

Evaluation of Fine Leaf Fescue Cultivars

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Introduction

Fine leaf fescues are grasses that provide a good quality turf under conditions of regular mowing. As the name implies, these fescues have thin, fine leaves that have a 'bunch type' growth habit or produce short weak rhizomes (underground runners). Bunch type grasses grow in a clump and reproduce by seed or establish new plants when individual tillers break away from the parent plant. The Sheep, Chewings and Hard fescues are considered to be bunch type grasses. The Creeping Red fescues have rhizomes that spread underground from the parent plant and can establish new plants from nodes on the rhizomes. Rhizomes help to produce a turf that will hold together and produce good sod strength. Fine leaf fescues are considered to have moderate drought tolerance and a lower fertility requirement than Kentucky bluegrass. Although they are not considered to be very tolerant of traffic they do produce a high quality turf with fewer inputs.

Considerable plant breeding has taken place within the fescue species and some of the creeping red varieties are thought to have strong creeping tendencies. The objective of this study is to assess the turf quality of some of these new fescues. Those cultivars that show good quality will be evaluated for sod strength.

Materials and Methods

Thirty cultivars of fine leaf fescue (*Festuca sp.*) were selected from seed lots provided by several North America seed producers. In addition, two commercially available fescue blends, Irish Links Blend and Scottish Links Blend were included in the study (Table 1).

Table 1: List of fine leaf fescues in the trial

<u>Chewings:</u>	<u>Creeping Red:</u>	<u>Hard Fescue:</u>
ACF266	Aruba M139-9-F10	Ambassador
Ambrose	M80-8-73	Aurora Gold
Culumbra II	Pathfinder	Aurora II
M139-9-F13	RaZor	Big Horn GT
PST-4CH6	Sea Breeze GT	B09-2
SR 5130	Shademaster III (48Y7)	B09-3
Tiffany	Wendy Jean	M139-9-F4
		Oxford
		Predator
<u>Red Fescue:</u>	<u>Strong Creeping:</u>	
B09-1	Epic (M146-6-612)	
Fortitude	Foxy II	
PST-8000	Miser (M22-7-502)	
	SR 5250	
<u>Fescue Blends:</u>		
Irish Links Blend		
- Hard Fescue - Sheep Fescue - Side Oats - Light Blue Star Fescue		
- Gold Star Idaho Fescue		
Scottish Links Blend		
-Hard Fescue - Creeping Red Fescue - Sheep Fescue - Chewings Fescue		

The trial was established on September 2, 2010 at Eagle Lake Turf Farms in Strathmore, Alberta. Plots measuring 1.5 by 2 meters were arranged in a randomized complete block design (RCBD) and replicated four times. The plots were seeded using shaker bottles at a rate of 2.0kg/100m². Following seeding each plot was lightly raked to ensure good seed to soil contact. Irrigation was provided on a regular basis in order to assist in the establishment of the grasses.

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A visual assessment of area cover in each plot was conducted six weeks (42 Days) after seeding. These turf establishment ratings were based on the National Turfgrass Evaluation Program (NTEP) protocols where numeric values are assigned to individual plots where 9 is best and 1 is poorest, and 6 is considered acceptable. The area cover values ranged from 1 for a complete absence of turf to 9 for complete cover with the desired grass. The presence of weeds or voids in the turf reduced the plots overall score.

Results and Discussion

On October 13, six weeks after seeding, the various fescues were assessed for their rate of establishment. Generally, all plots had good establishment and there were no large bare areas in any of the plots. While there were some differences in the area coverage of the cultivars, these differences were not significantly different from each other (Table 1).

These plots will be rated for establishment and turf quality over the next several years.

Table 2 - Rate of establishment as determined by area cover, October 13, 2010.

	42 Days After Seeding
	1 – 9 scale
Ambassador Hard Fescue	3.7a
Aruba M139-9-F10 Creeping Red Fescue	3.7a
Aurora Gold Hard Fescue	3.7a
B09-1 Red Fescue	3.7a
M139-9-F13 Chewings Fescue	3.7a
Pathfinder Creeping Red Fescue	3.7a
Ambrose Chewings Fescue	3.5a
Big Horn GT Hard Fescue	3.5a
Foxy II Strong Creeping	3.5a
M139-9-F4 Hard Fescue	3.5a
PST-8000 Red Fescue	3.5a
RaZor Creeping Red Fescue	3.5a
Sea Breeze GT Creeping Red Fescue	3.5a
Tiffany Chewings Fescue	3.5a
Aurora II Hard Fescue	3.2a
B09-2 Hard Fescue	3.2a
B09-3 Hard Fescue	3.2a
Miser Strong Creeping (M22-7-502)	3.2a
Oxford Hard Fescue	3.2a
PST-4CH6 Chewings Fescue	3.2a
Scottish Links Blend	3.2a

SR 5130 Chewings Fescue	3.2a
SR 5250 Strong Creeping Red	3.2a
Wendy Jean Creeping Red Fescue	3.2a
ACF266 Chewings Fescue	3.0a
Culumbra II Chewings	3.0a
Epic Strong Creeping (M146-6-612)	3.0a
Fortitude Red Fescue	3.0a
Irish Links Blend	3.0a
M80-8-73 Creeping Red Fescue	3.0a
Predator Hard Fescue	3.0a
Shademaster III (48Y7) Creeping Red Fescue	3.0a

LSD_{0.05} = n/s

* Numeric values followed by the same letter are not considered significantly different from each other.