

# Choosing a Grass for Arkansas Lawns

Aaron Patton  
Assistant Professor -  
Turfgrass Specialist

John Boyd  
Professor - Extension  
Weed Scientist

## What to Plant

No one type of grass is best suited to all situations. Avoid the trap of letting personal preference and the costs of establishment become the overriding factors in selecting a grass. Your choice of a lawn grass should be based on climate, sustainability, intended use and desired appearance.

Cool-season (northern) and warm-season (southern) grasses are grown in Arkansas. Cool-season grasses grow best in the spring and fall and less actively in the summer. They stay reasonably green in the winter. Tall fescue (*Festuca arundinacea*) is the most commonly grown cool-season grass in Arkansas. Warm-season grasses are slow to green up in the spring, grow best in the summer and go dormant after the first heavy frost. Warm-season grasses grown in Arkansas include bermudagrass (*Cynodon* spp.), centipedegrass (*Eremochloa ophiuroides*), St. Augustinegrass (*Stenotaphrum secundatum*) and zoysiagrass (*Zoysia* spp.). Table 1 rates the performance of various grasses in Arkansas.

Regardless of the region, the characteristics of each site and your goals will determine which types of grass are appropriate. Choose an adapted grass that best meets your preference for color, density and texture. Choose a tough, aggressive, wear-tolerant grass where heavy traffic is expected. Take into consideration the amount of time, effort and money you are willing to spend for turfgrass maintenance.

Because quality turfgrass requires irrigation and a minimum amount of sunlight, shade and lack of water are often the primary limiting factors for home lawns. Other environmental aspects to consider are soil type, drainage, slope and ease of mowing.

## Winter Hardiness

Arkansas lies in the transition zone. What this means is that summer in Arkansas is too hot for cool-season grasses to perform well and winters are often cold enough to injure or kill warm-season grasses. Unfortunately, maintaining lawn grasses in the transition zone is more difficult than in many other parts of the United States. Table 2 indicates relative winter hardiness of warm-season turfgrasses in Arkansas. Winters in Fayetteville are too cold for St. Augustinegrass and centipedegrass, and the summer heat and humidity in Texarkana make it difficult to grow tall fescue. Zoysiagrass and bermudagrass are grown in all parts of the state. We rarely have winter damage to zoysiagrass, but cold weather injury to bermudagrass is not unusual.

## Heat Tolerance

Warm-season grasses such as bermudagrass, centipedegrass, St. Augustinegrass and zoysiagrass have excellent heat tolerance. Among the cool-season turfgrasses, tall fescue has better heat tolerance than Kentucky bluegrass.

*Arkansas Is  
Our Campus*

Visit our web site at:  
<https://www.uaex.uada.edu>

**Table 1. Comparing turfgrasses for Arkansas lawns.**

	<b>Bermudagrass</b>	<b>Centipedegrass</b>	<b>St. Augustinegrass</b>	<b>Kentucky Bluegrass</b>	<b>Tall Fescue</b>	<b>Zoysiagrass</b>
<b>Region of adaptation</b>	Statewide	Central, south	South	North	North	Statewide
<b>Winter hardiness</b>	Good	Fair	Poor	Excellent	Excellent	Very good
<b>Heat tolerance</b>	Excellent	Excellent	Excellent	Fair	Good	Excellent
<b>Drought tolerance</b>	Excellent	Good	Fair	Poor	Fair	Very good
<b>Shade tolerance</b>	Poor	Fair	Good	Good	Good	Fair
<b>Optimum soil pH</b>	5.8 to 7.0	4.5 to 6.0	6.5 to 8.0	5.8 to 7.0	5.5 to 6.5	5.8 to 7.0
<b>Maintenance level</b>	Moderate to high	Low	Moderate	High	Moderate to high	Low to moderate
<b>Color</b>	Medium to dark green	Pale green	Medium to dark green	Medium to dark green	Medium to dark green	Pale to medium green
<b>Leaf texture</b>	Medium to fine	Coarse	Coarse	Medium	Coarse	Medium to fine
<b>Mowing height</b>	0.5 to 2.0	1.5 to 2.0	2.5 to 4.0	2.5 to 3.5	2.5 to 3.5	1.0 to 2.0
<b>Wear tolerance</b>	Excellent	Poor	Poor	Good	Good	Excellent
<b>Recuperative capacity</b>	Excellent	Poor	Good	Good	Poor	Good
<b>Establishment methods</b>	Seed, sod, plugs, sprigs	Sod, seed	Sod, plugs	Sod, seed	Sod, seed	Seed, sod, plugs, sprigs
<b>Growth rate</b>	Fast	Slow	Moderate to fast	Slow	Moderate	Slow
<b>Growth habit</b>	Stolons and rhizomes	Stolons	Stolons	Rhizomes	Bunch or clump type	Stolons and rhizomes

## Drought Tolerance

The relative ability of various grasses to withstand drought is often the subject of debate among turfgrass experts. Bermudagrasses survive dry soil conditions better than most turfgrasses. Research shows that ‘Midlawn’ bermudagrass requires less irrigation than ‘Meyer’ zoysiagrass in the transition zone. Both bermudagrass and zoysiagrass need less irrigation than tall fescue. Turfgrasses become semi-dormant under drought conditions and then regenerate from crowns, stolons or rhizomes when moisture becomes available. Bermudagrass and zoysiagrass are considered to be

fairly drought tolerant but need 1.0 to 1.5 inches of water per week to maintain growth during dry periods. Centipedegrass and St. Augustinegrass are not very drought tolerant and require careful water management during dry periods. Tall fescue requires frequent watering (1.5 to 2.0 inches per week) during the hottest part of the summer to keep it growing.

## Shade Tolerance

Turfgrasses need plenty of light to become dense and vigorous. Shade from buildings and dense tree canopies may prevent turfgrass growth. Shrubs, ground cover and mulches are the best alternatives

**Table 2. Comparing winter hardiness of commonly used cultivars and species of warm-season grasses.**

	<b>Bermudagrass</b>	<b>Centipedegrass</b>	<b>St. Augustinegrass</b>	<b>Zoysiagrass</b>
<b>Excellent</b>				‘Compadre’*, ‘Meyer’, ‘Zenith’*
<b>Very good</b>	‘Midlawn’, ‘Patriot’, ‘Quickstand’, ‘Riviera’*, ‘Yukon’*			‘Cavalier’, ‘El Toro’, ‘Palisades’, ‘Royal’, ‘Zorro’
<b>Good</b>	‘Baby’, ‘Barbados’*, ‘Contessa’*, ‘TifSport’, ‘Tifway’, ‘U-3’			‘Emerald’
<b>Fair</b> (central and southern Arkansas only)	‘Jackpot’*, ‘Mirage’*, ‘Princess 77’*, ‘Tifdwarf’, ‘Tifgreen’	‘TennTurf’, ‘TifBlair’*	‘Raleigh’, ‘Texas common’, ‘Seville’	‘Diamond’, ‘Empire’
<b>Poor</b> (southern Arkansas only)	‘Arizona common’*, ‘Sahara’*	‘Common’, ‘Oaklawn’	‘Floritam’, ‘Floralawn’	

\*Indicates cultivars with seed availability. Some cultivars may not be available at local seed suppliers and may require a special order.

for heavy shade. Light quality varies under different types of trees. Needle-leaf trees such as pine admit more light than broadleaf species. Most of the grasses listed, except bermudagrass, will grow in filtered pine tree shade or if they have at least four hours of full sun per day. Tall fescue and St. Augustinegrass are the most shade-tolerant grasses recommended for Arkansas.

## Soil pH

Soil pH is a measure of the soil acidity. The pH scale ranges from 0 to 14. A pH of 7.0 is neutral. Values less than 7.0 indicate acid conditions, while readings over 7.0 indicate alkaline conditions. Turfgrass selection may be affected by soil pH. If a soil test (available at no charge through your county Extension office) indicates soil pH is 5.0, centipede would be a better choice than St. Augustine in south Arkansas. The numbers in Table 1 indicate the ideal pH range for each turfgrass species. Ideally, the soil should be maintained at a value in the middle of the range. Nutrients essential to plant growth are most available between pH 5.5 and 6.5. Lime may be used to reduce soil acidity.

## Maintenance

The three primary maintenance chores are mowing, watering and fertilizing. Fast-growing grasses such as hybrid bermudagrasses may need monthly fertilization and mowing every three days during periods of rapid growth. Low maintenance grasses such as centipede and zoysiagrass may never need fertilizing and mowing only every 7 to 14 days. High maintenance would be considered four to six fertilizations per year and twice weekly mowing. Medium maintenance grasses require two to four fertilizations and about weekly mowing. A low maintenance turfgrass requires zero to two fertilizations and less frequent mowing.

## Color

Turfgrasses vary from pale apple green to very deep blue-green. Shade of green also depends on the level of fertilization. Turfgrass receiving heavy nitrogen fertilization will be dark green where unfertilized turf will be pale or yellow green. Zoysiagrass and centipedegrass may be maintained with little or no fertilizer if a pale green color is acceptable. Over-fertilization of zoysiagrass often results in unacceptable thatch buildup and may cause the loss of centipedegrass. Applications of foliar iron may be used to enhance color without the growth stimulation associated with nitrogen.

## Texture

Like color, leaf texture is a point of personal preference. Turfgrass texture refers to leaf width, with coarse-textured grasses having wider leaves and fine-textured grasses having thinner leaves. There is

often a variation in texture among the different cultivars of a single turfgrass species. For example, 'El Toro' zoysiagrass is medium coarse-textured, 'Meyer' zoysiagrass is medium-textured and 'Cavalier' zoysiagrass is a fine-textured cultivar.

## Mowing Height

The ideal cutting heights are listed in Table 1. Many of these grasses will tolerate low mowing heights, but a high cutting height is recommended for home lawns. Mowing at lower heights can decrease rooting and overall turf health as well as increase the risk of scalping. Low mowing heights also mean that you will have to mow more frequently to avoid scalping the turf. Mowing heights of less than 1 inch also require a reel mower for best results. Keeping the blade (bedknife) sharp and adjusting the height of cut is more difficult with reel mowers than with rotary mowers; therefore, they are not recommended for homeowners.

## Wear Tolerance

Will the lawn be for show or for an outdoor recreation area? If frequent traffic is anticipated, select a turfgrass that will tolerate wear. Centipede and St. Augustine are poor choices for heavily used areas. Good wear tolerance and the ability to recover rapidly make bermudagrasses good choices for recreation areas.

## Recuperative Capacity

Recuperative capacity or recovery potential is an important selection criterion for home lawns. Lawns receive traffic from children, pets and equipment and can be damaged. Additionally, turfgrasses might suffer damage from heat, drought or cold. It is important to select a species and variety that has the capacity to recuperate if damaged or if you expect to have some level of traffic on your lawn.

## Establishment Methods

Some turfgrasses are limited to vegetative propagation (sod, sprigs, plugs) because they do not produce enough seed to be harvested or the seed is genetically inconsistent with the parent. Recent advancements and improvements in plant material have provided a greater opportunity to establish quality warm-season grasses from seed. With the exception of St. Augustine, all of the warm-season grasses have seed available and improved cultivars.

## Growth Rate

Average growth rate of turfgrass species varies considerably based on the cultivar and time of year. Warm-season grasses grow quickly in the summer, are slow growing in spring and fall and dormant in winter. Bermudagrass typically has the fastest growth rate, followed by St. Augustinegrass, zoysiagrass and

centipedegrass which has the slowest growth rate. Tall fescue growth is most rapid in the spring, slow in summer and moderate in the fall.

## Growth Habit

Turfgrass growth habit affects how plants spread during establishment as well as how they recuperate from damage. Stolons are aboveground, specialized stems capable of producing new plants, and rhizomes are similar belowground stems. Zoysiagrass and bermudagrass are typically fairly quick (depending upon cultivar) to recover from damage because they have both stolons and rhizomes. Whereas, tall fescue is slow to recuperate because it lacks the ability to spread. Although good recuperative ability is an advantage to turf that has been damaged by traffic or winter injury, it can sometimes be a disadvantage. Grasses such as bermudagrass and zoysiagrass that have stolons and rhizomes will creep into and contaminate landscape beds that are not frequently mechanically or chemically edged. An advantage of planting tall fescue in northern Arkansas is that it will not creep into landscape beds like bermudagrass and zoysiagrass.

## Warm-Season Grasses

Warm-season grasses grow best during the warm months (80° to 95° F) of spring, summer and early fall. They grow vigorously during this time and become brown and dormant in winter.

### Bermudagrass

**Bermudagrass** is the most commonly used turfgrass in Arkansas. It is adapted to the entire state and will tolerate a wide pH range (Figure 1). It requires full sun (6 hours per day) and frequent mowing (twice weekly during periods of rapid growth) if adequately fertilized. Bermudagrass is very aggressive and readily invades sidewalks, borders, shrub and flower beds with aboveground and belowground runners. Common (*Cynodon dactylon*) and hybrid bermudagrasses (*Cynodon dactylon* x *C. transvaalensis*) are available as sod in Arkansas. The acreage of common bermudagrass is shrinking as more growers convert their production to hybrid bermudagrasses or improved cultivars of common bermudagrass. The most widely grown hybrid bermudagrasses in the state are 'Tifgreen' and 'Tifway'; however, many improved cultivars of common bermudagrass are also available. Compared with common bermudagrass, these improved cultivars have more disease resistance, greater turf density, better weed resistance, fewer seedheads, finer and softer texture and more favorable color. Spring dead spot is the most problematic disease for bermudagrass lawns in Arkansas. For rankings and management information on spring dead spot, see FSA7551, *Bermudagrass Spring Dead Spot*.



Figure 1. Most cultivars of bermudagrass and zoysiagrass are well adapted to the entire state of Arkansas.

**Tifway** (Tifton 419). This grass is the most popular hybrid used because of its outstanding features that make it an ideal turf for lawns, golf fairways and tees, football fields and other recreational areas. This improved bermudagrass has a darker green color and slightly wider leaf blade than 'Tifgreen' but not as wide as common bermudagrass. It is used primarily for golf course fairways, tees, athletic fields and occasionally home lawns. 'Tifway' may develop thatch if over-fertilized and watered. 'Tifway' can generally be identified by its reddish-purple seedheads. The ideal cutting height is 0.5 to 1.0 inch for golf turf, but a higher cutting height of 1.0 to 2.0 inches is recommended for home lawns.

**Tifgreen** (Tifton 328). This is a low-growing bermudagrass grown widely as sod for the home market due to its rapid growth. It is relatively disease resistant and makes a dense, weed-resistant turf when properly managed. Its fine texture (leaf width) and soft green leaves are largely responsible for its excellent putting qualities on golf greens. 'Tifgreen' can easily be identified by its golden seedheads. 'Tifgreen' also tolerates overseeding better than most bermudagrass cultivars. Before buying this grass, the homeowner should be aware of its demanding needs. It has an ideal cutting height of 0.25 to 0.5 inch and requires high levels of water and fertility to perform well. 'Tifgreen' may form thatch if mown too high. This grass is best suited for golf course putting greens where it can receive the necessary level of maintenance.

**Tifdwarf**. 'Tifdwarf' bermudagrass is a natural dwarf mutant of 'Tifgreen'; therefore, it has characteristics similar to 'Tifgreen'. 'Tifdwarf' has a finer texture than Tifgreen and is slower to establish. 'Tifdwarf' has a darker green color than 'Tifgreen' and produces a high-quality turf at lower mowing heights. 'Tifdwarf' is best suited for golf course putting greens where it can receive the necessary level of maintenance.

**Tifsport.** ‘Tifsport’ is the product of a breeding program at the University of Georgia. It is a hybrid of ‘Midiron’ bermudagrass, but it has better turf quality. It has better cold resistance, color and vigor than ‘Tifway’. It can be used for golf fairways, athletic fields and lawns.

**Patriot.** ‘Patriot’ bermuda is a medium-fine textured hybrid bermudagrass recently developed at Oklahoma State University. It is a dense turfgrass well suited for golf courses, sports turf and lawns. ‘Patriot’ produces a quality turf similar to ‘Tifway’ and ‘Tifsport’ but with better winter hardiness.

**Midlawn.** ‘Midlawn’ is a product of a bermudagrass breeding program at Kansas State University. It is similar to other bermudagrasses – ‘Midiron’, ‘Midfield’ and ‘Midway’, and all have excellent winter hardiness. They have a medium texture and produce few seedheads. They are commonly used for lawns, fairways and roughs.

**U-3.** ‘U-3’ bermudagrass was selected for golf courses in the early 1930s. ‘U-3’ has a moderate to fine texture and good winter hardiness. It is used for lawns, playing fields, park areas and on some golf courses. ‘U-3’ is still available from many sod farms, but it has largely been replaced by newer cultivars. Most of the remaining ‘U-3’ bermudagrass has been contaminated since its original release, and it differs genetically from the original breeder plant material. Use caution when choosing this cultivar because of genetic variability between sod farms.

**Quickstand.** ‘Quickstand’ was selected in Kentucky for its winter hardiness and fast establishment rate. Its texture is more coarse than hybrid bermudagrasses, but it is well suited for northern Arkansas where winterkill is a periodic problem.

**Seeded Varieties.** New cultivars of bermudagrass were released within the last ten years that make seeding bermudagrass more desirable than in the past. Seeding is sometimes preferred to sprigging or sodding because it is more economical. If the decision is made to seed bermudagrass, there are many cultivars available, but only a few are well adapted to Arkansas. Most of the seed sold in retail outlets such as ‘Jackpot’, ‘Mirage’, ‘NuMex Sahara’ and ‘Arizona Common’ lack reliable cold tolerance in Arkansas. Improved cultivars with good cold tolerance and improved turf quality should instead be planted. Recommended cultivars include ‘Barbados’, ‘Contessa’, ‘Riviera’ and ‘Yukon’. ‘Princess 77’ is another improved cultivar, but it should not be used in the northern third of Arkansas due to lack of cold hardiness.

## Zoysiagrasses

These grasses are adapted to the entire state and form an excellent turf when properly established and managed (Figure 1). Two species of zoysiagrass are used in Arkansas. *Zoysia japonica* and *Zoysia*

*matrella* are commonly known as Japanese lawngrass and Manilagrass, respectively, although both are often referred to as zoysiagrass in Arkansas. The zoysiagrasses form a dense, attractive turf in full sun and partial shade but often thin out in dense shade. Zoysiagrass is more shade tolerant than bermudagrass but not as shade tolerant as St. Augustinegrass. For the best appearance, zoysiagrasses require cutting with a reel mower, periodic thinning or dethatching and frequent irrigation. Zoysiagrass is more winter hardy than bermudagrass or St. Augustine. Of the two species, *Z. japonica* is generally more winter hardy. Most zoysiagrasses grow slowly compared to other grasses and usually are established by sodding, sprigging or plugging. Although there are seeded cultivars available, sodding is the most commonly used method to establish a zoysiagrass lawn. A comparison of the most commonly used cultivars is available in Table 3.

**Meyer (Z-52).** ‘Meyer’ is an improved selection of *Zoysia japonica*. It is the most widely used zoysiagrass in Arkansas. It has medium leaf texture, good cold tolerance and grows as far north as St. Louis, Missouri. This is the same cultivar of zoysiagrass often advertised as the “super” grass in the Sunday newspaper supplement.

**El Toro.** ‘El Toro’ zoysiagrass is a product of breeding efforts at the University of California. It is more coarse-textured than ‘Meyer’ and has a faster establishment and recuperative rate. It is the fastest growing zoysiagrass, tolerates mowing with a rotary mower and produces less thatch than ‘Meyer’. ‘El Toro’ is not as winter hardy as ‘Meyer’, but there is little concern with winterkill in Arkansas.

**Palisades.** ‘Palisades’ is a vegetatively produced, medium-coarse textured, high-density turf well suited for lawns, parks, golf course fairways and roughs and some low-use sports fields. Its appearance and growth rate are very similar to ‘El Toro’. ‘Palisades’ has better shade tolerance and drought tolerance than ‘Meyer’. ‘Palisades’ can be established as sprigs, plugs or as solid sod.

**Seeded Varieties.** The higher cost of vegetative establishment compared to bermudagrass has prevented some from establishing zoysiagrass, but cultivars of zoysiagrass are now available that can be established by seed. Zoysiagrass established on a site that has been tilled prior to seeding can provide 100 percent coverage in one growing season. However, germination and growth are slow and weed control is necessary to establish seeded zoysiagrass. Improved cultivars ‘Compadre’ and ‘Zenith’ are commercially available and well adapted to Arkansas.

**Emerald.** ‘Emerald’ zoysiagrass is a fine-textured hybrid zoysiagrass. It is well suited for top-quality lawns where a good maintenance program is provided. ‘Emerald’ zoysiagrass has less winter hardiness but more shade tolerance than ‘Meyer’. It has a dark green color, a very fine leaf texture, good shade

**Table 3. Comparison of selection criteria for zoysiagrass cultivars.**

	'Meyer'	'El Toro'	'Palisades'	'Zenith'	'Compadre'	'Emerald'	'Cavalier'	'Royal'	'Zorro'	'Diamond'
<b>Cold tolerance</b>	E	V	V	E	E	V	V	V	V	G
<b>Heat tolerance</b>	E	E	E	E	E	E	E	E	E	E
<b>Drought tolerance</b>	V	E	E	--	--	G	V	--	--	G
<b>Shade tolerance</b>	F	V	E	--	--	F	E	V	--	E
<b>Leaf width (mm)</b>	3.1	4.3	4.0	4.0	4.3	2.4	1.6	1.7	1.9	1.2
<b>Recuperative capacity</b>	F	E	E	V	F	F	V	--	V	--
<b>Establishment rate</b>	G	E	V	V	V	G	G	F	G	P

Excellent (E), very good (V), good (G), fair (F) or poor (P) with -- indicating data not available.

tolerance, high shoot density and a low growth habit. Emerald will develop excess thatch rather quickly if over-fertilized and is prone to winter injury in northern parts of the state. 'Emerald' is more sensitive to herbicides such as MSMA than 'Meyer'.

**Cavalier.** 'Cavalier' is a cultivar of *Zoysia matrella* selected by Texas A&M University. It produces a fine-textured, high-density turf. It is adapted for use in Arkansas and can be established from plugs, sprigs or solid sod. 'Cavalier' is suitable for golf course fairways, tee boxes and lawns in full sun or partial shade. Appearance is similar to 'Royal' and 'Zorro' zoysiagrass. 'Cavalier' has excellent shade tolerance and very good drought tolerance, although it will require weekly irrigation during prolonged dry periods. Under high fertility, it will produce thatch and require occasional verticutting or aerification.

**Royal.** 'Royal' is a *Zoysia matrella* cultivar with a fine texture and very good shade tolerance. 'Royal' tolerates close and frequent mowing and is well suited for golf course use. 'Royal' generally has sufficient winter hardiness but is slightly less cold hardy than 'Cavalier' or 'Zorro'. 'Royal' has good resistance to zoysiagrass mite.

**Zorro.** 'Zorro' zoysiagrass is a fine-textured cultivar of a *Zoysia matrella* with good shade tolerance, high turf quality, very good recuperative ability and resistance to several insect, mite and disease pests. 'Zorro' tolerates close and frequent mowing and is suited for golf course and lawn use in either full sun or partial shade. It has similar winter hardiness to 'Cavalier' and is available as sod, sprigs or plugs.

**Diamond.** 'Diamond' is the most fine-textured zoysiagrass cultivar. However, it is best suited for golf course turf and not home lawns. It has excellent shade tolerance and good resistance to some insects. Its winter hardiness is good, but it is best adapted to the southern half of Arkansas. It is available only as sod, plugs or sprigs.

In general, the zoysiagrasses are (1) slow to cover completely, thus more costly to establish; (2) less drought tolerant than bermudagrass; (3) less likely to require nitrogen fertility than bermudagrass; (4) less invasive and require less mowing than bermudagrass; (5) more shade tolerant than bermudagrass but not St. Augustinegrass; and (6) more cold hardy than other warm-season grasses.

## St. Augustinegrass

This turfgrass has large, flat stems and broad, coarse leaves somewhat similar to centipede grass. It is the most shade tolerant of the warm-season grasses grown in Arkansas. It has an attractive blue-green color and forms a deep, fairly dense turf. While it is aggressive, it is easily controlled around borders because it only spreads by aboveground stems. It is commonly planted by vegetative means because of problems with seed viability. It has poor wear and herbicide tolerance and is the least winter hardy of the warm-season grasses grown in Arkansas. Injury is likely in areas where the temperature dips below 10° F. Unlike other grasses, St. Augustine does not have underground stems (rhizomes) which have some degree of insulation in the soil.

The majority of St. Augustinegrass sold in Arkansas is shipped from Texas or Louisiana. While varieties such as 'Floritam', 'Raleigh' and 'Seville' do exist, homeowners will find common St. Augustinegrass readily available. Common is as cold tolerant as other St. Augustinegrasses but is susceptible to St. Augustine decline virus and chinch bug damage. St. Augustinegrass is well adapted as far north as Little Rock (Figure 2).

## Centipede grass

This grass is a medium-textured, low and slow growing but aggressive grass that can produce a dense, attractive, weed-free turf. It is more shade tolerant than bermudagrass but less shade tolerant than St. Augustinegrass and zoysiagrass. Since centipede grass produces stolons but not rhizomes, it is easily controlled around borders of flower beds and walks. It is well adapted as far north as Searcy (Figure 2). Centipede grass is ideal for the homeowner who wants a lawn which needs little care. Centipede can be established by either seed or vegetative parts. Centipede grass does not require much fertilizer or mowing, and when compared to other lawn grasses, it is generally resistant to most insects and diseases. Since it is slow growing, it takes longer than bermudagrass and St. Augustinegrass to completely establish. Common centipede grass is the most prevalent cultivar available, but new improved varieties



Figure 2. Centipedegrass and St. Augustinegrass are best adapted to the southern one-third of Arkansas but can be grown as far north as Little Rock.

such as ‘TifBlair’ and ‘TennTurf’ are also available. Centipede is subject to a condition referred to as centipede decline. This problem can be prevented by proper management, which includes care not to over-fertilize, prevention of thatch accumulation, irrigation during drought stress (particularly in the fall) and maintaining a mowing height of 1.5 to 2.0 inches. Centipede is adapted to soils of low fertility but grows best, like most turfgrasses, at a soil pH between 5.5 to 6.5. It can also tolerate soils with a pH as low as 4.5. Excess nitrogen and phosphorus fertilization will result in the loss of turf. Avoid fertilizers such as 13-13-13 because they add unneeded phosphorus to the soil which makes iron, essential to centipedegrass growth, unavailable.

### Buffalograss

Buffalograss (*Buchloe dactyloides*) is a cold hardy, warm-season grass well adapted to western Oklahoma, Kansas and Nebraska. It requires little fertilization and has excellent drought tolerance. Although there is some buffalograss in northwestern portions of Arkansas, it does not compete well with weeds in areas with high rainfall and requires extensive herbicide use to produce a good-quality turf. Therefore, buffalograss is not recommended for Arkansas except in some nonirrigated lawns where aesthetics is not a principal concern.

### Cool-Season Grasses

Cool-season grasses grow well during the cool months (60° to 75° F) of the year. They may undergo stress, become dormant or be injured during the hot months of summer and may require significantly more water than the warm-season grasses.

### Tall Fescue

Tall fescue is the most heat and drought tolerant of the cool-season or northern grasses. Reasons for the increased popularity of tall fescue include good shade tolerance compared to warm-season turfgrasses, ease of establishment from seed and excellent winter survival. Tall fescue will stay green through spring and fall when warm-season grasses are dormant. It does best in north Arkansas but can be grown in the central part of the state (Figure 3). This perennial bunch-type grass looks and grows best during the fall and spring. Summer color and growth of tall fescue are often poor. A good deal of supplemental watering will be needed during the hottest part of the summer. Because tall fescue is a bunch-type grass and spreads by tillers, it does not invade flower or shrub beds. The bunch-type growth habit also means that it will not fill in bare areas and may become clumpy over time. For this reason, periodic (every one to three years) overseeding with tall fescue is typically needed to keep the stand dense. Tall fescue may be established from seed or sod. There are many new varieties available that have finer leaf texture, darker green color and improved heat and drought tolerance compared to the original lawn tall fescue ‘Kentucky 31’. It is advisable to plant a blend of two or three of the turf-type tall fescue varieties to combine the best characteristics of each (Table 4). The multi-variety blends may be purchased already combined.

There is often confusion about fine fescues versus tall fescues. Fine fescues such as creeping red fescue and tall fescues are different species. Tall fescues have wider leaf blades and greater tolerance for Arkansas environmental conditions. Creeping red fescue (*Festuca rubra*) has very fine leaves and is suited to shaded, low-fertility sites but does not do well in Arkansas.



Figure 3. Tall fescue is best adapted to the northern one-third of Arkansas.

**Table 4. Recommended cultivars for Arkansas available by seed for each species. Some cultivars may not be available at local seed suppliers and may require a special order.**

Species	Cultivars with seed availability for Arkansas lawns
Bermudagrass	'Barbados', 'Contessa', 'Riviera', 'Yukon' and others
Centipede grass	'TifBlair'
Kentucky bluegrass hybrids	'Durablue', 'Thermal Blue', 'Thermal Blue Blaze', 'Solar Green' and others.
Tall fescue	'Apache', 'Avenger', 'Barvado', 'Bonanza', 'Cayenne', 'Cochise III', 'Durana', 'Dynasty', 'Finelawn Elite', 'Firebird', 'Greenkeeper', 'Guardian', 'Inferno', 'Jaguar', 'Justice', 'Masterpiece', 'Millennium', '2nd Millennium', 'Plantation', 'Rebel', 'Rebel II', 'Rebel Exeda', 'Red Coat', 'Rembrandt', 'Scorpio', 'Shenandoah', 'Solara', 'Turbo', 'Watchdog' and others
Zoysiagrass	'Compadre' and 'Zenith'

## Kentucky Bluegrass

Kentucky bluegrass (*Poa pratensis*) is only marginally adapted to northern Arkansas. Many varieties of Kentucky bluegrass are available. One new class of Kentucky bluegrass cultivars with improved heat tolerance has emerged. It is a hybrid of Texas bluegrass and Kentucky bluegrass (*Poa arachnifera* x *Poa pratensis*). Commercially available cultivars of this hybrid include 'Durablue', 'Thermal Blue', 'Thermal Blue Blaze' and 'Solar Green'. These hybrid bluegrasses have improved heat tolerance, but they are not improved enough to consider planting them alone in a lawn. To help offset their lack of drought and heat tolerance in summer, they can be mixed with tall fescue, which has better drought and heat tolerance. A common mixture percentage would be 90 percent tall fescue seed and 10 percent hybrid bluegrass seed by weight.

## Ryegrass – Blends and Mixtures

Perennial ryegrass and annual ryegrass are suited as temporary, cool-season turfgrasses throughout Arkansas. They can be used as a winter cover on new lawns where the permanent grass has not been established or for overseeding, that is, to provide a green cover while a warm-season grass is dormant during winter. However, overseeding may damage the warm-season grass unless managed correctly in the spring because the ryegrass competes for moisture, sunlight and nutrients.

## Turfgrasses Available as Seed in Arkansas

All of the species discussed above can be established by seed or have seed availability with the exception of St. Augustinegrass. However, not all

cultivars are available by seed. Table 4 provides a listing of cultivars available by seed that are well-adapted to Arkansas. For the most recent research regarding the cultivars best adapted to Arkansas, visit the National Turfgrass Evaluation Program web site at [www.ntep.org](http://www.ntep.org).

For more information on home lawns, visit:

- [turf.uark.edu](http://turf.uark.edu)
- [www.uaex.uada.edu](http://www.uaex.uada.edu)

## References

- Anderson, J.A., C.M. Taliaferro and D.L. Martin. 2002. Freeze tolerance of bermudagrasses: vegetatively propagated cultivars intended for fairway and putting green use and seed-propagated cultivars. *Crop Sci.* 42:975-977.
- Beard, J.B., S.I. Sifers and S.D. Griggs. 1991. Genetic diversity in low temperature hardiness among 35 major warm-season turfgrass genotypes. Texas Turfgrass Research – 1989-1990. Texas Agri. Exp. Sta. PR-4898. p. 56-58.
- Busey, P., and B.J. Myers. 1979. Growth rates of turfgrasses propagated vegetatively. *Agron. J.* 71:817-821.
- Fu, J., J. Fry and B. Huang. 2004. Minimum water requirements of four turfgrasses in the transition zone. *HortScience* 39(7):1740-1744.
- Karcher, D. E., M.D. Richardson, J.W. Landreth and J.H. McCalla, Jr. 2005. Recovery of zoysiagrass varieties from divot injury. Online. Applied Turfgrass Science. <http://www.plantmanagementnetwork.org/pub/ats/research/2005/zoysia/>.
- National Turfgrass Evaluation Program. [www.ntep.org](http://www.ntep.org)
- Patton, A.J. 2006. Characterizing the growth and cold hardiness of *Zoysia* spp. Ph.D. diss. Purdue Univ., W. Lafayette, IN.
- Riffell, S.K., M.C. Engelke and S.J. Morton. 1995. Performance of three warm-season turfgrasses cultured in shade: Zoysiagrass. TX Turfgrass Research –1995. *TURF* 95-11:60-65.
- White, R.H., M.C. Engelke, S.J. Anderson, B.A. Ruummele, K.B. Marcum and G.R. Taylor II. 2001. Zoysiagrass water relations. *Crop Sci.* 41:133-138.