

Effect of Mowing Height and Traffic On Alternative Species for Golf Course Fairways

By Eric Watkins, Andrew Hollman, and Brian Horgan
University of Minnesota

As restrictions on water use, fertilization, and pesticide applications continue to increase, golf course superintendents will need to use species that require reduced inputs. The objective of this study was to evaluate alternative grass species under low-input fairway conditions. In September 2005, 17 species were established on native soil [Waukegan silt loam (fine-silty over sandy, mixed, mesic Typic Hapludoll)] in St. Paul, Minnesota. The experimental design was a multiple split plot with four replications.

Each species was evaluated at three levels of traffic (0, 3 and 6 passes per week using a drum-type wear machine) and two mowing heights (0.75 and 1.0 in.). Plots were fertilized during establishment and subsequently only one time each fall (1.0 lb N/1000ft²). The trial only received irrigation when complete turf death was imminent (this occurred two times during the summer of 2007). No herbicides or fungicides were used throughout the course of the trial.

Velvet bentgrass, colonial bentgrass and supina bluegrass performed well under traffic at both mowing heights during year one. In year two, the fine fescue species (Hard fescue, Chewings fescue and Sheep fescue) were the top-performing species regardless of treatment. Results from this research will be used to develop further studies that continue to look at turfgrass options for

Species Evaluated

Common Name	Scientific Name	Cultivar
Creeping bentgrass	Agrostis palustris	L-93
Colonial bentgrass	Agrostis tenuis	Tiger II
Velvet bentgrass	Agrostis canina	Vesper
Redtop	Agrostis alba	Streaker
Kentucky bluegrass	Poa pratensis	Award
Creeping bluegrass	Poa annua v. reptans	4337
Rough bluegrass	Poa trivialis	Sabre II
Supina bluegrass	Poa supina	Supranova
Canada bluegrass	Poa compressa	Barpressa
Tall fescue	Festuca arundinacea	Corgi
Hard fescue	Festuca trachyphylla	SR 3100
Chewings fescue	Festuca rubra v. commutata	Jamestown II
Sheep fescue	Festuca ovina	Quatro
Perennial ryegrass	Lolium perenne	Gator 3
Tufted hairgrass	Deschampsia cespitosa	SR 6000
Alkaligrass	Puccinellia distans	Fults
Timothy	Phleum nodosum	Barvanti



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