

ESTABLISHMENT AND MAINTENANCE OF FINE FESCUE PUTTING GREENS

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Introduction

A focus of our research program at the University of Minnesota is to help turf managers be more efficient and effective in their day-to-day work lives. We accomplish this through breeding and genetics, product testing, environmental stewardship and looking into our crystal ball. For some strange reason, our crystal ball is coming up with the same message, LESS is BETTER!

You can interpret this in many different ways. LESS nutrients, LESS water, LESS pesticide, LESS labor, LESS resources, ect...Or you can interpret this as we can do BETTER by applying newer chemistries, having more control over our fertilizers and water, overseeding with new plant material, taking advantage of new equipment and BETTER management through cultural practices.

Shake up your 8-ball and tell me what you see in our future.

A Sports Turf Research Institute Agronomist, Henry Bechelet, from Bingley, England said, "Good greenkeeping is all about letting go of the looks without sacrificing the playing quality."

Are you ready to let go of the looks to play the LESS is BETTER game. We are giving it a try for you at the TROE Center.

Although not a novel research project from an international perspective, we are looking at finer grasses as putting green surfaces. Ongoing is research using velvet bentgrass on putting greens which we know uses less water than its creeping counterpart. However, this research is focusing on the use of fine fescues, primarily Hard Fescue (SR3150), Chewings Fescue (Longfellow II), Sheep Fescue (Azay) and comparing them to Creeping Bentgrass (Declaration), Colonial Bentgrass (Revere) and Velvet Bentgrass (SR7200). Good traditional putting green management naturally favors these finer textured grasses because occasional stress is used rather than masking weaker grasses with additional inputs and surface preparations. Bechelet states it best, "genuine fine turf comes when the greenkeeper invites a certain level of stress and is canny enough to reduce the level of disturbance; good greenkeeping is the art of working with the environment".

Materials and Methods

Plots are located at the University of Minnesota Turfgrass Research, Outreach and Education (TROE) center on a native push-up green. Six different turfgrass species are mowed at three different heights (0.125 in, 0.250 in and 0.375 in). Plots size is 5 by 17 feet and treatments are replicated in triplicate. Data will be collected on turfgrass quality, density, and annual bluegrass invasion. Stimp meter readings will be used to compare putting speed by species and mowing height. All grasses will be managed as low input with reduced pesticide use, irrigation at 60-80% PET and 1-2 lbs N per 1000 ft² per year. Plots were seeded on August 19, 2008. Fine fescues were seeded at 10 lbs per 1000 ft² and the bentgrasses were seeded at 1 lb per 1000 ft². A starter fertilizer (1-2-1 ratio) was applied at 1.0 lb P₂O₅ per 1000 ft². All plots were covered with Futerra blankets for establishment.

Species

Hard Fescue (HDF) – SR3150

Chewings Fescue (CHF) – Longfellow II

Sheep Fescue (SHF) – Azay

Creeping Bentgrass (CRB) – Declaration

Colonial Bentgrass (COL) – Revere

Velvet Bentgrass (VEL) – SR7200

Mowing Heights – 0.125, 0.250, 0.375 inches

Table 1. Plot layout of fine fescue putting green

Mowing Height (inches)			
0.125	COL	CHF	SHF
	HDF	VEL	CRB
0.25	SHF	COL	CHF
	VEL	HDF	CRB
0.375	HDF	VEL	COL
	SHF	CRB	CHF
0.375	COL	SHF	HDF
	CRB	CHF	VEL
0.125	CRB	COL	CHF
	VEL	SHF	HDF
0.25	VEL	CHF	SHF
	HDF	COL	CRB
0.375	CHF	CRB	HDF
	SHF	COL	VEL
0.25	CRB	VEL	COL
	CHF	SHF	HDF
0.125	HDF	SHF	CHF
	COL	CRB	VEL

South