

NATIONAL TURFGRASS EVALUATION PROGRAM

The National Turfgrass Evaluation Program (NTEP) is designed to develop and coordinate uniform evaluation trials of turfgrass varieties and promising selections in the United States and Canada. Test results can be used by national companies and plant breeders to determine the broad picture of the adaptation of a cultivar. Results can also be used to determine if a cultivar is well adapted to a local area or level of turf maintenance.

Briefly, the NTEP is a self-supporting, non-profit program, sponsored by the Beltsville Agricultural Research Center. Program policy is made by a policy committee consisting of one member from each of the four (4) Regional Turfgrass Research Committees in the United States, one member from the Lawn Seed Division of the American Seed Trade Association, one member from the United States Golf Association (USGA) Green Section, one member from the Golf Course Superintendents Assoc. of America (GCSAA), one member for the Turfgrass Producers International (TPI), one member from the Turfgrass Breeders Association and an executive director. The program does not make variety recommendations. However, the data from tests can be used by extension specialists and others for making recommendations.

The policy committee is responsible for determining program policy including, (1) requirements for submission of entries, (2) scheduling tests, (3) evaluation methods, (4) selecting standard or control test entries, (5) setting entry fees, (6) coordinating tests in their respective regions, (7) establishing guidelines for publication and data distribution and (8) scheduling committee meetings.

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CURRENT POLICY COMMITTEE MEMBERS:

Mr. Aaron Kuenzi, Mountain View Seeds
Mr. Ryan Jeffries, Columbia Seeds, Inc.
Dr. Cole Thompson, USGA Green Section
Dr. Charles Fontanier, Oklahoma State University
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A Guide to NTEP Turfgrass Ratings

Introduction

The quality and scientific merit of NTEP data is extremely important. However, the evaluation of turfgrass species and cultivars is a difficult and complex issue. Furthermore, turfgrass evaluation is generally a subjective process based on visual estimates of factors, like genetic color, stand density, leaf texture, uniformity and quality. These factors can not be measured in the same way as other agricultural crops. Turfgrass quality is not a measure of yield or nutritive value. Turfgrass quality is a measure of aesthetics (i.e. density, uniformity, texture, smoothness, growth habit and color), and functional use. The most common way of assessing turfgrass quality is a visual rating system that is based on the turfgrass evaluator's judgement.

General Considerations

Most visual ratings collected on NTEP trials are based on a 1 to 9 rating scale. One is the poorest or lowest and 9 is the best or highest rating. However, a few characteristics, such as winter kill or percent living ground cover, are rated on a percentage basis, again by using the evaluator's judgement. Most disease ratings found in NTEP reports will use the 1-9 scale, 9=no disease except where the evaluator made a judgement of the percentage of disease in each plot. Percent disease data will be found in separate tables and will normally not be included with disease data using the 1-9 scale.

Turfgrass Quality

Turfgrass Quality is based on 9 being outstanding or ideal turf and 1 being poorest or dead. A rating of 6 or above is generally considered acceptable. A quality rating value of 9 is reserved for a perfect or ideal grass, but it also can reflect an absolutely outstanding treatment plot. The NTEP requires quality ratings on a monthly basis. Quality ratings take into account the aesthetic and functional aspects of the turf. Quality ratings are not based on color alone, but on a combination of color, density, uniformity, texture, and disease or environmental stress.

Turfgrass quality ratings are grouped and presented by region, management level, a particular stress (shade, traffic, etc.) and in some cases, by individual location (starting with 2001 data, data from each location will be posted separately as well on the NTEP web site, <http://www.ntep.org>). Also available now is a summary table (Appendix) in the back of this report. This summary table includes various statistical measures not previously compiled for NTEP reports. For an explanation of this table and these changes, please go to the NTEP web site at <http://www.ntep.org/pdf/grandmean.mem.pdf>.

Other Ratings

More detailed information on the ratings of specific characteristics can be found on the NTEP web site at <http://www.ntep.org/reports/ratings.htm>.

2015 NATIONAL LOW INPUT COOL-SEASON TEST

LOCATIONS SUBMITTING DATA FOR 2019

State	Location	Code
Connecticut	Storrs	CT1
Connecticut	Storrs	CT2
Indiana	West Lafayette	IN1
Indiana	West Lafayette (Medium Input)	IN2
Maryland	College Park	MD1
Michigan	East Lansing	MI1
Minnesota	St. Paul	MN1
Missouri	Columbia	MO1
Missouri	Columbia	MO2
North Carolina	Raleigh	NC1
Nebraska	Mead	NE1
Oregon	Corvallis	OR1
Pennsylvania	Kennett Square	PA2
Utah	Logan	UT1
Virginia	Blacksburg	VA1

2015 National Low Input Cool-Season Test
Entries and Sponsors

Entry No.	Name	Species/Composition	Sponsor
*1	Natural Knit® PRG Mix	50% Mensa perennial ryegrass 50% Savant perennial ryegrass	Ledeboer Seed LLC
*2	Bullseye	100% Bullseye tall fescue	Standard entry
*3	Bewitched	100% Bewitched Ky. Bluegrass	Standard entry
4	BGR-TF3	100% BGR-TF3 tall fescue	Berger International LLC
5	MNHD-15	100% MNHD-15 hard fescue	University of Minnesota
6	DLFPS TF-A	33% Mustang 4 tall fescue 33% Grande 3 tall fescue 34% Fayette tall fescue	DLF/Pickseed/Seed Research of OR
7	DLFPS ChCrM	24% Longfellow 3 chewings fescue 24% Windward chewings fescue 24% Chantilly strong creeping red fescue 25% Ruddy strong creeping red fescue 3% Microclover™	DLF/Pickseed/Seed Research of OR
8	DLFPS ShHM	32% Quatro sheep fescue 32% Spartan II hard fescue 33% Eureka II hard fescue 3% Microclover™	DLF/Pickseed/Seed Research of OR
9	DLFPS TFAM	32% Mustang 4 tall fescue 32% Grande 3 tall fescue 33% Fayette tall fescue 3% Microclover™	DLF/Pickseed/Seed Research of OR
*10	Vitality Low Maintenance Mixture	80% VNS hard fescue 20% VNS chewings fescue	Landmark Turf & Native Seed
*11	Vitality Double Coverage Mixture	90% VNS tall fescue 10% VNS Kentucky bluegrass	Landmark Turf & Native Seed
*12	Chantilly	100% Chantilly strong creeping red	Standard entry
*13	Dutch White Clover	100% Dutch White Clover	Standard entry
14	DLFPS TFAStC	32% Mustang 4 tall fescue 32% Grande 3 tall fescue 33% Fayette tall fescue 3% strawberry clover	DLF/Pickseed/Seed Research of OR
15	DLFPS ChCrSH	14% Longfellow 3 chewings fescue 14% Windward chewings fescue 14% Chantilly strong creeping red fescue 14% Ruddy strong creeping red fescue 14% Quatro sheep fescue 14% Eureka hard fescue 14% Spartan hard fescue	DLF/Pickseed/Seed Research of OR
*16	Spartan II	100% Spartan II hard fescue	Standard entry
*17	Quatro	100% Quatro sheep fescue	Standard entry
*18	Ky-31 E+	100% Ky-31 tall fescue w/endophyte	Standard entry

Entry No.	Name	Species/Composition	Sponsor
19	CRS Mix #1	55% Gladiator hard fescue 45% 4GUD hard fescue	Columbia River Seed
20	CRS Mix #2	67% Gladiator hard fescue 33% NAI13-14 Kentucky bluegrass	Columbia River Seed
21	CRS Mix #3	45% Gladiator hard fescue 45% Sword hard fescue 10% Dutch White Clover	Columbia River Seed
22	DTT Tall Fescue Mix	50% DTT20 tall fescue 50% DTT43 tall fescue	Allied Seed LLC
23	DTTHO TF/KBG Mix	45% DTT20 tall fescue 45% DTT43 tall fescue 10% Holiday lawn Ky. Bluegrass	Allied Seed LLC
24	A-SFT	100% A-SFT tall fescue	Allied Seed LLC
*25	Kingdom	100% Kingdom tall fescue	SiteOne Landscape Supply
*26	Resolute (7H7)	100% 7H7 hard fescue	SiteOne Landscape Supply
27	Northern Mixture	40% VNS perennial ryegrass 20% VNS Kentucky bluegrass 20% VNS chewings fescue 20% VNS creeping red fescue	ProSeeds Marketing
28	Southern Mixture	70% VNS tall fescue 10% VNS Kentucky bluegrass 10% VNS perennial ryegrass 10% VNS chewings fescue	ProSeeds Marketing
*29	CS Mix	40% Castle chewings fescue 40% Sword hard fescue 10% Kent creeping red fescue 10% B-15.2415 Blue Mesa sheep fescue	Columbia Seeds LLC
*30	Yaak	100% Yaak western yarrow	Pacific NW Natives
*31	Radar	100% Radar chewings fescue	Standard entry
*32	Kenblue	100% Kenblue Kentucky bluegrass	Standard entry

* Commercially Available in the USA in 2020

TABLE A.

2019 LOCATIONS, SITE DESCRIPTIONS AND MANAGEMENT PRACTICES IN
THE 2015 NATIONAL LOW INPUT COOL-SEASON TEST

LOCATION	SOIL TEXTURE	SOIL PH	SOIL PHOSPHOROUS (LBS/ACRE)	SOIL POTASSIUM (LBS/ACRE)	NITROGEN (LBS/1000 SQ FT)	SUN OR SHADE	MOWING HEIGHT (IN)	IRRIGATION PRACTICED
CT1	SANDY LOAM	6.1-6.5	0-60	151-240	-	FULL SUN	3.6-4.0	NO IRRIGATION
CT2	SANDY LOAM	6.1-6.5	0-60	151-240	-	FULL SUN	3.6-4.0	NO IRRIGATION
IN1	SILT LOAM AND SILT	7.1-7.5	61-150	151-240	1.1-2.0	FULL SUN	4.1+	NO IRRIGATION
IN2	SILT LOAM AND SILT	7.1-7.5	61-150	151-240	2.1-3.0	FULL SUN	4.1+	NO IRRIGATION
MD1	SILT LOAM AND SILT	6.1-6.5	61-150	151-240	0.0-1.0	FULL SUN	3.6-4.0	NO IRRIGATION
MI1	-	-	-	-	-	-	-	-
MN1	SILTY CLAY LOAM	6.1-6.5	61-150	241-375	0.0-1.0	FULL SUN	3.1-3.5	NO IRRIGATION
MO1	-	-	-	-	-	-	-	-
MO2	-	-	-	-	-	-	-	-
NC1	SILTY CLAY LOAM	6.1-6.5	61-150	0-150	3.1-4.0	FULL SUN	3.1-3.5	TO PREVENT STRESS
NE1	SILTY CLAY AND CLAY	7.1-7.5	0-60	376-500	0.0-1.0	FULL SUN	2.6-3.0	NO IRRIGATION
OR1	SILTY CLAY LOAM	6.1-6.5	0-60	241-375	0.0-1.0	FULL SUN	2.6-3.0	NO IRRIGATION
PA2	SILT LOAM AND SILT	6.1-6.5	61-150	241-375	0.0-1.0	FULL SUN	2.6-3.0	NO IRRIGATION
UT1	SILT LOAM AND SILT	7.1-7.5	0-60	151-240	-	FULL SUN	3.6-4.0	NO IRRIGATION
VA1	SILT LOAM AND SILT	5.6-6.0	0-60	0-150	0.0-1.0	FULL SUN	3.1-3.5	NO IRRIGATION

TABLE B.

LOCATIONS AND DATA COLLECTED IN 2019

LOCATION	JANUARY QUALITY RATING	FEBRUARY QUALITY RATING	MARCH QUALITY RATING	APRIL QUALITY RATING	MAY QUALITY RATING	JUNE QUALITY RATING	JULY QUALITY RATING	AUGUST QUALITY RATING	SEPTEMBER QUALITY RATING	OCTOBER QUALITY RATING	NOVEMBER QUALITY RATING	DECEMBER QUALITY RATING
CT1					X	X	X	X	X	X		
CT2					X	X	X	X	X	X		
IN1					X	X	X	X	X	X		
IN2					X	X	X	X	X	X		
MD1						X		X	X	X		
MI1					X	X	X	X	X	X		
MN1					X	X	X	X	X	X		
MO1				X	X	X	X	X	X			
MO2				X	X	X	X	X	X			
NC1		X	X	X	X	X	X	X	X	X	X	
NE1				X	X	X	X	X	X	X		
OR1	X	X	X	X	X	X	X	X	X	X	X	X
PA2			X	X	X	X	X	X	X	X	X	
UT1					X	X	X	X	X	X		
VA1					X	X	X	X	X	X		

TABLE B.
(CONT'D)

LOCATIONS AND DATA COLLECTED IN 2019

LOCATION	SPRING GREENUP	SUMMER DENSITY	PERCENT COVER		PERCENT COVER FALL	PERCENT GRASS COVER	PERCENT GRASSY WEEDS	PERCENT WEED RATINGS		
			SPRING	SUMMER				SPRING	SUMMER	FALL
CT1	X				X				X	X
CT2	X				X				X	X
IN1		X								
IN2		X								
MD1										
MI1					X				X	
MN1				X	X				X	X
MO1			X							
MO2			X							
NC1	X				X			X	X	
NE1	X				X				X	X
OR1					X		X			
PA2			X		X				X	X
UT1	X				X	X		X		X
VA1			X		X			X	X	

TABLE 1. MEAN TURFGRASS QUALITY RATINGS OF COOL-SEASON CULTIVARS GROWN UNDER 1/
 LOW INPUT IN LOCATION PERFORMANCE INDEX (LPI) GROUP 1 **/
 2019 DATA
 TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF 2/

NAME	# Entry	CT1	NC1	MO1	MEAN
DLFPS TFAM	9	6.3	7.2	6.1	6.5
DLFPS TFASTC	14	5.8	5.9	6.0	5.9
DLFPS TF-A	6	5.5	5.7	5.8	5.7
*VITALITY DOUBLE	11	5.5	5.7	5.9	5.7
*BULLSEYE	2	5.1	5.5	5.7	5.4
BGR-TF3	4	5.1	5.1	5.5	5.2
CRS MIX #3	21	6.0	4.2	4.9	5.0
DTT TALL FESCUE MIX	22	4.7	4.8	5.5	5.0
A-SFT	24	4.6	4.4	5.2	4.8
DTTHO TF/KBG MIX	23	4.3	4.1	5.3	4.5
CRS MIX #1	19	5.3	3.2	5.0	4.5
*VITALITY LOW	10	4.9	3.4	5.2	4.5
SOUTHERN MIXTURE	28	4.5	3.8	5.2	4.5
CRS MIX #2	20	5.3	3.2	4.9	4.5
*YAAK	30	3.9	4.2	5.2	4.4
*KINGDOM	25	4.1	3.7	5.1	4.3
*RADAR	31	4.6	3.3	4.8	4.3
DLFPS CHCRM	7	4.8	3.1	4.8	4.2
NORTHERN MIXTURE	27	4.5	3.2	4.8	4.2
DLFPS CHCRSH	15	4.6	2.9	4.9	4.1
DLFPS SHHM	8	4.8	3.0	4.3	4.0
*RESOLUTE (7H7)	26	4.8	2.5	4.6	4.0
MNHD-15	5	4.8	2.3	4.6	3.9
*CS MIX	29	4.4	2.7	4.6	3.9
*KY-31 E+	18	3.6	3.1	4.7	3.8
*SPARTAN II	16	4.4	2.3	4.3	3.7
*CHANTILLY	12	4.1	2.3	4.4	3.6
*KENBLUE	32	3.3	1.8	4.1	3.1
*QUATRO	17	3.6	1.4	4.0	3.0
*BEWITCHED	3	3.2	1.5	3.9	2.8
*NATURAL KNIT © PRG MIX	1	2.9	1.4	3.7	2.7
*DUTCH WHITE CLOVER	13	2.9	1.3	3.5	2.6
LSD VALUE		1.0	1.0	1.0	1.0
C.V. (%)		13.7	17.8	12.8	14.5

*/ COMMERCIALLY AVAILABLE IN THE USA IN 2020.

**/ ENTRIES WITHIN THIS TABLE ARE ORDERED BY THE OVERALL MEAN AND HAVE SIMILAR TURF QUALITY PERFORMANCES IN ALL TEST LOCATIONS INCLUDED IN THIS LPI GROUP. IF YOUR STATE IS NOT REPRESENTED, THEN CHOOSE A LPI GROUP THAT CONTAINS A LOCATION AND MANAGEMENT SIMILAR TO YOUR PLANTING CONDITIONS. FOR MORE INFORMATION ON LPI, GO TO WWW.NTEP.ORG/LPI_Q&A.PDF

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

TABLE 2. MEAN TURFGRASS QUALITY RATINGS OF COOL-SEASON CULTIVARS GROWN UNDER 1/
 LOW INPUT IN LOCATION PERFORMANCE INDEX (LPI) GROUP 2 */
 2019 DATA
 TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF 2/

NAME	PA2	MI1	NE1	MEAN
VITALITY LOW	2.9	5.9	4.0	4.3
DLFPS TFASTC	2.9	5.9	4.0	4.3
KY-31 E+	2.8	5.9	3.8	4.2
QUATRO	2.8	5.9	3.9	4.2
BEWITCHED	2.7	5.9	3.9	4.2
DLFPS CHCRSH	2.8	5.7	3.9	4.1
DLFPS TF-A	2.7	5.8	3.8	4.1
RESOLUTE (7H7)	2.7	5.7	3.9	4.1
KINGDOM	2.7	5.8	3.8	4.1
CS MIX	2.7	5.7	3.8	4.1
DLFPS CHCRM	2.7	5.7	3.8	4.1
DLFPS TFAM	2.6	5.8	3.8	4.1
VITALITY DOUBLE	2.7	5.7	3.8	4.1
SOUTHERN MIXTURE	2.7	5.7	3.8	4.1
NATURAL KNIT © PRG MIX	2.6	5.9	3.7	4.1
DTTHO TF/KBG MIX	2.7	5.7	3.7	4.1
DTT TALL FESCUE MIX	2.7	5.7	3.7	4.0
MNHD-15	2.6	5.6	3.8	4.0
DLFPS SHHM	2.5	5.7	3.8	4.0
CRS MIX #2	2.6	5.6	3.8	4.0
CRS MIX #3	2.5	5.7	3.8	4.0
KENBLUE	2.6	5.7	3.7	4.0
CRS MIX #1	2.6	5.5	3.7	3.9
BULLSEYE	2.5	5.6	3.6	3.9
A-SFT	2.5	5.5	3.6	3.9
NORTHERN MIXTURE	2.5	5.5	3.6	3.9
BGR-TF3	2.5	5.5	3.6	3.9
DUTCH WHITE CLOVER	2.4	5.6	3.5	3.8
CHANTILLY	2.4	5.4	3.5	3.8
SPARTAN II	2.3	5.3	3.5	3.7
YAAK	2.3	5.3	3.3	3.6
RADAR	2.2	5.2	3.3	3.6
LSD VALUE	1.0	1.0	1.0	1.0
C.V. (%)	24.0	11.0	16.8	15.6

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2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

TABLE 3. MEAN TURFGRASS QUALITY RATINGS OF COOL-SEASON CULTIVARS GROWN UNDER 1/
 LOW INPUT IN LOCATION PERFORMANCE INDEX (LPI) GROUP 3 */
 2019 DATA
 TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF 2/

NAME	MD1	MN1	MEAN
CRS MIX #1	5.3	5.7	5.5
MNHD-15	4.9	5.3	5.1
CRS MIX #2	5.0	5.0	5.0
RESOLUTE (7H7)	4.7	4.9	4.8
VITALITY LOW	4.2	5.1	4.6
DLFPS CHCRSH	4.1	5.0	4.6
SPARTAN II	4.2	4.7	4.4
RADAR	3.8	4.9	4.4
DLFPS CHCRM	4.0	4.5	4.2
CHANTILLY	3.6	4.8	4.2
CS MIX	3.6	4.4	4.0
CRS MIX #3	4.9	3.0	3.9
NORTHERN MIXTURE	3.4	4.2	3.8
SOUTHERN MIXTURE	3.1	4.5	3.8
DLFPS TFASTC	3.4	3.9	3.7
VITALITY DOUBLE	3.2	4.1	3.6
BGR-TF3	2.8	3.8	3.3
DLFPS TF-A	3.0	3.3	3.2
DTTHO TF/KBG MIX	2.3	4.1	3.2
QUATRO	2.9	3.4	3.1
DTT TALL FESCUE MIX	2.4	3.9	3.1
A-SFT	2.6	3.6	3.1
BULLSEYE	2.5	3.4	3.0
KINGDOM	2.1	3.7	2.9
YAAK	1.6	4.0	2.8
KENBLUE	2.2	3.4	2.8
DLFPS SHHM	3.4	2.0	2.7
KY-31 E+	1.5	2.9	2.2
DLFPS TFAM	2.7	1.6	2.1
BEWITCHED	1.8	2.1	2.0
NATURAL KNIT © PRG MIX	1.1	1.2	1.2
DUTCH WHITE CLOVER	1.1	1.0	1.1
LSD VALUE	1.0	1.0	1.0
C.V. (%)	19.7	16.6	18.0

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1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

TABLE 4. MEAN TURFGRASS QUALITY RATINGS OF COOL-SEASON CULTIVARS GROWN UNDER 1/
 LOW INPUT IN LOCATION PERFORMANCE INDEX (LPI) GROUP 4 */
 2019 DATA
 TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF 2/

NAME	VA1	OR1	MEAN
CRS MIX #3	6.0	3.7	4.8
RESOLUTE (7H7)	5.8	3.6	4.7
CRS MIX #2	5.9	3.5	4.7
VITALITY LOW	5.8	3.6	4.7
DLFPS TFASTC	5.8	3.6	4.7
CRS MIX #1	5.8	3.4	4.6
MNHD-15	5.8	3.5	4.6
DLFPS TFAM	5.6	3.5	4.6
DLFPS CHCRSH	5.6	3.5	4.6
DLFPS CHCRM	5.6	3.4	4.5
DLFPS SHHM	5.5	3.5	4.5
DLFPS TF-A	5.6	3.4	4.5
CS MIX	5.5	3.4	4.4
VITALITY DOUBLE	5.6	3.3	4.4
QUATRO	5.3	3.5	4.4
SOUTHERN MIXTURE	5.4	3.3	4.3
NORTHERN MIXTURE	5.3	3.2	4.3
SPARTAN II	5.4	3.1	4.2
BEWITCHED	5.1	3.4	4.2
DTT TALL FESCUE MIX	5.3	3.2	4.2
BULLSEYE	5.3	3.1	4.2
BGR-TF3	5.3	3.1	4.2
CHANTILLY	5.3	3.1	4.2
KINGDOM	5.2	3.2	4.2
DTTHO TF/KBG MIX	5.2	3.1	4.2
KY-31 E+	5.0	3.2	4.1
A-SFT	5.2	3.1	4.1
RADAR	5.2	2.9	4.1
KENBLUE	5.0	3.1	4.1
NATURAL KNIT @ PRG MIX	4.8	3.2	4.0
DUTCH WHITE CLOVER	4.7	3.0	3.9
YAAK	4.7	2.6	3.7
LSD VALUE	1.0	1.0	1.0
C.V. (%)	11.6	19.0	14.4

*/ ENTRIES WITHIN THIS TABLE ARE ORDERED BY THE OVERALL MEAN AND HAVE SIMILAR TURF QUALITY PERFORMANCES IN ALL TEST LOCATIONS INCLUDED IN THIS LPI GROUP. IF YOUR STATE IS NOT REPRESENTED, THEN CHOOSE A LPI GROUP THAT CONTAINS A LOCATION AND MANAGEMENT SIMILAR TO YOUR PLANTING CONDITIONS. FOR MORE INFORMATION ON LPI, GO TO WWW.NTEP.ORG/LPI_Q&A.PDF

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

TABLE 5. MEAN TURFGRASS QUALITY RATINGS OF COOL-SEASON CULTIVARS GROWN UNDER 1/
 LOW INPUT IN LOCATION PERFORMANCE INDEX (LPI) GROUP 5 */
 2019 DATA
 TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF 2/

NAME	IN1	UT1	MEAN
YAAK	5.9	4.7	5.3
DTT TALL FESCUE MIX	5.8	4.3	5.0
DTTHO TF/KBG MIX	5.8	4.2	5.0
VITALITY DOUBLE	5.8	4.1	4.9
DLFPS TFASTC	5.7	3.9	4.8
BULLSEYE	5.4	4.1	4.7
BGR-TF3	5.5	3.7	4.6
KINGDOM	5.5	3.7	4.6
DLFPS TF-A	5.4	3.8	4.6
SOUTHERN MIXTURE	5.7	3.3	4.5
A-SFT	5.3	3.5	4.4
KY-31 E+	5.0	3.5	4.2
VITALITY LOW	5.8	2.6	4.2
DLFPS TFAM	4.4	3.6	4.0
RADAR	5.5	2.3	3.9
DLFPS CHCRSH	5.6	2.1	3.8
NORTHERN MIXTURE	5.2	2.2	3.7
DLFPS CHCRM	5.2	1.9	3.6
CS MIX	5.2	1.9	3.5
CHANTILLY	5.3	1.8	3.5
CRS MIX #1	5.6	1.4	3.5
KENBLUE	4.7	2.0	3.3
CRS MIX #2	5.2	1.1	3.2
MNHD-15	5.3	0.9	3.1
RESOLUTE (7H7)	5.1	1.0	3.1
SPARTAN II	5.0	1.1	3.0
QUATRO	4.4	1.1	2.8
BEWITCHED	3.9	1.4	2.6
NATURAL KNIT © PRG MIX	3.4	1.3	2.4
CRS MIX #3	4.0	0.3	2.1
DUTCH WHITE CLOVER	3.1	0.9	2.0
DLFPS SHHM	3.5	0.3	1.9
LSD VALUE	1.0	1.0	1.0
C.V. (%)	12.4	25.7	16.7

*/ ENTRIES WITHIN THIS TABLE ARE ORDERED BY THE OVERALL MEAN AND HAVE SIMILAR TURF QUALITY PERFORMANCES IN ALL TEST LOCATIONS INCLUDED IN THIS LPI GROUP. IF YOUR STATE IS NOT REPRESENTED, THEN CHOOSE A LPI GROUP THAT CONTAINS A LOCATION AND MANAGEMENT SIMILAR TO YOUR PLANTING CONDITIONS. FOR MORE INFORMATION ON LPI, GO TO WWW.NTEP.ORG/LPI_Q&A.PDF

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

TABLE 6.

MEAN TURFGRASS QUALITY AND OTHER RATINGS OF COOL-SEASON CULTIVARS
 UNDER LOW INPUT WITH INITIAL ANNUAL GRASS PRE-EMERGENCE AT STORRS, CT 1/
 2019 DATA

TURFGRASS QUALITY AND OTHER RATINGS 1-9; 9=BEST 2/

NAME	SPRING GREENUP	PERCENT GROUND COVER		PERCENT WEEDS		QUALITY RATINGS					MEAN
		FALL	SUMMER	FALL	MAY	JUN	JUL	AUG	SEP	OCT	
DLFPS TFASTC	5.3	80.0	10.0	11.7	8.0	6.3	6.7	6.0	6.3	6.7	6.7
CRS MIX #3	2.3	61.7	3.7	9.3	7.3	7.0	6.7	6.3	5.7	6.3	6.6
DLFPS TFAM	4.7	80.0	8.3	8.3	8.0	6.7	6.7	5.7	6.3	5.3	6.4
VITALITY DOUBLE	5.7	53.3	26.7	15.0	6.3	6.0	6.3	5.3	5.3	6.0	5.9
DLFPS CHCRM	5.0	75.0	10.0	8.3	6.3	6.3	6.3	4.0	6.0	6.0	5.8
CRS MIX #1	4.7	75.0	41.0	18.3	5.7	5.0	5.3	5.0	5.7	5.7	5.4
DTTHO TF/KBG MIX	5.3	65.0	58.3	40.0	5.7	6.7	5.3	4.7	4.7	5.3	5.4
BGR-TF3	5.3	76.7	30.0	25.0	5.7	5.3	4.7	4.3	5.7	6.0	5.3
VITALITY LOW	3.0	53.3	31.7	31.7	5.7	5.3	5.7	4.7	5.0	5.7	5.3
BULLSEYE	5.0	71.7	18.3	28.3	6.3	6.0	4.3	4.0	5.0	5.7	5.2
DLFPS TF-A	5.3	75.0	36.7	25.0	5.7	5.3	5.0	4.3	5.3	5.3	5.2
CRS MIX #2	3.3	81.7	26.7	26.7	5.0	4.7	5.0	4.7	5.7	5.7	5.1
MNHD-15	3.3	65.0	31.7	33.3	5.7	5.0	5.3	4.7	5.0	4.7	5.1
DLFPS SHHM	3.0	61.7	17.0	41.7	6.3	6.0	5.3	4.0	4.0	4.3	5.0
CS MIX	4.3	53.3	23.3	35.0	6.3	5.7	4.7	3.7	4.7	4.7	4.9
RADAR	4.0	53.3	28.3	28.3	6.0	4.7	5.0	3.7	5.0	4.7	4.8
DLFPS CHCRSH	4.3	60.0	35.0	40.0	6.0	5.0	4.0	3.0	4.7	4.7	4.6
KINGDOM	4.7	41.7	48.3	40.0	5.7	4.7	5.0	3.3	4.3	4.7	4.6
SPARTAN II	3.0	38.3	31.7	35.0	5.3	4.7	4.7	3.7	4.7	4.7	4.6
A-SFT	5.0	46.7	50.0	60.0	5.3	4.3	4.0	3.7	4.7	5.0	4.5
DTT TALL FESCUE MIX	5.0	63.3	35.0	56.7	5.3	5.0	4.0	3.0	4.0	4.3	4.3
CHANTILLY	5.7	33.3	58.3	63.3	5.7	4.7	4.3	3.0	3.7	4.0	4.2
KY-31 E+	5.7	66.7	53.3	43.3	5.0	3.0	4.7	3.7	4.3	4.3	4.2
SOUTHERN MIXTURE	4.7	45.0	58.3	35.0	6.0	3.7	3.7	3.7	4.0	4.0	4.2
RESOLUTE (7H7)	4.7	53.3	46.7	56.7	4.3	4.0	4.7	3.3	3.0	4.0	3.9
NORTHERN MIXTURE	5.3	36.7	60.0	61.7	5.7	3.0	4.3	2.7	3.7	3.7	3.8
BEWITCHED	4.7	21.7	75.0	73.3	3.0	4.0	4.3	2.7	3.7	3.7	3.6
NATURAL KNIT © PRG MIX	5.0	25.0	63.3	75.0	4.3	3.7	3.3	3.0	4.0	3.0	3.6
YAAK	3.3	30.0	83.3	66.7	2.0	2.3	3.0	3.0	4.0	4.0	3.1
QUATRO	3.3	40.0	63.3	80.0	4.3	3.3	2.7	2.0	3.0	2.3	2.9
KENBLUE	5.0	25.0	83.3	93.3	2.3	1.7	2.0	1.0	2.0	1.7	1.8
DUTCH WHITE CLOVER	2.0	31.7	90.0	91.7	1.0	2.0	1.7	1.0	2.0	1.7	1.6
LSD VALUE	1.6	28.2	25.5	19.3	1.0	1.3	1.0	1.5	1.3	1.0	0.7
C.V. (%)	21.0	30.2	38.5	30.0	12.5	17.5	14.4	24.6	18.3	14.8	10.1

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN.
 STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

TABLE 7. MEAN TURFGRASS QUALITY AND OTHER RATINGS OF COOL-SEASON CULTIVARS
 UNDER LOW INPUT WITH INITIAL ANNUAL GRASS PRE-EMERGENCE AT COLUMBIA, MO 1/
 2019 DATA

TURFGRASS QUALITY AND OTHER RATINGS 1-9; 9=BEST 2/

NAME	PERCENT GROUND COVER				QUALITY RATINGS				MEAN
	SPRING	APR	MAY	JUN	JUL	AUG	SEP		
DLFPS TFAM	97.3	7.7	8.0	8.0	7.3	7.3	7.0	7.6	
DLFPS TFASTC	93.7	7.0	7.3	7.3	7.3	7.0	6.0	7.0	
DLFPS TF-A	97.0	7.7	7.3	7.0	6.0	6.7	5.0	6.6	
VITALITY DOUBLE	93.3	6.3	6.7	6.7	7.0	6.3	6.0	6.5	
SOUTHERN MIXTURE	97.0	7.3	6.3	6.7	6.0	5.7	5.3	6.2	
DTT TALL FESCUE MIX	91.7	6.3	6.3	6.7	6.0	6.0	5.3	6.1	
DTTHO TF/KBG MIX	88.3	6.0	6.3	7.0	6.3	6.0	5.0	6.1	
KINGDOM	83.3	5.3	6.3	6.3	6.3	6.0	5.7	6.0	
BGR-TF3	86.7	6.0	6.0	6.0	5.7	6.0	5.3	5.8	
KY-31 E+	93.3	6.7	5.7	5.7	5.7	5.7	5.0	5.7	
BULLSEYE	88.3	5.7	6.0	6.0	5.7	5.3	4.7	5.6	
A-SFT	80.0	5.3	6.0	6.3	5.7	4.7	5.0	5.5	
MNHD-15	84.3	5.7	5.7	6.0	5.0	5.0	4.3	5.3	
NORTHERN MIXTURE	81.7	4.7	5.7	5.7	6.0	5.3	4.7	5.3	
KENBLUE	90.0	5.3	5.3	5.7	5.7	4.7	4.3	5.2	
BEWITCHED	78.3	4.0	5.0	5.0	5.3	5.3	5.0	4.9	
DLFPS SHHM	86.7	6.0	5.3	5.0	4.3	4.0	4.0	4.8	
YAAK	92.7	5.7	5.0	5.0	4.3	4.3	4.0	4.7	
DLFPS CHCRSH	55.0	3.3	4.3	4.7	5.0	5.0	5.0	4.6	
VITALITY LOW	66.7	3.7	4.0	4.7	5.3	5.3	4.7	4.6	
CHANTILLY	56.7	3.3	3.7	4.7	5.0	5.0	5.0	4.4	
SPARTAN II	84.3	6.0	5.0	4.3	4.0	4.0	3.3	4.4	
CRS MIX #2	76.7	4.7	4.3	4.3	4.0	4.3	4.3	4.3	
DLFPS CHCRM	51.7	2.7	3.3	4.0	4.7	5.3	4.7	4.1	
RADAR	46.7	2.7	3.3	4.0	4.7	5.0	4.7	4.1	
NATURAL KNIT © PRG MIX	60.0	4.0	4.0	4.0	4.0	3.7	4.3	4.0	
RESOLUTE (7H7)	76.7	4.7	4.3	4.0	3.7	3.7	3.7	4.0	
CRS MIX #1	63.3	3.3	3.7	4.0	4.0	4.0	4.7	3.9	
CS MIX	46.7	3.0	3.7	4.0	4.3	4.7	4.0	3.9	
QUATRO	83.3	4.7	4.7	4.3	3.7	3.0	3.3	3.9	
CRS MIX #3	80.0	4.3	4.3	3.7	4.0	3.0	3.3	3.8	
DUTCH WHITE CLOVER	61.7	3.0	3.0	3.0	3.3	3.3	4.7	3.4	
LSD VALUE	12.0	1.3	1.1	1.1	1.0	1.0	2.4	0.8	
C.V. (%)	10.1	16.3	14.3	13.6	12.5	13.5	22.1	10.7	

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

TABLE 8. MEAN TURFGRASS QUALITY AND OTHER RATINGS OF COOL-SEASON CULTIVARS WITH ADDITIONAL FERTILIZER (MEDIUM INPUT) AT WEST LAFAYETTE, IN 1/ 2019 DATA

TURFGRASS QUALITY AND OTHER RATINGS 1-9; 9=BEST 2/

NAME	SUMMER DENSITY	QUALITY RATINGS						MEAN
		MAY	JUN	JUL	AUG	SEP	OCT	
DTHO TF/KBG MIX	7.0	6.7	6.7	6.7	5.3	6.0	5.0	6.1
DTT TALL FESCUE MIX	7.0	6.7	6.7	5.7	5.7	6.0	5.3	6.0
A-SFT	6.3	6.7	7.0	6.3	5.0	5.3	5.0	5.9
DLFPS TF-A	6.7	6.3	7.0	6.0	5.3	6.0	5.0	5.9
BGR-TF3	6.7	6.0	6.7	6.3	5.0	5.7	5.0	5.8
SOUTHERN MIXTURE	6.3	6.7	6.7	5.7	5.3	5.3	5.0	5.8
RADAR	6.7	6.7	6.0	5.7	5.0	5.0	5.7	5.7
DLFPS TFASTC	6.7	5.3	6.3	6.3	5.3	5.3	5.0	5.6
KINGDOM	6.3	6.3	6.3	6.0	4.3	5.3	5.0	5.6
DLFPS CHCRSH	7.0	6.0	6.3	6.0	5.0	4.7	5.0	5.5
NORTHERN MIXTURE	5.0	6.0	6.3	5.3	4.7	5.0	5.7	5.5
DLFPS TFAM	6.7	5.7	6.3	5.3	5.0	5.0	5.3	5.4
CS MIX	5.3	6.0	5.7	5.3	4.7	4.7	5.3	5.3
DLFPS CHCRM	6.0	6.0	5.7	5.3	4.7	4.7	5.7	5.3
VITALITY DOUBLE	6.7	5.3	6.7	5.7	5.0	5.3	4.0	5.3
VITALITY LOW	5.7	6.7	5.7	5.3	5.0	4.3	4.7	5.3
YAAK	7.0	5.7	6.0	6.0	4.0	4.7	5.0	5.2
BULLSEYE	5.7	6.0	6.3	5.7	4.0	4.7	3.7	5.1
CHANTILLY	6.0	5.3	5.7	5.0	4.7	4.7	5.0	5.1
CRS MIX #2	5.0	5.0	5.7	4.7	4.3	4.0	5.0	4.8
KY-31 E+	6.3	5.3	6.0	5.0	4.0	4.0	3.7	4.7
BEWITCHED	5.0	5.0	5.3	4.7	4.3	4.3	4.0	4.6
CRS MIX #1	6.0	5.0	5.3	5.3	4.0	4.0	3.7	4.6
MNHD-15	5.7	5.7	5.0	4.7	4.3	3.7	4.3	4.6
SPARTAN II	5.3	4.7	5.0	4.7	3.7	4.7	4.7	4.6
QUATRO	3.7	4.7	4.7	4.0	4.0	3.0	5.0	4.2
KENBLUE	4.7	5.0	4.7	4.3	4.0	3.3	3.3	4.1
NATURAL KNIT ® PRG MIX	4.3	4.3	5.7	5.0	2.7	3.3	3.7	4.1
RESOLUTE (7H7)	4.0	4.3	5.3	4.7	3.7	3.3	3.3	4.1
DLFPS SHHM	2.7	3.0	3.7	3.3	3.3	2.0	2.3	2.9
DUTCH WHITE CLOVER	3.3	3.7	3.7	3.0	2.0	2.3	2.0	2.8
CRS MIX #3	2.3	3.0	3.3	2.3	2.0	2.0	2.0	2.4
LSD VALUE	2.0	1.5	1.0	1.1	1.2	1.2	1.4	0.7
C.V. (%)	21.0	16.6	10.9	13.7	17.1	17.4	19.3	9.8

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

TABLE 9. SPRING GREENUP RATINGS OF COOL-SEASON CULTIVARS 1/
GROWN UNDER LOW INPUT IN THE U.S.
2019 DATA

SPRING GREENUP RATINGS 1-9; 9=COMPLETELY GREEN 2/

NAME	CT1	NC1	NE1	UT1	MEAN
YAAK	4.7	6.3	3.3	9.0	5.8
DLFPS TFASTC	5.3	7.3	4.3	3.0	5.0
DTT TALL FESCUE MIX	6.0	6.3	4.0	3.0	4.8
KY-31 E+	4.7	6.3	4.0	4.3	4.8
SOUTHERN MIXTURE	5.3	7.7	3.3	3.0	4.8
DLFPS CHCRSH	5.7	8.0	3.3	2.0	4.8
NORTHERN MIXTURE	5.7	8.0	3.7	1.3	4.7
VITALITY DOUBLE	5.7	6.0	4.0	3.0	4.7
DLFPS TF-A	5.0	7.0	3.7	3.0	4.7
DLFPS TFAM	6.3	7.7	2.3	2.3	4.7
RADAR	6.3	7.0	3.3	1.7	4.6
A-SFT	5.7	6.0	4.0	2.3	4.5
BULLSEYE	5.7	6.0	3.3	3.0	4.5
DTTHO TF/KBG MIX	5.3	5.0	4.0	3.7	4.5
NATURAL KNIT ® PRG MIX	5.3	5.0	4.3	3.0	4.4
VITALITY LOW	4.0	8.0	3.7	2.0	4.4
CHANTILLY	6.3	7.0	3.0	1.0	4.3
BGR-TF3	6.0	5.3	3.3	2.3	4.3
DLFPS CHCRM	4.7	6.7	4.0	1.3	4.2
KINGDOM	4.7	5.7	3.0	2.7	4.0
CRS MIX #3	3.0	7.0	3.3	2.3	3.9
BEWITCHED	4.7	4.0	4.3	2.3	3.8
CS MIX	2.7	7.0	4.0	1.7	3.8
SPARTAN II	3.7	7.0	3.7	1.0	3.8
MNHD-15	3.0	6.7	4.0	1.0	3.7
CRS MIX #2	3.7	5.7	3.7	1.3	3.6
QUATRO	3.3	6.0	4.0	1.0	3.6
RESOLUTE (7H7)	4.0	6.0	3.3	1.0	3.6
KENBLUE	5.0	4.3	3.0	2.0	3.6
DLFPS SHHM	3.3	5.7	3.3	1.7	3.5
CRS MIX #1	3.3	5.3	3.3	1.7	3.4
DUTCH WHITE CLOVER	2.3	3.0	3.7	2.7	2.9
LSD VALUE	1.6	1.7	1.5	1.0	0.7
C.V. (%)	21.3	17.4	25.7	25.9	21.8

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

TABLE 10. SUMMER DENSITY RATINGS OF COOL-SEASON CULTIVARS 1/
GROWN UNDER LOW INPUT IN THE U.S.
2019 DATA

DENSITY RATINGS 1-9; 9=MAXIMUM DENSITY 2/

NAME	IN1
CRS MIX #1	7.3
RADAR	7.3
VITALITY DOUBLE	7.0
YAAK	7.0
A-SFT	6.7
DLFPS CHCRSH	6.7
DTT TALL FESCUE MIX	6.7
KINGDOM	6.7
VITALITY LOW	6.7
BGR-TF3	6.3
CHANTILLY	6.3
DLFPS CHCRM	6.3
DLFPS TFASTC	6.3
CS MIX	6.0
DLFPS TF-A	6.0
DLFPS TFAM	6.0
MNHD-15	6.0
NORTHERN MIXTURE	6.0
CRS MIX #2	5.7
DTTHO TF/KBG MIX	5.7
KY-31 E+	5.3
SOUTHERN MIXTURE	5.3
KENBLUE	5.0
BULLSEYE	4.7
RESOLUTE (7H7)	4.7
SPARTAN II	4.7
NATURAL KNIT © PRG MIX	4.3
QUATRO	4.3
BEWITCHED	4.0
DLFPS SHHM	4.0
DUTCH WHITE CLOVER	3.7
CRS MIX #3	2.7
LSD VALUE	1.8
C.V. (%)	20.1

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

TABLE 11. PERCENT LIVING GROUND COVER (SPRING) RATINGS OF COOL-SEASON CULTIVARS 1/
GROWN UNDER LOW INPUT IN THE U.S.
2019 DATA

PERCENT LIVING GROUND COVER IN SPRING: LOCATIONS 2/

NAME	MO1	PA2	VA1	MEAN
SOUTHERN MIXTURE	94.3	99.0	97.7	97.0
DLFPS TF-A	92.7	96.0	94.3	94.3
SPARTAN II	93.3	97.0	91.7	94.0
DLFPS TFAM	97.0	94.3	90.0	93.8
KY-31 E+	88.3	97.0	95.0	93.4
DTTHO TF/KBG MIX	90.0	98.3	91.7	93.3
DLFPS TFASTC	89.3	98.7	88.3	92.1
DTT TALL FESCUE MIX	91.7	94.0	90.0	91.9
BULLSEYE	88.3	94.3	92.7	91.8
A-SFT	83.3	98.7	91.0	91.0
VITALITY DOUBLE	94.7	80.0	97.3	90.7
BGR-TF3	90.0	86.7	95.0	90.6
CRS MIX #3	80.0	94.3	94.3	89.6
YAAK	83.3	98.3	86.7	89.4
CRS MIX #2	80.0	95.3	91.7	89.0
CRS MIX #1	75.0	98.3	93.3	88.9
RESOLUTE (7H7)	90.0	98.3	78.3	88.9
MNHD-15	90.0	81.7	93.3	88.3
KENBLUE	85.0	98.7	80.0	87.9
KINGDOM	76.7	98.7	88.3	87.9
NORTHERN MIXTURE	75.0	96.0	91.7	87.6
QUATRO	83.3	94.3	83.3	87.0
VITALITY LOW	70.0	97.0	86.3	84.4
DLFPS CHCRSH	63.3	96.0	86.7	82.0
DLFPS SHHM	83.3	81.7	80.0	81.7
RADAR	58.3	97.7	88.3	81.4
DLFPS CHCRM	58.3	93.0	91.7	81.0
CS MIX	53.3	98.3	83.3	78.3
CHANTILLY	55.0	83.0	84.7	74.2
BEWITCHED	66.7	98.7	51.7	72.3
NATURAL KNIT © PRG MIX	58.3	85.0	65.0	69.4
DUTCH WHITE CLOVER	55.0	94.3	48.3	65.9
LSD VALUE	14.5	7.7	16.9	7.9
C.V. (%)	11.4	5.1	12.2	9.8

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

TABLE 12. PERCENT LIVING GROUND COVER (SUMMER) RATINGS OF COOL-SEASON CULTIVARS 1/
 GROWN UNDER LOW INPUT IN THE U.S.
 2019 DATA

PERCENT LIVING GROUND COVER IN SPRING: LOCATIONS 2/

NAME	MN1
YAAK	84.0
DUTCH WHITE CLOVER	79.0
MNHD-15	76.0
CHANTILLY	75.3
CRS MIX #2	75.3
CRS MIX #3	73.0
CRS MIX #1	72.7
SOUTHERN MIXTURE	71.3
VITALITY LOW	71.3
SPARTAN II	67.7
BULLSEYE	67.3
CS MIX	67.0
RADAR	67.0
DLFPS CHCRSH	66.3
NORTHERN MIXTURE	66.0
KY-31 E+	65.7
DTT TALL FESCUE MIX	62.7
KENBLUE	62.0
DLFPS CHCRM	61.7
RESOLUTE (7H7)	61.7
DLFPS TFASTC	58.7
QUATRO	56.3
DTTHO TF/KBG MIX	53.3
VITALITY DOUBLE	52.3
BGR-TF3	52.0
DLFPS TF-A	51.3
KINGDOM	51.0
A-SFT	50.7
DLFPS TFAM	43.7
DLFPS SHHM	31.3
BEWITCHED	25.0
NATURAL KNIT © PRG MIX	14.7
LSD VALUE	18.1
C.V. (%)	18.6

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

TABLE 13. PERCENT LIVING GROUND COVER (FALL) RATINGS OF COOL-SEASON CULTIVARS 1/
GROWN UNDER LOW INPUT IN THE U.S.
2019 DATA

PERCENT LIVING GROUND COVER IN FALL: LOCATIONS 2/										
NAME	CT1	MI1	MN1	NC1	NE1	OR1	PA2	UT1	VA1	MEAN
DLFPS TFAM	83.3	94.7	60.0	94.7	80.0	90.0	99.0	70.0	96.0	85.3
BULLSEYE	55.0	91.7	86.0	68.3	91.3	91.7	98.3	76.7	96.0	83.9
DLFPS TFASTC	81.7	95.0	84.7	81.7	80.0	65.0	98.3	73.3	88.0	83.1
DLFPS TF-A	48.3	94.7	85.3	90.0	83.3	90.0	98.0	66.7	89.7	82.9
VITALITY DOUBLE	48.3	95.0	75.7	86.7	76.7	91.7	98.3	73.3	99.0	82.7
DTT TALL FESCUE MIX	63.3	96.3	76.0	75.0	73.3	88.3	98.3	73.3	89.7	81.5
BGR-TF3	68.3	94.7	77.0	73.3	73.3	90.0	99.0	66.7	90.0	81.4
A-SFT	48.3	95.0	77.0	78.3	83.3	85.0	98.3	63.3	88.3	79.7
SOUTHERN MIXTURE	43.3	97.7	83.7	60.0	81.7	92.0	99.0	73.3	86.3	79.7
DLFPS CHCRSH	70.0	96.3	88.0	36.7	85.0	98.3	99.0	56.7	81.7	79.1
VITALITY LOW	63.3	94.7	83.3	41.7	73.3	91.7	99.0	70.0	81.7	77.6
CS MIX	60.0	96.3	83.3	35.0	85.0	94.7	98.7	50.0	80.0	75.9
DLFPS CHCRM	80.0	93.3	80.0	35.0	76.7	93.0	98.7	40.0	81.7	75.4
KY-31 E+	36.7	95.0	88.3	23.3	80.0	80.0	98.0	90.0	86.3	75.3
KINGDOM	58.3	96.3	81.0	45.0	56.7	85.0	98.7	66.7	85.0	74.7
DTTHO TF/KBG MIX	50.0	91.7	71.3	31.7	80.0	88.3	99.0	76.7	81.7	74.5
CRS MIX #1	76.7	91.3	80.3	30.0	80.0	76.7	98.7	43.3	92.7	74.4
YAAK	65.0	96.3	68.3	65.3	80.0	19.0	98.0	99.0	78.3	74.4
RADAR	41.7	81.7	82.7	50.0	76.7	97.0	97.7	53.3	80.0	73.4
NORTHERN MIXTURE	36.7	95.0	84.3	43.3	89.7	90.0	98.3	30.0	80.0	71.9
CRS MIX #3	86.7	96.3	83.0	40.0	80.0	33.3	98.3	10.0	81.7	67.7
SPARTAN II	53.3	93.3	74.3	20.0	78.3	83.3	98.7	16.7	89.7	67.5
CHANTILLY	45.0	96.3	90.3	16.7	66.7	79.3	98.0	33.3	78.3	67.1
MNHD-15	56.7	95.0	75.7	15.0	85.0	70.0	98.0	16.7	89.7	66.9
CRS MIX #2	53.3	97.7	79.7	18.3	75.0	66.7	98.7	20.0	91.3	66.7
QUATRO	38.3	95.0	73.7	8.3	78.3	87.7	98.0	30.0	85.0	66.0
RESOLUTE (7H7)	63.3	89.7	67.0	13.3	81.7	43.3	98.3	16.7	99.0	63.6
DLFPS SHHM	61.7	95.0	29.0	33.3	66.7	70.0	99.0	16.7	96.0	63.0
NATURAL KNIT © PRG MIX	35.0	93.3	45.3	11.7	81.7	46.7	99.0	20.0	73.3	56.2
KENBLUE	13.3	86.7	71.7	27.3	71.7	5.0	98.3	40.0	83.3	55.3
BEWITCHED	33.3	91.3	39.0	3.3	83.3	5.7	99.0	13.3	73.3	49.1
DUTCH WHITE CLOVER	28.3	96.3	27.3	5.0	78.3	1.7	98.3	10.0	80.0	47.3
LSD VALUE	29.1	9.1	14.0	34.9	24.5	22.1	0.7	17.4	10.6	6.9
C.V. (%)	33.1	6.0	11.8	51.2	19.4	19.2	0.5	22.2	7.7	17.9

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

TABLE 14.

PERCENT COVER RATINGS OF COOL-SEASON CULTIVARS 1/
 GROWN UNDER LOW INPUT IN THE U.S.
 2019 DATA 2/

NAME	UT1
YAAK	99.0
DTTHO TF/KBG MIX	73.3
KY-31 E+	70.0
BULLSEYE	66.7
KINGDOM	66.7
SOUTHERN MIXTURE	66.7
DTT TALL FESCUE MIX	63.3
VITALITY DOUBLE	63.3
BGR-TF3	56.7
VITALITY LOW	56.7
DLFPS TF-A	50.0
DLFPS TFAM	50.0
DLFPS TFASTC	50.0
A-SFT	46.7
DLFPS CHCRM	33.3
RADAR	30.0
DLFPS CHCRSH	26.7
CS MIX	23.3
CRS MIX #1	20.0
KENBLUE	20.0
NORTHERN MIXTURE	16.7
QUATRO	16.7
CHANTILLY	13.3
CRS MIX #2	13.3
NATURAL KNIT © PRG MIX	13.3
CRS MIX #3	10.0
DLFPS SHHM	10.0
MNHD-15	10.0
RESOLUTE (7H7)	10.0
SPARTAN II	10.0
BEWITCHED	6.7
DUTCH WHITE CLOVER	6.7
LSD VALUE	15.1
C.V. (%)	25.8

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

TABLE 15.

PERCENT GRASSY WEEDS RATINGS OF COOL-SEASON CULTIVARS 1/
 GROWN UNDER LOW INPUT IN THE U.S.
 2019 DATA 2/

NAME	OR1
KENBLUE	90.0
BEWITCHED	75.0
DUTCH WHITE CLOVER	70.0
CRS MIX #3	41.3
DLFPS SHHM	16.7
YAAK	13.3
MNHD-15	11.7
RESOLUTE (7H7)	7.7
SPARTAN II	4.7
CRS MIX #2	4.0
VITALITY LOW	4.0
CRS MIX #1	3.3
QUATRO	2.0
A-SFT	1.7
NATURAL KNIT © PRG MIX	1.7
CHANTILLY	1.3
CS MIX	1.3
NORTHERN MIXTURE	1.3
DLFPS CHCRSH	0.7
KINGDOM	0.7
DLFPS CHCRM	0.3
RADAR	0.3
BGR-TF3	0.0
BULLSEYE	0.0
DLFPS TF-A	0.0
DLFPS TFAM	0.0
DLFPS TFASTC	0.0
DTT TALL FESCUE MIX	0.0
DTTHO TF/KBG MIX	0.0
KY-31 E+	0.0
SOUTHERN MIXTURE	0.0
VITALITY DOUBLE	0.0
LSD VALUE	13.2
C.V. (%)	74.3

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

TABLE 16.

PERCENT WEEDS (SPRING) RATINGS OF COOL-SEASON CULTIVARS 1/
GROWN UNDER LOW INPUT IN THE U.S.
2019 DATA

PERCENT WEEDS IN SPRING: LOCATIONS 2/

NAME	NC1	UT1	VA1	MEAN
DUTCH WHITE CLOVER	70.0	70.0	50.0	63.3
BEWITCHED	68.3	63.3	45.0	58.9
NATURAL KNIT @ PRG MIX	71.7	56.7	31.7	53.3
DLFPS SHHM	49.3	53.3	16.7	39.8
KENBLUE	41.7	56.7	20.0	39.4
QUATRO	55.0	40.0	16.7	37.2
NORTHERN MIXTURE	42.7	50.0	8.3	33.7
MNHD-15	53.3	40.0	6.7	33.3
SPARTAN II	48.3	40.0	8.3	32.2
CHANTILLY	50.0	26.7	15.0	30.6
CS MIX	43.3	30.0	16.7	30.0
RESOLUTE (7H7)	18.3	40.0	21.7	26.7
CRS MIX #2	20.7	46.7	8.3	25.2
CRS MIX #3	1.7	63.3	5.0	23.3
CRS MIX #1	30.0	30.0	6.7	22.2
DLFPS CHCRSH	23.3	26.7	13.3	21.1
KY-31 E+	45.0	13.3	5.0	21.1
KINGDOM	17.7	30.0	11.7	19.8
DTTHO TF/KBG MIX	30.0	20.0	8.3	19.4
A-SFT	17.7	30.0	9.0	18.9
DLFPS CHCRM	10.0	36.7	8.3	18.3
SOUTHERN MIXTURE	26.7	26.7	1.7	18.3
DLFPS TFASTC	2.3	33.3	11.7	15.8
VITALITY LOW	13.3	20.0	13.3	15.6
RADAR	15.0	20.0	11.7	15.6
DTT TALL FESCUE MIX	18.3	16.7	10.0	15.0
BULLSEYE	5.0	30.0	7.3	14.1
DLFPS TFAM	0.7	30.0	10.0	13.6
BGR-TF3	15.0	20.0	5.0	13.3
YAAK	25.0	0.0	13.3	12.8
DLFPS TF-A	10.0	20.0	5.7	11.9
VITALITY DOUBLE	7.3	23.3	2.3	11.0
LSD VALUE	32.7	16.0	17.3	13.4
C.V. (%)	68.7	28.9	81.3	56.1

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

TABLE 17. PERCENT WEEDS (SUMMER) RATINGS OF COOL-SEASON CULTIVARS 1/
GROWN UNDER LOW INPUT IN THE U.S.
2019 DATA

NAME	PERCENT WEEDS IN SUMMER: LOCATIONS 2/							
	CT1	MI1	MN1	NC1	NE1	PA2	VA1	MEAN
NATURAL KNIT ® PRG MIX	81.7	13.3	82.7	93.3	26.7	78.3	11.7	55.4
BEWITCHED	61.7	11.7	58.0	97.0	46.7	98.7	11.7	55.0
QUATRO	63.3	30.0	42.3	80.0	33.3	94.3	7.7	50.1
KENBLUE	91.7	16.7	37.0	63.0	10.0	98.7	8.3	46.5
DUTCH WHITE CLOVER	70.0	20.0	17.7	97.3	10.0	94.3	10.0	45.6
KINGDOM	38.3	13.3	48.0	61.7	50.0	98.7	7.7	45.4
SPARTAN II	51.7	36.7	31.7	78.3	13.3	97.0	5.0	44.8
DTTHO TF/KBG MIX	35.0	23.3	45.7	66.7	23.3	98.3	9.3	43.1
DTT TALL FESCUE MIX	58.3	25.0	36.7	41.7	40.0	94.0	5.0	43.0
KY-31 E+	26.7	10.0	33.7	97.3	20.0	97.0	6.7	41.6
NORTHERN MIXTURE	70.0	10.0	32.0	51.7	16.7	96.0	10.0	40.9
RESOLUTE (7H7)	48.3	26.7	38.3	55.0	16.7	98.3	0.0	40.5
CHANTILLY	51.7	26.7	23.7	68.3	16.7	79.7	11.7	39.8
VITALITY LOW	31.7	40.0	28.3	45.0	26.7	97.0	9.3	39.7
CS MIX	43.3	20.0	30.3	64.7	10.0	98.3	11.0	39.7
BGR-TF3	26.7	36.7	47.7	33.3	43.3	76.7	5.0	38.5
DLFPS CHCRSH	36.7	26.7	33.0	48.3	10.0	96.0	9.3	37.1
DLFPS SHHM	25.0	23.3	58.0	59.3	10.0	81.7	1.7	37.0
YAAK	50.0	15.0	16.0	37.7	23.3	98.3	11.7	36.0
A-SFT	60.0	13.3	38.7	21.7	13.3	98.7	6.0	36.0
CRS MIX #2	55.0	25.0	23.7	28.3	20.0	95.3	4.3	36.0
MNHD-15	36.7	21.7	23.7	71.7	10.0	81.7	5.0	35.8
BULLSEYE	51.7	8.3	32.3	43.3	16.7	94.3	1.7	35.5
DLFPS TF-A	36.7	23.3	47.7	23.3	13.3	96.0	5.0	35.0
DLFPS CHCRM	21.7	15.0	36.3	56.7	6.7	93.0	9.3	34.1
DLFPS TFAM	35.0	23.3	55.3	19.0	10.0	94.3	1.7	34.1
VITALITY DOUBLE	45.0	11.7	47.3	18.3	43.3	70.0	0.0	33.7
SOUTHERN MIXTURE	33.3	11.7	28.0	31.7	16.7	99.0	6.7	32.4
CRS MIX #1	16.7	26.7	25.3	31.7	16.7	98.3	3.3	31.2
RADAR	25.0	15.0	30.7	23.3	13.3	97.3	10.0	30.7
DLFPS TFASTC	9.3	15.0	40.3	26.7	10.0	98.7	6.0	29.4
CRS MIX #3	4.0	16.7	23.7	9.3	16.7	94.3	9.3	24.9
LSD VALUE	42.1	23.7	20.5	39.5	27.1	12.0	5.5	10.3
C.V. (%)	60.2	72.3	34.1	47.8	82.4	8.0	49.3	43.5

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

TABLE 18. PERCENT WEEDS (FALL) RATINGS OF COOL-SEASON CULTIVARS 1/
GROWN UNDER LOW INPUT IN THE U.S.
2019 DATA

PERCENT WEEDS IN FALL: LOCATIONS 2/						
NAME	CT1	MN1	NE1	PA2	UT1	MEAN
DUTCH WHITE CLOVER	86.7	67.7	16.7	86.7	70.0	65.5
DLFPS SHHM	55.0	63.7	36.7	86.7	66.7	61.7
BEWITCHED	71.7	60.7	36.7	80.0	56.7	61.1
KENBLUE	90.0	28.3	40.0	91.7	53.3	60.7
QUATRO	85.0	24.3	26.7	76.7	56.7	53.9
NATURAL KNIT © PRG MIX	45.0	49.3	23.3	86.7	60.0	52.9
SPARTAN II	56.7	25.7	26.7	86.7	60.0	51.1
MNHD-15	48.3	24.3	43.3	85.0	53.3	50.9
NORTHERN MIXTURE	56.7	16.0	36.7	85.0	56.7	50.2
RESOLUTE (7H7)	40.0	33.0	33.3	85.0	56.7	49.6
CHANTILLY	68.3	10.0	16.7	93.3	46.7	47.0
CRS MIX #2	45.0	20.3	23.3	83.3	60.0	46.4
CRS MIX #3	11.7	13.3	30.0	91.7	70.0	43.3
CS MIX	50.0	16.3	13.3	95.0	40.0	42.9
RADAR	35.0	17.7	43.3	91.7	26.7	42.9
DTTHO TF/KBG MIX	51.7	28.7	36.7	93.3	3.3	42.7
YAAK	53.3	31.7	36.7	91.7	0.0	42.7
VITALITY LOW	41.7	16.3	50.0	76.7	26.7	42.3
CRS MIX #1	20.0	19.7	46.7	83.3	36.7	41.3
KINGDOM	45.0	18.7	46.7	91.7	3.3	41.1
DLFPS CHCRSH	30.0	12.3	30.0	91.7	36.7	40.1
A-SFT	28.3	21.7	56.7	86.7	6.7	40.0
DLFPS CHCRM	25.0	20.0	23.3	71.7	50.0	38.0
DTT TALL FESCUE MIX	26.7	24.0	40.0	93.3	3.3	37.5
BGR-TF3	25.0	22.0	36.7	83.3	6.7	34.7
KY-31 E+	40.0	10.3	53.3	70.0	0.0	34.7
VITALITY DOUBLE	31.7	24.3	26.7	85.0	3.3	34.2
DLFPS TFAM	7.7	36.0	30.0	85.0	10.0	33.7
DLFPS TF-A	25.0	14.3	46.7	75.0	6.7	33.5
SOUTHERN MIXTURE	33.3	16.3	13.3	88.3	3.3	30.9
DLFPS TFASTC	10.0	15.3	20.0	86.7	10.0	28.4
BULLSEYE	18.3	14.3	23.3	81.7	3.3	28.2
LSD VALUE	28.9	12.5	33.6	12.3	17.5	10.1
C.V. (%)	42.3	30.4	62.8	8.9	33.4	32.1

1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).

2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

APPENDIX TABLE. SUMMARY OF TURFGRASS QUALITY RATINGS FOR COOL-SEASON CULTIVARS
GROWN UNDER LOW INPUT
2019 DATA

TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF

NAME	QUALITY	MAXIMUM
	MEAN 1/	IN TOP 25% 2/
A-SFT	4.1	16.7
BEWITCHED	3.2	16.7
BGR-TF3	4.3	33.3
BULLSEYE	4.3	33.3
CHANTILLY	3.8	16.7
CRS MIX #1	4.4	50.0
CRS MIX #2	4.3	41.7
CRS MIX #3	4.1	16.7
CS MIX	4.0	8.3
DLFPS CHCRM	4.1	25.0
DLFPS CHCRSH	4.2	16.7
DLFPS SHHM	3.5	16.7
DLFPS TF-A	4.5	41.7
DLFPS TFAM	4.4	33.3
DLFPS TFASTC	4.7	58.3
DTT TALL FESCUE MIX	4.3	41.7
DTTHO TF/KBG MIX	4.2	16.7
DUTCH WHITE CLOVER	2.8	8.3
KENBLUE	3.5	16.7
KINGDOM	4.0	8.3
KY-31 E+	3.7	8.3
MNHD-15	4.1	33.3
NATURAL KNIT ® PRG MIX	2.9	8.3
NORTHERN MIXTURE	4.0	8.3
QUATRO	3.5	8.3
RADAR	4.0	16.7
RESOLUTE (7H7)	4.1	41.7
SOUTHERN MIXTURE	4.2	16.7
SPARTAN II	3.8	25.0
VITALITY DOUBLE	4.6	33.3
VITALITY LOW	4.4	41.7
YAAK	4.0	8.3
LSD VALUE	0.3	
C.V. (%)	15.6	

- */ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN. STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD 0.05).
- **/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.
- 1/ MEAN AN AVERAGE OF ALL THE TURFGRASS QUALITY RATINGS FROM ALL LOCATIONS.
- 2/ MAXIMUM IN TOP 25% THE PERCENTAGE OF LOCATIONS WHERE THAT ENTRY FINISHED IN THE TOP 25% OF ALL ENTRIES.