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2017 National Turfgrass Evaluation Program Perennial Ryegrass Test: 2018 Data

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2017 National Turfgrass Evaluation Program Perennial Ryegrass Test: 2018 Data

Abstract

More than 100 entries of perennial ryegrass were evaluated in the perennial ryegrass National Turfgrass Evaluation Program (NTEP) study in Manhattan, KS, in 2018. A broad variation occurred among entries. Several entries consistently ranked in the top 10 in quality from month to month.

Keywords

NTEP, perennial ryegrass, quality

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2017 National Turfgrass Evaluation Program Perennial Ryegrass Test: 2018 Data

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Summary

More than 100 entries of perennial ryegrass were evaluated in the perennial ryegrass National Turfgrass Evaluation Program (NTEP) study in Manhattan, KS, in 2018. A broad variation occurred among entries. Several entries consistently ranked in the top 10 in quality from month to month.

Rationale

Perennial ryegrass is a cool season grass and has been used extensively on golf courses, sports turfs, and in mixtures for home lawns in Kansas. Perennial ryegrass is very fast to germinate, which makes it attractive when a quick repair is needed. Ryegrass may suffer heat stress in summer in Kansas. Therefore, we have been evaluating the quality of new entries along with industry standards in Kansas.

Objective

The objective of this study was to evaluate the turf quality of 112 perennial ryegrass entries.

Study Description

In September 2017, 112 entries of perennial ryegrass were seeded in Manhattan, KS, at 6 lb/1,000 ft^2 and plots reached full cover quickly (Figure 1). Plots measuring 5 × 5 ft were arranged in a randomized complete plot design with three replications. Plots were rated visually for turfgrass quality on a 1–9 scale (1 = poorest quality; 9 = optimum color, density, texture, and uniformity). Data were analyzed using ANOVA and means separated using the Waller-Duncan K-ratio test.

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Results

Many entries had good quality between April and October in 2018 (Table 1). In general, there is less genetic diversity among perennial ryegrasses than what we typically observe with Kentucky bluegrass or creeping bentgrass. Performance in evaluations such as this may be best used to identify entries that do not perform to the level of others.

Table 1. Quality ratings of perennial ryegrass entries in 2018 at Manhattan, KS

	Quality[1]							
Entry	April	May	June	July	August	September	October	Mean
DLFPS-236/3554	4.7	6.7	6.7	7.3	6.7	7.7	7.0	6.7
SILVER SPORT (PST-2CRP)	5.0	6.0	7.0	7.0	6.7	7.0	7.0	6.5
BAR LP 6117	4.3	6.0	7.0	7.3	6.0	7.7	6.7	6.4
DLFPS-236/3538	5.0	6.0	6.7	7.0	6.0	7.3	7.0	6.4
GRAY WOLF (PST-2GAL)	5.3	6.0	6.7	6.7	5.7	7.3	7.0	6.4
XCELERATOR	5.7	6.3	6.3	7.0	5.7	7.3	6.3	6.4
DLFPS-236/3542	4.7	5.7	6.7	6.7	6.0	7.7	7.0	6.4
DLFPS-236/3543	4.3	5.7	6.7	6.7	6.3	7.7	7.0	6.3
DLFPS-236/3545	4.7	5.7	6.3	6.7	6.3	7.7	7.0	6.3
DLFPS-236/3546	4.7	5.7	6.7	7.0	6.0	7.0	7.0	6.3
DLFPS-236/3550	5.0	5.7	6.7	7.0	5.7	7.0	7.0	6.3
FURLONG (LTP-FCB)	4.3	5.7	6.3	7.0	6.0	7.7	7.0	6.3
NP-3	4.0	5.7	6.3	7.0	6.7	7.3	7.0	6.3
APR 2616	4.7	6.0	6.7	7.0	5.3	7.0	7.0	6.2
APR 3060	4.7	5.7	6.0	7.0	6.0	7.3	7.0	6.2
BAR LP 6158	4.3	6.0	6.7	6.3	6.7	7.3	6.3	6.2
DLFPS-236/3540	4.3	5.7	6.3	7.0	5.7	7.7	6.7	6.2
DLFPS-236/3548	3.7	6.0	6.7	7.0	5.7	7.3	7.0	6.2
PPG-PR 371	4.7	5.3	6.3	6.7	6.3	7.0	7.0	6.2
PPG-PR 420	5.3	6.3	6.7	6.3	4.3	7.3	7.0	6.2

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Entry	Quality[1] April	May	June	July	August	September	October	Mean
ALLOY (RRT)	4.3	5.7	6.3	7.0	6.0	6.7	7.0	6.1
CPN	5.0	5.3	5.7	6.7	5.3	8.0	7.0	6.1
DLFPS-236/3547	4.3	5.3	6.3	6.7	5.7	7.7	7.0	6.1
DLFPS-236/3552	4.3	6.0	7.0	6.7	5.0	7.0	7.0	6.1
FASTBALL 3GL (PPG-PR 329)	4.3	5.3	6.7	6.7	6.0	7.0	7.0	6.1
GRAND SLAM GLD	4.3	6.0	6.3	7.0	5.3	7.0	7.0	6.1
PPG-PR 370	4.0	5.7	6.0	7.0	5.7	7.7	6.7	6.1
PPG-PR 421	4.7	5.3	6.7	7.0	5.0	7.0	7.0	6.1
PPG-PR 423	4.7	5.3	5.7	7.0	5.7	7.3	7.0	6.1
PR-5-16	4.0	5.7	6.3	6.7	5.7	7.3	7.0	6.1
PST-2EGAD	4.0	5.0	6.3	6.7	6.3	7.3	7.0	6.1
023	5.0	5.3	6.7	7.0	5.0	6.7	6.7	6.1
APPLE 3GL (PPG-PR 339)	4.3	5.7	6.7	7.0	5.0	6.7	7.0	6.1
ASP0118GL (A-4G)	4.3	5.7	6.0	6.7	5.7	7.0	7.0	6.1
BAR LP 6159	4.0	5.3	6.7	7.0	5.3	7.0	7.0	6.0
BAR LP 6164	4.3	5.3	6.3	7.0	6.0	6.3	7.0	6.0
DLFPS-236/3541	4.7	5.7	6.0	7.0	5.0	6.7	7.0	6.0
DLFPS-236/3544	4.3	5.7	5.7	6.7	5.3	7.0	7.3	6.0
FP2	4.3	5.3	5.7	6.7	5.7	7.3	7.0	6.0
GRAY HAWK (PST-2FIND)	4.3	5.3	5.7	6.7	5.7	7.3	7.0	6.0
HOMERUN LS (PPG-PR 419)	5.0	5.3	5.7	6.7	5.3	7.0	7.0	6.0
JR-123	4.0	5.0	5.3	7.0	6.3	7.3	7.0	6.0
JR-197	4.3	5.7	6.3	6.3	5.7	7.3	6.3	6.0
MAN O WAR	4.7	5.7	6.7	6.0	5.0	7.0	6.7	6.0
NP-2	4.0	6.0	6.0	6.7	5.0	7.0	7.0	6.0
PPG-PR 360	4.0	5.7	6.0	6.7	5.3	7.0	7.0	6.0

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PPG-PR 372	4.0	5.7	6.0	6.3	5.7	7.0	7.0	6.0
PPG-PR 422	4.7	5.3	5.7	6.3	5.7	7.0	7.0	6.0
PPG-PR 424	4.0	5.0	5.3	7.0	6.0	7.7	6.7	6.0
PR-6-15	4.7	6.0	6.0	6.3	5.0	7.0	6.7	6.0
PST-2BDT	4.3	5.7	6.0	6.7	4.7	7.0	7.3	6.0
PST-2FOXY	4.3	5.0	5.7	6.7	5.7	7.3	7.0	6.0
PST-2GTD	4.0	5.0	6.3	6.7	5.3	7.3	7.0	5.9
SNX	3.7	5.3	6.3	6.0	6.3	7.0	7.0	5.9
APR 2612	5.0	5.0	5.7	6.7	5.3	7.0	6.7	5.9
ASP0117 (A-PR15)	4.0	5.7	6.3	6.7	4.7	7.0	7.0	5.9
ASP0218 (A-6D)	4.0	5.7	6.0	6.3	5.7	6.7	7.0	5.9
DLFPS-236/3553	4.0	5.3	6.0	6.7	5.3	7.0	7.0	5.9
GO-142	4.3	5.3	6.0	6.7	5.0	7.0	7.0	5.9
MRSL-PR16	5.0	5.7	5.7	6.3	5.3	6.3	7.0	5.9
OVERDRIVE 5G	4.7	4.3	6.0	7.0	5.0	7.0	7.0	5.9
PPG-PR 331	4.0	5.3	5.7	7.0	5.0	7.0	7.0	5.9
PPG-PR 367	4.0	5.7	6.0	6.0	5.3	7.0	7.0	5.9
SHIELD (02BS4)	4.3	5.0	6.3	6.0	5.7	6.7	7.0	5.9
SLIDER LS (PPG-PR 241)	4.0	5.3	6.3	6.7	5.0	7.0	6.7	5.9
SLUGGER 3GL (PPG-PR 343)	5.0	5.3	6.3	6.3	4.0	7.3	6.7	5.8
02BS2	4.0	4.3	5.7	6.7	5.3	7.7	7.0	5.8
ALLSTAR III	3.7	5.3	6.0	6.0	5.7	7.0	7.0	5.8
AMP-R1	4.0	5.7	5.7	6.0	6.0	7.0	6.3	5.8
BAR LP 6131	3.7	6.0	6.0	6.3	5.3	6.3	7.0	5.8
BSP-17	4.3	6.0	7.0	6.3	4.0	6.0	7.0	5.8
DLFPS-236/3556	5.0	6.0	6.0	6.0	4.7	6.0	6.7	5.8

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Entry	Quality[1]							
	April	May	June	July	August	September	October	Mean
EVOLVE	3.7	5.7	6.3	6.0	4.7	7.3	6.7	5.8
GO-141	4.0	5.0	6.0	6.7	5.3	6.3	7.0	5.8
GO-143	4.3	5.3	6.3	6.3	4.3	6.7	7.0	5.7
SIGNET	4.0	5.3	6.3	6.3	5.3	6.7	6.3	5.7
021	4.7	5.3	5.7	6.0	4.7	6.7	7.0	5.7
ASP0116EXT	4.3	4.7	5.7	6.0	6.0	6.7	6.7	5.7
BAR LP 6162	4.3	5.0	6.0	6.3	5.0	6.7	6.7	5.7
BSP-25	4.0	5.7	6.0	6.3	4.3	6.7	7.0	5.7
BWH	4.7	5.3	6.0	6.3	4.0	6.7	7.0	5.7
DERBY XTREME	4.7	5.3	5.7	6.0	5.3	6.3	6.7	5.7
PHARAOH	4.3	5.7	6.3	6.0	5.7	6.0	6.0	5.7
PPG-PR 385	4.0	5.0	5.3	6.3	5.0	7.3	7.0	5.7
PST-2A2	4.0	5.0	5.7	6.7	4.7	6.7	7.0	5.7
PST-2PDA	4.0	5.0	5.3	7.0	5.0	6.7	6.7	5.7
RAD-PR 112	4.3	5.0	6.3	6.0	4.7	6.7	6.7	5.7
SEABISCUIT	4.3	5.7	6.3	6.3	3.7	6.3	7.0	5.7
BRIGHTSTAR SLT	4.3	5.7	5.7	6.3	4.3	6.3	6.7	5.6
CS-6	4.3	6.7	6.0	6.0	3.7	6.3	6.3	5.6
INTENSE	4.0	5.7	6.3	6.3	4.3	6.3	6.3	5.6
LPB-SD-101	4.7	5.7	5.0	5.7	5.0	6.3	6.7	5.6
LPB-SD-104	4.0	5.7	5.7	6.0	4.7	6.0	7.0	5.6
PEPPER II (RAD-PR 103)	4.3	5.0	5.3	6.0	5.3	6.0	7.0	5.6
SAGUARO	5.0	4.7	6.3	6.0	4.3	6.3	6.3	5.6
DLFPS-238/3014	4.3	6.0	6.3	5.7	3.7	6.0	6.7	5.5
JR-888	4.0	6.0	6.7	6.0	4.3	5.7	6.0	5.5
LPB-SD-102	4.0	5.0	6.0	5.7	5.0	6.7	6.3	5.5

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Entry	Quality[1]							
	April	May	June	July	August	September	October	Mean
MRSL-PR15	3.3	5.7	6.0	6.0	4.3	6.3	7.0	5.5
SAVANT	3.7	5.3	6.3	6.3	4.0	6.7	6.3	5.5
SR 4650	3.7	4.3	5.0	6.7	5.7	6.0	7.0	5.5
UMPQUA	4.0	4.3	5.7	6.3	4.3	7.0	6.7	5.5
BAR LP 6165	4.7	3.7	5.0	6.3	5.0	6.7	6.7	5.4
BAR LP 6233	4.0	6.0	5.7	6.3	3.7	5.7	6.3	5.4
LPB-SD-103	3.0	4.3	5.3	6.7	5.3	6.7	6.3	5.4
LPB-SD-105	4.0	6.0	6.0	6.3	4.0	5.0	6.3	5.4
UF3	4.3	5.3	6.0	5.3	4.7	6.7	5.3	5.4
02BS1	4.0	5.0	4.7	6.3	4.3	6.3	6.7	5.3
PL2	4.0	5.0	5.0	5.7	4.0	6.3	7.0	5.3
JR-747	3.3	6.0	5.7	6.0	3.3	6.0	5.7	5.1
MENSA	4.0	6.3	6.0	5.7	3.0	5.3	5.3	5.1
LINN	3.0	3.7	3.7	3.3	2.7	4.0	4.7	3.6
LSD[2]	1.7	1.5	1.4	1.0	1.6	1.2	0.7	0.5

[1]Quality was rated visually on a 1–9 scale (1 = poorest quality; 9 = optimum color, density, texture, and uniformity).
[2]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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Figure 1. Plots in the perennial ryegrass National Turfgrass Evaluation Program trial in Manhattan, KS.

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