

BERMUDAGRASS SELECTION

for Athletic Fields in the Transition Zone



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When it comes to recreational events and competitive athletics, the surface of an athletic field is important for proper play. It not only has to be aesthetically pleasing but should provide a safe playing surface for athletes. A healthy turfgrass stand must also tolerate heavy traffic and have good recovery ability. Bermudagrass (*Cynodon spp.*) is an excellent option for athletic fields as it:

- establishes rapidly,
- endures wear and traffic,
- recovers quickly from injury,
- is very heat and drought tolerant,
- grows rapidly on most soil types, and
- creates an excellent surface if fertilized and mowed low (0.5 to 1.5 inches) and frequently.

It is used on baseball, football, soccer, softball, and polo fields; volleyball, tennis, badminton and croquet courts; lawn bowling greens, and many other recreational sites.

There are a wide variety of bermudagrass cultivars available that are appropriate for little

league fields all the way up to professional football fields (Table 1). When selecting a cultivar, choose high-quality seed, sod, or sprigs of the grass species and cultivars best adapted to the site. This fact sheet outlines the suitability of bermudagrass for athletic fields in the transition zone and offers a quick and easy explanation of recommended bermudagrass cultivars.

Table 1. Recommended bermudagrass cultivars for athletic fields in the transition zone

Seeded Bermudagrass	Vegetative Bermudagrass
Riviera*	Astro
Monaco*	Latitude 36*
U-3 (Common)	Northbridge*
Yukon*	Patriot*
	Tahoma 31*†
	TifTuf†
	Tifway419

Note: All bermudagrasses available for use in the transition zone are not listed in this table.

*Improved cold hardiness
 †Improved drought resistance

Advantages of Bermudagrass

Rapid Establishment

Bermudagrass is very aggressive and fast-growing. Its creeping below-(rhizomes) and above-ground (stolons) lateral stems can spread as much as 3 feet each year to cover bare and worn areas.

Drought Resistance

Bermudagrass has inherent drought resistance with certain newer cultivars having even better drought resistance. Compared with many other turfgrass species, it can perform relatively well under limited irrigation on low-budget athletic fields.

Adaptable to Soil Types

Bermudagrass is extremely adaptable. Whether you have a high-quality sand-based field or a low-budget native soil field, bermudagrass will most likely grow.

Wear Resistant and High Recovery Rate

Actively growing bermudagrass is extremely wear-resistant and will recover very rapidly from heavy traffic during months of active growth.

Disadvantages of Bermudagrass

Winter-Kill Issues

Winter-kill occurs when turfgrasses are exposed to extreme or prolonged cold temperatures, resulting in death or significant injury. Sports fields located in the transition zone (Fig. 1) can experience particularly cold temperatures, so winter-kill is often an issue for warm-season turfgrasses in this region. Improved cultivars of bermudagrass are commonly used due to their improved cold tolerance. Cultivars such as 'Celebration', 'Princess 77', and 'NuMex-Sahara' should be avoided in colder climates due to an increased risk of winter-kill compared with some other cultivars. Cultivars that have improved cold toler-



Figure 1. Turfgrass climate zones. (Source: Sod Solutions)

ance can be found in Table 1. Even though some improved bermudagrass cultivars have excellent winter hardiness, some winter-kill should potentially be expected during extremely low temperatures.

Fall/Winter Dormancy

Bermudagrass will typically turn brown after the first frost. Depending on the sport, this may leave the field with poor color and poor recovery potential during critical parts of the season. Dormant bermudagrass may have good traction, but it will not be able to recover from damage while dormant. Overseeding a cool-season turfgrass such as perennial ryegrass is an option to improve fall and spring performance of bermudagrass athletic fields.

Shade Tolerance

Bermudagrass is not considered a shade-tolerant grass and is limited in its ability to grow successfully in shaded areas. Some improved bermudagrass cultivars have shown a slight improvement in shade tolerance, 'Celebration' for example. However, even the most shade-tolerant bermudagrass is not comparable to other more well-known shade tolerant turfgrasses, such as some zoysiagrasses, tall fescues, or fine fescues. Supplemental lighting may be required if bermudagrass must be used in a shaded area on your sports field.

Common or Seeded Bermudagrass

Seeded or common bermudagrasses are often preferred by some athletic field managers because these options are typically less costly when compared to sod or sprigs from newer, clonally bred cultivars. Seeding rates of most bermudagrass products range from 1-3 pounds per 1,000 square feet, depending on the cultivar, quality of seed, amount of inert matter present, and if seeds are coated. Nevertheless, managers should recognize that compared to clonal bermudagrass, most common bermudagrasses produce a lower quality playing surface due to their lighter green color, coarser leaves and density, unattractive stem and seedhead production during summer, as well as slower restorative potential.

'Riviera' and 'Monaco' are improved common cultivars that can be seeded and are of high quality, similar to the best vegetatively established cultivars. 'Riviera' is also known for its excellent cold tolerance, as is the slightly coarser-textured 'Yukon'. Common bermudagrass sold as 'U-3' is a popular option for many athletic fields across the south. Unfortunately, DNA fingerprinting suggests a number of different common bermudagrasses, both between and within sod farms, are sold as 'U-3'.

Clonal or Vegetative Bermudagrass

Unlike common bermudagrasses, clonal bermudagrasses must be established vegetatively due to their seed being sterile. This is most commonly done with sprigs and sod, and less frequently by plugs. The initial cost of these planting methods is often greater than seeding common bermudagrasses; however, for the desired aesthetics, color, density, texture, and recuperative potential, these clonal cultivars are most often superior to common bermudagrass.

Currently, the most often used vegetative bermudagrasses for sports fields are 'Tifway' (also called 'Tifton 419') and 'Latitude 36'. Other improved bermudagrasses managed on athletic fields include 'Northbridge', 'Patriot', 'TifTuf®', and 'Tahoma 31™'.

Conclusion

Whether a little league field or an NFL field, bermudagrass is almost the only choice for athletic fields in the transition zone (Fig. 2). Budgetary concerns can be met by making the correct bermudagrass selection for your situation. There are numerous bermudagrass cultivars available that can be purchased at different expense levels.

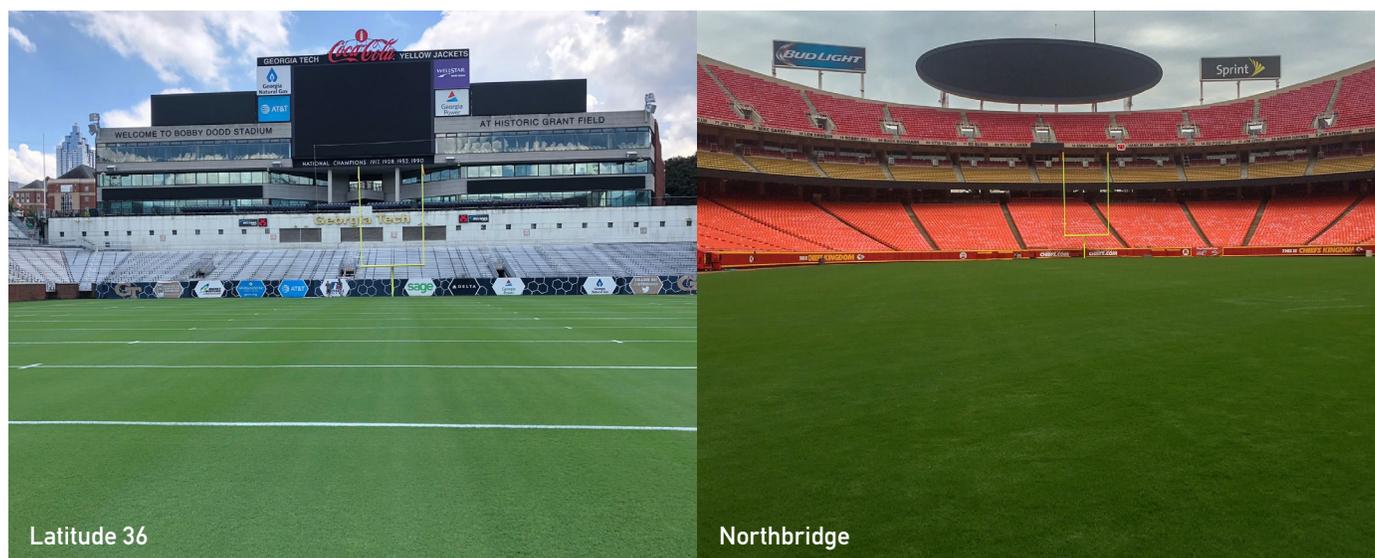


Figure 2. Bermudagrass sports fields. (Source: Sod Solutions)

Do your research and choose the best bermudagrass for your situation. Bermudagrass cultivar comparison data can be found on the National Turfgrass Evaluation Program (NTEP) website, which offers information on current and experimental bermudagrass cultivars from all over the United States. Remember, just because a cultivar

is not found in the NTEP trial does not mean it is not a viable option as a surface.

Additional Information

National Turfgrass Evaluation Program
Website – www.ntep.org

Cover photos, left to right:
University of Oklahoma’s John Crain Field with Latitude 36 bermudagrass (Source: Jeff Salmond),
Georgia Tech’s Bobby Dodd Stadium with Latitude 36 bermudagrass (Source: CC BY 3.0),
Texas Christian University’s Amon G. Carter Stadium with TifTuf® bermudagrass (Source: Andrew Siegel).

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