

# Tall Fescue Shade Cultivar Trial

## RFR-A2024

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### Introduction

This is the second full year data from tall fescue (*Schedonorus arundinaceus* Schreb.) growing in natural shade conditions. This is a National Turfgrass Evaluation Program (NTEP) ancillary trial, and is being conducted only at Iowa State University, Horticulture Research Station, Ames, Iowa. It contains 132 seeded cultivars, including a number of new experimental cultivars. Iowa State University also is home to both a traffic tolerance and full-sun setting of this trial.

### Materials and Methods

The trial was planted September 18, 2018. Plots are 4 ft by 5 ft in size, and all cultivars are replicated three times. Supplemental irrigation was provided during establishment and a starter fertilizer (10-10-10) was applied at seeding providing 1 lb N/1,000 ft<sup>2</sup>. Fertility was applied at 2 lb N/1,000 ft<sup>2</sup> over the course of the growing season with a 28-0-3 fertilizer. The mowing height is three inches. Significant shade is provided by the shade tree cultivar trial, which the turfgrass trial is planted under.

Digital images were taken monthly starting in April through November. Digital images were captured with the use of a light box to ensure a consistent lighting and digital camera. Images were scanned using Sigma Scan for percent green cover (1-100% cover), color (1 = light

green color and 9 = dark green color), and turfgrass quality (1 = poor and 6 = acceptable quality). Visual ratings also were taken during this time period, and not presented here.

### Results and Discussion

Significant differences existed between cultivars for percent cover (data not shown), color (data not shown), and quality for each month's rating dates.

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

Some cultivars received damage from brown patch diseases in June and July this year, those ratings will be posted at [www.NTEP.org](http://www.NTEP.org). Limited light conditions changed some of the performance of many of the cultivars, dropping the percent green cover over the year.

### Acknowledgements

Appreciation is extended to the NTEP organization for funding to conduct this project, as well as to Jeff Iles, professor and chair, Department of Horticulture, for use of the ground under his shade tree trial. Special appreciation also to Simon Mitbo, Ethan DenBeste, Nate Underwood, and Colin Laswell for their help on plot maintenance, traffic simulation, and data collection.

**Table 1. Percent green cover ratings for the tall fescue shade cultivar trial, Ames, Iowa.**

Cultivar	Percent green cover <sup>a</sup>							
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
Naturally Green	6.3	5.3	6.7	5.7	6.3	6.3	5.7	3.7
Paramount	5.7	5.7	6.0	5.0	6.0	5.7	5.7	4.0
DLFPS-321/3693	5.7	6.0	6.0	5.0	6.0	6.7	5.7	4.3
DLFPS-321/3694	5.3	5.0	5.3	5.0	5.7	5.7	5.7	4.0
DLFPS-321/3695	5.7	6.3	6.0	5.3	6.3	6.7	6.0	4.3
TMT1	6.0	5.7	6.0	5.7	6.3	6.3	5.7	4.3
ATF2116	5.7	6.0	6.7	6.0	6.3	6.3	6.3	4.3
NT-3	6.0	7.0	6.0	5.3	6.0	6.3	6.0	4.0
RS1	6.0	5.7	5.7	5.0	6.0	6.0	6.0	4.7
5LSS	5.7	6.0	6.0	5.3	6.0	6.0	5.7	5.0
BGR-TF3	5.7	5.7	6.0	5.0	6.0	6.0	6.0	4.7
ATF 1768	5.3	6.0	5.7	4.7	5.7	6.0	6.0	3.7
DLFPS-TF/3550	6.0	6.3	5.7	4.3	5.3	5.3	5.7	3.3
DLFPS-TF/3552	5.3	5.7	6.0	5.7	6.3	6.3	6.3	4.7
DLFPS-TF/3553	6.0	6.0	6.0	5.0	6.0	5.5	5.5	4.5
DLFPS-321/3679	5.7	5.7	5.7	5.0	6.0	6.7	6.0	4.3
LBF	6.3	6.3	6.0	5.0	6.0	6.0	6.0	4.0
TD2	6.0	6.0	5.7	5.3	6.0	6.3	6.0	4.3
DLFPS-321/3696	6.7	7.3	5.7	5.0	6.3	6.3	6.7	4.7
DLFPS-321/3699	6.0	6.7	6.0	5.0	6.3	6.7	7.3	4.7
Grande 3	6.0	7.3	7.0	6.0	7.0	7.7	7.7	5.0
Fayette	6.7	6.7	6.7	6.0	7.0	7.3	7.7	5.7
JT-517	5.3	7.0	6.3	6.0	6.7	7.0	7.3	5.0
JS-DTT	6.0	6.3	6.7	5.7	7.0	7.0	7.0	5.0
RDC	6.0	6.7	6.7	6.3	7.0	7.0	6.7	5.0
BAR 9FE MAS	5.7	5.3	7.0	6.0	7.0	6.3	5.7	3.7
BAR FA 8228	5.3	6.0	6.0	5.3	5.7	5.0	5.7	3.7
COL-TF-148	5.7	7.3	6.3	5.7	6.0	6.7	6.7	5.0
LTP-TF-122	6.3	6.7	6.3	5.3	6.7	7.0	6.7	5.0
LTP-TF-111	5.3	6.7	6.3	5.3	6.3	7.0	7.0	5.3
K18-ROE	5.0	6.0	5.3	5.0	5.7	6.0	6.7	4.3
K18-NSE	5.3	7.0	6.7	6.0	6.7	7.0	7.3	5.3
BY-TF-169	5.7	6.3	6.3	5.3	6.3	7.3	6.7	5.0
DLFPS-321/3701	6.7	6.3	6.7	5.7	6.7	7.3	7.7	5.0
DLFPS-321/3702	5.3	6.3	6.7	6.0	6.7	7.0	6.3	4.0
DLFPS-321/3703	6.3	6.7	6.3	6.0	7.0	7.0	7.0	5.0
PST-5TRN	6.3	7.3	7.0	5.7	7.0	7.3	7.0	5.3
PST-5GQ	6.3	7.0	7.0	6.3	7.0	7.0	7.7	5.3
PST-5MCMO	6.0	7.0	6.7	6.3	7.0	7.0	7.3	5.0
ProGold	6.0	6.7	6.7	6.3	6.7	6.7	7.7	5.7
PST-5E6	5.0	6.7	7.3	6.0	7.0	7.0	6.7	5.0
PST-5THM	5.7	7.0	6.0	5.3	6.7	6.7	6.7	4.3
PST-5BYOB	6.0	7.0	6.7	6.0	6.7	7.3	7.0	5.3
Lifeguard	6.3	7.0	7.0	6.3	7.0	6.3	7.0	5.0
PST-5MINK	6.3	7.0	6.3	6.0	6.3	6.7	7.3	5.3
Moondance	5.3	6.3	6.7	6.7	7.0	7.0	7.0	5.0
PST-5SQB	5.3	6.7	6.7	6.0	6.7	7.0	7.0	4.3
PST-5DZM	5.7	7.0	6.7	6.0	7.0	7.3	7.3	4.7
PST-5GLBS	5.3	7.0	6.7	5.7	6.7	7.0	7.7	4.7
PST-5DART	5.3	7.3	6.7	6.0	7.0	7.3	7.3	5.3
PST-5DC24	6.0	5.7	6.3	5.7	7.0	7.3	7.3	5.0
Tango	6.0	6.3	6.3	6.0	6.7	7.0	6.3	5.0
3N1	5.3	7.0	5.3	5.0	6.0	6.0	6.0	4.7

**Table 1 (continued). Percent green cover ratings for the tall fescue shade cultivar trial, 2020.**

Cultivar	Percent green cover <sup>a</sup>							
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
Bandit	6.0	7.0	6.5	6.0	6.7	6.7	7.3	5.0
Copious TF	5.3	7.0	6.7	6.0	7.0	7.3	7.0	5.7
Padre 2	6.7	6.7	6.3	6.7	7.0	7.0	7.3	5.7
Bravo 2	5.7	6.7	6.3	6.0	7.0	7.0	7.3	5.3
NAI-FQZ-17	5.7	6.7	6.3	5.7	6.3	6.0	6.0	4.7
DLFPS-321/3705	5.3	7.0	6.7	5.7	7.0	8.0	6.7	5.7
DLFPS-321/3706	5.7	5.0	6.0	5.3	6.0	5.7	5.7	4.7
DLFPS-321/3707	6.3	6.3	6.7	6.0	7.0	7.0	6.7	4.3
DLFPS-321/3708	6.0	5.0	6.7	5.7	6.3	6.7	6.0	4.3
BAR-TF-134	6.3	4.7	5.7	5.3	6.0	5.7	5.3	4.3
BAR-FA8230	5.3	6.0	6.7	6.0	6.0	6.0	6.3	4.7
AH1	5.7	5.3	5.7	5.0	5.7	5.3	5.0	4.0
PPG-TF-249	6.0	6.3	6.3	5.7	6.3	6.7	6.3	4.7
PPG-TF-262	5.3	4.7	5.7	4.7	5.0	5.3	4.7	3.0
PPG-TF-267	6.0	5.3	5.3	5.0	5.0	5.0	5.3	3.7
AH2	5.7	6.7	6.0	5.3	6.0	6.0	6.0	4.3
K18-RS6	5.7	5.3	5.3	4.3	5.7	6.3	5.0	4.0
K18-WB1	5.7	6.7	5.7	5.0	6.0	7.0	6.7	4.0
RH1	6.0	7.3	5.7	5.7	6.3	7.3	7.0	5.0
RH3	6.3	7.0	6.0	5.7	6.3	6.7	7.3	4.7
JT 233	5.7	7.0	6.3	5.7	6.3	7.7	6.3	5.0
JT 268	6.0	7.3	6.3	5.7	6.7	7.0	7.3	5.3
PPG-TF 244	6.3	7.3	6.3	5.7	6.7	6.7	7.0	4.7
PPG-TF 305	6.3	6.7	6.7	5.7	7.0	7.0	6.3	5.3
PPG-TF 316	6.0	5.7	6.3	6.0	6.0	6.0	6.7	5.3
RC4	6.3	6.7	6.0	6.0	6.3	6.7	7.0	5.0
PPG-TF-257	6.0	7.0	5.3	6.0	6.7	7.3	7.3	5.3
PPG-TF-238	6.7	6.7	7.3	7.0	7.0	7.0	7.3	5.7
PPG-TF-254	6.7	6.7	6.3	5.7	6.3	7.3	6.7	4.7
PPG-TF-308	6.3	7.0	6.7	6.3	7.3	7.0	7.0	5.7
PPG-TF-255	6.3	6.0	6.3	5.7	6.3	6.3	7.0	5.0
PPG-TF-312	5.3	7.0	6.0	5.3	6.0	6.3	5.7	4.7
PPG-TF-315	6.0	7.3	6.3	5.7	6.3	7.0	6.7	4.3
PPG-TF-336	6.3	6.7	6.7	6.0	6.7	6.3	6.3	5.3
PPG-TF-337	5.7	6.0	6.7	6.0	6.3	6.0	6.0	4.3
ZRC1	5.7	6.7	6.3	5.7	6.3	6.7	6.7	4.0
PPG-TF-231	6.0	7.3	6.0	6.0	6.7	7.0	7.3	4.7
PPG-TF-306	6.7	6.7	6.7	6.3	7.0	7.0	6.7	5.0
PPG-TF-318	6.3	6.3	6.0	5.3	6.0	6.3	6.3	4.7
Bullseye	7.0	6.7	6.3	6.0	6.7	6.7	6.3	5.3
Firehawk SLT	6.0	5.7	6.3	5.3	6.3	6.3	5.3	4.3
Hemi	6.0	6.3	7.0	6.0	6.7	6.7	7.0	4.7
Bullseye LTZ	5.7	6.7	7.0	6.3	6.7	6.7	6.7	4.7
Turbo SS	6.7	6.7	6.7	6.3	7.3	7.7	7.3	5.3
Dragster	6.0	7.0	7.3	6.3	7.3	7.0	6.7	5.3
GO-RH20	6.7	7.3	7.0	6.3	7.0	7.0	7.0	5.3
Birmingham	6.3	6.7	7.0	6.0	7.3	7.0	7.0	6.0
GO-AOMK	5.7	6.3	6.0	5.3	5.7	6.0	5.7	4.3
NAI-3N2	5.7	7.0	7.0	6.0	7.0	6.7	6.7	5.0
NAI-ROS4	6.3	7.0	6.7	6.0	7.0	7.0	7.0	5.3
NAI-TUE	6.3	6.7	6.7	6.7	7.0	7.3	7.3	5.3
NAI-ST5	6.3	5.7	6.0	5.7	6.0	6.0	6.3	4.3
SE5302	6.0	5.3	6.3	6.0	6.3	6.0	5.3	4.3

**Table 1 (continued). Percent green cover ratings for the tall fescue shade cultivar trial, Ames, Iowa.**

Cultivar	Percent green cover <sup>a</sup>							
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
SE5STAR	6.0	6.3	6.0	5.7	6.3	6.3	6.0	4.3
SE5CR1	6.0	6.3	6.3	5.7	6.7	7.0	7.0	4.7
SETF104	6.3	7.0	6.3	6.3	7.0	7.3	7.0	5.0
SETFM2	5.3	6.0	5.3	5.0	5.7	6.0	6.3	4.7
SETFM3	6.0	6.3	5.3	5.0	6.0	6.7	6.0	4.3
3B2	5.3	7.0	6.0	5.0	6.7	7.0	7.3	5.0
RAD--TF105	6.3	7.3	6.7	5.7	6.7	7.3	7.3	5.7
RAD-TF0.0	6.0	6.0	6.3	5.7	6.3	6.3	5.7	4.7
RHL2	6.5	5.5	6.3	5.8	6.0	6.5	6.3	4.5
Raptor III	5.7	6.0	6.7	5.7	6.3	6.3	6.3	4.0
RHF	6.0	6.0	6.3	5.7	6.3	5.7	5.7	4.3
PPG-TF-313	6.0	6.0	6.3	6.0	6.3	5.7	5.0	4.0
PPG-TF-320	5.7	5.0	6.3	5.3	5.7	5.7	6.0	4.0
PPG-TF-323	5.7	6.0	6.0	5.0	5.7	5.7	5.3	4.0
PPG-TF-338	6.0	5.0	5.7	5.0	5.3	5.7	5.0	4.0
Estrena	6.0	6.0	6.0	6.0	6.0	5.7	6.0	4.3
AST8118LM	6.0	5.7	5.3	5.0	5.3	5.3	5.3	4.0
AST8218LM	5.7	5.7	5.0	4.7	5.3	5.7	5.7	3.7
A-TF31	5.3	6.0	6.0	5.3	6.0	7.0	6.7	4.3
Palomar	5.3	5.0	6.0	5.7	6.3	6.0	5.0	4.0
Escalade	5.7	6.0	5.7	5.3	5.7	6.3	6.3	4.3
OG-WALK	5.3	5.7	5.7	5.0	5.3	5.0	5.0	3.7
TF445	6.0	6.7	6.3	6.0	6.7	6.7	6.7	5.0
TF456	5.3	6.3	5.7	5.0	6.3	6.7	6.3	5.0
FC15-01P	5.7	6.0	6.0	5.3	6.3	6.3	6.3	4.7
Kentucky-31	5.7	6.3	6.0	5.7	6.0	5.7	6.3	4.3
<b>LSD (0.05)<sup>b</sup></b>	1.2	1.6	1.6	1.5	1.4	1.7	1.8	1.5

<sup>a</sup>Percent green cover is the average quality rated monthly with digital image analysis on a 0-100 scale.

<sup>b</sup>Means were separated using Fisher's LSD.