from the general appearance of the turf. Buffalograss can be established from processed and treated seed or from sod. Seed is commercially available for common and Texoka, an improved cultivar.

St. Augustinegrass (*Stenotaphrum scundatum*)

St. Augustinegrass is a medium to coarse-textured, warm-season turfgrass that spreads by stolons. It is suited to southern Texas but can sometimes be grown in the extreme southern regions of Oklahoma on sheltered sites. St. Augustinegrass produces a quality lawn on full-sun to lightly- shaded sites. However, it requires more frequent watering and better soil conditions than bermudagrass. Selections of Texas common St. Augustinegrass may appear to have greater winter hardiness than many of the other commercially available cultivars, such as Raleigh and Floratam.

Zoysiagrass (*Zoysia* spp.)

Zoysiagrass is fine to medium-textured warm-season turfgrass that spreads by stolons and rhizomes. Its winter hardiness and its ability to grow under light shade are its desirable features. Its slow establishment rate is its greatest liability. Zoysiagrass requires more frequent watering to prevent wilting than bermudagrass but has lower annual fertilizer requirements. Zoysiagrass, like the fine-textured bermudagrasses, should only be utilized for lawns when a top-quality and high-maintenance turf is desired. Meyer zoysiagrass (Z-52) is the only cultivar that is commercially available in appreciable quantities in Oklahoma. It is a medium-textured cultivar that produces a medium-dense turf having superior wear tolerance.

Turfgrasses for Shaded or Irrigated Sites

Occasionally, cool-season turfgrass species are the best selection for a lawngrass. The warm-season turfgrasses cannot tolerate shaded sites, so a cool-season turfgrass such as tall fescue (*Festuca arundinacea*), Kentucky bluegrass (*Poa pratensis*), or perennial ryograss (*Lolium perenne*) should be seeded (ideally in the fall) if a permanent turf is desired. Cool-season grasses provide a green cover the entire year if properly watered and fertilized.

Cool-season turfgrasses, such as tall fescue and Kentucky bluegrass can also be successfully grown in full sun, but requires more frequent watering during the summer than bermudagrass to prevent wilting, thinning, and a loss of turf density. Thus, cool-season turfgrasses may be utilized in full sun only when a convenient means of irrigation is available.

Perennial ryegrass and annual ryegrass, sometimes called Italian ryegrass (*Lolium multiflorum*), can also be utilized for overseeding into dormant warm-season turfgrasses or for soil stabilization during the fall and spring when a turf cover is rapidly needed. Perennial ryegrass is commonly seeded into an established bermudagrass turf when a fine-textured, green turf cover is desired from October through April. Annual ryegrass is less expensive and is also successfully used for the same purpose, although it provides an inferior quality winter turf. Annual ryegrass is also commonly used for temporary soil stabilization on construction sites that are completed during the fall and winter, when conditions are unfavorable for establishment of warm-season turfgrasses.

Preliminary research findings at OSU indicate that several cool-season turfgrass cultivars have promise for Oklahoma conditions. These include:

- Kentucky bluegrass. America, Baron, Columbia, Midnight, and Wabash.
- Perennial ryegrass. Diplomat, Citation, Palmer, Prelude, Ranger, Repell.
- Tall fescue. Adventure, Houndog, Jaguar, Kentucky 31, and Mustang.

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Selecting a Lawn Grass for Oklahoma

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http://osufacts.okstate.edu

The geographic location of Oklahoma permits turfgrass species popular in the north, south, east, and west environments of the United States to be grown somewhere in the state. However, high temperatures and limited rainfall during the summer limit the success of the cool-season turfgrass species to shaded areas and sites with irrigation systems. Relatively low temperatures during the winter prohibit the success of many warm-season (grows in the summer, dormant in the winter) turfgrass species.

Successful turfgrass management begins with the selection of a turfgrass species adapted to the wide fluctuations in temperature and moisture found in the state. It also involves the selection of a turfgrass suited to your personal need(s) (a show place, a neighborhood sports field, an average lawn, or cover to protect the soil from erosion), and a turfgrass species suited to any physical or environmental limitations of the planting site such as shade, no supplemental water, or poor soil conditions. This fact sheet was prepared to aid you in selecting the best-adapted turfgrass for your conditions.

Bermudagrass (*Cynodon* spp.)

Bermudagrass is an aggressive, warm-season turfgrass species that spreads rapidly by above-ground (stolons) and below-ground (rhizomes) stems. It is the best-adapted turfgrass for full-sun areas in Oklahoma due to its excellent heat and drought tolerance during the summer and its sufficient winter hardiness. Bermudagrass cultivars having a fine texture (relative measure of leaf-blade width) and a high turf density (number of leaves or stems per unit area) are best suited for areas such as athletic fields and golf courses. The coarser-textured, lower density, common-type cultivars are better suited for home lawns because they require lower amounts of maintenance (fertilizing, mowing, and dethatching). Cultivars of this type that can be established vegetatively or with seed are Arizona common, U-3, and Guymon. All other bermudagrass cultivars do not produce seed and must be vegetatively propagated with sprigs, plugs, or sod.

Arizona Common

Arizona common is a medium textured, seed propagated bermudagrass that rapidly produces a turf of medium density and quality. Ease of establishment by seed and relatively low maintenance requirements are its desirable features. Winter kill during the first winter of establishment is a serious liability. Therefore, seed this cultivar on or before May 1 in order to allow time for it to prepare itself for winter. Sod of common bermudagrass is also available. It produces a turf area with medium density and texture, with sufficient winter hardiness when vegetatively propagated two to three months prior to the first fall frost.

Guymon

Guymon bermudagrass, a medium coarse-textured, winter-hardy, seed-propagated cultivar, was developed for soil stabilization and turf. It was released by OSU in 1982. This cultivar can be seeded as late as July 15 without drastically affecting its winter survival during the first winter of its establishment. It produces a lawn of acceptable density and quality. However, it should not be planted if a show-case turf is desired.

Sunturf, Tifgreen, and Tifway

These are fine-textured, vegetatively-propagated bermudagrasses that produce a dense turf of excellent quality. They are an excellent choice for areas receiving a high degree of traffic because they resist and recover well from wear. Their utilization for home lawns should only be considered when a top-quality, high-maintenance turf is desired.

U-3

U-3 bermudagrass is a medium fine-textured, vegetatively-propagated, selection of common bermudagrass. It produces a denser turf cover than common bermudagrass and is finer in texture and darker green in color. This cultivar produces a nice lawn or athletic field turf with lower maintenance requirements than with the finer-textured cultivars. Seed of U-3 bermudagrass is offered for sale, but produces a turf with less uniform texture than one from sod or sprigs.

Buffalograss (*Buchloe dactyloides*)

Buffalograss is a warm-season, sod-forming, native prairie grass that spreads by stolons. It has a fine texture and a grayish-green color. It has excellent tolerance for the heat, drought, and cold conditions found in Oklahoma. Buffalograss is best suited to full-sun sites in areas of Oklahoma receiving 12 to 25 inches of rainfall per year.

It grows best on heavy-textured soils and has some tolerance of alkaline soils. Buffalograss is the best choice for unirrigated lawns and general turf areas of western Oklahoma. It produces numerous seed heads which may distract

Adaptation and Establishment of Turfgrasses in Oklahoma

Turfgrass	Adaption: State	Adaption: Site	Resistance To[1]: Heat	Resistance To[1]: Winter-Kill	Resistance To[1]: Wilting from drought	Resistance To[1]: Shade	Resistance To[1]: Wear	Maintenance Requirements[2]: Culture Intensity	Maintenance Requirements[2]: Cutting Height (in)	Maintenance Requirements[2]: Irrigation Requirements	Maintenance Requirements[2]: Dethatching Needs	Establishment: Method	Establishment: Time	Establishment: Rate/1000 ft.[2]
WARM-SEASON TURFGRASSES														
Bermudagrass														
Arizona common* Guymon U-3	Statewide	Full Sun	Excellent	Marginal-Favorable	Excellent	Poor	Good	M	1.0-1.5	L	M-H	Seed Vegetable	May 1 May-July	1 lb. PLS[3] (hulled) 30-50 ft.[2] sod for plugging 2-in plugs on 6 to 12-in. centers 3-10 bu. sprigs for sprigging.[4]
												Vegetable	May-July	30-50 ft.[2] sod for plugging 2-in plugs on 6 to 12-in. centers 3-10 bu. sprigs for sprigging.[4]
Sunturf Tifgreen Tifway	Statewide	Full Sun	Excellent	Marginal	Good	Poor	Excellent	H	0.5-1.0	M	H	Seed	May-July	2 lb. PLS[3] (processed)
Buffalograss	Western	Full Sun	Excellent	Excellent	Excellent	Poor	Marginal	L	1.0-3.0	L	N	Vegetable	May-July	60-100 ft [2] sod for plugging 2-in. plugs on 6-in. centers
St. Augustinegrass (common)	Extreme Southeasten	Full Sun to light shade	Excellent	Poor	Good	Marginal	Favorable	M	2.5-3.0	M	M-H	Vegetable	May-July	30-50 ft.[2] sod for plugging 2-in plugs on 6 to 12-in. centers 3-10 bu. sprigs for sprigging.[4]
Zoysiagrass (Meyer)	Eastern	Full Sun to light shade	Excellent	Favorable	Good	Marginal	Excellent	H	0.5-1.0	M	H	Vegetable	May-July	50 ft.[2] sod for plugging 2-in plugs on 6 in. centers 3-10 bu. sprigs for sprigging.[4]
COOL-SEASON TURFGRASSES														
Kentucky Bluegrass	Northern	**	Marginal	Excellent	Poor	Favorable	Marginal	M-H	1.5-2.5	H	M	Seed	Sept-Oct	1-3 lb. PLS
Perennial Ryegrass	Northern	**	Marginal	Good	Poor	Favorable	Marginal	M-H	1.5-2.5	H	N	Seed	Sept-Oct	4-8 lb. PLS, 10-40 lb. PLS for overseeding
Tall fescue	Statewide	**	Good	Good	Favorable	Good	Favorable	M-H	2.5-3.0	M-H	N	Seed	Sept-Oct	5-7 lb. PLS

* Arizona common has poor tolerance to winterkill the year it is seeded.
** Recommended for sites that are shaded or irrigated.
1. Tolerance ranking is: Excellent > Good > Favorable > Marginal > Poor.
2. Maintenance Requirements: H = High; M= Medium; L = Low; N= None.
3. PLS = Pure Live seed = (percent pure seed) X (percent germination).
4. Generally, 1 square yard of bermudagrass sod (9ft.^{2}) equals 1,000 1-inch plugs, or 1,000 to 2,000 sprigs, or approximately one bushel of sprigs.