

Classification of Creeping Bentgrass Cultivars

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New creeping bentgrasses coming on the market have added to the choices for superintendents who are deciding which cultivar to use for new construction, renovations or overseeding. These new cultivars are the result of many years of work to improve the performance of creeping bentgrass to meet the needs of superintendents and their courses. Improved characteristics include disease resistance, higher density at low mowing heights, increased competitiveness against *Poa annua*, higher stress tolerance, improved growth during cold and warm seasons, smoother putting surfaces and ability to maintain density with reduced nitrogen. Not every golf course requires all of these characteristics and each superintendent must decide which cultivar is best based on maintenance requirements, course budget and golfer requirements.

To assist superintendents and others who purchase creeping bentgrass for golf courses, I have developed a classification system for creeping bentgrass that is somewhat similar to the classifications used for Kentucky bluegrass.

Density

The first category used in this classification — and the only category discussed here — is density, which is the biggest factor in determining maintenance regimes and potential uses. The subcategories of density are based primarily on NTEP ratings, ratings from additional university trials and personal observations at universities and on golf courses. The same cultivars are not in all trials, so trials with additional cultivars that may not be in the current NTEP trial and comparisons with control varieties are necessary in some cases.

Standard–Low-Density

The oldest cultivars are Standard–Low-Density types and include Penncross, PennEagle, PennLinks and Seaside. These were often used for greens on old courses, but they do not have the density of newer cultivars. They have also been used for tees and fairways. Typically these cultivars are not as competitive against *Poa annua*.

Standard–Moderate-Density

The Standard–Moderate-Density cultivars are what many individuals would call the first-generation improved cultivars. Most of these cultivars were released 14 to 20 years ago and were in the 1989 and 1993 Bentgrass NTEP Trials. These cultivars have a slightly greater density than the Standard–Low-Density types and can be used for greens, tees and fairways. The improvements are not as great as in the next generation, but many of these cultivars have been used extensively and have a good track record. Some were developed for particular uses and may still be useful in many locations. This category includes the cultivars 18th Green, Backspin, Cato, Century, Cobra, Crenshaw, Grand Prix, Imperial, Mariner, Princeville, ProCup, Providence,



Putter, Regent, Seaside II, Southshore, SR 1020, Trueline and Viper. Some cultivars in this group are no longer available.

Improved–Moderate High-Density

The next density category includes the Improved–Moderate High-Density types. These cultivars have the ideal density for fairway usage but can also be used on greens with less thatch development. This group includes both second- and third-generation improved cultivars that were included in the 1998 and 2003 Bentgrass NTEP trials. Many cultivars in this group were developed with high resistance to dollar spot or brown patch because these cultivars are often used on fairways. Cultivars in this group with high performance features have been used around the world for greens, tees and fairways. This group includes the cultivars 13M, Alpha, Benchmark DSR, Bengal, Brighton, Independence, L-93, LS-44, Ninety-six two, PennEagle II, PennLinks II, Sandhill, SR 1119 and SR 1150.

Versatile–High-Density

The next group is the Versatile–High-Density type, which can be used for greens, tees and fairways. This type tends to have slightly higher density but can still be used for fairways without significantly greater thatch management requirements. They have excellent performance in greens and are competitive against *Poa annua*. They are truly versatile because they can be blended with the Ultra type in greens and the Improved–Moderate High-Density type in fairways. These cultivars were

included in the 2003 Bentgrass NTEP Trial. This group includes 007, Kingpin, MacKenzie and Memorial. The cultivars in this group have improved resistance to dollar spot and brown patch and high stress tolerance.

Ultra

The Ultra type cultivars have the highest density. They are excellent performers on greens and tees, but use in fairways will probably require a higher budget and more time for thatch management. They tolerate low cutting heights and require frequent topdressing for thatch/mat management.

These cultivars tend to be the most competitive against *Poa annua*, with higher tiller counts per square inch.

The first of these cultivars were in the 1993 Bentgrass NTEP Trials, with additional ones appearing in the 1998 and 2003 Bentgrass NTEP. Newer cultivars in this group have been selected for higher stress tolerance, improved resistance to dollar spot and other characteristics. This group includes Authority, CY-2, Declaration, Penn A-1, Penn A-2, Penn A-4, Penn G-1, Penn G-2, Penn G-6, Shark, T-1 and Tyee.

Other characteristics

Other characteristics are important in choosing between bentgrass cultivars or selecting cultivars for blending. Further research may modify where each cultivar belongs, and performance can be influenced significantly by management. Density is the just the first category in this classification system, which helps define the relationship of the newest creeping bentgrasses to others on the market. Other important characteristics to be considered include texture, color, disease resistance, uniformity and stress tolerance.