

Bermudagrass Athletic Fields

By Sean Connell

Bermudagrass is being used and considered for use in the mid-Atlantic region more and more for athletic fields. The idea of bermudagrass in this region is not new. Golf courses have tried utilizing bermudagrass for fairways and tees only to discover that harsh winters resulting in winterkill, slow recovery and poor transitions in the spring made bermudagrass more trouble than benefit. New varieties of bermudagrass are giving turf managers new choices. Some considerations need to be made before making the decision to utilize bermudagrass for athletic fields. Of the new varieties, 'Patriot' is the most popular; 'Celebration' and 'TifSport' are still close rivals. All the new grasses are evaluated on www.ntep.org (National Turfgrass Evaluation Program) - which is a great resource to view trials on turfgrasses.

The benefits of bermudagrass are many: heat and wear tolerance, recovery and overall playing surface are unparalleled with proper maintenance and sustained soil temperature. The reasons for consideration are well justified. After a stand of bermudagrass has developed a thatch layer, other than winterkill or physical damage, killing it is nearly impossible. The maintenance on bermudagrass is reduced by seasons; in the winter there is really no maintenance after a fall preemergence herbicide and fertilizer is applied. It overwinters nicely whether or not it has been overseeded. In the summer, bermudagrass is unstoppable under lots of heat, water and fertilizer. It reproduces/spreads with above and below ground runners. An existing stand can be thatched and sprigged into bare spots for the cost of labor. Simply cutting-in sprigs with a sprig cutter (flat solid discs pushing sprigs straight into loose soil) or even burying with loose soil, the sprigs will propagate growth with proper maintenance. You will have an acceptable stand of turf in 6 to 8 weeks. In the south, sodding is always the second choice. Considering '419' bermudagrass is \$0.09 per square foot without freight or \$3900 an acre without freight; 419 sprigs are \$0.60 per bushel and the recommended rate is 1000 bushels per acre; \$600 per acre to sprig is very paltry by any standards. Installation rates are not included in these figures. The price alone is the temptation. Of course the bermudagrass that is being marketed here is being priced at about double the rates quoted considering most bluegrass and fescue are cheaper. It can be a hard choice.

Regarding the chance of winterkill or slow transition in the spring, the question is: Is it worth the trouble of transition? It is only going to be a mat for overseeding. The primary issue specific to the mid-Atlantic is: Will it survive the winters? Time

will tell the truth on that issue. I did not notice any trials at www.ntep.org specific to the mid-Atlantic or northeast. Even in Atlanta, 600 miles south of Philadelphia, they have winterkill on bermudagrass on a large basis in 5 to 7 years cycles. Big Arctic blasts from Canada with zero temperatures are rare but still happen in the south and can lead to winterkill. When conditions are perfect for winterkill, it is droughty in the fall which weakens the grass stand, there is not enough irrigation water to supplement, and the grass turns dormant in the heat further stressing the plant. Fertilizing and applying a preemergence herbicide to dormant bermudagrass with no water does not seem reasonable or beneficial to the turf or the turf manager.

By definition, bermudagrass is a warm-season turfgrass and its optimum growing temperature is 85-degrees and above. One inch (1.0") of water is a minimum per week to keep green turf. The nitrogen requirement for the growing season is around 5 lbs to 7 lbs per 1000 square feet; this is probably a smaller amount in the mid-Atlantic region because of the shorter growing season. As with all turf, aerification is a must. The more air, water and nutrients you supply to the plant the healthier the plant is. Topdressing is not mandatory but it smoothes out the surface very well and helps draw higher soil temperatures which increases lateral growth. Mowing can be 3 or 4x per week job in the summer and is usually dependent on preference of mowing height and fertility. Bermudagrass is a sun-loving plant and can only survive in well drained surfaces. This plant typically does not grow at all in shade.

Being a construction contractor, I usually shy away from recommendations that involve choosing between warm-season and cool-season turfgrasses. I have planted one field in Philadelphia this year with Patriot bermudagrass as specified by the owner. I am interested in the outcome and hope my customer the best; but like a lot of others, I want to see how it goes before I tell my customers or potential customers to use warm season grasses. In my opinion, soil temperatures appear to be the biggest hurdle for bermudagrass to survive in the mid-Atlantic region.

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DID YOU KNOW?

A monocot is a plant having one cotyledon in the seed; grasses are an example.