

# TURFGRASS RESEARCH 2015



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## 2012 National Turfgrass Evaluation Program Tall Fescue Test: 2012 and 2013 Data<sup>1</sup>

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**Summary.** Tall fescue is the cool-season turfgrass best adapted for the transition zone because it tolerates drought and heat and has few serious insect or disease problems. It possesses a rather coarse leaf texture, lacks stolons, and has only very short rhizomes. Efforts to improve cultivar quality include selecting for finer leaf texture, rich green color, and better sward density while maintaining good stress tolerance and disease resistance. New introductions need regular evaluation to determine their long-range suitability for use in Kansas.

**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. For the 2012 National Tall Fescue Test, Wichita, Kansas, was selected for an ancillary trial, emphasizing brown patch resistance.

**Objective.** Evaluate tall fescue cultivars for brown patch resistance and general quality under southern 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. Before seeding, 13-13-13 was incorporated into the study plots at a rate of 1 lb

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<sup>2</sup> Department of Horticulture, Forestry and Recreation Resources.

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NPK/1,000 ft<sup>2</sup>. Since establishing the study, fertility of the plots was maintained at 0.25 lb nitrogen/1,000 ft<sup>2</sup> per growing month. Plots were irrigated as necessary to prevent turf stress and mowed weekly at 3.5 in., with clippings removed, during the 2013 growing season.

Rating for this study is done visually on a scale of 1 to 9 (1 = poorest, 6 = acceptable, and 9 = optimum measure). Percent cover data were collected October 10, 2012. During the 2013 growing season, data were collected on brown patch resistance August 19 and September 4, genetic color on September 17, and fall color retention on November 20. Overall quality was rated April 25, May 30, July 2, August 6, September 4, and October 10, 2013. Quality ratings were influenced by degree of cover, weed infestation, and disease resistance as well as turf color, texture, and density.

**Results.** Data collection began by looking at percent cover as a measure of cultivar establishment. By the end of the 2012 growing season, Ky-31, B23, and LSD were the best established (Table 1<sup>3</sup>). During the 2013 growing season, turf was rated monthly for quality, with MET 1, W45, and PPG-TF-170 averaging as best performers for the year. Plots were rated twice for brown patch resistance, noting that the problem worsened throughout August. By the first of September, resistance was rated at least acceptable in 96 of the 116 different cultivars. Warhawk, Marauder, Comp. Res. SST, DB1, JS 825, and TD1 were among the most susceptible to the fungus. Turf color ratings showed IS-TF 272 and OR-21 were the darkest green, and PPG-TF-169, along with 10 other cultivars, retained color the longest in the fall.

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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<sup>3</sup> Only cultivars mentioned by name in the text of this report and top performers have been included in Table 1. For a complete listing of all the cultivars included in the trial, see the NTEP website <http://www.ntep.org/>.





**Table 1. 2012–2013 performance of tall fescue cultivars at Wichita, Kansas<sup>1,2</sup>.**

Cultivar/ Experimental Number	% Cover <sup>3</sup> 10/10/12	Genetic Color 9/17/13	Fall Color 11/20/13	Brown Patch Resistance 9/4/13	Quality Avg. 2013
MET 1	75.0	6.3	6.3	7.0	6.8
W45	71.7	7.0	5.7	7.3	6.8
PPG-TF-170	73.3	6.0	5.7	7.3	6.8
PPG-TF-135	71.7	6.7	6.0	8.0	6.7
PPG-TF-137	65.0	6.0	6.0	8.0	6.7
U43	73.3	6.7	5.3	7.0	6.7
Burl TF-136	68.3	6.0	5.7	7.7	6.7
Burl TF-2	73.3	6.0	6.0	8.0	6.7
LSD	78.3	6.0	5.3	7.3	6.7
LTP-F5DPDR	70.0	6.0	5.7	6.7	6.7
Pick-W43	75.0	6.7	6.0	7.0	6.7
Grande 3	71.7	6.3	6.3	8.0	6.6
IS-TF 308 SEL	60.0	6.0	6.0	7.0	6.6
PPG-TF-138	63.3	6.0	5.7	7.0	6.6
F711	76.7	6.0	6.0	8.0	6.6
Firebird 2	63.3	6.3	6.0	7.7	6.6
MET 6 SEL	70.0	5.3	5.3	8.0	6.6
PPG-TF-115	70.0	5.7	5.3	7.7	6.6
B23	78.3	6.7	5.3	7.7	6.6
PPG-TF-157	61.7	6.3	6.3	7.3	6.6
T31	63.3	5.7	6.3	8.0	6.6
U45	61.7	6.0	6.3	6.7	6.5
CCR2	71.7	6.0	6.3	7.7	6.4
PPG-TF-172	71.7	6.0	6.3	7.0	6.4
W41	68.3	6.0	6.3	8.0	6.4
IS-TF 284 M2	51.7	7.0	5.0	6.3	6.4
PPG-TF-145	65.0	7.0	5.7	7.0	6.4
ZW 44	66.7	6.0	6.3	8.0	6.4
Regenerate	75.0	6.7	6.3	8.0	6.3
PPG-TF-169	73.3	6.0	6.7	6.7	6.3
TF-287	76.7	6.7	5.0	6.7	6.3
TY 10	76.7	6.7	5.7	5.7	6.3
DB1	68.3	7.0	5.7	4.7	6.2

*continued*



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Exp TF-09	70.0	7.0	4.7	5.7	6.2
IS-TF 272	61.7	7.3	5.0	7.7	6.2
K12-05	60.0	7.0	4.7	6.7	6.2
IS-TF 282 M2	60.0	7.0	4.7	6.7	6.1
JS 818	76.7	6.0	4.7	5.7	6.0
OR-21	70.0	7.3	4.7	6.0	5.8
BAR Fa 121091	65.0	7.0	3.7	5.3	5.6
PPG-TF-142	66.7	7.0	5.3	5.3	5.6
JS 809	76.7	5.7	4.0	5.7	5.5
Ky-31	84.7	3.0	4.0	8.0	3.5
<i>LSD</i> <sup>4</sup>	9.3	0.7	0.9	2.2	0.6

<sup>1</sup> Only those cultivars that were the best performers overall or in one or more specific measure are included in this table. For a complete listing of all the cultivars included in the trial, see the NTEP website <http://www.ntep.org/>.

<sup>2</sup> Visual ratings based on a scale of 1 to 9 (1 = poorest, 6 = acceptable, and 9 = optimum measure).

<sup>3</sup> Percent cover was rated visually on a scale of 0% to 100%.

<sup>4</sup> 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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