Turfgrass Research
2015

2012 National Turfgrass Evaluation Program Tall Fescue Test: 2014 Data[1]

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Summary. A number of the cultivars included in the 2012 National Turfgrass Evaluation Program Tall Fescue Test performed well and showed good brown patch resistance in southern Kansas during the 2014 growing season.

Rationale. The National Turfgrass Evaluation Program (NTEP) locates studies nationwide to evaluate cultivars of a variety of turfgrass species under all types of environmental conditions. Wichita, Kansas, was selected for an ancillary trial, emphasizing brown patch resistance, during the 2012 National Tall Fescue Test. Tall fescue is the cool-season turfgrass best adapted to the Kansas transition zone because it tolerates drought and heat and has few serious insect or disease problems. Efforts to improve cultivar quality include selecting for stress tolerance and disease resistance as well as finer leaf texture, a rich green color, and better sward density.

Objective. Evaluate tall fescue cultivars for brown patch resistance and general quality under Kansas growing conditions and submit data collected to the National Turfgrass Evaluation Program.

Study Description. On September 11, 2012, 116 tall fescue cultivars and experimental lines were seeded at the John C. Pair Horticultural Center in Wichita. The study was established as a randomized complete block design with three replications, comprising 348 individual plots measuring 5 × 5 feet.

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Before seeding, 13-13-13 was incorporated into the study plots at a rate of 1 lb NPK/1,000 ft^2. Fertilizer was applied to the study plots three times during 2014: 1.0 lb N/1,000 ft^2 on April 7, 1.0 lb N/1,000 ft^2 on September 15, and 1.4 lb N/1,000 ft^2 on October 21. Plots were mowed 1 to 2 times weekly during the summer of 2014 with dropped clippings, and mowing height was gradually decreased from the 3.5 inches used in 2013 to 3.0 inches by midsummer to 2.75 inches by fall. Plots were irrigated as necessary to prevent turf stress or dormancy.

Rating for this study is done visually on a scale of 1 to 9 (1 = poorest, 6 = acceptable, and 9 = optimum measure). During the 2014 growing season, data were collected on spring greenup April 16, brown patch resistance July 31, and genetic color November 4. Overall quality was rated April 30, May 22, June 25, July 23, August 20, September 30, and October 29. Quality ratings were influenced by degree of cover, weed infestation, and disease resistance as well as turf color, texture, and density.

Results. The 2014 growing season began with looking at spring greenup when the overall study visually appeared to be about 50 percent green. The varieties that broke dormancy the earliest were LTP-TWUU, PST-5EX2, *Falcon V, *Ky-31, *TY 10 (Caesar), PPG-TF-151, Pick-W43, and U45 (Table 1). During the April through October growing season, turf was rated monthly for quality. The year's average best performers were IS-TF 308 SEL, PPG-TF-172, PPG-TF-157, RZ2, and U45. Signs of brown patch appeared during July, and at the end of July plots were rated for brown patch resistance and percent infestation. Those rankings showed *Ky-31, PPG-TF-147, *Burl TF-136 (Hot Rod), PPG-TF-105, PPG-TF-135, PST-5EV2, and *Grande 3 were doing the best. At the end of the year, turf color ratings showed IS-TF 272, *OR-21 (Temptation), *TY 10 (Caesar), IS-TF 285, JS 809, and PPG-TF-145 were the darkest green.

Complete 2012 National Tall Fescue Test results and more information on NTEP can be found online at: *http://www.ntep.org/*.

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Table 1. 2014 performance of tall fescue cultivars at Wichita, Kansas[1].

Cultivar/ Experimental Number	Green Up 4/16	Genetic Color 11/4	Brown Patch Resistance 7/31	% Brown Patch 7/31	Quality Avg.
IS-TF 308 SEL	5.7	6.0	6.0	11.7	5.8
PPG-TF-172	5.3	5.7	5.3	16.7	5.8
PPG-TF-157	5.7	7.0	6.0	13.3	5.8
RZ2	5.3	5.7	6.3	10.0	5.8
U45	6.0	6.0	6.3	10.3	5.8
PPG-TF-150	5.3	5.3	6.0	11.0	5.7
*Falcon V	6.0	5.3	6.0	11.7	5.7
PPG-TF-135	5.0	6.3	6.7	6.7	5.7
PPG-TF-156	5.3	6.0	6.3	11.0	5.7
SRX-TPC	4.3	6.3	5.3	20.0	5.7
Terrano	5.3	6.3	6.3	10.0	5.7
LTP-F5DPDR	5.3	5.3	6.3	10.0	5.6
*Burl TF-2 (GTO)	5.7	6.0	5.7	16.7	5.6
*Firebird 2	5.7	7.0	6.0	11.7	5.6
PPG-TF-151	6.0	6.3	6.3	9.3	5.6
F711	5.3	5.7	6.3	10.3	5.6
LTP-TWUU	6.3	6.3	6.0	11.7	5.6
PST-5GRB	5.0	5.0	6.3	11.7	5.6
ATF 1754	5.0	5.3	5.3	13.3	5.6
DZ1	5.0	6.0	6.3	10.0	5.6
*Regenerate	5.3	5.7	6.0	15.0	5.5
BIZEM	5.0	5.3	6.3	9.0	5.5
MET 1	5.7	6.0	6.3	10.3	5.5
PST-5MVD	5.3	5.7	6.3	9.3	5.5
Pick-W43	6.0	5.7	5.7	16.7	5.5
CCR2	5.7	6.0	6.0	15.3	5.4
PPG-TF-152	4.7	6.3	5.7	15.0	5.4
PST-5BRK	5.7	5.0	5.3	18.3	5.4
U43	5.3	5.7	6.0	11.7	5.4
*Grande 3	5.3	5.3	6.7	10.3	5.4
ATF 1704	5.7	5.0	6.0	13.3	5.4
JS 916	5.3	6.0	5.3	16.7	5.4

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Cultivar/ Experimental Number	Green Up 4/16	Genetic Color 11/4	Brown Patch Resistance 7/31	% Brown Patch 7/31	Quality Avg.
LTP-FSD	5.0	5.7	5.7	10.0	5.4
MET-3	5.3	5.7	5.7	15.0	5.4
PPG-TF-169	5.7	5.7	5.7	15.0	5.4
PST-5EV2	4.7	5.3	6.7	8.3	5.4
W45	5.3	6.0	6.0	13.3	5.4
*LSD (Rhambler 2 SRP)	5.0	6.0	5.0	20.0	5.4
IS-TF 307 SEL	5.0	6.3	5.7	13.3	5.4
PPG-TF-145	5.0	7.7	5.3	15.0	5.4
PPG-TF-147	5.0	5.3	7.0	7.0	5.4
PST-5EX2	6.3	4.3	6.3	10.0	5.4
ATF 1612	5.0	5.7	5.3	16.7	5.3
PPG-TF-105	5.3	7.0	6.7	6.0	5.3
PPG-TF-137	5.3	6.0	6.0	10.0	5.3
PPG-TF-138	4.7	6.3	5.7	15.0	5.3
T31	5.7	5.7	5.7	15.0	5.3
W41	5.3	6.3	6.0	11.7	5.3
IS-TF 282 M2	5.3	7.3	6.0	13.3	5.3
*Catalyst	5.7	6.0	5.0	21.7	5.3
*PST-5SALT (Saltillo)	4.3	6.0	6.3	9.7	5.3
PSG-GSD	5.7	5.7	6.3	10.0	5.3
PSG-TT4	5.0	6.0	5.7	16.7	5.3
ZW 44	5.7	6.0	5.7	13.3	5.3
IS-TF 284 M2	4.7	7.3	5.3	16.7	5.2
MET 6 SEL	5.0	5.0	5.0	31.7	5.2
PSG-PO1	5.3	6.3	6.3	11.7	5.2
PST-5BPO	5.3	5.3	5.3	18.3	5.2
PST-5RO5	5.0	5.7	6.0	10.0	5.2
ATF 1736	4.7	5.7	6.0	13.3	5.2
B23	4.7	6.3	6.3	11.7	5.2
DB1	4.7	7.0	5.7	20.3	5.2
IS-TF 310 SEL	5.0	7.0	5.0	18.3	5.2
PPG-TF-115	4.7	7.0	6.0	11.7	5.2

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RAD-TF-88	5.0	6.7	5.0	20.0	5.2
*Burl TF-136 (Hot Rod)	5.0	6.0	6.7	6.0	5.1
PSG-WE1	5.0	6.7	6.0	11.7	5.1
*TY 10 (Caesar)	6.0	7.7	5.3	16.7	5.1
IS-TF 311	5.0	6.7	5.7	13.3	5.1
*Falcon IV	5.0	5.7	5.3	15.0	5.1
IS-TF 291	5.0	7.3	5.3	20.0	5.1
IS-TF 330	4.3	7.0	5.7	13.3	5.1
PPG-TF-142	5.0	7.3	5.7	16.7	5.1
Burl TF-69	4.7	6.3	6.0	15.0	5.1
PSG-8BP2	4.7	6.7	5.7	18.3	5.1
Fesnova	5.7	5.7	5.3	16.7	5.1
PPG-TF-170	5.7	6.7	5.3	22.0	5.1
*Faith	5.3	6.3	5.7	10.0	5.0
IS-TF 269 SEL	5.0	7.0	4.3	25.0	5.0
IS-TF 276 M2	5.7	6.7	4.7	30.0	5.0
BAR Fa 121091	4.3	7.0	6.3	12.0	4.9
*Hemi	4.7	6.0	6.3	7.7	4.9
GO-DFR	5.0	7.0	4.3	40.0	4.9
*PST-R5NW (Inspiration)	5.0	6.7	5.7	15.0	4.9
JS 819	5.0	7.0	5.7	16.7	4.9
K12-MCD	5.3	5.7	5.7	15.0	4.9
RAD-TF-89	4.7	7.0	5.3	18.3	4.9
RAD-TF-92	5.0	6.0	4.7	30.0	4.9
BAR Fa 121089	4.7	6.7	5.3	16.7	4.8
IS-TF 289	3.7	7.3	4.7	23.3	4.8
TD1	4.0	7.3	5.7	15.3	4.8
*Exp TF-09 (Frontline)	5.7	7.3	4.7	23.3	4.8
RAD-TF-83	5.3	7.3	4.7	26.7	4.8
*Bullseye	5.3	6.0	4.7	23.3	4.7
JS 818	5.3	7.3	4.3	25.0	4.7

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PST-5DZP	4.0	6.3	5.7	15.0	4.7
TF-287	5.0	6.7	5.3	15.0	4.7
*Annihilator	5.0	7.0	4.0	43.3	4.7
*Aquaduct	4.7	7.0	5.3	21.7	4.7
*OR-21 (Temptation)	4.7	7.7	4.3	40.0	4.7
*PST-5SDT (Rain Dance)	5.3	6.3	5.0	23.3	4.7
IS-TF 305 SEL	4.3	7.3	5.3	18.3	4.7
*Marauder	4.0	6.3	4.3	23.3	4.6
BAR Fa 120878	4.3	5.0	5.3	15.0	4.6
JS 825	4.3	7.0	4.3	38.3	4.6
PPG-TF-139	5.0	7.3	5.0	21.7	4.6
*Warhawk	4.7	7.3	4.7	26.7	4.6
Comp. Res. SST	4.3	6.3	4.7	26.7	4.6
IS-TF 272	4.7	8.0	4.0	35.0	4.6
BAR Fa 121095	4.0	6.7	4.3	35.0	4.6
K12-05	4.3	7.0	5.0	21.7	4.5
IS-TF 285	4.7	7.7	4.0	41.7	4.4
K12-13	3.7	7.0	5.0	51.7	4.2
JS 809	4.0	7.7	5.0	25.0	4.2
204 Res. Blk4	4.0	6.3	4.0	40.0	4.2
*Ky-31	6.0	3.0	7.3	3.0	3.4
LSD	*1.4*	*1.0*	*2.2*	*26.5*	*0.7*

[1] Visual ratings based on a scale of 1 to 9 (1 = poorest, 6 = acceptable, and 9 = optimum measure).
[2] Cultivars marked with "*" were commercially available in 2014.
[3] To determine statistical differences among entries, subtract one entry's mean from another's. If the result is larger than the corresponding Least Significant Difference (LSD) value, the two are statistically different.

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