruit are white. Suckers profusely and can be aggressive. Growth rate is slow, but shoots are fast.
Flowering Dogwood	<i>Cornus florida</i>	D	5–9	F–S	20'–30'	20'–30'	17'–25'	5.0–6.5	X	Showy part of flower are bracts and not petals. Color white, pink, red. Wood is hard, heavy. Very sensitive to heavy, poorly drained soils. Growth rate is slow to medium.
Swamp Dogwood	<i>Cornus foemina</i>	D	6–9	F–P	20'–25'	10'–20'	10'–20'	5.5–7.0	X	Very similar to Silky Dogwood, except larger. Wetland shrub or small tree in the wild. Growth rate is medium to fast.
Kousa Dogwood	<i>Cornus kousa</i>	D	5–8	F–P	20'–30'	20'–30'	15'–25'	5.5–6.5		Many cultivars and not easy to cultivate in Zones 7 and 8. Bracts white and showy like Flowering Dogwood, but slightly smaller. Growth rate is slow to medium.
Cornelian Cherry Dogwood	<i>Cornus mas</i>	D	4–8	F–P	20'–25'	15'–20'	10'–15'	5.5–6.5		Flowers yellow, but bark is also an interesting landscape feature. Several cultivars. Growth rate is medium.
American Smoketree	<i>Cotinus obovatus</i>	D	4–8	F–S	20'–30'	20'–30'	20'–30'	6.0–8.0	X	Also called Chittamwood. Grows on high-pH soils or rock in the wild. Can become a small tree with age. Growth rate is slow to medium.
Cockspur Hawthorn	<i>Crataegus crus-galli</i>	D	4–7	F	20'–30'	20'–35'	15'–25'	6.0–7.0	X	Large hooked thorns, although var. <i>inermis</i> is thornless. Spring flowers showy. Growth rate slow to medium.
Washington Hawthorn	<i>Crataegus phaenopyrum</i>	D	4–8	F–S	25'–30'	20'–25'	13'–20'	6.0–7.0	X	One of the best of all the hawthorns. Tolerates city conditions well. One of later-flowering species. Fruit showy in winter. Native from Virginia to Alabama. Growth rate is medium to fast.
Mourning Cypress	<i>Cupressus funebris</i>	NE	8–11	F	30'–40'	25'–35'	25'–35'	6.0–7.5		Impressive weeping form in landscape. Have grown successfully in 7b for many years. Growth rate is medium.
Monterey Cypress	<i>Cupressus macrocarpa</i>	NE	7–9	F	30'–40'	25'–35'	25'–35'	6.0–7.5		Develops layered branches and flat top with age. Humidity difficult for this tree, though have had a tree for several years from seed. Numerous cultivars. Growth rate slow to medium.

Medium Trees — 20–40 feet

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Native ⁴	Comments
Italian Cypress	<i>Cupressus sempervirens</i>	NE	7–9	F	30'–40'	3'–4'	3'–6'	6.0–7.5		Distinct columnar growth seen in West Coast and Mediterranean land- scapes. Very formal, although the wild form tends to be informal. Several cultivars, including the typical columnar forms. Needs well-drained soils. Growth rate is medium.
Dove-tree	<i>Davidia involucreta</i>	D	6–7	F–P	20'–40'	20'–40'	15'–30'	6.0–7.0		Fascinating tree with a fascinating cultural past. Flowers (bracts) with the appearance of flying doves, sometimes called Ghost Tree for similar reason. Not easily established as young plants, at least in Zone 7. Growth rate is slow to medium.
Japanese Persimmon	<i>Diospyros kaki</i>	D	7–9	F	20'–30'	20'–30'	7'–10'	5.5–7.0		Fruit may be nuisance in landscape, but when fruit is major consideration, plant two varieties. Refer to MSU publication IS1446 for more information on fruiting varieties and culture. Growth rate is medium.
Fortune Fontanesia	<i>Fontanesia fortunei</i>	D	4–8	F–P	20'–30'	15'–20'	8'–15'	5.5–7.0		Large shrub, but can be used as a small tree. Very fine texture in land- scape. Growth rate is medium.
Sunburst Thornless Honey Locust	<i>Gleditsia triacanthos inermis</i> 'Sunburst'	D	4–8	F	30'–35'	30'–35'	20'–25'	6.0–8.0	X	Thornless with yellow foliage, but other similar cultivars exist. Susceptible to canker. Growth rate is fast.
Loblolly-bay	<i>Gordonia lasianthus</i>	BE	7–9	F–P	30'–40'	20'–30'	15'–25'	5.5–6.5	X	Rare in Mississippi, both wild and in the landscape. Generally a species of wet, acid soils, but may favor well-drained soils in cultivation. Not easily cultivated, especially in Zone 7. Growth rate is medium.
Carolina Silverbell	<i>Halesia carolina</i>	D	4–9	F–P	30'–40'	20'–35'	15'–25'	6.0–8.0	X	Rare in Mississippi, occurring on rocky ridges in the northeast part of the state, usually as an understory tree. Showy white, bell-shaped flowers in spring. Growth rate is medium.
Two-winged Silverbell	<i>Halesia diptera</i>	D	5–8	F–P	20'–30'	20'–30'	15'–25'	5.5–7.5	X	Typically, an understory tree of floodplain forests in Mississippi. Very showy when blooming and seems to do well in land- scapes. Similar to other silverbells. Growth rate is medium.
Mountain Silverbell	<i>Halesia tetraptera</i>	D	4–9	F–P	30'–40'	20'–35'	15'–25'	6.0–7.5	X	Similar to Carolina Silverbell with showy white, bell-shaped flowers in spring. Growth rate is medium.
Common Witchhazel	<i>Hamamelis virginiana</i>	D	3–9	F–S	20'–30'	20'–25'	10'–15'	5.5–6.5	X	Difficult to move as a large plant. Trunk and bark are land- scape features. Does not flower well in deep shade. Growth rate is medium.
East Palatka Holly	<i>Ilex x attenuata</i> 'East Palatka'	BE	6–9	F–P	25'–30'	20'–25'	15'–20'	5.0–6.0		Very heavy berry producer. Supposed to be a female clone of American Holly. Growth rate is medium.
Foster's No. 2 Holly	<i>Ilex x attenuata</i> 'Foster #2'	BE	6–9	F–P	25'–30'	10'–18'	10'–15'	5.0–6.0		Hybrid between American Holly and Dahoon Holly. Leaves more narrow than American Holly. More tolerant of adverse conditions than American Holly. Growth rate is medium to fast.
Savannah Holly	<i>Ilex x attenuata</i> 'Savannah'	BE	6–9	F–P	25'–30'	20'–25'	15'–20'	5.0–6.0		Popular large holly. Leaves have wavy margin, 2–3 inches long, with several spines. Growth rate is medium.

Medium Trees — 20–40 feet

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Native ⁴	Comments
Dahoon	<i>Ilex cassine</i>	BE	7–9	F–P	20'–30'	8'–15'	8'–15'	5.0–6.0	X	Native to the lower South. Foliage is somewhat fine in texture, compared to American Holly. Growth rate is slow to medium.
Possumhaw	<i>Ilex decidua</i>	D	5–9	F–P	20'–30'	15'–25'	10'–15'	5.0–6.5	X	Shrub to small tree. Birds reported to prefer red berries over orange ones. Common in low ground, either open or with overstory trees. Fruit not showy until after frost. Several cultivars. Georgia Holly (<i>Ilex longipes</i>) is very similar. Growth rate is medium.
Koehne Holly	<i>Ilex x koehneana</i>	BE	7–9	F–P	20'–25'	15'–25'	10'–15'	5.0–6.0		Shrub to small tree. Plant closer for screening. Fruit and foliage attractive. Growth rate is medium.
Lusterleaf Holly	<i>Ilex latifolia</i>	BE	7–9	P	20'–25'	15'–20'	15'–20'	5.0–6.0		Dioecious. Fruits on 2-year-old wood. Vigorous shoots may be injured by cold. May resemble magnolia at a distance. Growth rate is slow to medium.
Hollywood Juniper	<i>Juniperus chinensis</i> 'Kaizuku'	NE	5–9	F	20'–30'	10'–20'	5'–8'	6.0–8.0		Also known as 'Torulosa.' Growth shape apparently not drastically affected by pruning. Apparently not hardy in northern U.S. A popular, picturesque plant. Growth rate is medium to fast.
Rocky Mountain Juniper	<i>Juniperus scopulorum</i>	NE	3–7	F	30'–40'	3'–15'	10'–15'	6.0–8.0		Usually planted as a specimen. Native to the West with several cultivars, including 'Blue Heaven,' 'Moonglow,' 'Skyrocket,' and 'Wichita Blue' (all blue foliage forms with columnar to pyramidal form). Susceptible to foliar disease and may need staking when first planted. Growth rate is medium.
Canaert Eastern Red Cedar	<i>Juniperus virginiana</i> 'Canaertii'	NE	3–9	F	20'–30'	8'–15'	10'–15'	6.0–8.0	X	Heavy fruit producer. Very popular form of red cedar. Easily sheared to various shapes. Growth rate is medium.
Golden Rain Tree	<i>Koelreuteria bipinnata</i>	D	6–8	F–P	20'–30'	15'–25'	20'–30'	5.0–7.0		Subject to winter kill or severe injury every 10–15 years. Best suited for coastal Mississippi. Tree's form is unpredictable. Short lived. Growth rate is fast.
Panicled Golden Rain Tree	<i>Koelreuteria paniculata</i>	D	5–8	F–P	30'–40'	25'–35'	30'–45'	5.0–7.0		May not do well in northern Mississippi. Growth rate is medium to fast.
Bois-d-Arc, Bodark, or Osage-Orange	<i>Maclura pomifera</i>	D	4–9	F–P	20'–40'	20'–40'	30'–40'	6.0–7.5	X	Native west of Mississippi. Fruit and deadwood are a maintenance problem. Difficult to grow other plants beneath this one. Inner bark is orange. Root system shallow and competitive. Adapted to alkaline soils. Sap is milky, and female fruit can be a problem. Wood is very durable. Growth rate is fast.
Bigleaf Magnolia	<i>Magnolia macrophylla</i>	D	5–8	F–S	30'–40'	20'–30'	17'–25'	5.0–6.5	X	Flowers white and large, as much as 1 foot across. Leaves very large at 1–3 feet long. Open exposure may result in large leaves being beaten by the wind. Other similar species native to Southeast. Growth rate is fast.
Umbrella Magnolia	<i>Magnolia tripetala</i>	D	5–8	F–S	15'–30'	10'–25'	17'–25'	5.0–6.5	X	Difficult to transplant. Very similar to Bigleaf Magnolia. Open exposure may result in large leaves being beaten by the wind. Other similar species native to southeast. Growth rate is fast.

Medium Trees — 20–40 feet

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Native ⁴	Comments
Japanese or Saucer Magnolia	<i>Magnolia x soulangeana</i>	D	4–9	F–P	20'–30'	20'–30'	15'–25'	5.0–6.0		One of the showiest plants in bloom. Flowers and buds may be injured by cold. Warm spell causes buds to open. Cultivars available: 'Alba' has white flowers; 'Alexandria' has rose-purple flowers; 'Burgandy' has deep purple flowers; and many others. Growth rate is medium.
Southern Crabapple	<i>Malus angustifolia</i>	D	4–9	F	20'–30'	20'–30'	15'–25'	5.0–6.5	X	Flowers pinkish, but probably not as showy as some hybrid cultivars, although it is native. Growth rate is slow to medium.
Japanese Flowering Crabapple	<i>Malus floribunda</i>	D	4–8	F	15'–25'	10'–20'	17'–25'	6.0–7.0		One of the oldest and most dependable crabapples. Flowers fairly early in its life. Bears every year. May not receive enough cold in Zone 8b for good flowering. Growth rate is medium fast.
Hybrid Flowering Crabapples	<i>Malus cultivars</i>	D	4–9	F	15'–25'	10'–20'	17'–25'	6.0–7.0		Variable group of trees with many cultivars. Cultivars vary in flower color, foliage color, height, disease resistance, and bark features. Growth rate is slow to fast depending on cultivar.
Fruitless White Mulberry	<i>Morus alba</i> 'Fruitless'	D	5–9	F–P	30'–50'	25'–45'	20'–25'	6.0–7.5		Many cultivars, but fruited forms can be invasive. Tolerates most soils. Growth rate is fast.
American Hophornbeam	<i>Ostrya virginiana</i>	D	4–9	F–P	25'–40'	15'–30'	15'–25'	6.0–6.5	X	Also known as ironwood. Generally an understory species. Leaves small, similar to elm or birch, a positive landscape feature. Growth rate is slow.
Sourwood	<i>Oxydendrum arboreum</i>	D	5–9	F–P	25'–30'	18'–20'	15'–25'	5.5–6.5	X	Related to azaleas, flowers more similar to Pieris. Fall color generally red, showy, but bark and branching an interesting landscape feature as well. Growth rate is slow.
Jerusalem Thorn	<i>Parkinsonia aculeata</i>	SE	9–11	F–P			13'–20'	6.0–7.5		Native to southern North America. In warm areas will flower from spring to fall. Stems remain green throughout the year. Thorns. Short-lived tree. Young trees grow rapidly and require staking for first 2 or 3 years. Tolerant of salt spray. Growth rate is fast.
Persian Parrotia	<i>Parrotia persica</i>	D	5–8	F–P	20'–40'	15'–30'	15'–20'	6.0–7.0		Similar to Witchhazel, with which it is related. Interesting bark. Growth rate is medium.
Swamp Redbay	<i>Persea borbonia</i>	BE	7–9	F–P	20'–30'	15'–25'	10'–20'	5.5–6.5	X	Plant of swamps, now threatened by invading disease-carrying beetles. Similar to Sweetbay Magnolia, but smaller. Growth rate is medium.
Amur Corktree	<i>Phellodendron amurense</i>	D	4–7	F–P	30'–45'	30'–45'	25'–35'	6.0–7.0		Fine-textured tree related to <i>Citrus</i> , but dioecious. Growth rate is medium.
Virginia Pine	<i>Pinus virginiana</i>	NE	4–8	F	15'–40'	10'–30'	13'–20'	5.5–6.5	X	Rare Mississippi pine generally found in rocky bluffs in north-east Mississippi. Often grown commercially in Christmas tree farms. Takes regular pruning at proper time well. Growth rate is fast.
Pistachio or Chinese Pistache	<i>Pistacia chinensis</i>	D	6–9	F	30'–35'	25'–35'	26'–40'	5.5–6.5		Drought tolerant. Planted for fall color of scarlet to golden yellow. Used as understock for edible nut tree. Durable tree, wind resistant. Growth rate is medium.

Medium Trees — 20–40 feet

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Native ⁴	Comments
Platycarya	<i>Platycarya strobilacea</i>	D	6–8	F	20'–30'	20'–30'	15'–25'	6.0–7.0		Interesting uncommon tree in Mississippi landscapes, but certainly one for the collector. Growth rate is medium to fast.
Southern Yew	<i>Podocarpus macrophyllus maki</i>	BE	8–10	F–P	20'–35'	10'–15'	8'–10'	5.5–7.0		Can be sheared and shaped easily. Dioecious. Widely used on the coast. Several other species available, but uncommon in Mississippi landscapes. Growth rate is medium to fast.
Formosan Cherry	<i>Prunus campanulata</i>	D	8–9	F	20'–30'	15'–25'	20'–30'	6.0–7.0		Early flowering cherry with pink flowers. 'Okame' is the common cultivar sold and hardier. Growth rate is medium.
Carolina Cherry Laurel	<i>Prunus caroliniana</i>	BE	7–10	F–P	20'–30'	15'–25'	10'–15'	5.5–6.5	X	Native coastal plain species. Leaves and fruit poisonous when eaten. Best in full sun. A few compact forms available. Prefers well-drained soils. Subject to wind and ice storm damage. Growth rate is medium to fast.
Double Flowering Oriental Cherry	<i>Prunus serrulata</i> 'Kwansan'	D	5–9	F	30'–40'	25'–35'	20'–30'	6.0–7.0		Very attractive when in flower. New growth bronzy-green. One of the hardiest and most popular flowering cherries. Growth rate is medium.
Higan Cherry	<i>Prunus subhirtella</i>	D	5–8	F	20'–40'	15'–30'	10'–20'	6.0–7.5		Pink flowering in early spring. Showy with both weeping and double-flowering forms. Growth rate is slow to medium depending on cultivar.
Yoshino Cherry	<i>Prunus x yedoensis</i>	D	5–8	F	20'–30'	20'–30'	23'–35'	6.0–7.0		Makes excellent show in early spring. Growth rate is medium.
Blue Japanese Oak	<i>Quercus glauca</i>	BE	7–9	F–P	20'–30'	15'–20'	13'–20'	5.5–6.5		Difficult to find in the trade, but escapes in cultivation. Leaves very dark green, but severe winters may kill the foliage. Excellent tree for coastal areas and somewhat shrubby when young. Growth rate is medium to fast.
Chinese Sumac	<i>Rhus chinensis</i>	D	5–8	F–P	20'–25'	20'–25'	13'–20'	5.0–6.0		Leaves generally coarser than native species. Like native species, root suckers can be a problem in the landscape. Growth rate is medium to fast.
Flameleaf Sumac	<i>Rhus copallina</i>	D	4–9	F–P	20'–30'	20'–30'	7'–10'	5.5–7.0	X	Suckers freely, forming a large colony. One of the earliest woody plants to appear on cleared land. Large specimens rarely seen. Growth rate is medium.
Staghorn Sumac	<i>Rhus typhina</i>	D	4–8	F–P	15'–30'	15'–30'	13'–20'	5.0–6.0	X	Cutleaf forms available. Easily damaged by ice storms, and root suckers can be a problem. Tolerates poor dry soils. Branching habit often resembles a stag's horns. Growth rate is medium.
Black Locust	<i>Robinia pseudoacacia</i>	D	4–9	F–P	30'–50'	20'–35'	13'–20'	6.0–8.0	X	Tends to sucker readily, forming large clumps. Several cultivars including purple flowering forms. Wood highly resistant to decay. Growth rate is medium to fast.
Babylon Weeping Willow	<i>Salix babylonica</i>	D	5–8	F–P	30'–40'	30'–40'	20'–30'	5.0–6.0		Now considered a hybrid. Very fast grower near water sources. Brittle wood subject to storm damage. Short-lived. Shallow, competitive root system. Growth rate is fast.

Medium Trees — 20–40 feet

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Native ⁴	Comments
Corkscrew Willow	<i>Salix matsudana</i> 'Tortuosa'	D	4–7	F–P	20'–30'	15'–25'	10'–15'	6.0–8.0		Twisted branch form is Peking Willow. Short-lived tree in Mississippi heat and humidity. Wood is weak and subject to storm damage. Roots may clog sewer lines. Landscape asset is the twisted branches resembling a cork screw. Nice effect when foliage is not present. Growth rate is medium to fast.
Western Soapberry	<i>Sapindus drummondii</i>	D	6–9	F	25'–30'	25'–30'	20'–30'	6.0–8.0		Southwestern native. Fruit reported to be mildly poisonous. Fruit, when crushed in water, will form lather like soap. Not readily available in trade but should be used more. Growth rate is medium.
Sassafras	<i>Sassafras albidum</i>	D	4–9	F–P	30'–50'	25'–40'	13'–20'	6.0–8.0	X	Sassafras tea is made from roots. Difficult to transplant, especially if large. Stems remain green. Often found growing in colonies. Three different leaf shapes on same tree: right mitten, left mitten, and three-lobed. Growth rate is medium to fast.
Tall Stewartia	<i>Stewartia monadelph</i>	D	6–8	F–P	20'–40'	20'–40'	10'–20'	5.5–6.5		Flowers and bark not as showy as Japanese Stewartia, but still worth consideration, especially since it may be more heat tolerant. Growth rate is medium.
Japanese Stewartia	<i>Stewartia pseudocamellia</i>	D	4–7	F–P	20'–40'	20'–40'	10'–20'	5.5–6.5		Both flowers and bark are attractive landscape features. Tall Stewartia may be more adaptable statewide. Growth rate is slow to medium.
Japanese Snowbell	<i>Styrax japonicus</i>	D	5–8	F	20'–30'	20'–30'	10'–15'	6.0–7.0		Larger than native <i>Styrax</i> species. Flowers showy and generally white, but pink flowering forms available. Growth rate is medium.
Japanese Tree Lilac	<i>Syringa reticulata</i>	D	3–7	F	20'–30'	15'–25'	15'–25'	6.0–7.0		Flowers typically white, but showy and fragrant. Not common in Mississippi landscapes. Growth rate is medium.
Stinking Cedar	<i>Torreya taxifolia</i>	NE	6–9	P–S	30'–35'	20'–25'	15'–20'	6.0–7.0	X	Federally endangered. Only <i>Torreya</i> in U.S., although other species occur in Asia. Very dark green foliage on horizontal branches. Very interesting tree and certainly one for the collector. Growth rate is slow to medium.

¹ BE = Broadleaf Evergreen; D = Deciduous; NE = Needled Evergreen; SE = Semibroadleaf Evergreen; and V = Variable.

² F = Full Sun; P = Part Sun to Part Shade; and S = Shade.

³ Heights provided in this table are general ranges, and some species may get larger over many years, as observed in record champion trees.

⁴ Native refers to species that are native to the southeastern United States.

Large Trees — More than 40 feet

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Native ⁴	Comments
Momi Fir	<i>Abies firma</i>	NE	4-9	F	40'-50'	20'-30'	10'-20'	6.0-7.0		Hard to find firs like Momi hardy in the South. Probably cooler parts of Tennessee where a number of firs, foreign and domestic, would be suited, but not the Deep South. Growth rate is medium.
Crimson King Norway Maple	<i>Acer platanoides</i> 'Crimson King'	D	4-7	F-S	40'-50'	30'-40'	27'-40'	6.0-8.0		See Norway Maple in Table 2. Holds red to reddish-purple leaf color during growing season. Fall color may not be compatible in some situations. Growth rate is medium to fast.
Emerald Queen Norway Maple	<i>Acer platanoides</i> 'Emerald Queen'	D	4-7	F-S	40'-50'	30'-40'	27'-40'	6.0-8.0		See Norway Maple in Table 2. Leaves green during growing season. Growth rate is medium to fast.
Jade Green Norway Maple	<i>Acer platanoides</i> 'Jade Glen'	D	4-7	F-S	40'-50'	30'-40'	27'-40'	6.0-8.0		See Norway Maple in Table 2. Rapid grower with straight limbs. Growth rate is medium to fast.
Schwedleri Norway Maple	<i>Acer platanoides</i> 'Schwedleri'	D	4-7	F-S	40'-50'	30'-40'	23'-35'	6.0-8.0		See Norway Maple in Table 2. Slightly smaller than parent plant. Leaves red in spring, turning green in summer. Growth rate is medium to fast.
Superform Norway Maple	<i>Acer platanoides</i> 'Superform'	D	4-7	F-S	40'-50'	30'-45'	27'-40'	6.0-8.0		See Norway Maple in Table 2. Rapid grower with dark green leaves. Growth rate is medium to fast.
Red Maple	<i>Acer rubrum</i>	D	3-9	F-P	40'-60'	40'-60'	33'-50'	6.0-8.0	X	Tolerates poorly drained soils. Good fall color. Many cultivars. Growth rate is fast.
Autumn Flame Red Maple	<i>Acer rubrum</i> 'Autumn Flame'	D	5-9	F-P	40'-60'	40'-60'	27'-40'	6.0-7.5	X	See Red Maple. Large globular tree with slightly smaller leaves. Colors early in fall. Growth rate is fast.
Columnar Red Maple	<i>Acer rubrum</i> 'Columnare'	D	5-9	F-P	60'-80'	15'-25'	27'-40'	6.0-7.5	X	See Red Maple. Tree densely upright in form, giving it a columnar appearance. Growth rate is fast.
October Glory Red Maple	<i>Acer rubrum</i> 'October Glory'	D	5-9	F-P	40'-50'	40'-50'	27'-40'	6.0-7.5	X	See Red Maple. Large globular tree with glossy green leaves. Turns scarlet to crimson in the fall. Growth rate is fast.
Red Sunset Red Maple	<i>Acer rubrum</i> 'Red Sunset'	D	5-9	F-P	45'-50'	35'-40'	27'-40'	6.0-7.5	X	See Red Maple. Large upright tree with glossy green leaves. Good fall color. Growth rate is fast.
Drummond Red Maple	<i>Acer rubrum drummondii</i>	D	5-9	F-P	40'-50'	40'-50'	27'-40'	6.0-7.5	X	See Red Maple. Leaves with three to five lobes, woolly white beneath. Fruit generally larger than Red Maple. Relatively short-lived tree. A wetland variety of <i>A. rubra</i> . Growth rate is fast.
Silver Maple	<i>Acer saccharinum</i>	D	3-9	F-P	50'-100'	30'-70'	20'-30'	6.0-7.5	X	Short-lived tree. Not well adapted for lower South. Wood is brittle. Good fall color. Shallow root system may cause heaving of walks, etc. Growth rate is medium to fast.
Sugar Maple	<i>Acer saccharum</i>	D	4-8	F-P	60'-100'	30'-70'	27'-40'	6.0-7.5	X	Commonly sold, but better suited for cooler and more humid regions of the United States. Several cultivars. Not recommended below Zone 7. Florida or Southern Sugar Maple better suited. Growth rate is slow to medium.

Large Trees — More than 40 feet

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Native ⁴	Comments
Yellow Buckeye	<i>Aesculus flava</i>	D	4–8	F–S	60'–75'	40'–50'	30'–40'	6.0–8.0	X	Flowers yellow, but not always visible high in canopy. Fruit can be smaller than Ohio and Red Buckeye. Growth rate is medium.
Monkey Puzzle	<i>Araucaria araucana</i>	NE	7–10	F–P	50'–80'	30'–50'	20'–30'	6.0–7.0		Related to Norfolk Island Pine, but native to South America. Unique tree, but not easily established in the South. Growth rate is medium.
River Birch	<i>Betula nigra</i>	D	4–9	F–P	40'–70'	40'–60'	20'–30'	5.0–6.5	X	Aphids may be severe on young leaves, causing distortion. Exfoliating bark. Some cultivars. May be multitrunked. Chlorosis above pH of 6.5. Growth rate is medium.
California Incense Cedar	<i>Calocedrus decurrens</i>	NE	5–8	F–P	30'–50'	8'–10'	8'–10'	6.0–7.0		Western native and can get very large with age. Growth rate is slow to medium (faster when established).
European Hornbeam	<i>Carpinus betulus</i>	D	5–7	F–P	40'–60'	30'–40'	25'–35'	6.0–7.0		Several cultivars, including columnare, compact, and weeping forms. Better for northern Midsouth zones. Growth rate is slow to medium.
Water Hickory	<i>Carya aquatica</i>	D	6–10	F–P	60'–90'	25'–40'	25'–25'	5.5–7.0	X	Tree of very wet soils. Leaf texture fine, comparable to Pecan. Nuts small and slightly flattened. Growth rate is medium.
Southern Shagbark Hickory	<i>Carya carolinae-septentrionalis</i>	D	5–8	F–P	60'–80'	35'–55'	27'–40'	6.4–8.0	X	Similar to Shagbark Hickory. Bark peels in long strips. Nut is edible. Nut may be food for wildlife such as squirrels and birds. Growth rate is medium.
Bitternut	<i>Carya cordiformis</i>	D	4–9	F–P	50'–75'	30'–40'	25'–35'	6.0–7.0	X	Native bottomland hardwood, with relatively fine leaf texture. Similar to Water Hickory. Bark rather smooth. Growth rate is medium.
Pignut Hickory	<i>Carya glabra</i>	D	4–9	F–P	50'–60'	25'–35'	30'–50'	5.5–7.0	X	Common hardwood in a wide range of habitat. Bark rather smooth. Fall color typically yellow. Nuts may be food for wildlife such as squirrels and birds. Growth rate is medium.
Pecan	<i>Carya illinoensis</i>	D	5–9	F	70'–100'	40'–75'	27'–40'	6.4–8.0	X	Leaves fall early and appear late. Wood brittle and subject to storm damage. Nuts are edible. Nuts may be food for wildlife such as squirrels and birds. Growth rate is medium.
Big Shellbark	<i>Carya laciniosa</i>	D	5–8	F–P	60'–80'	35'–55'	27'–40'	6.4–8.0	X	Leaves fall early and appear late. Bark peels in long strips. Nuts are edible. Nuts may be food for wildlife such as squirrels and birds. Growth rate is medium.
Shagbark Hickory	<i>Carya ovata</i>	D	4–8	F–P	60'–80'	35'–55'	27'–40'	6.4–8.0	X	Leaves fall early and appear late. Bark peels in long strips. Nuts are edible. Nuts may be food for wildlife such as squirrels and birds. Growth rate is medium.
Nutmeg Hickory	<i>Carya myristiciformis</i>	D	6–8	F–P	60'–80'	35'–55'	25'–35'	6.5–8.0	X	Tree of calcareous soils. Texture relatively fine, with yellowish-copper leaf undersides most notable in fall. Nuts are small, blotched. Growth rate is medium.
Mockernut Hickory	<i>Carya tomentosa</i>	D	4–9	F–P	50'–60'	25'–35'	30'–50'	6.4–8.0	X	Bottomland hardwood. Bark peels in long strips. Nuts are edible. Nuts may be food for wildlife such as squirrels and birds. Growth rate is medium.

Large Trees — More than 40 feet

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Native ⁴	Comments
Chinese Chestnut	<i>Castanea mollissima</i>	D	4–8	F–P	40'–60'	40'–60'	25'–35'	5.5–6.5		Sometimes used as replacement for American Chestnut. Spiny fruit husk can be a problem in landscape. Fruit is edible. Growth rate is slow to medium.
Northern Catalpa	<i>Catalpa speciosa</i>	D	4–8	F–P	40'–60'	20'–40'	15'–30'	6.0–7.0	X	Larger relative of Southern Catalpa. Leaves coarse-textured; fruits long, pendant pods. Leaves eaten by worms that are sometimes used for fish bait. Growth rate is medium to fast.
Atlas Cedar	<i>Cedrus atlantica</i>	NE	6–9	F	40'–60'	30'–40'	15'–30'	6.0–7.0		Usually used as an accent tree. Gray and weeping forms typically sold. Prefers well-drained soils. Growth rate is slow.
Deodar Cedar	<i>Cedrus deodara</i>	NE	7–8	F	40'–70'	30'–40'	20'–30'	6.0–7.0		Tops may die because of borers and destroy symmetry. Branches pendulous when young. Reported to be drought tolerant. Growth rate is medium.
Cedar of Lebanon	<i>Cedrus libani</i>	NE	5–7	F	40'–60'	30'–40'	15'–30'	6.0–7.0		Similar to Deodar Cedar in form. Available but rarely seen in Mississippi. Some cultivars available. Growth rate is slow.
Sugar Hackberry	<i>Celtis laevigata</i>	D	5–9	F–P	50'–70'	40'–60'	33'–50'	6.0–8.0	X	Long-lived tree. Bark interesting with warty outgrowths. Zigzag stems. Good for chalky or alkaline soils. Roots shallow and dense. Growth rate is medium.
Common Hackberry	<i>Celtis occidentalis</i>	D	3–9	F–P	40'–60'	30'–50'	25'–40'	6.0–8.0	X	Similar to Sugar Hackberry. A few cultivars. Growth rate is medium to fast.
Katsuratree	<i>Cercidiphyllum japonicum</i>	D	4–8	F–P	40'–60'	20'–35'	15'–25'	6.0–7.0		Leaf similar to Redbud but opposite and unrelated and without showy flowers. Good shade tree with yellowish fall color. Growth rate is medium to fast.
Hinoki Falsecypress	<i>Chamaecyparis obtusa</i>	NE	5–8	F	50'–75'	10'–20'	8'–15'	5.5–7.5		Standard form described here, but several cultivars available that will remain very small. Growth rate on standard is medium, but dwarf forms are slow.
Sawara Falsecypress	<i>Chamaecyparis pisifera</i>	NE	4–8	F	50'–70'	10'–20'	8'–15'	5.5–7.5		Standard form described here, but several cultivars available that will remain very small. Threadleaf (filifera) forms common and often used as shrubs. Growth rate on standard is medium, but dwarf forms are slow.
Atlantic Whitecedar	<i>Chamaecyparis thyoides</i>	NE	4–9	F–P	40'–50'	10'–20'	8'–15'	5.5–6.5	X	Native to swamps in the South. Have seen large trees along tributaries in Southeast Mississippi. Many cultivars, including dwarf and gray forms. Growth rate is medium to fast.
American Yellowwood	<i>Cladrastis kentukea</i>	D	4–8	F–P	30'–50'	40'–55'	25'–40'	5.5–7.0	X	Rather rare in Mississippi, generally occurring on limestone bluffs. Both bark and white flowers of interest in the landscape. Growth rate is medium.
Japanese Cryptomeria	<i>Cryptomeria japonica</i>	NE	5–8	F	50'–60'	20'–30'	15'–25'	5.5–7.0		Nice pyramidal tree, although can develop some disease problems with age. Several cultivars, including dwarf or more compact forms like 'Black Dragon.' Growth rate is medium.
Common Chinafir	<i>Cunninghamia lanceolata</i>	NE	7–9	F	30'–75'	10'–30'	13'–20'	6.0–8.0		Overall appearance of plant is coarse, though foliage is small. Sensitive to poorly drained soils. Can get unusually shaggy with age. A gray form is available. Growth rate is slow to medium.

Large Trees — More than 40 feet

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Native ⁴	Comments
Leyland Cypress	<i>X Cupressocyparis leylandii</i>	NE	6–10	F–P	60'–70'	12'–20'	10'–15'	5.0–7.0		This plant is an intergeneric hybrid. Transplants easily from containers. Tolerant of salt spray. Varieties include 'Castlewellaan' with yellow foliage; 'Green Spire' with a narrow, columnar form; 'Leighton Green' with heat resistance; 'Naylor's Blue' with grayish-green foliage; 'Silverdust' with bluish-green foliage with white variegations. Growth rate is very fast.
Arizona Cypress	<i>Cupressus arizonica</i>	NE	7–9	F–P	40'–50'	25'–30'	15'–25'	6.0–8.0		Has very attractive blue-gray needles. Responds well to fertilizer. May get too big for many locations. Growth rate is medium.
Common Persimmon	<i>Diospyros virginiana</i>	D	4–9	F	35'–60'	20'–35'	20'–30'	5.0–6.5	X	One of the most durable of small trees, growing in a wide variety of habitats. Male and female trees. Difficult to transplant. Growth rate is medium.
Cider Gum	<i>Eucalyptus gunnii</i>	BE	7–11	F–P	40'–50'	30'–40'	20'–30'	6.0–8.0		Unusual landscape tree with gray foliage. Many species from Australia and Tasmania. The similar Silver Dollar Tree (<i>E. cinerea</i>) is listed for Zone 8 south, but have had one in 7b for several years. Too many Zone 7 south species to address here. Another group for the collector. Growth rate is medium.
American Beech	<i>Fagus grandifolia</i>	D	4–9	F–P	50'–70'	50'–70'	30'–50'	5.0–6.7	X	Sensitive to overly wet areas. Roots are shallow and tolerate very little soil disturbance around plant once established. Not tolerant of city conditions. Growth rate is medium.
European Beech	<i>Fagus sylvatica</i>	D	4–7	F	50'–60'	35'–45'	30'–40'	5.0–6.7		Sensitive to very wet areas. Does not tolerate soil disturbance around roots once established. Many cultivars, including purple leaf forms. Growth rate is medium.
White Ash	<i>Fraxinus americana</i>	D	4–9	F	50'–80'	50'–80'	30'–40'	6.0–7.5	X	Not tolerant of poorly drained soils and should not be used in suburban areas with no topsoil or where soil is a heavy clay. Several cultivars. Now threatened by the emerald ash borer. Growth rate is medium.
Green Ash	<i>Fraxinus pennsylvanica lanceolata</i>	D	2–9	F	50'–60'	25'–30'	30'–40'	6.0–7.5	X	Leaves more lance-shaped than regular Green Ash. Occurs over much of United States. Avoid poorly drained soils, although commonly grows in flood plain forest. Several cultivars, including seedless. Now threatened by the emerald ash borer. Growth rate is medium to fast.
Marshall's Seedless Green Ash	<i>Fraxinus pennsylvanica lanceolata</i>	D	3–9	F	50'–60'	40'–50'	30'–40'	6.0–7.5	X	One of male (seedless) varieties. Does not have litter problem as with 'Marshall's Seedless' Green Ash. Old cultivar selected in Nebraska. Drought resistant. Now threatened by emerald ash borer. Growth rate is medium to fast.
Blue Ash	<i>Fraxinus quadrangulata</i>	D	4–7	F–P	50'–70'	30'–50'	20'–30'	6.0–8.0	X	Short-lived tree, with unusual four-winged twigs. Tolerates alkaline soils and dry conditions. Growth rate is medium to fast.

Large Trees — More than 40 feet

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Native ⁴	Comments
Ginkgo	<i>Ginkgo biloba</i>	D	4–8	F–P	50'–80'	30'–40'	30'–40'	6.0–7.0		Many cultivars, including male and female cultivars. Fruit is produced on female trees and often has an unpleasant odor. Select a male variety. Long-lived with good fall gold color. Fossils of leaves over 150 million years old. Growth rate is medium.
Thornless Honey Locust	<i>Gleditsia triacanthos inermis</i>	D	4–8	F	30'–70'	25'–60'	20'–35'	6.0–8.0	X	This selection has no thorns, but there are several thornless cultivars. May develop thorns with age. Growth rate is fast.
Moraine Thornless Honey Locust	<i>Gleditsia triacanthos inermis</i> 'Moraine'	D	4–8	F	40'–50'	35'–45'	20'–35'	6.0–8.0	X	Thornless cultivar with good gold fall color. First patented thornless honey-locust. Growth rate is fast.
Kentucky Coffeetree	<i>Gymnocladus dioicus</i>	D	4–8	F	60'–75'	40'–50'	25–35'	6.0–7.5	X	Another rare tree both in the landscape and wild. Very large compound leaves. Seeds once used as a coffee substitute after roasting. Legume, so rather tolerant of poor soils. A few cultivars. Growth rate is slow to medium.
Igiri Tree	<i>Idesia polycarpa</i>	D	6–9	F	40'–60'	40'–60'	30'–40'	6.0–7.0		Unusual tree, particularly in fruit. Uncommon in Mississippi landscapes. Growth rate is fast.
American Holly	<i>Ilex opaca</i>	BE	5–9	F–P	40'–50'	18'–40'	13'–20'	5.0–6.0	X	Often an understory tree in woodlands. Numerous varieties. Some with yellow fruit. Dioecious. Difficult to transplant in larger sizes. Fruits on new wood. Growth rate is medium.
Howard American Holly	<i>Ilex opaca</i> 'Howard'	BE	6–9	F–P	40'–50'	18'–40'	13'–20'	5.0–6.5	X	See American Holly. Heavy berry producer. Female clone. Not as hardy as American Holly. Growth rate is medium.
Butternut or White Walnut	<i>Juglans cinerea</i>	D	3–7	F	40'–60'	30'–50'	25'–40'	6.0–8.0	X	Rare in Mississippi and over much of its native range. Roots give off toxic substance, making it difficult to grow other plants nearby. Fruit can be a nuisance. Difficult to transplant. Growth rate is slow to medium.
Black Walnut	<i>Juglans nigra</i>	D	4–9	F	50'–75'	45'–70'	30'–40'	6.0–8.0	X	Roots give off toxic substance, making it difficult to grow other plants nearby. Fruit can be a nuisance. Difficult to transplant. Growth rate is slow to medium.
English Walnut	<i>Juglans regia</i>	D	6–9	F	40'–60'	40'–60'	25'–40'	6.0–8.0		Smooth, whitish bark an interesting feature in the landscape. Fruit can be a nuisance, but easier to shell. Difficult to transplant. Growth rate is slow to medium.
Eastern Red Cedar	<i>Juniperus virginiana</i>	NE	2–9	F	40'–50'	8'–20'	13'–20'	5.5–8.0	X	Usually dioecious. Fruit matures in 1 year. May be difficult to transplant when large. Lends itself to formal landscapes. Many cultivars. Growth rate is medium.
American Sweetgum	<i>Liquidambar styraciflua</i>	D	5–9	F	60'–75'	40'–50'	30'–40'	6.0–7.0	X	One of better trees for fall color for Deep South. Usually maroon but may be red or yellow. Seed balls may be a nuisance in landscapes. They do not decay readily. Roots shallow and not easily transplanted in larger sizes. One of few trees that tolerates topping at an old age. Growth rate is medium.

Large Trees — More than 40 feet

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Native ⁴	Comments
Tulip Magnolia	<i>Liriodendron tulipifera</i>	D	4-9	F-P	70'-90'	35'-50'	30'-40'	6.0-7.0	X	Does not transplant easily in larger sizes. Sensitive to poorly drained soils or soils with high water table. Rapid growth when fertilized in late winter with high nitrogen fertilizer. Growth rate is medium.
Cucumbertree Magnolia	<i>Magnolia acuminata</i>	D	4-8	F-S	50'-80'	40'-70'	30'-40'	5.0-7.0	X	Not very common in landscapes. Pyramidal in form when young. Flowers greenish to yellow, unlike native, deciduous, white-flowered magnolias. Several cultivars. Growth rate is medium to fast.
Yulan Magnolia	<i>Magnolia denudata</i>	D	5-8	F-P	30'-40'	25'-35'	15'-25'	5.0-6.0		Difficult to transplant. Needs plenty of room to develop. Rose-colored flowering form available. Growth rate is medium.
Southern Magnolia	<i>Magnolia grandiflora</i>	BE	7-10	F-S	60'-80'	30'-50'	30'-40'	5.0-6.0	X	Leaf litter objectionable. Best when the lower branches are retained and allowed to sweep the ground. Difficult to transplant in large sizes. Many cultivars, some dwarf. Growth rate is slow to medium.
Sweetbay Magnolia	<i>Magnolia virginiana</i>	BE	5-9	F-S	60'-70'	30'-50'	30'-40'	5.0-6.0	X	Sheds leaves in spring. Roots shallow and difficult to transplant. Sprouts readily from the roots. Typically grows in Southern swamps and not drought tolerant. Foliage silvery below. Several cultivars. Not to be confused with true bays (Lauraceae) used in cooking. Growth rate is medium fast.
Dawn Redwood	<i>Metasequoia glyptostroboides</i>	D	5-8	F-P	70'-100'	25'-30'	30'-40'	5.5-6.5		Prior to 1944 this tree was known only by its fossil records. It existed in the small Chinese province of Szechuan-Hupei for over a million years until its discovery. Much variation found in seedlings and some cultivars available. Growth rate is fast.
Red Mulberry	<i>Morus rubra</i>	D	5-9	F-P	40'-70'	40'-50'	20'-30'	5.5-6.5	X	Fruit red to black, although White Mulberry may also have black fruit. Usually a woodland understory tree. Leaves large and branches usually horizontal and open. Growth rate is medium to fast.
Water Tupelo	<i>Nyssa aquatica</i>	D	6-9	F-P	80'-90'	40'-50'	30'-40'	5.5-6.5	X	Swamp species with rather coarse texture and high canopy. Trunk swollen (buttressing) on wet sites, but no knees like Baldcypress. Growth rate medium.
Swamp Tupelo	<i>Nyssa biflora</i>	D	7-10	F-P	40'-50'	20'-25'	15'-25'	5.0-6.5	X	Swamp or bog very similar to Tupelo Blackgum but grows in wetter soils, sometimes very acidic. Growth rate slow to medium depending on soils.
Tupelo Blackgum	<i>Nyssa sylvatica</i>	D	4-9	F-P	30'-50'	20'-30'	20'-30'	6.0-7.0	X	Generally distributed along streams and floodplains. Early fall color and leaf drop. A few cultivars. Growth rate is medium.
Shortleaf Pine	<i>Pinus echinata</i>	NE	6-9	F	50'-75'	25'-50'	20'-25'	5.5-6.5	X	Upland tree with small cones. Timber tree and generally not a landscape tree, but may be found in natural home landscapes. Growth rate is fast.

Large Trees — More than 40 feet

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Native ⁴	Comments
Slash Pine	<i>Pinus elliotii</i>	NE	8–10	F	50'–75'	25'–50'	30'–40'	5.0–7.0	X	Tree of wet soils and also has some salt tolerance in coastal areas. Cones 2–6 inches long and stalked. Can be damaged by ice storms. Difficult to transplant past the seedling stage. Excellent canopy tree for azaleas and camellias. Growth rate is fast.
Spruce Pine	<i>Pinus glabra</i>	NE	8–10	F–P	40'–60'	20'–30'	15'–20'	5.5–7.0	X	Floodplain species that will tolerate heavier soil conditions than other pines. Bark smooth similar to oaks. Branches smooth. Cones remain on tree for 2–3 years. Cones 1–2.5 inches. Growth rate is medium to fast.
Austrian Pine	<i>Pinus nigra</i>	NE	4–7	F	50'–60'	20'–40'	10'–20'	5.5–6.5		Occasionally sold in Mississippi with a few cultivars, but tends to be short-lived. Needles coarse, stiff. Similar to Japanese Black Pine in form. Growth rate is medium.
Longleaf Pine	<i>Pinus palustris</i>	NE	7–10	F–S	50'–75'	25'–50'	30'–40'	4.5–5.0	X	Sometimes confused with Slash Pine, but generally a tree of more upland sandy and poor soils. Slow growth for first 2–3 years, then fast. Needles 8–18 inches long. Easily damaged by ice storms. Excellent canopy for camellias and azaleas. Growth rate is fast.
White Pine	<i>Pinus strobus</i>	NE	3–7	F–P	50'–80'	20'–40'	20'–40'	5.0–6.0	X	Very soft-textured pine. Bark smooth on young limbs and trunks. Not recommended for Lower South, at least parts of Zone 7 and south. Plant is affected by day length, which varies less in the Deep South. Growth rate is fast.
Loblolly Pine	<i>Pinus taeda</i>	NE	6–9	F–S	60'–90'	30'–40'	30'–40'	5.0–6.0	X	Difficult to transplant in large sizes. Excellent canopy for azaleas and camellias, but not generally recommended for landscapes. Cones 3–6 inches long with almost no stem. Needles 6–9 inches long. Growth rate is fast.
Japanese Black Pine	<i>Pinus thunbergii</i>	NE	6–8	F	20'–80'	15'–50'	30'–40'	5.5–6.5		Needles 3–4 inches long. Ideal for Japanese garden effect. Similar to Austrian Pine in form. Growth rate is fast.
London Plane Tree	<i>Platanus x acerifolia</i>	D	4–9	F	70'–100'	65'–80'	30'–40'	6.0–7.5		Cross between American and Oriental Sycamores. Reported to be less susceptible to anthracnose. Is very similar to American Sycamore except smaller in scale. Growth rate is fast.
American Sycamore	<i>Platanus occidentalis</i>	D	4–9	F	75'–100'	65'–80'	30'–40'	6.0–7.5	X	Short-lived tree well recognized by brown bark exfoliating to smooth white under bark. Due to disease and insect problems, it is questionable if this tree should be planted in the Deep South. Leaves may be a litter problem. Growth rate is fast.
Bolleana Poplar	<i>Populus alba</i> 'Pyramidalis'	D	3–8	F–P	50'–60'	5'–10'	17'–25'	5.5–7.0		Very formal. Leaf silvery-white beneath. May show dust and soot. Suckers readily from roots. Tolerates poor to fertile soils. Growth rate is medium to fast.
Eastern Poplar	<i>Populus deltoides</i>	D	3–9	F	75'–100'	50'–75'	30'–40'	5.5–7.0	X	Male trees preferred due to nuisance, cottony seeds of female trees. Quick shade but short-lived. A major tree for pulpwood because of rapid growth. Massive fibrous root system may invade sewer lines and fertile, moist planting beds. Leaves a litter problem. Growth rate is fast.

Large Trees — More than 40 feet

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Native ⁴	Comments
Lombardy Poplar	<i>Populus nigra</i> 'Italica'	D	3-9	F	50'-60'	5'-15'	20'-30'	5.5-7.0		Formal columnar tree. Short-lived tree. Highly advertised tree through mail order sources. Shallow roots with many suckers. Growth rate is fast.
Black Cherry	<i>Prunus serotina</i>	D	3-9	F-P	50'-60'	40'-50'	20'-30'	6.0-7.5	X	Fruit favored by many forms of wildlife. Short-lived tree with brittle wood. Volunteer seedling common along fence rows. Fast growth with fertile, moist, well-drained soils. Growth rate is fast.
Chinese Wingnut	<i>Pterocarya hupehensis</i>	D	6-9	F	60'-80'	50'-70'	30'-40'	6.0-7.0		Fine foliage, related to Hickory. Other large species of Wingnuts are available for shade. Growth rate is medium.
Sawtooth Oak	<i>Quercus acutissima</i>	D	5-9	F	40'-60'	30'-50'	30'-40'	5.0-6.5		Can escape cultivation. Acorn about 1 inch in diameter with long scales covering about half the acorn. Sometimes confused with chestnut oak. Growth rate is medium to fast.
White Oak	<i>Quercus alba</i>	D	4-9	F-P	50'-80'	50'-80'	30'-40'	5.0-6.5	X	Attains a massive size but is slow-growing. Not easily adaptable to city conditions. Leaves are large and provide fairly dense shade. Acorns attract deer and other wildlife. Growth rate is slow.
Southern Red Oak	<i>Quercus falcata</i>	D	6-9	F-P	70'-80'	60'-70'	30'-40'	4.0-5.0	X	Bark dark brown or black and deeply fissured. Easily transplanted. One of the best oaks for the South. Grows better in drier locations. Galls can be a problem. Growth rate is medium to fast.
Swamp Red Oak	<i>Quercus pagoda</i>	D	7-9	F-P	70'-80'	60'-70'	30'-40'	4.0-5.0	X	Easily transplanted. Taller growing than Southern Red Oak and generally on lower ground. Galls may be unsightly. Growth rate is medium to fast.
Laurel Oak or Diamond Oak	<i>Quercus laurifolia</i>	SE	6-9	F-P	70'-80'	60'-70'	30'-40'	5.0-6.0	X	Acorn half-inch long. Plant difficult to transplant. Long-lived tree. Attractive, symmetrical tree. Similar and often confused with <i>Quercus hemisphaerica</i> . Growth rate is medium.
Overcup Oak	<i>Quercus lyrata</i>	D	5-9	F-P	40'-60'	30'-50'	20'-30'	5.0-6.0	X	Wetland species and included here for very wet areas in landscapes. Acorns float and can be a problem in landscape. Growth rate slow to medium.
Bur Oak	<i>Quercus macrocarpa</i>	D	3-8	F-P	70'-80'	60'-70'	30'-40'	6.0-8.0	X	Acorn large and possible problem in landscape. Rare in Mississippi and adapted to alkaline soils. Foliage and bark dark. Growth rate is slow.
Chinkapin Oak	<i>Quercus muehlenbergii</i>	D	4-7	F-P	70'-80'	60'-70'	30'-40'	5.0-8.0	X	Also known as Yellow Chestnut Oak and leaves similar to Swamp Chestnut Oak. Bark ashy-gray and flaky. Acorn about half-inch long, oval, dark brown with cap covering about one-fourth of acorn. Not especially well-suited for coastal counties, but does well in alkaline soils. Growth rate is slow to medium.
Water Oak	<i>Quercus nigra</i>	D	6-9	F-P	40'-70'	50'-80'	30'-40'	5.5-6.5	X	Bark grayish-black, rough. Excellent for city conditions. Leaves may be retained part of the winter. A good oak for the landscape. Leaves spatulate at the end, often developing three lobes. Acorns small and attract wildlife. Growth rate is medium to fast.

Large Trees — More than 40 feet

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Native ⁴	Comments
Pin Oak	<i>Quercus palustris</i>	D	4–8	F	60'–70'	25'–40'	30'–40'	5.0–6.5	X	Easily transplanted. Typically a bottomland tree and not very drought tolerant. Becomes chlorotic if grown in alkaline soils. Leaves deeply cut with five to nine lobes. Tolerates city conditions. Growth rate is medium to fast.
Willow Oak	<i>Quercus phellos</i>	D	5–9	F–P	40'–60'	30'–40'	30'–40'	5.0–6.0	X	Retains leaves late in fall. Leaves fine and resemble those of Black Willow. Long-lived tree. Acorn about half-inch long, oval to flattened, with cap covering about one-fourth of acorn. Growth rate is medium to fast.
Swamp Chestnut Oak	<i>Quercus michauxii</i>	D	5–9	F–P	70'–80'	60'–70'	30'–40'	5.0–6.0	X	Difficult to transplant. Bottomland hardwood. Excellent fall color not found in other chestnut oaks. Acorn large, about 1½ inch long, lustrous brown, with cap covering about one-third of acorn. Growth rate is medium.
English Oak or British Oak	<i>Quercus robur</i>	D	4–8	F–P	40'–60'	30'–40'	30'–40'	5.5–6.5		Many cultivars available. More columnar forms can be planted closer together. Difficult to transplant. Acorn 1 inch long on stalk. Growth rate is slow.
Shumard Oak	<i>Quercus shumardii</i>	D	5–9	F–P	40'–60'	30'–50'	30'–40'	6.0–7.5	X	Good substitute for Scarlet Oak. Very attractive symmetrical tree. Acorn ¾ to 1¼ inch long. Growth rate is medium to fast.
Post Oak	<i>Quercus stellata</i>	D	5–9	F–S	60'–70'	40'–60'	30'–40'	5.0–6.0	X	Rather difficult to transplant. Dead leaves fall throughout the winter. Not often used in the landscape. Will tolerate moist, well-drained areas. Acorn about half-inch long with cup covering a fourth to half of the acorn. Growth rate is slow to medium.
Live Oak	<i>Quercus virginiana</i>	BE	7–10	F	40'–80'	60'–100'	50'–75'	5.0–6.0	X	Largest on record has a 38-foot trunk circumference, 168-foot spread, and 75-foot height. Other Live Oak species and varieties exist in the United States. Easily transplanted when young. Needs plenty of room to develop. Acorns three-fourths inch long, narrow, black. Thought to be slow-growing, but proper care indicates otherwise. Growth rate is medium.
White Willow	<i>Salix alba</i>	D	2–9	F	75'–100'	50'–100'	30'–50'	5.0–6.0		Escaped in the United States. Large willow with fine texture. A few cultivars, including yellow twig forms. Growth rate is fast.
Black Willow	<i>Salix nigra</i>	D	3–9	F–P	40'–60'	30'–50'	20'–30'	5.5–7.0	X	Easily escapes in the landscape by wind-dispersed seed. Very fine texture, but branches brittle and problem in the landscape. Tree of little landscape value, but adaptable to very wet sites. Growth rate is fast.
Japanese Pagodatree	<i>Sophora japonica</i>	D	4–7	F	50'–75'	50'–75'	30'–50'	5.5–6.5		Fine-textured tree with creamy-white flowers. Legume adaptable to poor soils. Can reseed in the landscape. A few cultivars. Growth rate is medium to fast.
Common Baldcypress	<i>Taxodium distichum</i>	D	4–11	F–P	50'–70'	20'–30'	25'–35'	5.5–6.5	X	Tolerates very dry to very wet sites. Cypress knee production occurs in wet or poorly drained soils. Growth rate is slow to medium.

Large Trees — More than 40 feet

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Native ⁴	Comments
American Arborvitae	<i>Thuja occidentalis</i>	NE	3–7	F	40'–60'	10'–15'	8'–15'	5.5–7.0		Native to North America with many cultivars. Commonly sold, but often suffers in Zone 7 south. Growth rate is slow to medium depending on cultivar and growing conditions.
Giant Arborvitae	<i>Thuja plicata</i>	NE	5–7	F–P	50'–70'	15'–25'	10'–20'	5.5–7.0		Native to western North America with many cultivars. Commonly sold, especially 'Green Giant,' which may or may not be Giant Arborvitae. Growth rate is slow to medium.
American Linden	<i>Tilia americana</i>	D	4–8	F–P	60'–80'	40'–50'	30'–40'	5.0–6.5	X	More than one botanical variety and cultivar in the United States. Flowers attract bees in large numbers, since they are a good source of nectar for honey. Tolerant of most soils but does well in moist, fertile, well-drained ones. Growth rate is medium to fast.
Littleleaf Linden	<i>Tilia cordata</i>	D	4–7	F	60'–70'	40'–50'	30'–40'	5.5–7.5		Many cultivars. One of several exotic Tilia species in cultivation. An attractive tree. More tolerant of alkaline soils. Does not tolerate dry sites. Drainage must be good. Growth rate is fast.
Canadian Hemlock	<i>Tsuga canadensis</i>	NE	4–7	F–S	40'–70'	25'–35'	10'–15'	5.5–6.5	X	Many cultivars. Native Alabama north. Asian and western species are also cultivated. Beautiful tree in nature producing intense shade. Large and sometimes old stands in the Appalachian Mountains are dying from the invasive woolly adelgid. Growth rate is medium.
Winged Elm	<i>Ulmus alata</i>	D	6–9	F–P	50'–60'	45'–55'	30'–40'	5.5–6.5	X	Noted for the cork-winged branches. Very tolerant of difficult sites. Growth rate is medium to fast.
American Elm	<i>Ulmus americana</i>	D	3–9	F–P	60'–80'	40'–50'	30'–40'	5.5–6.5	X	A nice, well-recognized shade tree with several cultivars, some of which were developed for Dutch elm disease resistance. Growth rate is medium to fast.
Cedar Elm	<i>Ulmus crassifolia</i>	D	7–9	F–P	50'–70'	40'–60'	30'–40'	5.5–7.0	X	Similar to Winged Elm, but without the wings. Withstands a wide range of conditions from wet to dry. Seen more west of Mississippi. Growth rate is slow to medium.
Japanese Zelkova	<i>Zelkova serrata</i>	D	5–8	F–P	50'–80'	30'–60'	20'–40'	6.0–7.0		Many cultivars. Has been promoted as an elm replacement. Other Zelkova species have been introduced. Foliage very similar to elm, but bark tends to be smooth. Growth rate is medium.

¹ BE = Broadleaf Evergreen; D = Deciduous; NE = Needled Evergreen; SE = Semibroadleaf Evergreen; and V = Variable.

² F = Full Sun; P = Part Sun to Part Shade; and S = Shade.

³ Heights provided in this table are general ranges, and some species may get larger over many years, as observed in record champion trees.

⁴ Native refers to species that are native to the southeastern United States.

TABLE 2. Invasive landscape trees and suggested alternatives for each.

Common Name	Scientific Name	Foliage ¹	Zones	Light ²	Height ³	Width	Spacing	pH range	Regulated ⁴	Reason ⁵	Suggested Alternatives
Trident Maple	<i>Acer buergerianum</i>	D	5–8	F–P	20'–35'	20'–35'	15'–30'	5.5–6.5		S	Other medium-height Maple species (<i>Acer</i> spp.)
Norway Maple	<i>Acer platanoides</i>	D	4–7	F–S	40'–50'	30'–40'	27'–40'	6.0–8.0		S	Native maple (<i>Acer</i>) species
Tree of Heaven	<i>Ailanthus altissima</i>	D	4–8	F–P	40'–60'	30'–50'	15'–25'	5.5–8.0		B	Other pinnate-leaved trees, such as Pecan
Mimosa	<i>Albizia julibrissin</i>	D	7–9	F–P	20'–30'	20'–30'	23'–35'	5.0–7.0		S	Thornless Honeylocust
Tung-oil Tree	<i>Aleurites (Vernicia) fordii</i>	D	8–10	F–P	10'–20'	10'–20'	8'–15'	6.0–7.0		S	Southern Catalpa (<i>Catalpa bignonioides</i>)
Common Paper Mulberry	<i>Broussonetia papyrifera</i>	D	6–10	F–P	20'–40'	20'–40'	20'–30'	5.5–7.0		V	Other mulberries (<i>Morus</i> spp.), native or fruitless
Camphor Tree	<i>Cinnamomum camphora</i>	BE	9–11	F–P	40'–60'	40'–60'	20'–40'	5.5–7.0		S	Live Oak, Sweetbay Magnolia, or Southern Magnolia
Harlequin Glorybower	<i>Clerodendrum trichotomum</i>	D	7–9	F–S	5'–10'	5'–8'	5'–8'	5.5–7.0		V	Seven-son Flower (<i>Heptacodium miconioides</i>)
Russian-olive	<i>Elaeagnus angustifolia</i>	D	2–7	F	12'–20'	12'–20'	8'–12'	6.0–8.0		S	Pineapple Guava for grayish foliage
Autumn Elaeagnus	<i>Elaeagnus umbellata</i>	SE	4–8	F	12'–20'	15'–25'	8'–12'	6.0–8.0		S	Pineapple Guava for grayish foliage
Common Pearlbush	<i>Exochorda racemosa</i>	D	4–8	F–S	10'–15'	10'–15'	8'–12'	5.5–7.5		S	Small cherry species (<i>Prunus</i> spp.), snowbells (<i>Halesia</i> spp. or <i>Styrax</i> spp.), or hawthorns (<i>Crataegus</i> spp.)
Chinese Parasol Tree	<i>Firmiana simplex</i>	D	7–9	F–P	30'–45'	20'–35'	10'–25'	5.0–7.0		S	Bigleaf or Umbrella Magnolia
Japanese Privet	<i>Ligustrum japonicum</i>	BE	7–10	F–S	6'–12'	6'–10'	6'–10'	6.0–7.0		S	<i>Osmanthus</i> spp., or other small broadleaf evergreen tree
Glossy Privet	<i>Ligustrum lucidum</i>	BE	7–10	F–S	20'–25'	20'–25'	10'–15'	6.0–7.0		S	<i>Osmanthus</i> spp., or other small broadleaf evergreen tree
Chinaberry	<i>Melia azederach</i>	D	7–10	F–P	30'–40'	25'–35'	15'–20'	5.0–7.0		B	Lilac Chastetree (<i>Vitex agnus-castus</i>) or Chastetree (<i>Vitex negundo</i>)
White Mulberry	<i>Morus alba</i>	D	5–9	F–P	30'–50'	25'–45'	20'–25'	6.0–7.5		S	Fuitless variety, or native
Royal Paulownia	<i>Paulownia tomentosa</i>	D	5–9	F	30'–40'	30'–40'	20'–25'	6.0–8.0		S	<i>Catalpa bignonioides</i> or <i>speciosa</i> ; <i>Tilia americana</i>
Chinese Photinia	<i>Photinia serrulata</i>	BE	6–9	F–P	20'–25'	15'–20'	10'–15'	6.0–7.0		S	Banana Shrub, Swamp Redbay, Blue Japanese Oak, or other
Trifoliolate-orange	<i>Poncirus trifoliata</i>	D	6–9	P–S	8'–20'	4'–15'	4'–15'	5.5–6.5		S	<i>Citrus</i> cultivars where hardy, or Wafer-ash
Callery Pear	<i>Pyrus calleryana</i>	D	5–8	F	30'–50'	20'–35'	17'–25'	5.5–6.5		S	Includes 'Aristocrat,' 'Bradford,' 'Capital,' and other cutlivars. Replace with medium-height cherry species (<i>Prunus</i> spp.)
Chinese Tallow Tree	<i>Triadica sebifera</i>	D	7–10	F–P	30'–40'	30'–40'	15'–30'	5.5–6.5	X	S	Golden Rain Tree or Paniced Golden Rain Tree
Lacebark Elm	<i>Ulmus parvifolia</i>	D	5–9	F	40'–50'	40'–50'	13'–20'	5.0–7.5		S	Japanese Stewartia, or other tree with attractive bark feature
Siberian Elm	<i>Ulmus pumila</i>	D	4–9	F–P	50'–70'	40'–50'	13'–20'	5.5–7.5		S	Japanese Zelkova or native elms (<i>Ulmus</i> spp.)
Linden Viburnum	<i>Viburnum dilatatum</i>	D	5–7	F–P	8'–10'	6'–8'	5'–8'	6.0–7.0		S	Blackhaw Viburnum or Rusty Blackhaw

¹ BE = Broadleaf Evergreen; D = Deciduous; NE = Needled Evergreen; SE = Semibroadleaf Evergreen; and V = Variable.

² F = Full Sun; P = Part Sun to Part Shade; and S = Shade.

³ Heights provided in this table are general ranges, and some species may get larger over many years, as observed in record champion trees.

⁴ Regulated as a noxious weed in Mississippi by the Mississippi Department of Agriculture and Commerce.

⁵ Primary reason species is invasive: S=Seed; V=Vegetative Spread; B=Both Seed and Vegetative.

Publication 2679 (POD-05-23)

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Extension Service of Mississippi State University, cooperating with U.S. Department of Agriculture. Published in furtherance of Acts of Congress, May 8 and June 30, 1914. STEVE MARTIN, Interim Director

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