

Seeded vs. Vegetative Buffalograss for Southern California

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With decreasing fresh water resources and increasing water use restrictions on landscapes, the turf industry and general public are increasingly seeking after alternative and low maintenance turfgrasses. Recently, there has been a lot of interest in using buffalograss [*Buchloe dactyloides* (Nutt.) Engelm.] on lawns and landscapes in Southern California. Buffalograss is a warm-season, stoloniferous turfgrass species native to North America. Of particular importance in areas where water availability is an issue, buffalograsses have a comparatively low water use rate. As importantly, buffalograsses exhibit a drought induced dormancy survival characteristic, with certain cultivars (e.g., „UC Verde’) demonstrating a very quick recovery once water is available. Buffalograsses also perform very well with little or no mowing.

Although buffalograss does have a place in the Southern California landscape, it is important to understand its weaknesses as well as its strengths. Like other warm-season turfgrasses with lower water use requirements, buffalograss will go dormant or turn straw brown color during the colder periods of winter except perhaps in coastal environments where temperatures are moderated by the ocean. In general, buffalograss also exhibits weak sod strength, and poor tolerance to shaded conditions and traffic.

UC Verde is a vegetatively propagated buffalograss cultivar that resulted from a turfgrass improvement program at the University of California Davis and Riverside campuses. It was found that the new diploid female buffalograss cultivar exhibited superior drought tolerance, stolons of fine texture, and a competitive growth habit. Also, relative to other buffalograsses, it had shorter winter dormancy with superior color retention, and high turf density with a rapid stolon spreading rate and short plant height that provided a low maintenance turf of good quality. Although UC Verde is well adapted to our region, it is vegetatively propagated by plugs only. This can be both expensive and time-consuming to establish a stand of turf.

In this experiment, we sought to compare establishment rates, traffic tolerance, and other turf quality characteristics of UC Verde and three experimental seed-propagated lines of buffalograss from the University of Nebraska. These experimental lines were developed from parental materials that exhibited improved turfgrass performance and greater seed yield. All three lines are hexaploid. They have exhibited excellent heat tolerance and drought resistance characteristics. The lines will be named and limited seed of these releases will be available in 2011.

Location: UCR Turf Facility

Soil: Hanford fine sandy loam

Experimental Design: Randomized complete block with 3 replications

Plot Size: 12' by 12'

Plugs and Seed Established: 7/9/2010

Seeding Rate: 2 lbs/1000 ft²

Spacing: 18-inch spacing of UC Verde plugs

Fertility: 0.5 lb N/1000 ft² approximately monthly

Mowing Height: 2.25 inches

Irrigation Regimes: Established for 8 weeks at 160% ET_o replacement, then irrigation was lowered to (60% ET_o*K_c)/DU

Data Collection: turf quality, percent brown canopy tissue cover, color quality, percent cover, winter color retention, spring green up, response to simulated traffic (following establishment)

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Treatments:

1. NE BFG 07-4E seed
2. „UC VERDE’ plugs
3. NE BFG 07-03 seed
4. NE BFG 07-01 seed

Plot Map:

North

4E	UC Verde	03	01
03	01	UC Verde	4E
UC Verde	4E	01	03