

## Fine Fescue Shaded Cultivar Trial

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### Introduction

This is the initial establishment data of fine fescue (*Festuca* spp.) growing under partial natural shade conditions. This is a National Turfgrass Evaluation Program (NTEP) ancillary trial, and is being conducted solely at ISU Horticulture Research Station, Ames, Iowa. 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 ISU 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 4 ft by 6 ft in size, and all cultivars are replicated three times with 3 ft borders between replications. Automatic overhead irrigation was applied to provide proper turfgrass establishment conditions. Starter fertilizer was applied at seeding at 1.0 lb P/1,000 ft<sup>2</sup>, followed by 0.5 lb N/1,000 ft<sup>2</sup> October 27. The trial was cut November 2 at 3 in. with a rotary mower. Significant shade is provided by the shade tree cultivar trial, under which the turfgrass trial is planted.

Digital images were taken monthly to determine percent green cover. Digital images were captured with a light box to ensure a consistent lighting. Images were scanned using Turf Analyzer. Color (1 = light green color and 9 = dark green color), density (1 = no turf and 9 = full turf stand), and turfgrass quality (1 = poor, 6 = acceptable quality, and 9 = ideal) was rated visually. Color and quality results will not be 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 45 percent green cover (Table 2). At the November rating date, all cultivars were above 60 percent with several above 80 percent green cover.

Turfgrass density was above a 6 density rating in October for all cultivars. The November rating followed the first mowing of the stand, resulting in the appearance of a loss of turfgrass density. All cultivars had lower turfgrass density ratings in November as compared with October ratings.

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

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**Table 1. Treatment list for fine fescue shaded cultivar evaluation trial, Ames, Iowa.**

<b>Treatment number</b>	<b>Cultivar name</b>	<b>Species</b>
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 shaded cultivar trial, Ames, Iowa.**

Cultivars	Percent cover <sup>a</sup>		Density <sup>b</sup>	
	October	November	October	November
Gladiator	63.0	84.7	7.33	3.67
Seabreeze GT	68.0	85.7	6.67	4.00
SPHD-20	65.3	80.7	6.33	5.00
DLFPS-FL-3104	60.7	84.0	7.33	3.67
Quatro	56.3	69.0	7.67	4.67
Resolute	49.0	70.7	7.00	5.00
Brittany 2	63.0	81.0	6.67	4.00
Foxfire 2	51.0	61.7	7.33	3.33
BAR FRC 123	64.0	80.3	6.67	3.33
BAR FO 131	53.3	65.0	7.00	4.67
BAR FRL 122	60.0	81.7	7.00	3.67
BAR FT 135	63.0	78.0	7.00	4.00
BAR FT 132	54.7	76.3	7.67	4.33
BAR FRC 130	60.0	81.3	6.33	4.00
Kevin	63.7	74.3	7.00	3.33
RAD-FC59	52.3	74.0	6.67	3.67
Jamestown VII	58.3	74.0	6.67	3.67
NAI-CHU1	64.7	71.0	6.00	4.00
NAI-HAQ1+2	63.7	79.3	7.67	5.33
NAI-HTB2	52.7	66.0	6.67	3.00
RAD-FR64	64.0	72.7	7.00	3.00
5Z2	53.3	69.0	7.00	3.33
STB1	58.7	78.7	6.33	4.00
5Z5	64.3	87.7	6.67	3.00
BYE	51.0	87.0	6.67	3.33
DLF-FRR-3128	60.0	74.0	7.33	3.00
Boreal	60.3	80.3	6.67	4.00
PPG-FRC-130	56.7	68.0	7.00	4.00
Compass II	62.0	79.7	6.33	4.00
PPG-FRR-134	67.0	69.7	6.67	4.00
Cardinal II	61.0	84.7	7.33	3.00
DLFPS-FRC-3105	57.3	78.0	7.00	5.33
Blue Hornet	47.7	72.0	7.00	4.33
PPG-FRC 127	64.3	89.7	6.00	2.67
PPG-FRR 132	66.3	92.3	7.33	4.33
PPG-FL 128	62.3	87.3	6.67	4.33
PPG-FRR 127	55.3	74.3	7.00	4.33
DA5-RHF	55.7	60.7	6.33	2.33
PST-4SWTM	65.0	84.3	7.00	3.67
PST-4SHAD	48.3	79.0	6.67	3.67
PVF-PDB-2020	52.0	82.3	6.67	4.00
PVF-HYS+	48.7	71.0	6.33	4.33
PVF-MVP-2020	61.3	83.0	6.67	4.00
<b>LSD 0.05</b>	18.1	19.4	1.57	2.44

<sup>a</sup>Percent cover: Digital images taken monthly to determine percent green cover.

<sup>b</sup>Density: 1 = no turf and 9 = full turf stand.