



Fine Fescue Full Sun Cultivar Evaluation Trial

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This is the 2021 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 and 14 other university locations. It contains 43 seeded cultivars, 30 of which are new experimental cultivars. Data collection will continue through 2025.

Materials and Methods

This trial was established at the 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, then the seedbed was prepped by cultipacking and leveling.

The trial was planted on 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 1.0 lb. P per 1,000 ft.², followed by 0.5 lb. N per 1,000 ft.² on October 27. The trial was cut at 3 in. with a rotary mower once a week.

Digital images were taken monthly to determine percent green cover. Digital images were captured with the use of a light box to ensure a consistent lighting. Images were scanned using Turf Analyzer to obtain percent cover. 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) were rated visually. Color, density, and quality results are not presented here.

Results and Discussion

Significant differences existed between cultivars for percent cover, color (data not shown) and quality (data not shown) during the growing season.

The values listed under each month in Table 1 are the averages of the percent cover. The last row states the Fisher's LSD (least significant difference), which is a statistical measurement of how widely the datum in each column must vary before these are considered to be different from one another.

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Table 1. Percent cover data for fine fescue full sun cultivar evaluation trial, 2021.

Cultivar	Percent cover ^a							
	April	May	June	July	Aug	Sept	Oct	Nov
Gladiator	98.2	100.0	82.6	90.0	89.8	97.8	99.9	99.3
Seabreeze GT	96.5	99.9	81.1	89.2	93.5	97.2	99.8	99.0
SPHD-20	87.9	99.6	82.2	81.9	85.6	97.4	99.9	99.2
DLFPS-FL-3104	96.9	99.7	91.1	90.1	93.9	97.6	99.9	99.4
Quatro	99.2	99.8	66.2	65.5	95.7	95.4	99.8	99.1
Resolute	98.4	99.9	54.1	76.1	83.6	97.0	99.9	99.1
Brittany 2	98.4	99.9	72.1	86.1	95.6	97.7	100.0	99.3
Foxfire 2	94.2	99.9	79.0	85.5	94.1	95.9	99.8	98.5
BAR FRC 123	99.5	100.0	83.2	68.3	96.5	97.0	99.9	99.5
BAR FO 131	99.3	99.9	66.4	72.4	92.5	95.4	99.9	99.5
BAR FRL 122	92.4	99.6	94.9	96.3	94.3	98.1	99.9	99.5
BAR FT 135	98.8	99.9	71.6	83.6	96.8	97.0	99.9	99.5
BAR FT 132	94.1	99.9	77.0	76.9	88.8	95.5	99.9	99.0
BAR FRC 130	98.8	99.9	60.8	70.3	85.9	96.8	99.9	98.9
Kevin	95.7	99.8	66.6	72.6	97.1	93.8	99.8	98.9
RAD-FC59	99.4	99.9	72.6	77.6	96.1	98.0	99.9	99.2
Jamestown VII	97.2	99.9	76.7	76.6	85.8	94.8	99.7	98.3
NAI-CHU1	97.0	99.9	76.9	93.0	95.0	98.8	99.9	98.9
NAI-HAQ1+2	89.0	99.8	86.4	93.1	97.0	97.7	99.9	99.1
NAI-HTB2	99.5	99.9	78.8	80.4	94.3	98.4	100.0	99.3
RAD-FR64	97.6	99.7	90.2	93.2	93.8	97.5	99.9	99.6
5Z2	92.1	99.9	94.9	88.6	96.9	98.4	99.9	98.7
STB1	98.9	99.9	80.2	82.0	96.4	97.5	99.9	99.3
5Z5	97.7	99.9	68.6	86.6	96.4	98.1	99.7	99.2
BYE	95.2	99.8	88.5	85.0	96.3	97.9	99.9	99.4
DLF-FRR-3128	95.1	99.9	66.6	76.9	94.2	96.0	99.4	98.8
Boreal	96.0	99.9	85.7	72.6	87.3	86.5	99.2	98.6
PPG-FRC-130	98.8	99.9	94.3	94.6	97.2	97.4	99.9	99.4
Compass II	98.8	99.9	77.1	79.5	95.6	97.6	99.9	99.6
PPG-FRR-134	93.9	99.8	79.6	84.7	95.4	97.5	99.9	98.6
Cardinal II	92.1	99.8	82.8	85.8	90.9	93.0	99.4	98.2
DLFPS-FRC-3105	98.3	99.8	85.3	69.6	93.3	96.9	99.9	99.6
Blue Hornet	99.3	99.9	90.8	88.6	94.4	98.1	99.9	99.3
PPG-FRC 127	98.7	100.0	90.3	87.6	97.3	99.5	100.0	99.7
PPG-FRR 132	96.7	99.8	77.4	69.5	94.5	93.7	99.7	99.1
PPG-FL 128	98.9	99.9	77.1	77.6	86.4	94.9	99.9	98.3
PPG-FRR 127	98.5	99.8	66.3	69.2	94.4	96.0	99.9	98.7
DA5-RHF	98.2	99.9	76.7	85.7	92.0	98.2	99.9	99.0
PST-4SWTM	95.3	99.9	90.0	88.9	97.3	98.3	99.8	99.6
PST-4SHAD	95.9	99.7	75.4	82.4	97.5	94.7	99.5	99.4
PVF-PDB-2020	99.0	99.8	90.8	86.3	91.4	98.2	99.9	99.6
PVF-HYS+	94.6	99.9	77.6	90.7	97.0	97.6	99.9	99.2
PVF-MVP-2020	96.1	100.0	85.6	94.0	97.8	98.4	99.9	99.5
LSD _(0.05) ^b	8.6	0.3	31.9	25.0	10.3	5.3	0.4	1.1

^aPercent cover was determined by digital image analysis (0-100%).

^bMeans were separated using Fisher's LSD.