

Fine Fescue Full Sun Cultivar Trial

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Introduction

This is the initial establishment data of fine fescue (*Festuca* spp.) growing under full natural sun conditions. This is a National Turfgrass Evaluation Program (NTEP) standard trial and is being conducted at Iowa State University, Horticulture Research Station, Ames, Iowa, and 14 other university locations. It contains 43 seeded cultivars, 30 of which are new experimental cultivars (Table 1). Data collection will continue through 2025.

Materials and Methods

This trial was established at the Iowa State University Horticulture Research Station. The ground was cleared of all vegetative cover with a nonselective herbicide (glyphosate) before planting. The site was tilled to a 6 in.-depth and the seedbed was prepped by cultipacking and leveling.

The trial was planted September 15, 2020. Plots are 5 ft by 5 ft in size, and all cultivars are replicated three times. Automatic overhead irrigation was applied to provide proper turfgrass establishment conditions. Starter fertilizer was applied at seeding at one lb P/1,000 ft², followed by 0.5 lb N/1,000 ft² October 27. The trial was cut November 2 at 3 in. with a rotary mower.

Digital images were taken monthly to determine percent green cover. Digital images were captured with a light box to ensure consistent lighting. Images were scanned using Turf Analyzer. Color (1 = light green color, 6 = acceptable, and 9 = dark green color), density (1 = no turf, 6 = acceptable, and 9 = full turf stand), and turfgrass quality (1 = poor, 6 = acceptable quality, and 9 = ideal) was rated visually. Color and quality results are not presented here.

Results and Discussion

Significant differences existed between cultivars for percent cover and density during fall establishment. One month after planting, all cultivars had at least 28 percent green cover (Table 2). At the November rating date, all cultivars were above 35 percent with several above 60 percent green cover.

Turfgrass density was rated twice in the fall with all cultivars having above a 5.0 density rating in October. The November rating followed the first mowing of the stand. This mowing resulted in the appearance of a loss of turfgrass density. All cultivars had lower turfgrass density ratings on the November rating compared with the October rating.

Turfgrass color, while not presented, did improve from the October rating to the November rating as the turfgrass became more established.

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Table 1. Treatment list for fine fescue full sun cultivar trial, Ames, Iowa.

Treatment number	Cultivars	Species
1	Gladiator	Hard fescue
2	Seabreeze GT	Slender creeping red
3	SPHD-20	Hard fescue
4	DLFPS-FL-3104	Hard fescue
5	Quatro	Sheep fescue
6	Resolute	Sheep fescue
7	Brittany 2	Chewings fescue
8	Foxfire 2	Strong creeping red fescue
9	BAR FRC 123	Chewings fescue
10	BAR FO 131	Sheep fescue
11	BAR FRL 122	Slender creeping red
12	BAR FT 135	Hard fescue
13	BAR FT 132	Hard fescue
14	BAR FRC 130	Chewings fescue
15	Kevin	Strong creeping red fescue
16	RAD-FC59	Chewings fescue
17	Jamestown VII	Chewings fescue
18	NAI-CHU1	Chewings fescue
19	NAI-HAQ1+2	Hard fescue
20	NAI-HTB2	Hard fescue
21	RAD-FR64	Strong creeping red fescue
22	5Z2	Strong creeping red fescue
23	STB1	Strong creeping red fescue
24	5Z5	Strong creeping red fescue
25	BYE	Strong creeping red fescue
26	DLF-FRR-3128	Strong creeping red fescue
27	Boreal	Strong creeping red fescue
28	PPG-FRC-130	Chewings fescue
29	Compass II	Chewings fescue
30	PPG-FRR-134	Strong creeping red fescue
31	Cardinal II	Strong creeping red fescue
32	DLFPS-FRC-3105	Chewings fescue
33	Blue Hornet	Sheep fescue
34	PPG-FRC 127	Chewings fescue
35	PPG-FRR 132	Strong creeping red fescue
36	PPG-FL 128	Hard fescue
37	PPG-FRR 127	Strong creeping red fescue
38	DA5-RHF	Hard fescue
39	PST-4SWTM	Chewings fescue
40	PST-4SHAD	Chewings fescue
41	PVF-PDB-2020	Hard fescue
42	PVF-HYS+	Strong creeping red fescue
43	PVF-MVP-2020	Chewings fescue

Table 2. Data for fine fescue full sun cultivar trial, Ames, Iowa.

Cultivars	Percent cover ^a		Density ^b	
	October	November	October	November
Gladiator	40.0	43.0	6.33	6.67
Seabreeze GT	71.3	75.7	6.00	4.33
SPHD-20	45.7	46.0	6.33	3.67
DLFPS-FL-3104	44.7	45.3	5.67	4.33
Quatro	36.0	40.3	7.33	3.33
Resolute	40.0	45.0	7.33	3.67
Brittany 2	50.7	48.3	6.67	4.33
Foxfire 2	28.3	35.0	7.00	3.33
BAR FRC 123	54.0	54.7	7.33	4.67
BAR FO 131	32.0	38.3	7.33	3.67
BAR FRL 122	56.0	50.7	5.33	3.00
BAR FT 135	34.7	37.0	6.00	4.67
BAR FT 132	37.0	35.7	6.33	4.00
BAR FRC 130	50.0	53.7	6.33	2.00
Kevin	61.7	54.7	6.00	4.67
RAD-FC59	44.3	42.3	6.33	3.33
Jamestown VII	52.0	53.7	5.67	3.67
NAI-CHU1	52.3	59.0	6.00	2.67
NAI-HAQ1+2	41.3	42.0	7.00	3.33
NAI-HTB2	37.7	39.7	6.00	4.67
RAD-FR64	60.0	59.5	5.50	2.50
5Z2	57.7	53.0	5.33	3.00
STB1	74.0	64.0	6.00	2.67
5Z5	73.0	69.5	5.50	3.50
BYE	55.0	55.3	5.00	3.33
DLF-FRR-3128	42.7	38.3	5.33	1.67
Boreal	47.0	40.3	6.00	3.00
PPG-FRC-130	48.0	44.7	6.00	3.33
Compass II	56.0	54.0	5.33	4.00
PPG-FRR-134	71.0	70.7	5.67	3.33
Cardinal II	52.7	53.7	6.33	4.33
DLFPS-FRC-3105	60.0	74.7	5.67	2.00
Blue Hornet	76.7	64.7	6.00	4.67
PPG-FRC 127	54.7	37.0	6.00	5.00
PPG-FRR 132	45.3	46.0	7.33	3.67
PPG-FL 128	50.0	48.0	6.00	3.00
PPG-FRR 127	60.7	58.0	6.00	3.67
DA5-RHF	40.0	41.3	6.00	3.67
PST-4SWTM	47.3	38.7	6.33	4.67
PST-4SHAD	57.0	60.7	6.67	4.33
PVF-PDB-2020	60.7	52.3	6.33	5.00
PVF-HYS+	52.7	48.7	6.00	3.33
PVF-MVP-2020	50.7	44.0	6.33	2.00
LSD 0.05	29.4	32.1	1.47	2.39

^aPercent cover: Digital images taken monthly to determine percent green cover.

^bDensity: 1 = no turf, 6 = acceptable, and 9 = full turf stand.