

What grass should I grow for my lawn?

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Virginia is what turfgrass managers describe as a “transition zone”. What it means to you and your lawn is that our cold winters and hot, dry summers don’t allow for easy choices in lawn grasses for most of our state. Following the drought of 2007 (and the disconcerting forecast for continued suboptimal rainfall in 2008) there are lots of lawns that need work this spring and we might have more problems ahead this summer. This article considers the strengths and weaknesses of the major turfgrasses that can be managed as lawn grasses across Virginia, where they are best adapted, and how their use fits into lawn management programs that deliver quality, aesthetically pleasing turf in an environmentally friendly approach.

Cool-season turfgrasses. These grasses prefer temperatures of 60-75 ° F and have active growing periods in the late summer to early winter, and early spring to early summer. Their growth rates in mid-summer drop sharply as they encounter the typical high temperatures and possible drought of the summer season. These grasses are best adapted to the hill and valley regions of the southwest, the Shenandoah Valley, and northern Virginia. Tall fescue is grown in all regions of the state but is likely to struggle during summer extremes in the southern Piedmont and Tidewater regions. Spring establishments are possible, but fall is the preferred time for planting.

Tall fescue. This is the best adapted turfgrass used as a lawn grass across the state. There are over 100 cultivars of ‘turf-type’ fescues (those selected for finer leaf texture and higher plant density) currently available. It is noted for having the deepest root system of the cool-season grasses, allowing it to avoid drought by using water it finds deeper in the soil profile. Tall fescue seed germinates quickly (10-14 days) and is readily available as sod around the state. It performs best in full sun to moderate shade, is tolerant of a wide range of physical and chemical soil conditions, and performs best at cutting heights of 2-3 inches. It is managed as a bunch (clump) grass although some of the latest cultivars are touted for their rhizomatous (below-ground stems) growth habit. Tall fescue is a good choice for low to moderate maintenance lawns, responding to annual nitrogen (N) fertility levels of 2 to 4 lbs/1000 sq ft/year.

Kentucky bluegrass. The dark green color and fine to medium leaf blades of the vast number of cultivars of this grass provide some of the prettiest lawns in the region. It is a full-sun turfgrass that if selected, indicates a commitment by the homeowner to a moderate to high maintenance lawn. Bluegrass responds to fertility levels of 3 to 4 lbs of N/1000 sq ft/year and if under-fertilized, tend to get many of the nuisance turf diseases of dollar spot, red thread, and rust. This grass has an aggressive creeping growth habit from rhizomes and can produce a significant thatch layer over years of aggressive management. Seed is readily available, but it is slow to germinate (14-21 days) and complete establishment usually takes months, making spring plantings much less successful than those of early fall. Kentucky bluegrass is usually maintained between a 1.5 to 2.5 inch cutting height and will enter dormancy under extreme drought in order to

survive. The newest releases of bluegrasses to hit the market are the “hybrid bluegrasses”, crosses of Kentucky and Texas bluegrass. These grasses tout better heat and drought tolerance. To date, they look promising for the warmer, drier regions of Virginia but have not distinguished themselves from standard Kentucky bluegrasses in the cooler regions. Sod is not as widely available for bluegrass as tall fescue, but there are producers of bluegrass-only sod in the state. Mixtures of bluegrass and tall fescue are popular in sod production, providing advantages in pest and environmental stress tolerance while maintaining a uniform appearance.

Fine-leaf fescues. This group of extremely fine-bladed grasses are some of the most under-utilized grasses in the state, being well adapted to the Valley and Ridge and northern Piedmont regions. People either love or hate fine fescues because of their needle-like leaf texture. However, these grasses (broken down into species such as creeping red, hard, or chewings fescues) provide some of the highest quality, low maintenance cool-season turf possible. They are ideal for low maintenance lawns where minimal fertility and fewer mowing events are desired, but fine fescues have poor traffic tolerance, so be wary of using them if your lawn will have lots of use from kids or pets. The fine fescues have the best shade tolerance of the cool-season turfgrasses and are very persistent in dry conditions and somewhat poor soils. They generally do not fare well in persistently wet soils and their quality will decline if over fertilized (only 1 to 2 lbs N/1000 sq ft/year is recommended). Seed is readily available but there are not nearly as many choices in cultivars as for other species. Fine fescue seed germinates pretty quickly (10-14 days) but is a somewhat slow establisher, so fall seedings are best. It thrives under mowing heights of 1.5 to 2.5 inches, but is often used in the mountains as ‘no mow’ turf for areas too steep to mow. Seed mixtures with Kentucky bluegrass are commonly sold as ‘sun-shade’ mixes where bluegrass is intended to dominate in the sun and fine fescue in the shade. The grasses likely will segregate out over time, but fine fescue has the best chance of persisting in moderate shade. There are no fine fescue sod producers in the region.

Perennial ryegrass. This grass fell out of favor for homelawn use in the 1990s when gray leaf spot disease ravaged many ryegrass cultivars on the east coast. However, turf breeders have since selected for greatly improved resistance to gray leaf spot and perennial ryegrass has returned to a place of prominence in Virginia’s cooler climates. Perennial ryegrass is a bunch-type grass best suited for use in full sun to moderately shaded lawns at elevations above 1500 feet. It is one of the fastest germinating grasses from seed (7-10 days) and also one of the fastest to establish a dense canopy. Mature perennial ryegrass has excellent wear tolerance but it is not very heat and drought tolerant, and can have significant disease pressure in warmer climates. It tolerates some of the lowest mowing heights possible (1 to 2.5 inch recommended cutting height) and is noted for its striping potential when mowed. Ryegrass responds to 2 to 4 lbs N/1000 sq ft/year, with higher rates being used when it is mixed with Kentucky bluegrass at 80-90% ryegrass by seed weight. This seed combination takes advantage of the rapid establishment characteristics of the ryegrass and the long-term creeping potential of the bluegrass. There is no perennial ryegrass sod produced in the state.

Warm-season grasses. These grasses prefer temperatures of 80-95° F and will have a winter dormancy period (i.e. loss of green color) of 3-5 months depending on where they are used in the state. As a group, these grasses have fewer pest problems, greater water use efficiency rates, and less sensitivity to environmental extremes of summer.

Zoysiagrass and bermudagrass are adapted for lawns across the state although only zoysiagrass typically might be grown in the cooler climates. Centipedegrass and St. Augustinegrass are adapted only to the Tidewater region. The ideal time to establish warm-season grasses is mid-May through June around the state.

Bermudagrass. This grass is considered as both an awesome turfgrass and one of the world's most troublesome weeds. Bermudagrass is the fastest growing turfgrass used on lawns, creeping by both stolons (aboveground stems) and rhizomes. Hence it can become a serious invasive pest in gardens and plant beds but has tremendous recuperative potential if damaged. It is a full-sun grass with very poor shade tolerance that tolerates mowing heights from 0.5 to 2.5 inches (cutting less than 1" requires a reel mower rather than a standard rotary unit). Many superior cultivars can only be established vegetatively by sod, sprigs (i.e. stems), or plugs, but several improved varieties established from seed are now available. While not known for its cold tolerance, recent releases selected with cold-tolerance in mind have broadened the use of bermudagrass all across the state. Bermudagrass responds well to 2 to 4 lbs of N/1000 sq ft/season, and higher levels of management will likely result in a grass that needs periodic vertical mowing for thatch control. There are several producers of bermudagrass sod around the state.

Zoysiagrass. This warm-season grass is the most cold-hardy of the group and is very unlikely to be damaged by even a severe winter in this region. While zoysia spreads by both rhizomes and stolons, it is an extremely slow grower as compared to bermudagrass, this presents a challenge while waiting for it to establish (either vegetatively or from recently available seeded cultivars), but upon gaining full establishment, it is a very low maintenance grass with lower mowing frequencies. It is noted for its exceptional density, such that its density often provides its own weed control. It has few pest problems and while not as drought tolerant as bermudagrass, it still exceeds the cool-season grasses in terms of water use efficiency. It has average shade tolerance and tolerates mowing heights of 1 to 2.5 inches. Optimal fertility programs for zoysia are 1 to 2 lbs N/1000 sq ft/season and under these levels of fertility, it is not likely to produce significant thatch. Zoysiagrass requires a very sharp mower blade to provide a high quality cut. It is expensive to establish because of its slow growth rate, but end users are ultimately rewarded for their patience or cash outlay with one of the highest quality, low maintenance turfgrasses available. There are a small number of zoysiagrass sod producers around Virginia.

Centipedegrass. This slow growing, stoloniferous grass is only adapted to the Tidewater region. It is commonly referred to as the "poor folks grass of the south". Seed is available for centipedegrass and while there are no sod producers in the state, there are numerous producers in eastern North Carolina that serve the VA market. Centipede has a naturally yellow-green color and is an extremely slow growing grass with average shade tolerance and tolerance to acid soil conditions. To improve its color, it is common for

lawn service companies to use liquid iron fertilizers to enhance the greening without a lot of foliar growth. It prefers cutting heights of 1.5 to 2.5 inches and thrives under low maintenance programs providing only 1 to 2 lbs N/1000 sq ft per year. It has few pest problems and one of its biggest weaknesses is its poor traffic tolerance. Most centipedegrass sod comes to Virginia from the Carolinas and seed is available, but is quite expensive.

St. Augustinegrass. This tropical origin, fast growing, stoloniferous grass is also only adapted to the Tidewater region. St. Augustine's biggest advantage as a warm-season grass comes from its excellent shade tolerance. Establishment is almost exclusively by sod or plugs from farms south of Virginia. It forms a high density, rapidly spreading turf that usually has more problems with insects and diseases than other warm-season grasses. It prefers mowing heights of 2-3 inches and responds to N fertility programs of 2 to 4 lbs/1000 sq ft/year. As a species, it is noted for poor cold tolerance, but there are lawns in the Tidewater region that have never encountered serious winter kill due to winter extremes. Seed is very difficult to locate and the majority of St. Augustinegrass is established vegetatively (sod or plugs) from material imported into the state from the Carolinas and south.

Where can I get more information? Your local Virginia Cooperative Extension office can assist you in selecting varieties of these grasses that best fit your needs. The Virginia Turfgrass Variety Recommendation list and list of Virginia sod producers can be found under the lawn and landscape link at the VCE website, www.ext.vt.edu/.