

growth, especially in clay soil. When the planting hole is filled with soil, the rootball should rest 1" (small trees) to 3" (larger trees) above the backfill soil.

### 9. Add 10 to 20 gallons of water to the rootball

Fill any air pockets with soil.

### 10. Cover the backfill soil with mulch

Apply mulch to a minimum 8' diameter circle around the tree, if possible. Do not construct a **berm** from soil, since this soil could end up over the root ball several months later. Water the mulch well after spreading.

### 11. Stake the tree, if necessary

Staking holds the rootball firmly in the soil. If the tree moves in the wind, the rootball may shift, and emerging roots could break or the plant could fall over. Young trees might require staking until enough trunk strength develops. Remove staking materials after the tree becomes established. If not removed, ties and stakes can **girdle** a tree, which can kill it.

#### GLOSSARY BOX:

**Berm:** a raised earthen area used in the past to catch water and direct it to the root zone.

**Girdle:** to constrict or destroy the bark in a ring around the trunk or branch of a plant, cutting off flow of nutrients and water through the bark; ultimately the plant dies.

### 12. Water trees frequently so roots fully establish

Light, frequent irrigation fosters the quickest establishment for trees. Following the initial few months of frequent irrigation, water weekly until plants are fully established. At each watering, apply about 1 to 2 gallons of water per inch of trunk diameter (i.e., 2 to 4 gallons for a 2" tree). Never water if the rootball is saturated. In Alabama the typical establishment period for trees is 3 months per 1" of trunk diameter. This could take longer depending on climate, watering schedule, and species. Water is crucial during the first and second growing season. Fertilizing during the establishment period doesn't improve survival rates. For more information see *Street Trees: Site Selection, Planting, and Maintenance in the Urban Landscape*: <http://www.aces.edu/pubs/docs/A/ANR-0814/>.

## TURFGRASSES

Home lawns are often a focal point in the landscape and can be a real asset. A beautiful lawn enhances the landscape by improving not only the aesthetic and economic value of the home, but by providing many environmental benefits as well. A dense, healthy lawn prevents soil erosion, reduces glare from the sun, helps cool temperatures on hot days, and absorbs many airborne pollutants, like dust.

Perhaps the most important factor in establishing and maintaining an attractive and trouble free home lawn is selecting the proper turfgrass. Since a home lawn is intended to be a long term investment, the proper selection of a turfgrass is an important first step.

### What Type of Lawn is Desired or Expected?

Having a perfect, dark green, lush lawn that does not need to be mowed, fertilized, or irrigated is a myth. For practical purposes, decide if the lawn is to be a "perennial yard of the month," an average lawn, or just a groundcover to lessen soil erosion and provide soil stability around the home.

### What Level of Maintenance Will the Lawn be Given?

Most turfgrasses will respond to a range of maintenance levels; however, each turfgrass has a preferred maintenance level for optimum results. Levels of maintenance are closely related to how much time and how much money one wants to spend on the lawn. Obviously, a higher level of maintenance will require a higher level of cost.

### Are there Any Physical or Environmental Limitations to the Site?

A quality lawn may require some irrigation; therefore, water quantity and quality are important lawn selection factors. Can the area be easily mowed on a frequent basis? Is the lawn going to be very shaded? What is the soil type? Is drainage going to be a problem? With answers to these basic questions in mind, use the following

information to select the proper turfgrass for your home lawn. (NOTE: some turfgrasses are shade tolerant. All do better and require less maintenance in full sun and free of competition from adjacent plant roots.)

Environmental and soil conditions vary greatly throughout the state of Alabama, and certain turfgrasses grow better under some of these conditions and locations than others do. There are several turfgrass species and cultivars from which to choose. Some turfgrasses can be planted anywhere in the state; others perform best in a certain region.

Turfgrasses can be divided into two categories based on their adaptation: cool season turfgrasses and warm season turfgrasses. Cool season turfgrasses, such as tall fescue and Kentucky bluegrass, are best adapted to cooler climates and exhibit optimum growth during the cooler months of fall, winter, and early spring. Tall fescue is the only cool season turfgrass that is recommended for home lawns in Alabama. Warm season turfgrasses, such as bahiagrass, bermudagrass, centipedegrass, St. Augustinegrass, and zoysiagrass grow best during hot summer months. Most lawns across the state are warm season turfgrasses.

You must consider the range of temperatures between the northern and southern parts of Alabama before choosing a turfgrass. For example, winter temperature extremes in the northern part of Alabama are too severe for the survival of St. Augustinegrass; and the summer heat in the southern part of the state is too severe for the survival of tall fescue. The simplest method to determine which turfgrass is best adapted to your area is to check the lawns in your neighborhood to see which turfgrass survives and looks the best. If you need further assistance in terms of adaptation, refer to the table below.

Turfgrasses						
Condition	Heat tolerant Bluegrass	Bermudagrass	Centipedegrass	St. Augustine	Tall fescue	Zoysiagrass
Adaptation 1	N	N,C,S	C,S	C,S	N	N,C,S
Drought tolerance	Fair	Excellent	Good	Good	Fair	Excellent
Sunlight 2	Full to partial	Full	Full to partial	Full to shade	Full to shade	Full to partial
Salt tolerance	Poor	Good	Poor	Good	Poor	Good
Wear tolerance	Fair	Excellent	Poor	Poor	Fair	Excellent
Soil pH	5.5 to 7.0	5.5 to 7.0	5.5 to 7.0	5.5 to 7.0	5.5 to 7.0	5.5 to 7.0
Establishment methods	Seed, sod	Sprigs, plugs, sod, seed 4	Sprigs, plugs, sod, seed	Sprigs, plugs, sod	Seed, sod	Sprigs, plugs, sod
Leaf color	Dark	Medium to dark	Light	Medium to dark	Medium	Medium to dark
Leaf texture	Medium	Medium to fine	Coarse to medium	Coarse	Coarse to medium	Coarse to fine
Maintenance level 3	High	Medium to high	Low	Medium	Medium	Medium
Mowing height	2.5 to 3"	1 to 1.5"	1 to 1.5"	2.5 to 4"	2 to 3"	1 to 2"

1 Adaptation: N=north, C=central, S=south

2 Sunlight: Full=at least 6 hours of sunlight; Partial=at least 4 hours of sunlight; Shade=at least 2 hours of sunlight

3 Maintenance Level: Low = fewer than 2 fertilizations per year; Medium = 2 to 4 fertilizations per year; High = more than 4 fertilizations per year

4 Common bermudagrass types only

## Turfgrasses Recommended for Use in Alabama

The ultimate consideration is simply this: which turfgrass do you consider to be the most appealing, the most beautiful, and the most enjoyable? Some may prefer the fine texture; some may want the one with the dark green color. It's your decision! There are six turfgrasses currently recommended for use on home lawns in Alabama: bahiagrass, bermudagrass, centipedegrass, St. Augustinegrass, tall fescue, and zoysiagrass.

### Bahiagrass

Bahiagrass is normally considered a pasture turfgrass; however, it can be used for home lawns. It spreads by both rhizomes (underground stems) and stolons (aboveground stems). Bahiagrass has excellent drought tolerance but forms what is considered to be a low quality lawn. It is suitable for low use or utility turfgrass areas such as roadsides. One of the primary reasons bahiagrass is considered by most to be an undesirable

lawn is the fact that it produces rather tall seed heads after it is mowed. Seed is available for the two most common varieties, 'Pensacola' and 'Tifton 9.'

### Bermudagrass

Bermudagrass is the most common turfgrass used for home lawns primarily due to its market availability and drought tolerance. It is a long lived, perennial, warm season turfgrass that is adapted across all of Alabama. It spreads by both rhizomes and stolons. There are two types available: common and hybrid. Common bermudagrass produces viable seed. Hybrid bermudagrasses, such as 'Tifway', are also available. The hybrids are only available as sprigs, plugs, or sod, but are more commonly used due to ease of lawn establishment.

### Centipedegrass

Centipedegrass is a slow growing turfgrass that spreads by stolons that resemble centipedes, hence its name. This warm season turf is adapted for use as a low maintenance turfgrass and is ideal for someone who wants a fairly attractive lawn that needs little care. Most of the centipedegrass that is sold is of the common variety. Improved varieties of centipedegrass are available, including 'Oklawm' and 'AU Centennial.'

### St. Augustinegrass

St. Augustinegrass is native to both the coastal regions of the Gulf of Mexico and the Mediterranean. It is primarily used for home lawns in the coastal plains area of Alabama. St. Augustinegrass spreads by stolons and produces some viable seed; however, most St. Augustinegrass lawns are established by vegetative plantings. St. Augustinegrass has good salt tolerance and handles shade better than any other warm season turfgrass. There are several cultivars of St. Augustinegrass available, including common, 'Bitterblue,' 'Floratine,' 'Floritam,' 'Floralawn,' 'Jade,' 'Delmar,' 'Raleigh,' 'Gulf Star,' 'Mercedes,' 'Palmetto,' and 'Seville.'

### Tall Fescue

Tall fescue is a cool season turfgrass that is tough enough to be grown in certain areas of the southeastern United States, including Alabama (Cullman and northward). Tall fescue is a bunch-type turfgrass that spreads by tillers; therefore, it must be established by seeding. The greatest advantage that it has over the warm season turfgrasses is its ability to grow well in shade and stay green throughout the winter. There are several varieties of tall fescue available, including many new, improved turf-type varieties that have finer leaf texture and improved heat and shade tolerance. For best results, use a mixture (blend) of three or four of these new turf-type tall fescues.

### Zoysiagrass

Zoysiagrass is native to southern Asia and is the most cold tolerant of the warm season turfgrasses. Zoysiagrass is a very slow growing turfgrass, but it forms a very dense lawn once established. There are several species and cultivars of zoysiagrass available, but the improved cultivars are recommended. Some of these zoysiagrasses include 'Z-52,' 'Meyer,' 'Emerald,' 'El Toro,' 'Matrella,' and 'Cashmere.'

## ASK THE EXPERTS

Throughout Alabama, experts who can assist you in your plant choices abound. Try these services, most of which are free, for advice on putting the right plant in the right place:

- Alabama Cooperative Extension Service: <http://www.aces.edu>
- Alabama Master Gardeners: <http://www.aces.edu/mg>
- Alabama Master Gardeners Association: <http://www.alabamamg.org>
- Certified Horticultural Professionals:  
<http://www.alnla.org/Education-Opportunities/alabama-certified-landscape-professional-acfp>
- Alabama Wildflower Society: <http://alwildflowers.org/>
- Alabama Nursery and Landscape Association: <http://www.alnla.org>
- Water Management Districts: <http://water.sam.usace.army.mil/>
- USDA Natural Resources Conservation Service: <http://www.nrcs.usda.gov/>
- Libraries