



Turf of the Month:

Hybrid Bermudagrass



Hybrid Bermuda turf for Super Bowl XXIX at Joe Robbie Stadium in Miami was shipped by truck from Southern California just a few weeks before the game. Photo courtesy: West Coast Turf.

Tifgreen 328 was the field surface at Jack Murphy Stadium in San Diego for the 1992 Major League Baseball All-Star Game. Photo courtesy: Steve Wightman.

By Mike Augsdorfer

Hybrid Bermuda (*Cynodon dactylon*) is a dense, deep-rooted grass with a fine to medium leaf texture that is among the most attractive and resilient turfs used for athletic fields. Highly tolerant to heat and drought, hybrid Bermuda is a popular choice for fields in the Southwestern desert, where summer temperatures can exceed 100 degrees Fahrenheit. While hybrid Bermudagrass may be watered daily on golf courses, frequent irrigation is not necessary for athletic fields. Most hybrid Bermuda surfaces simply require deep irrigation once or twice per week during the summer.

Most commercial-use hybrid Bermudagrass is essentially a cross between common Bermuda and a different species. These hybrids are sterile, so sod, sprigs or plugs must be used for propagation. Hybrid Bermuda withstands wear better than many other turfgrasses and recovers quickly from injury. During the growing season — usually from early spring through the middle of autumn — a hybrid Bermuda field should be cut at least once a week to a height of 1/2- to 3/4-inches.

While it is highly tolerant to hot and dry conditions, hybrid Bermudagrass is a high-maintenance turfgrass that requires careful management. Most varieties of hybrid Bermuda are vulnerable to cold temperatures and do not grow well in shaded areas. However, hybrid Bermuda turf can be used as a base and overseeded in winter with a cool-season



grass. With careful management, including a fall fertilization program and removal of thatch before overseeding, hybrid Bermuda will green up quickly in the spring.

Bermudagrass was originally introduced in the U.S. in the late 1800s. In the 1950s several new varieties were introduced, including Tifgreen and Tifway, and further experimentation resulted in the introduction of cold-tolerant varieties such as Midiron and Midway in the 1970s.

With proper maintenance, weeds and diseases are generally not a problem with hybrid Bermuda turf. Dollar spot, *Helminthosporium* leaf and crown rot are diseases that are most troublesome for hybrid Bermudagrass. Also, over-application of nitrogen fertilizers can contribute to the development of spring dead spot on new hybrid Bermuda turf. Spring and autumn applications are best if herbicides are necessary, but prevention, in the form of good maintenance, is the best defense against disease.

Insect damage is most common during warmer months.

Grubs, cutworms, billbugs and sod webworms are among the pests frequently found in hybrid Bermudagrass. These insects may gather near the soil surface or on the roots just below the surface where they feed.

Three Varieties

Tifgreen, Tifway and Santa Ana are three varieties of hybrid Bermudagrass that are most popular in the western U.S. Tifgreen and Tifway were developed by researchers in Tifton, GA, while Santa Ana was developed specifically for sports turf usage by researchers at the University of California, Riverside, around 1968.

Stan Spaulding was involved in the early development of the Santa Ana strain as a research associate for Dr. Victor V. Youngner at UCLA. "We were looking for winter color retention in Bermudagrass, since common Bermuda is dormant in winter," Spaulding explains. Dr. Youngner developed the new hybrid by crossing parent grasses from South Africa and Iran. "We introduced it in 1967, and the sod growers didn't want it," Spaulding relates. "They already had the Tifgreen and Tifway, and it's a big investment to plant a couple of hundred acres."

Undaunted by the initial rejection, Youngner and Spaulding continued their work until the demand for the Santa Ana grass increased. One of the advantages of Santa Ana, says Spaulding, is its shorter dormancy period — in fact, Spaulding prefers to say it is just resting, not dormant. "It has a very dark green color in the normal growing period, where the Tifton series are lighter green," he adds.

Jeff Cole, company spokesman for West Coast Turf in Palm Desert, CA, says Tifway is the most widely used hybrid Bermudagrass. "It's real popular on golf course fairways and stadiums as well," Cole notes. "You'll find it from Joe Robbie Stadium in Miami to Jack Murphy Stadium in San Diego." In the late 1980s Tifway II was developed and touted as an improved version of the original Tifway 419.

Cole reports that West Coast Turf has had very few problems with hybrid Bermuda turf. "The Bermudas are one of the most disease-resistant, pest-resistant grasses available," he explains.

"Seldom do we have any problems with disease or insects in our production field."

Tifgreen is the oldest of the Bermudagrass cultivars. "Tifgreen has been around since the late '50s and has been the standard bearer for many years," says John Rector of Pacific Sod in Camarillo, CA.

Rector likes Tifgreen as an athletic surface because it is the easiest to maintain. "Of the three, Tifgreen is the most manageable. It's not as aggressive or as

heavy a thatch producer," he relates.

Phil Larkis, operations manager at Anaheim Stadium, home of the California Angels, has worked with several different types of hybrid Bermudagrass on the field. "Last year we had Tif II," he relates. This year we went with Santa Ana for mostly cosmetic reasons — just personal preference of the general manager and the ballclub."

Larkis says the Tifway II offers some advantages over other hybrid Bermudas.

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Turf of the Month

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"You have quicker growth and recuperation with Tif II," he admits. "We had it down about four or five days, and the root system had already grown in 3/4 of an inch."

The main concern with hybrid Bermuda on baseball fields, says Larkis, is thatching. "Some grasses will thatch more than others," he notes. "Baseball is concerned with that because if the ball is hit into a thatched area, it might affect the path of the ball."

Steve Wightman, turf manager at Jack Murphy Stadium in San Diego, has also used several different varieties of hybrid Bermuda. "Santa Ana was in the stadium when I got here in 1988," he relates. "I changed it in March 1992 to Tifgreen 328." Jack Murphy Stadium hosted the Major League Baseball All-Star game in July 1992, and Tifgreen 328 was the field surface for that game. "It's a little more of a prostrate grower and a little more accommodating to baseball," admits Wightman. Jack Murphy Stadium is currently sodded with Tifway 419.

"That was changed in March 1994," explains Wightman. "I knew it would be a good football grass, and it turned out to be as good as the 328 for baseball."

The Santa Ana, says Wightman, was the hardest to maintain. "When I first got here, one of the problems was the 'snaking' of the baseball. Wightman relates. He attributed the problem to the thatchy nature of the Santa Ana variety and to the fact that Santa Ana has a stiffer stem than the other varieties. Wightman resods the entire field every March, just before the start of the baseball season.

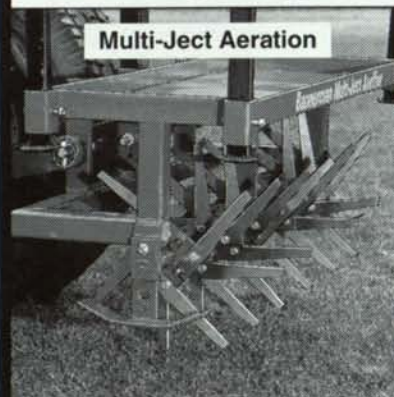
Steve Quinn of PC Sports in Adel, GA, finds that the trends in the Southeast are similar to those in the West. "For athletic fields it's usually Tifway 419 or occasionally Tifway II," he says. Quinn works in cooperation with Jaimie Allen at Pike Creek Turf Farms Inc. to supply high-quality turf to a number of teams in the Southeast, including the Jacksonville Jaguars, the Atlanta Braves and Florida State University. According to Quinn, turf managers report few problems with hybrid Bermudagrass in the Southeast except for occasional infestations of mole

crickets in Florida. "Mole crickets are big down here in sand-based areas," he explains. "They eat away at the rootzone. You end up having to bait them to the surface." Once the mole crickets reach the surface, chemical controls can be used to eradicate them.

Ed Mangan, field director for Atlanta Braves, uses Tifway 419 turf at Atlanta Fulton County Stadium. Getting the turf through the winter is his main concern. "I'd like my summers to be a little bit longer," he quips, "but we can't do much about the weather." Although the field had some winterkill a few years ago, Mangan says major turf problems are rare. "Unless we have a hard winter, we should be able to bring it through," he notes.

Despite a reputation as a high-maintenance turf, hybrid Bermuda is chosen again and again by turf managers for professional sports teams and major colleges. Hybrid Bermudagrass provides the uniform surface that is essential for top-level athletics, and it is durable enough to handle the intense pounding that is common to professional-level fields. □

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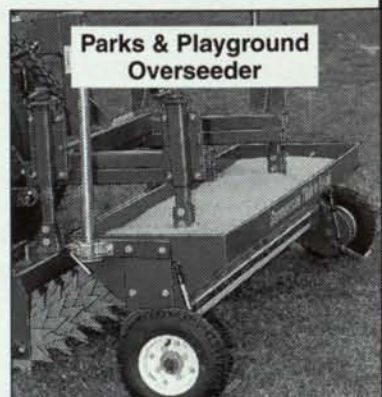


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