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 and the National Turfgrass Federation, Inc. 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, one member from the Sports Turf Managers Association of America (STMA), 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.

Executive Director - Kevin N. Morris, National Turfgrass Evaluation Program, Inc.

CURRENT POLICY COMMITTEE MEMBERS:

Mr. Sean Chaney, DLF North America
Mr. Bo Lacy, Barenbrug USA.
Dr. Cole Thompson, USGA Green Section
Dr. Barry Stewart, Mississippi State University
Dr. Alec Kowalewski, Oregon State University
Mr. Mike Selman, Buena Vista Turf Farm
Mr. Mark Johnson, Golf Course Superintendents Assoc. of America
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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 2016-2020

State	Location	Code
Connecticut	Storrs	CT1
Connecticut	Storrs (Pre-emergence)	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 (Pre-emergence)	MO2
Nebraska	Mead	NE1
North Carolina	Raleigh	NC1
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 Oregon
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 4% Eureka hard fescue 14% Spartan hard fescue	DLF/Pickseed/Seed Research of Oregon
*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
19	CRS Mix #1	55% Gladiator hard fescue 45% 4GUD hard fescue	Columbia River Seed

Entry No.	Name	Species/Composition	Sponsor
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 2021

TABLE A.

2016-20 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	2.0-3.0	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	SILT LOAM AND SILT	5.6-6.0	0-60	151-240	0.0-1.0	FULL SUN	2.6-3.0	NO IRRIGATION
MO2	SILT LOAM AND SILT	5.6-6.0	0-60	151-240	0.0-1.0	FULL SUN	2.6-3.0	NO IRRIGATION
NC1	SILTY CLAY LOAM	6.1-6.5	61-150	0-150	2.0-3.0	FULL SUN	3.1-3.5	PREVENT DORMANCY
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 2016-20

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	GENETIC COLOR	SPRING GREENUP	SEEDLING VIGOR
CT1				X	X	X	X	X	X	X	X			X	
CT2				X	X	X	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	X	X	X	X				
MI1					X	X	X	X	X	X				X	
MN1				X	X	X	X	X	X	X					X
MO1			X	X	X	X	X	X	X	X	X		X		
MO2			X	X	X	X	X	X	X	X	X		X		
NC1	X	X	X	X	X	X	X	X	X	X	X	X		X	
NE1				X	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				X
UT1				X	X	X	X	X	X	X				X	
VA1				X	X	X	X	X	X	X					

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LOCATION	SUMMER DENSITY	FALL DENSITY	PERCENT COVER SPRING	PERCENT COVER SUMMER	PERCENT COVER FALL	DROUGHT TOLERANCE DORMANCY	STEM RUST	DOLLAR SPOT	BROWN PATCH WARM TEMP.	PINK SNOW MOLD	PERCENT ESTABLISHMENT	PERCENT WEEDS	PERCENT WEED RATINGS SPRING	SUMMER	FALL
CT1			X		X						X			X	X
CT2			X		X						X		X	X	X
IN1	X	X	X		X										
IN2	X	X	X		X										
MD1			X		X		X					X			X
MI1				X	X	X						X		X	
MN1			X	X	X							X	X	X	X
MO1			X	X	X						X		X		
MO2			X	X							X		X		
NC1			X	X	X								X	X	X
NE1			X		X						X			X	X
OR1			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

LOCATION	PERCENT PLANTED GRASSES	UNIFORMITY RATINGS	HEIGHT MEASUREMENTS JUNE	JULY	PERCENT BARE SOIL SPRING	SUMMER	FALL	PERCENT ESTABLISHMENT RATINGS JUNE 2015	JULY 2015	AUGUST 2015	NOVEMBER 2015	MARCH 2016	PERCENT PLANTED GRASSES SPRING	FALL	PERCENT WEEDS SPRING	FALL
CT1																
CT2																
IN1		X	X	X												
IN2		X	X	X												
MD1																
MI1																
MN1					X	X	X									
MO1																
MO2																
* NC1											X	X				
NE1																
* OR1																
PA2		X														
UT1		X						X	X	X						
VA1		X											X	X	X	X

* MORE WEED DATA FOR NC1 AND OR1 IN TABLE 39 AND 40.

TABLE 1.

MEAN TURFGRASS QUALITY RATINGS OF COOL-SEASON CULTIVARS GROWN UNDER   1/
LOW INPUT IN LOCATION PERFORMANCE INDEX (LPI) GROUP 1 **/
2016 DATA

TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF 2/

NAME	# Entry	VA1	MN1	UT1	OR1	MEAN
* VITALITY LOW	10	7.6	5.4	8.0	4.2	6.3
* CS MIX	29	7.3	5.2	8.4	3.8	6.2
* RADAR	31	7.3	4.9	8.6	3.8	6.2
DLFPS CHCRSH	15	7.1	5.0	7.5	4.0	5.9
SOUTHERN MIXTURE	28	7.0	4.1	8.4	3.8	5.8
DTT TALL FESCUE MIX	22	7.0	4.7	7.7	3.8	5.8
DLFPS TF-A	6	7.1	4.5	7.6	4.1	5.8
DLFPS TFASTC	14	7.2	4.2	7.7	4.1	5.8
A-SFT	24	6.7	4.5	8.4	3.6	5.8
* CHANTILLY	12	6.7	5.4	6.7	4.3	5.8
* VITALITY DOUBLE	11	7.2	4.4	7.6	3.9	5.8
* BULLSEYE	2	7.2	4.3	7.6	3.6	5.7
DLFPS CHCRM	7	7.4	3.8	8.0	3.5	5.7
* KINGDOM	25	6.9	4.0	8.4	3.3	5.7
NORTHERN MIXTURE	27	6.5	4.2	8.2	3.7	5.6
DTTHO TF/KBG MIX	23	6.7	4.4	7.6	3.8	5.6
CRS MIX #2	20	6.9	4.4	7.5	3.5	5.6
MNHD-15	5	6.9	4.7	6.9	3.7	5.5
* NATURAL KNIT ? PRG MIX	1	6.3	3.7	8.8	3.2	5.5
CRS MIX #1	19	7.0	4.8	6.0	3.9	5.4
DLFPS TFAM	9	7.4	3.1	7.7	3.3	5.4
BGR-TF3	4	6.6	3.9	7.5	3.4	5.3
* RESOLUTE (7H7)	26	6.9	4.5	5.8	3.8	5.2
* SPARTAN II	16	6.5	4.6	5.7	4.0	5.2
* QUATRO	17	6.4	3.9	6.5	3.4	5.1
DLFPS SHHM	8	7.0	3.3	6.8	3.1	5.0
CRS MIX #3	21	7.0	3.0	6.0	3.2	4.8
* KY-31 E+	18	5.7	2.9	6.8	3.5	4.7
* YAAK	30	6.7	3.5	4.2	3.5	4.5
* BEWITCHED	3	5.0	3.1	5.7	3.2	4.2
* DUTCH WHITE CLOVER	13	6.3	2.8	4.2	3.0	4.1
* KENBLUE	32	4.6	3.0	3.8	3.4	3.7
LSD VALUE		1.0	1.0	1.0	1.0	1.0
C.V. (%)		9.2	15.1	8.8	17.1	11.5

*/ COMMERCIALLY AVAILABLE IN THE USA IN 2021.

**/ 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 */
                                        2016 DATA

                    TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF 2/

NAME	PA1	IN1	MI1	NE1	MEAN
DLFPS TFASTC	5.1	6.2	4.7	4.9	5.2
DLFPS TF-A	4.8	6.0	4.6	4.8	5.1
KY-31 E+	5.0	5.9	4.2	4.6	4.9
SOUTHERN MIXTURE	5.1	5.9	4.2	4.6	4.9
DLFPS TFAM	5.1	6.0	4.2	4.5	4.9
VITALITY DOUBLE	4.6	5.8	4.4	4.6	4.8
VITALITY LOW	4.4	5.8	4.6	4.6	4.8
DLFPS CHCRM	4.8	5.8	4.2	4.4	4.8
NORTHERN MIXTURE	4.8	5.7	4.0	4.4	4.7
SPARTAN II	3.8	5.6	4.6	4.6	4.7
DTTHO TF/KBG MIX	4.5	5.6	4.2	4.4	4.7
RADAR	4.6	5.6	4.1	4.3	4.6
DLFPS CHCRSH	4.2	5.6	4.4	4.4	4.6
CHANTILLY	3.8	5.5	4.6	4.5	4.6
DTT TALL FESCUE MIX	4.3	5.5	4.2	4.3	4.6
CRS MIX #3	4.2	5.6	4.1	4.3	4.5
CRS MIX #1	3.6	5.5	4.5	4.4	4.5
A-SFT	4.5	5.4	3.8	4.1	4.5
YAAK	3.4	5.5	4.6	4.4	4.5
BULLSEYE	4.2	5.4	4.0	4.2	4.5
KINGDOM	4.7	5.4	3.7	4.1	4.5
RESOLUTE (7H7)	3.6	5.4	4.5	4.4	4.5
BGR-TF3	4.3	5.4	3.9	4.1	4.4
NATURAL KNIT ? PRG MIX	4.9	5.4	3.5	4.0	4.4
DLFPS SHHM	4.2	5.4	3.8	4.0	4.4
CS MIX	4.1	5.2	4.0	4.1	4.3
MNHD-15	3.7	5.2	4.1	4.1	4.3
BEWITCHED	4.0	5.3	3.8	4.1	4.3
CRS MIX #2	4.0	5.2	3.9	4.0	4.3
QUATRO	3.9	5.3	4.0	4.1	4.3
KENBLUE	3.4	5.2	4.1	4.2	4.2
DUTCH WHITE CLOVER	3.3	5.2	4.1	4.0	4.2
LSD VALUE	1.0	1.0	1.0	1.0	1.0
C.V. (%)	14.5	11.2	14.9	14.4	13.6

*/ 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 3.   MEAN TURFGRASS QUALITY RATINGS OF COOL-SEASON CULTIVARS GROWN UNDER   1/
                        LOW INPUT IN LOCATION PERFORMANCE INDEX (LPI) GROUP 3 */
                                          2016 DATA

                        TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF 2/

NAME	CT1	NC1	MO1	MEAN
DLFPS TFAM	6.5	6.1	7.2	6.6
CRS MIX #3	6.3	5.4	6.7	6.1
DLFPS CHCRM	6.2	5.2	6.8	6.1
DLFPS SHHM	6.1	5.0	6.6	5.9
DLFPS TFASTC	6.1	5.1	6.4	5.9
YAAK	6.4	4.7	6.3	5.8
VITALITY DOUBLE	6.1	4.6	6.4	5.7
VITALITY LOW	6.3	4.0	6.5	5.6
SOUTHERN MIXTURE	5.7	4.8	6.2	5.6
DLFPS TF-A	5.9	4.6	6.2	5.6
BULLSEYE	6.0	4.3	6.3	5.5
DUTCH WHITE CLOVER	5.9	4.6	6.0	5.5
RADAR	5.8	4.0	6.2	5.4
CRS MIX #1	6.1	3.8	6.1	5.3
RESOLUTE (7H7)	6.0	3.9	6.0	5.3
KINGDOM	5.5	4.3	6.0	5.3
DLFPS CHCRSH	5.9	3.8	6.0	5.2
DTT TALL FESCUE MIX	5.7	3.8	5.9	5.2
CS MIX	5.8	3.5	6.1	5.1
BGR-TF3	5.4	4.1	5.8	5.1
CRS MIX #2	5.6	3.8	5.9	5.1
MNHD-15	5.7	3.5	5.9	5.0
DTTHO TF/KBG MIX	5.4	4.0	5.7	5.0
SPARTAN II	5.7	3.7	5.6	5.0
QUATRO	5.4	3.8	5.6	4.9
NORTHERN MIXTURE	5.1	4.0	5.4	4.8
A-SFT	5.1	3.6	5.5	4.8
KY-31 E+	4.6	4.6	4.9	4.7
NATURAL KNIT ? PRG MIX	4.7	4.0	5.3	4.7
CHANTILLY	5.5	3.1	5.4	4.7
BEWITCHED	3.9	3.2	4.0	3.7
KENBLUE	3.9	2.8	3.6	3.5
LSD VALUE	1.0	1.0	1.0	1.0
C.V. (%)	11.1	14.9	10.6	11.9

*/ 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
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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 1 **/
2017 DATA

TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF 2/

NAME	ENTRY #	CT1	PA2	MD1	VA1	NC1	MI1	MO1	NE1	OR1	MEAN
DLFPS TFAM	9	7.5	4.6	5.5	7.2	4.2	5.4	5.8	4.0	5.1	5.7
CRS MIX #3	21	7.1	4.0	5.7	7.2	3.7	6.7	5.5	3.7	4.2	5.7
CRS MIX #2	20	6.2	3.8	5.8	6.9	2.8	6.7	6.0	3.9	4.1	5.5
DLFPS TFASTC	14	7.0	4.4	5.0	7.0	3.6	5.0	6.0	4.1	5.2	5.4
CRS MIX #1	19	6.2	3.6	5.8	6.9	2.4	6.5	6.1	3.7	3.9	5.3
*VITALITY DOUBLE	11	6.1	4.3	4.9	6.7	3.3	5.1	6.1	4.2	5.2	5.2
DLFPS CHCRM	7	6.2	4.2	5.3	6.5	3.3	4.8	6.1	3.8	5.0	5.2
*VITALITY LOW	10	5.5	3.7	5.6	6.5	2.5	6.1	6.1	3.8	4.2	5.2
MNHD-15	5	5.9	3.4	5.1	6.8	2.3	6.7	5.7	3.8	3.8	5.1
*BULLSEYE	2	6.2	4.3	4.5	6.6	3.5	4.6	6.0	4.2	5.4	5.1
DLFPS TF-A	6	6.5	4.2	4.5	6.6	3.3	4.5	5.8	4.0	5.2	5.1
*SPARTAN II	16	5.4	3.4	5.1	6.5	2.6	6.8	5.5	3.8	3.8	5.0
BGR-TF3	4	5.7	4.2	4.8	6.3	3.3	4.4	5.9	4.0	5.2	5.0
*RESOLUTE (7H7)	26	6.1	3.1	4.7	6.7	2.3	6.4	5.3	3.5	3.6	4.9
DTTHO TF/KBG MIX	23	6.0	3.9	4.0	6.6	3.1	5.1	5.6	4.2	5.0	4.9
DLFPS SHHM	8	5.2	3.5	4.3	6.3	3.3	6.7	4.8	4.1	4.1	4.9
*RADAR	31	4.6	3.8	5.6	5.9	2.5	5.1	6.3	3.8	4.6	4.8
DTT TALL FESCUE MIX	22	6.3	3.7	4.2	6.4	2.7	4.5	5.5	3.6	4.6	4.8
SOUTHERN MIXTURE	28	5.9	3.6	4.1	6.4	2.8	4.9	5.5	3.8	4.6	4.7
*CS MIX	29	5.2	3.2	4.6	6.2	2.2	5.9	5.5	3.7	3.9	4.7
DLFPS CHCRSH	15	4.5	3.5	4.8	6.0	2.4	5.7	5.8	4.0	4.3	4.7
*KINGDOM	25	6.1	3.7	3.5	6.4	2.8	4.2	5.4	3.9	4.9	4.6
*YAAK	30	7.1	3.5	2.6	6.7	2.6	3.7	5.1	3.7	4.9	4.5
*QUATRO	17	4.8	2.9	3.7	6.1	2.5	6.4	4.6	3.8	3.7	4.4
*KY-31 E+	18	4.5	3.5	3.2	5.9	2.9	5.5	5.0	4.4	4.7	4.4
*CHANTILLY	12	4.0	3.5	4.5	5.4	2.2	4.6	5.8	3.7	4.5	4.3
NORTHERN MIXTURE	27	4.1	3.4	4.2	5.5	2.1	4.5	5.7	3.7	4.5	4.2
A-SFT	24	5.0	3.5	3.0	5.8	2.8	4.1	5.0	3.9	4.9	4.2
*KENBLUE	32	2.9	3.0	3.4	5.2	2.3	5.6	4.9	4.1	4.1	3.9
*NATURAL KNIT ? PRG MIX	1	4.2	3.1	2.4	5.2	2.6	3.7	4.3	3.6	4.5	3.6
*DUTCH WHITE CLOVER	13	3.7	2.6	1.6	5.3	2.6	5.4	3.5	4.0	3.8	3.5
*BEWITCHED	3	4.2	2.8	2.5	5.0	2.0	3.6	4.3	3.2	4.0	3.5
LSD VALUE		0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
C.V. (%)		9.7	14.7	12.3	8.5	19.0	10.1	9.7	13.7	11.9	11.2

*/ COMMERCIALLY AVAILABLE IN THE USA IN 2021.

**/ 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
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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.

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TABLE 5.                        MEAN TURFGRASS QUALITY RATINGS OF COOL-SEASON CULTIVARS GROWN UNDER    1/
                                   LOW INPUT IN LOCATION PERFORMANCE INDEX (LPI) GROUP 2  */
                                                    2017 DATA

                         TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF  2/

                         NAME                      IN1       MN1       UT1       MEAN

                         YAAK                      7.2       4.9       5.4       5.8
                         MNHD-15                   6.6       5.4       4.3       5.4
                         KINGDOM                   6.9       4.7       4.6       5.4
                         CRS MIX #1                6.6       5.5       4.0       5.4
                         VITALITY DOUBLE           6.9       4.5       4.3       5.2
                         DTTHO TF/KBG MIX          6.7       4.3       4.6       5.2
                         NORTHERN MIXTURE          6.9       5.1       3.5       5.2
                         VITALITY LOW              6.6       5.1       3.7       5.1
                         RADAR                     6.8       5.2       3.2       5.1
                         DLFPS CHCRSH              6.6       5.0       3.6       5.1
                         CS MIX                    6.4       4.9       3.9       5.1
                         SOUTHERN MIXTURE          6.5       4.2       4.2       5.0
                         CRS MIX #2                6.3       4.7       3.9       5.0
                         BULLSEYE                  6.7       3.9       4.2       4.9
                         DLFPS TFASTC              6.5       3.8       4.4       4.9
                         DTT TALL FESCUE MIX       6.4       4.1       4.1       4.9
                         DLFPS TF-A                6.5       3.8       4.2       4.9
                         RESOLUTE (7H7)            6.0       4.5       4.1       4.8
                         CHANTILLY                 6.6       4.7       3.1       4.8
                         DLFPS CHCRM               6.4       3.9       3.7       4.7
                         KY-31 E+                  6.2       3.5       4.2       4.7
                         A-SFT                     6.3       3.4       4.0       4.5
                         BGR-TF3                   6.3       3.5       3.6       4.5
                         SPARTAN II                5.7       3.9       3.7       4.4
                         KENBLUE                   5.9       3.5       3.2       4.2
                         QUATRO                    5.2       2.8       3.7       3.9
                         BEWITCHED                 5.4       2.6       3.1       3.7
                         NATURAL KNIT ? PRG MIX    5.3       1.9       3.3       3.5
                         DLFPS TFAM                5.2       1.6       3.8       3.5
                         CRS MIX #3                4.7       1.7       3.5       3.3
                         DLFPS SHHM                4.5       1.2       3.3       3.0
                         DUTCH WHITE CLOVER        4.4       0.9       3.6       3.0

                         LSD VALUE                 0.9       0.9       0.9       0.9
                         C.V. (%)                  8.6      13.8      13.7      11.5


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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.
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TABLE 6.

MEAN TURFGRASS QUALITY RATINGS OF COOL-SEASON CULTIVARS GROWN UNDER   1/
LOW INPUT IN LOCATION PERFORMANCE INDEX (LPI) GROUP 1 **/
2018 DATA

TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF 2/

NAME	# ENTRY	CT1	PA1	MD1	VA1	NC1	MI1	MO1	NE1	MEAN
DLFPS TFAM	9	7.1	3.7	4.5	7.6	6.1	6.2	6.1	4.4	5.9
DLFPS TFASTC	14	6.2	3.7	4.6	7.5	4.7	5.6	5.6	4.4	5.4
CRS MIX #3	21	6.3	3.0	5.6	7.3	5.0	5.4	5.2	4.1	5.4
*VITALITY DOUBLE	11	5.7	4.0	4.4	7.3	4.4	5.9	5.6	4.7	5.3
DLFPS TF-A	6	5.7	3.8	4.3	7.2	4.4	5.7	5.5	4.6	5.2
CRS MIX #1	19	5.6	3.5	5.7	7.5	3.7	5.2	5.1	4.5	5.2
*BULLSEYE	2	5.4	3.9	3.8	7.0	4.4	5.9	5.5	4.6	5.1
CRS MIX #2	20	5.3	3.6	5.9	7.3	3.7	5.4	5.0	4.8	5.1
BGR-TF3	4	5.2	3.6	4.2	7.0	3.8	5.4	5.2	4.4	4.9
*VITALITY LOW	10	5.3	3.3	5.0	7.2	3.4	4.9	4.9	4.2	4.9
MNHD-15	5	5.0	3.4	5.4	7.2	3.1	5.0	4.8	4.5	4.8
*SPARTAN II	16	4.9	3.4	5.0	6.9	3.5	5.3	4.8	4.6	4.8
*RESOLUTE (7H7)	26	4.9	3.5	4.9	7.0	3.2	5.1	4.8	4.5	4.8
DLFPS CHCRM	7	4.9	3.4	4.4	6.8	3.5	5.2	4.9	4.3	4.7
SOUTHERN MIXTURE	28	4.9	3.6	3.9	6.8	3.5	5.3	5.1	4.4	4.7
DLFPS SHHM	8	4.9	3.0	4.0	6.3	4.1	5.3	4.7	4.0	4.6
DTTHO TF/KBG MIX	23	4.2	3.9	3.4	6.5	3.2	5.6	5.0	4.7	4.6
*RADAR	31	4.5	3.4	4.6	6.9	2.7	4.8	4.7	4.3	4.5
DTT TALL FESCUE MIX	22	4.8	3.4	3.5	6.7	3.2	5.0	4.9	4.1	4.5
*CS MIX	29	5.0	3.1	4.3	6.9	2.9	4.6	4.7	3.8	4.5
A-SFT	24	4.4	3.6	3.4	6.5	3.2	5.3	4.9	4.3	4.4
DLFPS CHCRSH	15	4.3	3.4	4.4	6.6	2.7	5.0	4.6	4.4	4.4
*YAAK	30	4.8	3.4	2.9	6.6	3.0	4.8	4.9	3.7	4.3
*KY-31 E+	18	4.0	3.6	2.8	6.1	3.2	5.5	4.8	4.4	4.3
*KINGDOM	25	4.4	3.3	2.9	6.4	2.9	4.9	4.8	3.8	4.2
*CHANTILLY	12	3.9	3.3	4.2	6.4	2.3	4.8	4.3	4.3	4.2
NORTHERN MIXTURE	27	3.8	3.4	3.8	6.3	2.4	4.9	4.4	4.3	4.1
*QUATRO	17	4.0	3.0	3.6	6.0	3.0	4.9	4.3	4.0	4.1
*KENBLUE	32	3.0	3.7	3.3	5.7	2.5	5.5	4.3	4.9	4.0
*BEWITCHED	3	2.6	3.1	2.3	5.1	2.3	5.1	3.9	4.2	3.5
*NATURAL KNIT ? PRG MIX	1	2.4	2.8	1.7	4.8	1.9	4.6	3.7	3.7	3.1
*DUTCH WHITE CLOVER	13	1.4	2.9	2.0	4.2	1.7	5.1	3.3	4.4	3.0
LSD VALUE		0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
C.V. (%)		12.5	16.9	14.5	8.8	17.3	11.1	12.1	13.4	12.7

*/ COMMERCIALLY AVAILABLE IN THE USA IN 2021.

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1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN.
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2/ C.V. (COEFFICIENT OF VARIATION) INDICATES THE PERCENT VARIATION OF THE MEAN IN EACH COLUMN.

TABLE 7.

MEAN TURFGRASS QUALITY RATINGS OF COOL-SEASON CULTIVARS GROWN UNDER   1/
LOW INPUT IN LOCATION PERFORMANCE INDEX (LPI) GROUP 2 */
2018 DATA

TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF 2/

NAME	# ENTRY	IN1	MN1	UT1	OR1	MEAN
*YAAK	30	7.2	3.7	4.4	4.6	5.0
*VITALITY DOUBLE	11	6.8	3.6	3.7	4.4	4.6
DTTHO TF/KBG MIX	23	6.8	3.6	3.8	4.3	4.6
*KINGDOM	25	6.8	3.4	3.9	4.3	4.6
*RADAR	31	6.5	5.1	3.0	3.7	4.6
DTT TALL FESCUE MIX	22	6.7	3.7	3.7	4.2	4.6
SOUTHERN MIXTURE	28	6.6	3.6	3.5	4.1	4.5
DLFPS TFASTC	14	6.6	3.4	3.5	4.3	4.5
*CS MIX	29	6.4	4.6	3.0	3.8	4.4
*VITALITY LOW	10	6.3	4.8	2.8	3.7	4.4
DLFPS TF-A	6	6.6	3.2	3.5	4.3	4.4
CRS MIX #1	19	6.2	5.1	2.5	3.6	4.4
A-SFT	24	6.5	3.3	3.5	4.0	4.3
*BULLSEYE	2	6.6	2.7	3.7	4.4	4.3
BGR-TF3	4	6.4	3.5	3.3	4.0	4.3
MNHD-15	5	6.2	5.3	2.4	3.4	4.3
*RESOLUTE (7H7)	26	6.2	4.6	2.6	3.6	4.3
DLFPS CHCRSH	15	6.2	4.6	2.7	3.5	4.2
NORTHERN MIXTURE	27	6.3	4.2	2.9	3.5	4.2
*CHANTILLY	12	6.1	4.7	2.5	3.3	4.1
DLFPS CHCRM	7	6.1	3.8	2.7	3.6	4.1
*KY-31 E+	18	6.3	2.4	3.4	3.9	4.0
CRS MIX #2	20	5.8	4.8	2.0	3.2	4.0
*SPARTAN II	16	5.8	4.0	2.2	3.2	3.8
DLFPS TFAM	9	5.9	1.3	3.3	4.2	3.7
*KENBLUE	32	5.7	2.9	2.4	3.1	3.5
*QUATRO	17	5.3	2.5	2.0	2.9	3.2
*BEWITCHED	3	5.2	1.7	2.1	2.8	2.9
CRS MIX #3	21	4.9	2.6	1.4	2.8	2.9
*NATURAL KNIT ? PRG MIX	1	5.2	1.5	2.2	2.7	2.9
DLFPS SHHM	8	4.9	1.7	1.7	2.8	2.8
*DUTCH WHITE CLOVER	13	4.1	0.7	0.8	1.6	1.8
LSD VALUE		0.9	0.9	0.9	0.9	0.9
C.V. (%)		9.5	16.8	20.4	16.0	14.5

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TABLE 8.

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

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    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.

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TABLE 9.                     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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*/ 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
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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 10.   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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    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

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    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.   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

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    INCLUDED IN THIS LPI GROUP. IF YOUR STATE IS NOT REPRESENTED, THEN CHOOSE A LPI GROUP THAT CONTAINS A LOCATION AND
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    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.   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

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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.

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TABLE 13.                          MEAN TURFGRASS QUALITY RATINGS OF COOL-SEASON CULTIVARS GROWN UNDER   1/
                                     LOW INPUT IN LOCATION PERFORMANCE INDEX (LPI) GROUP 1  **/
                                                       2020 DATA

                                  TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF  2/
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NAME	# Entry	CT1	PA2	VA1	NC1	MI1	MO1	NE1	UT1	MEAN
* BULLSEYE	2	5.5	3.3	7.1	4.9	6.3	5.9	4.8	3.1	5.4
DLFPS TFASTC	14	5.8	3.1	7.1	5.3	5.9	5.6	4.3	3.2	5.3
DLFPS TFAM	9	6.0	2.7	6.8	5.8	5.5	5.3	4.4	3.3	5.2
DLFPS TF-A	6	5.3	2.9	6.8	4.9	5.9	5.3	4.9	3.5	5.1
* VITALITY DOUBLE	11	4.8	3.0	6.8	5.1	5.9	5.7	4.1	3.3	5.1
MNHD-15	5	5.7	3.3	7.0	3.3	6.0	5.3	4.3	2.1	5.0
A-SFT	24	4.3	3.2	6.8	4.3	6.1	5.9	4.0	2.8	5.0
* KINGDOM	25	4.6	2.9	6.6	4.2	5.9	5.2	4.8	3.2	4.9
DLFPS CHCRM	7	5.8	3.0	6.8	4.0	5.6	5.2	3.7	2.0	4.9
* KY-31 E+	18	5.3	2.6	6.4	4.2	5.7	4.5	5.3	3.3	4.9
BGR-TF3	4	5.0	2.6	6.5	5.0	5.5	4.9	4.5	3.4	4.9
CRS MIX #3	21	6.6	3.1	7.0	2.8	5.6	5.3	3.4	0.6	4.8
CRS MIX #2	20	5.3	3.3	7.0	3.4	5.8	5.4	3.7	1.9	4.8
DTT TALL FESCUE MIX	22	4.7	2.7	6.4	4.4	5.7	4.9	4.9	3.4	4.8
DTTHO TF/KBG MIX	23	4.3	2.9	6.6	4.1	5.9	5.5	4.2	2.8	4.8
DLFPS CHCRSH	15	5.1	3.0	6.8	4.0	5.6	5.3	3.4	2.1	4.7
* VITALITY LOW	10	5.5	2.9	6.7	4.0	5.5	5.0	3.7	2.2	4.7
* NATURAL KNIT ? PRG MIX	1	4.1	3.2	6.8	3.0	6.2	6.3	3.4	1.4	4.7
SOUTHERN MIXTURE	28	4.4	2.7	6.5	4.5	5.6	5.2	3.9	3.0	4.7
* CS MIX	29	5.1	2.8	6.7	4.4	5.3	5.3	3.1	2.2	4.7
CRS MIX #1	19	5.5	2.8	6.6	3.4	5.5	4.5	4.2	2.2	4.7
* CHANTILLY	12	4.5	3.1	6.8	3.4	5.8	5.6	3.2	1.8	4.6
NORTHERN MIXTURE	27	4.5	2.9	6.7	4.2	5.5	5.5	3.0	2.1	4.6
* RADAR	31	4.4	2.9	6.7	4.1	5.5	5.5	3.1	2.2	4.6
* RESOLUTE (7H7)	26	5.7	2.7	6.5	3.3	5.3	4.2	4.2	2.1	4.6
DLFPS SHHM	8	5.4	2.5	6.4	3.9	5.2	5.1	3.3	1.6	4.6
* YAAK	30	3.7	2.4	6.1	4.7	5.5	4.7	4.6	3.8	4.5
* SPARTAN II	16	5.4	2.8	6.6	3.2	5.3	4.9	3.3	1.4	4.5
* QUATRO	17	4.6	2.8	6.6	3.4	5.4	5.4	2.9	1.4	4.4
* BEWITCHED	3	3.1	2.6	6.1	2.5	5.6	5.4	3.0	1.3	4.1
KENBLUE	32	2.9	2.4	6.0	3.1	5.4	5.2	3.2	2.0	4.0
* DUTCH WHITE CLOVER	13	2.6	2.4	5.9	2.4	5.4	5.5	2.5	1.0	3.8
LSD VALUE		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
C.V. (%)		12.7	21.6	9.3	15.5	10.9	11.7	16.0	26.1	13.1

*/ COMMERCIALLY AVAILABLE IN THE USA IN 2021.

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

TABLE 14.

MEAN TURFGRASS QUALITY RATINGS OF COOL-SEASON CULTIVARS GROWN UNDER   1/
LOW INPUT IN LOCATION PERFORMANCE INDEX (LPI) GROUP 2 */
2020 DATA

TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF 2/

NAME	# Entry	IN1	MN1	OR1	MEAN
CRS MIX #1	19	5.0	5.8	3.6	4.8
CRS MIX #2	20	5.2	5.5	3.6	4.8
*VITALITY LOW	10	5.1	5.0	4.1	4.7
DLFPS CHCRSH	15	5.2	4.8	4.1	4.7
*RESOLUTE (7H7)	26	4.8	5.8	3.5	4.7
*RADAR	31	5.3	4.3	4.0	4.5
MNHD-15	5	4.9	5.4	3.3	4.5
DLFPS CHCRM	7	4.8	4.5	4.1	4.4
NORTHERN MIXTURE	27	5.2	4.0	4.1	4.4
*SPARTAN II	16	4.7	5.0	3.6	4.4
*CS MIX	29	5.0	4.0	4.3	4.4
*CHANTILLY	12	5.1	4.6	3.3	4.3
*VITALITY DOUBLE	11	5.1	3.1	4.0	4.1
DLFPS TFASTC	14	4.8	2.9	4.5	4.1
SOUTHERN MIXTURE	28	5.0	3.5	3.6	4.0
*QUATRO	17	4.5	3.8	3.3	3.9
DLFPS TF-A	6	4.7	2.9	3.6	3.7
*YAAK	30	5.0	3.1	3.0	3.7
BGR-TF3	4	4.6	2.8	3.7	3.7
CRS MIX #3	21	3.6	4.0	3.3	3.6
DTT TALL FESCUE MIX	22	4.5	3.1	2.9	3.5
A-SFT	24	4.7	2.6	3.0	3.5
*BULLSEYE	2	4.4	2.3	3.5	3.4
*KINGDOM	25	4.5	2.9	2.7	3.4
DTTHO TF/KBG MIX	23	4.5	2.7	2.7	3.3
*KY-31 E+	18	4.0	3.0	2.7	3.2
DLFPS TFAM	9	4.0	1.1	4.4	3.2
DLFPS SHHM	8	3.5	1.9	3.3	2.9
*KENBLUE	32	4.2	2.4	1.8	2.8
*BEWITCHED	3	3.7	1.9	1.3	2.3
*NATURAL KNIT ? PRG MIX	1	3.6	1.4	1.7	2.2
*DUTCH WHITE CLOVER	13	3.4	1.2	1.1	1.9
LSD VALUE		1.0	1.0	1.0	1.0
C.V. (%)		13.5	17.8	18.8	16.3

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    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.   MEAN TURFGRASS QUALITY AND OTHER RATINGS OF FINELEAF FESCUE CULTIVARS
                                 GROWN UNDER LOW INPUT WITH INITIAL ANNUAL GRASS PRE-EMERGENCE AT STORRS, CT 1/
                                                              2016-20 DATA

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

| | SPRING | % GROUND COVER | | PERCENT | PERCENT WEEDS | | QUALITY RATINGS | | | | | | | | |
NAME	GREENUP	SPRING	FALL	ESTABLISHMENT	SUMMER	FALL	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	MEAN
DLFPS TFAM	4.5	96.3	91.3	73.3	4.3	9.9	7.7	6.9	6.9	6.9	6.7	7.0	6.4	6.3	6.8
CRS MIX #3	4.3	99.0	86.9	50.0	4.2	4.4	6.0	6.3	6.7	6.9	6.7	6.5	6.9	6.7	6.7
DLFPS TFASTC	4.8	97.7	91.1	71.7	12.2	14.1	7.0	6.8	6.5	6.3	6.2	6.5	6.7	6.3	6.5
VITALITY LOW	4.5	97.7	85.6	53.3	9.5	19.0	5.3	5.6	6.3	6.1	5.8	6.0	6.3	7.0	6.0
CRS MIX #1	5.2	96.0	83.5	58.3	17.8	26.1	5.3	5.7	6.1	5.9	6.1	5.7	6.2	6.7	5.9
DLFPS CHCRM	5.7	97.7	87.9	65.0	4.3	13.6	6.3	6.2	6.1	6.0	5.5	5.7	5.9	5.3	5.9
DLFPS TF-A	4.8	97.7	87.6	71.7	20.9	24.5	7.3	5.9	5.9	5.5	5.6	6.1	6.3	6.3	5.9
BULLSEYE	4.6	97.7	86.7	68.3	21.3	16.3	7.0	6.1	6.3	5.1	5.5	6.0	6.0	6.0	5.8
CRS MIX #2	4.5	93.3	85.8	58.3	21.8	28.7	5.0	5.7	5.9	5.8	5.9	5.7	6.2	7.0	5.8
MNHD-15	4.7	93.0	80.0	58.3	19.6	26.0	4.3	5.3	6.2	6.1	5.9	5.7	5.9	7.0	5.8
VITALITY DOUBLE	4.3	94.7	80.6	71.7	20.4	24.7	6.0	5.9	6.2	6.0	5.5	5.6	6.0	5.0	5.8
CS MIX	4.9	97.7	77.3	65.0	21.5	24.9	6.0	6.1	6.2	5.2	5.3	5.4	5.7	6.3	5.6
DLFPS SHHM	4.6	93.0	76.4	48.3	12.5	20.5	5.0	5.5	5.7	5.9	5.5	4.9	5.2	5.7	5.4
RADAR	5.2	99.0	76.5	63.3	14.2	26.9	6.0	5.9	5.7	5.1	4.9	5.3	5.5	5.7	5.4
SPARTAN II	4.3	96.3	70.9	60.0	12.9	27.5	5.7	5.3	5.6	5.7	5.3	5.2	5.6	6.7	5.4
DTTHO TF/KBG MIX	4.2	96.3	71.0	63.3	40.3	39.4	6.0	5.2	6.0	5.3	5.1	5.1	5.5	5.7	5.3
KINGDOM	4.0	94.7	69.1	65.0	35.8	34.9	6.0	5.3	5.5	5.0	4.5	5.3	5.8	5.7	5.2
BGR-TF3	4.7	85.0	77.2	70.0	39.0	33.9	7.3	4.7	5.3	4.4	4.3	5.5	6.0	5.7	5.1
RESOLUTE (7H7)	5.1	95.0	70.3	53.3	30.4	38.6	4.0	4.9	5.5	5.3	5.2	4.6	5.2	7.0	5.1
SOUTHERN MIXTURE	4.5	96.3	65.6	71.7	24.8	41.1	7.0	5.9	5.4	5.0	4.5	5.0	4.7	5.3	5.0
DLFPS CHCRSH	5.0	95.0	72.2	63.3	22.6	38.5	5.7	5.5	5.3	4.9	4.5	4.5	5.5	6.0	5.0
A-SFT	4.3	93.3	68.3	66.7	32.1	42.1	5.7	4.9	5.5	4.7	4.3	4.9	5.2	5.7	4.9
DTT TALL FESCUE MIX	4.3	96.3	74.6	61.7	32.2	36.9	6.0	4.5	5.6	4.7	4.3	5.0	5.3	5.7	4.9
KY-31 E+	4.6	96.3	75.5	76.7	28.7	35.5	7.0	5.1	3.9	5.0	4.9	4.7	4.4	4.7	4.7
YAAK	3.0	99.0	55.1	75.0	26.0	51.3	7.7	4.7	5.0	4.8	5.3	4.3	4.3	5.3	4.7
CHANTILLY	6.2	94.7	59.0	65.0	26.9	45.9	6.0	5.3	4.9	4.3	4.1	4.3	4.7	6.0	4.6
NORTHERN MIXTURE	5.5	90.0	61.3	68.3	39.6	48.5	5.0	5.1	4.5	4.3	3.8	3.9	4.2	4.0	4.3
NATURAL KNIT ® PRG MIX	5.4	97.7	48.0	83.3	37.6	51.9	7.0	4.3	4.9	3.5	3.3	4.1	3.9	5.7	4.0
QUATRO	3.9	93.3	56.7	51.7	37.8	49.2	6.0	4.3	4.1	4.2	3.5	3.7	3.4	6.0	3.9
BEWITCHED	5.3	66.7	40.7	45.0	66.1	79.3	3.3	3.3	4.5	3.5	3.1	3.3	3.7	4.7	3.5
DUTCH WHITE CLOVER	2.8	99.0	31.2	43.3	49.4	74.0	5.0	2.5	2.8	3.1	3.3	2.2	2.4	6.0	2.7
KENBLUE	5.3	46.7	24.5	12.0	70.8	84.5	2.0	3.3	2.9	2.5	2.2	2.1	2.5	4.0	2.5
LSD VALUE	1.0	5.8	15.1	10.6	19.8	17.7	1.2	0.9	0.8	0.7	0.8	0.8	0.9	1.2	0.6
C.V. (%)	26.4	4.2	31.7	11.4	93.2	73.9	13.4	25.4	22.6	21.2	25.3	24.8	24.7	11.8	17.7

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 16.
MEAN TURFGRASS QUALITY AND OTHER RATINGS OF FINELEAF FESCUE CULTIVARS
GROWN UNDER LOW INPUT WITH INITIAL ANNUAL GRASS PRE-EMERGENCE AT COLUMBIA, MO 1/
2016-20 DATA

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

NAME	GENETIC COLOR	% GROUND COVER SPRING	% GROUND COVER SUMMER	PERCENT ESTABLISHMENT	% WEEDS SPRING	QUALITY RATINGS MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	MEAN
DLFPS TFAM	6.7	96.1	99.0	91.3	11.0	7.0	7.0	6.9	6.9	6.7	6.5	6.4	6.1	6.7	6.7
DLFPS TFASTC	7.3	92.7	98.3	86.7	9.7	6.0	6.3	6.5	6.0	5.8	6.2	6.3	6.2	6.3	6.2
DLFPS TF-A	6.3	94.3	99.0	89.3	12.5	6.0	6.2	6.1	5.8	5.5	5.8	5.6	6.1	6.7	5.9
SOUTHERN MIXTURE	5.7	95.6	98.3	86.0	8.3	6.0	6.3	6.0	5.6	5.7	5.7	5.8	6.0	6.7	5.9
DTTHO TF/KBG MIX	7.0	90.9	97.7	81.7	13.8	5.3	5.9	5.9	6.1	5.5	5.7	5.9	5.7	6.7	5.8
MNHD-15	6.0	88.5	96.0	63.3	13.3	5.3	5.5	5.7	6.1	5.7	5.7	5.5	5.7	5.7	5.6
DTT TALL FESCUE MIX	7.0	90.6	91.7	81.7	17.2	4.7	5.5	5.8	5.5	5.2	5.5	5.5	5.4	5.7	5.5
VITALITY DOUBLE	6.0	91.8	97.0	85.0	12.5	5.0	5.2	5.7	5.3	5.4	5.7	5.6	5.4	6.3	5.5
DLFPS CHCRM	7.0	84.2	99.0	76.7	7.3	8.0	5.8	5.9	5.5	5.1	5.3	5.1	5.3	6.7	5.4
KINGDOM	7.7	87.7	96.3	81.7	17.5	4.3	5.5	5.6	5.4	5.5	5.4	5.3	5.3	5.7	5.4
VITALITY LOW	6.0	87.3	96.0	61.7	9.2	6.0	5.8	5.6	5.3	5.5	5.2	5.2	5.5	7.7	5.4
CRS MIX #3	6.0	84.2	99.0	70.0	22.5	7.0	5.2	5.4	5.6	5.2	5.1	5.5	5.8	5.0	5.3
CS MIX	6.0	80.9	97.7	75.0	15.0	6.0	5.5	5.9	5.1	5.0	4.9	5.2	5.5	6.7	5.3
RADAR	6.3	81.4	97.7	63.3	8.5	6.7	5.8	5.9	4.9	5.0	4.9	5.0	5.6	7.3	5.3
A-SFT	7.0	87.8	97.7	83.3	16.7	5.0	5.5	5.4	5.1	5.0	5.1	5.1	5.4	5.3	5.2
CRS MIX #2	5.7	89.8	94.7	50.0	13.3	4.0	5.5	5.5	5.1	5.1	5.1	5.3	5.8	5.7	5.2
DLFPS SHHM	6.0	86.3	99.0	70.0	24.2	5.7	5.5	5.7	5.7	4.9	5.0	4.9	5.1	4.3	5.2
BGR-TF3	6.3	89.0	94.7	85.0	19.2	5.0	5.3	5.5	4.9	4.9	5.3	5.1	4.9	5.3	5.1
BULLSEYE	6.3	91.3	97.7	85.0	13.3	6.0	5.2	5.3	4.8	4.7	5.2	5.3	5.0	6.3	5.1
CRS MIX #1	6.3	85.7	97.7	60.0	13.3	4.0	4.8	5.1	5.2	5.2	5.1	5.4	5.7	6.0	5.1
DLFPS CHCRSH	6.3	82.8	97.7	66.7	11.7	5.3	5.0	5.5	5.1	4.9	4.9	5.3	5.3	6.7	5.1
RESOLUTE (7H7)	5.3	86.1	94.7	71.7	15.8	4.3	5.1	5.3	5.5	5.1	5.0	5.1	5.3	5.3	5.1
SPARTAN II	4.7	90.9	97.7	71.7	16.7	5.0	5.5	5.5	5.1	4.9	4.7	4.8	5.5	5.3	5.1
KENBLUE	6.3	85.9	70.0	23.3	25.0	3.3	4.8	4.9	4.9	4.9	5.1	5.1	5.3	5.0	5.0
KY-31 E+	4.0	91.3	99.0	92.3	11.3	4.0	5.1	4.9	5.1	4.9	4.9	4.8	4.9	5.0	5.0
NORTHERN MIXTURE	6.3	89.0	95.7	78.3	11.3	5.3	5.3	5.5	4.9	4.9	4.9	4.5	4.8	5.3	5.0
YAAK	6.0	90.4	94.7	85.0	11.7	6.0	5.6	4.9	5.0	5.1	4.7	4.9	5.2	4.7	5.0
CHANTILLY	6.0	82.8	98.3	80.0	12.2	6.7	5.2	5.5	4.9	4.5	4.4	4.7	4.9	5.3	4.9
BEWITCHED	6.0	84.0	41.7	68.3	25.8	3.7	4.3	4.5	4.7	4.7	5.1	5.3	5.6	5.3	4.8
QUATRO	6.0	83.6	97.7	60.0	30.0	5.0	5.1	5.1	5.1	4.7	4.7	4.7	5.1	3.7	4.8
NATURAL KNIT ® PRG MIX	6.3	75.6	94.7	91.3	34.2	6.7	5.3	5.7	4.1	4.1	4.0	4.3	4.3	4.0	4.5
DUTCH WHITE CLOVER	6.3	64.7	99.0	66.7	53.3	5.7	3.9	4.3	4.3	3.9	3.8	4.2	4.2	2.0	4.0
LSD VALUE	1.0	10.9	8.9	14.5	7.7	1.9	1.0	1.1	1.0	0.8	0.8	1.1	1.5	1.0	0.7
C.V. (%)	9.3	14.3	6.2	12.5	43.2	19.8	24.0	23.1	23.4	20.6	22.1	24.9	23.8	11.3	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 17. 　　　　　　　　　　　　　MEAN TURFGRASS QUALITY AND OTHER RATINGS OF FINELEAF FESCUE CULTIVARS
　　　　　　　　　　　　　　　　GROWN WITH ADDITIONAL FERTILIZER (MEDIUM INPUT) AT WEST LAFAYETTE, IN 1/
　　　　　　　　　　　　　　　　　　　　　　　　　　2016-20 DATA

　　　　　　　　　　　　　　　　　TURFGRASS QUALITY AND OTHER RATINGS 1-9; 9=BEST 2/
　　　　　　　　　　　　　　　　　　　HEIGHT MEASURED IN INCHES

NAME	SUMMER DENSITY	FALL DENSITY	% GROUND COVER SPRING	% GROUND COVER FALL	UNIFORMITY	HEIGHT MEASUREMENT BETWEEN MOWING JUNE	HEIGHT MEASUREMENT BETWEEN MOWING JULY	QUALITY RATINGS MAY	JUN	JUL	AUG	SEP	OCT	MEAN
A-SFT	6.0	7.3	96.3	99.0	7.0	3.7	3.3	6.2	6.3	6.1	6.3	6.1	5.9	6.1
KINGDOM	5.5	7.3	96.3	99.0	4.7	4.3	3.7	5.9	6.3	6.1	6.2	6.5	6.1	6.1
DLFPS TF-A	6.2	7.7	95.0	99.0	7.0	3.7	4.3	5.9	5.8	6.2	6.1	6.8	6.2	6.0
DTTHO TF/KBG MIX	6.3	6.7	95.0	99.0	7.0	3.0	4.3	6.1	5.9	6.3	6.0	6.5	6.2	6.0
DLFPS TFASTC	6.2	8.0	96.3	99.0	6.7	4.0	4.7	5.8	5.9	5.8	5.9	6.4	6.0	5.9
RADAR	6.2	5.0	94.7	96.0	6.7	4.0	3.7	6.1	6.2	5.7	5.8	5.7	6.3	5.9
VITALITY DOUBLE	6.2	7.3	95.0	99.0	6.0	3.0	3.3	5.6	5.9	6.1	6.0	6.3	5.8	5.9
VITALITY LOW	6.3	6.3	93.3	98.7	6.0	3.7	4.3	6.3	5.9	5.9	6.0	6.0	5.8	5.9
BGR-TF3	6.2	7.3	91.7	99.0	7.0	3.7	3.3	5.8	5.7	5.7	5.9	6.4	6.0	5.8
DLFPS CHCRSH	7.3	5.7	90.0	97.7	7.3	4.0	4.0	5.9	6.1	5.7	5.7	5.6	5.9	5.8
DTT TALL FESCUE MIX	6.7	7.7	95.0	99.0	6.0	3.7	4.3	5.8	5.9	5.3	6.3	6.6	6.1	5.8
SOUTHERN MIXTURE	6.2	7.3	95.0	98.7	5.0	3.7	3.3	6.0	6.1	6.1	6.1	5.8	5.5	5.8
YAAK	5.3	7.0	93.3	99.0	6.0	3.3	3.7	5.8	5.8	6.1	5.5	6.0	6.1	5.8
BULLSEYE	5.3	6.7	96.3	99.0	5.3	4.7	5.0	6.0	5.7	5.9	5.7	6.0	5.8	5.7
DLFPS TFAM	5.7	7.0	96.3	97.7	5.3	7.0	6.3	5.7	5.5	5.7	5.7	6.1	6.0	5.7
CHANTILLY	6.7	5.7	91.7	97.7	6.7	4.0	4.3	5.6	5.7	5.5	5.7	5.4	5.8	5.6
CS MIX	6.3	5.7	91.7	94.7	6.3	4.7	4.3	5.7	5.7	5.7	5.5	5.8	5.6	5.6
NORTHERN MIXTURE	5.7	5.7	91.7	99.0	6.7	5.7	4.7	5.5	5.9	5.7	5.4	5.6	6.2	5.6
BEWITCHED	4.7	6.0	91.7	97.0	5.7	4.0	4.3	5.2	5.2	5.3	5.2	5.7	5.6	5.3
DLFPS CHCRM	6.7	5.3	93.3	88.3	7.3	6.0	5.0	5.2	5.3	5.2	5.5	5.4	5.6	5.3
KY-31 E+	5.4	6.7	90.0	99.0	7.3	5.3	5.0	5.0	5.6	5.5	5.5	5.3	5.1	5.3
KENBLUE	5.0	5.7	91.7	98.7	5.3	4.3	3.7	5.0	5.2	5.4	5.1	5.1	5.6	5.2
MNHD-15	6.0	5.3	91.7	80.0	6.0	3.3	3.3	5.2	5.3	4.8	5.2	4.7	5.5	5.1
SPARTAN II	6.0	5.7	90.0	74.3	6.0	4.7	3.7	4.9	5.1	5.1	5.1	5.4	5.5	5.1
CRS MIX #2	5.5	6.0	93.3	98.3	5.3	2.3	2.7	4.8	5.0	5.0	5.3	5.2	5.3	5.0
RESOLUTE (7H7)	4.3	5.3	90.0	58.3	4.3	2.7	3.0	4.9	5.0	4.9	4.9	5.3	5.3	5.0
NATURAL KNIT ® PRG MIX	4.7	5.7	99.0	89.7	4.3	3.0	3.3	4.7	5.2	5.1	4.7	4.4	5.2	4.8
QUATRO	4.2	4.0	90.0	56.7	4.7	3.0	2.3	4.5	4.9	4.5	4.6	4.5	5.2	4.7
CRS MIX #1	6.0	5.3	93.3	76.7	6.0	3.3	3.7	4.1	4.6	4.7	4.8	4.8	5.1	4.6
DLFPS SHHM	3.0	2.7	91.7	23.3	4.0	5.0	5.7	3.5	3.7	4.3	4.2	4.0	4.3	4.1
DUTCH WHITE CLOVER	3.2	5.3	88.3	23.3	3.0	9.0	8.3	3.8	3.5	4.3	3.7	4.3	4.2	3.9
CRS MIX #3	2.7	2.7	93.3	21.7	3.3	8.0	7.7	3.4	3.4	3.6	3.6	3.5	3.8	3.6
LSD VALUE	1.5	1.2	5.1	18.7	2.6	1.0	1.2	1.0	0.7	0.7	0.8	1.0	1.1	0.6
C.V. (%)	23.0	13.1	2.9	14.3	22.8	15.4	18.4	23.5	18.6	19.3	20.9	22.0	22.6	16.6

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.

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TABLE 18.   GENETIC COLOR RATINGS OF COOL-SEASON CULTIVARS 1/
                                    GROWN UNDER LOW INPUT IN THE U.S.
                                          2017 DATA ONLY

                            GENETIC COLOR RATINGS 1-9; 9=DARK GREEN 2/

                        NAME   MO1

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

                        LSD VALUE   1.5
                        C.V. (%)   14.9

    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 19.   SPRING GREENUP RATINGS OF COOL-SEASON CULTIVARS 1/
                                       GROWN UNDER LOW INPUT IN THE U.S.
                                               2016-20 DATA

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

NAME	CT1	MI1	NC1	NE1	UT1	MEAN
YAAK	4.0	8.7	5.8	4.0	7.6	5.5
DLFPS TFAM	5.4	7.0	6.8	4.0	3.9	5.3
DLFPS CHCRM	5.8	6.8	5.7	4.4	3.8	5.1
DLFPS TFASTC	4.7	5.7	6.0	4.7	4.1	5.0
NORTHERN MIXTURE	5.2	4.7	6.3	4.0	3.7	4.9
VITALITY DOUBLE	4.2	4.5	5.4	4.8	4.2	4.9
BULLSEYE	4.8	4.8	5.7	4.5	4.0	4.8
CHANTILLY	6.4	3.7	5.7	3.7	3.4	4.8
SOUTHERN MIXTURE	4.8	4.3	6.2	3.8	4.4	4.8
BGR-TF3	4.4	4.7	5.3	4.7	3.9	4.8
NATURAL KNIT ® PRG MIX	5.8	5.0	3.8	4.9	3.4	4.7
DLFPS CHCRSH	4.9	3.3	6.0	3.9	4.1	4.7
VITALITY LOW	4.7	3.3	5.6	4.2	4.3	4.7
RADAR	5.7	3.7	5.5	3.8	4.1	4.7
DTT TALL FESCUE MIX	4.9	4.7	4.6	4.8	3.7	4.6
KINGDOM	3.9	4.3	4.9	4.7	4.0	4.6
DLFPS TF-A	4.1	4.5	5.7	4.0	4.1	4.6
KY-31 E+	4.2	4.5	4.3	4.5	5.1	4.6
A-SFT	4.5	4.7	5.2	4.1	3.4	4.4
CRS MIX #3	5.0	4.3	4.8	3.9	4.0	4.4
DLFPS SHHM	4.8	4.5	4.8	4.3	3.4	4.4
CS MIX	4.0	3.0	5.0	4.6	3.7	4.3
BEWITCHED	4.5	4.2	3.1	4.5	3.4	4.2
DTTHO TF/KBG MIX	3.9	4.7	4.0	3.8	4.6	4.2
CRS MIX #2	4.6	2.8	4.3	4.2	2.3	4.2
SPARTAN II	4.5	2.7	4.8	3.9	3.1	4.1
QUATRO	4.3	3.2	4.0	4.6	3.8	4.1
KENBLUE	4.1	3.7	4.1	4.2	4.0	4.1
RESOLUTE (7H7)	4.7	3.2	4.1	4.0	3.3	4.1
MNHD-15	4.0	3.0	4.3	4.3	3.2	4.0
CRS MIX #1	4.3	2.3	3.9	4.1	3.9	3.9
DUTCH WHITE CLOVER	3.3	5.7	2.5	4.1	4.3	3.7
LSD VALUE	1.5	1.0	1.9	1.4	1.0	0.8
C.V. (%)	20.4	14.2	25.0	21.4	18.8	19.6

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 20.

SEEDLING VIGOR RATINGS OF COOL-SEASON CULTIVARS 1/
GROWN UNDER LOW INPUT IN THE U.S.
2016 DATA

SEEDLING VIGOR RATINGS 1-9; 9=MAXIMUM VIGOR 2/

NAME	MN1	PA2	MEAN
KY-31 E+	8.7	5.0	6.8
BULLSEYE	8.7	4.3	6.5
DLFPS TF-A	8.0	5.0	6.5
DLFPS TFAM	8.3	4.7	6.5
NATURAL KNIT ? PRG MIX	8.0	5.0	6.5
DLFPS TFASTC	8.0	4.7	6.3
A-SFT	7.7	4.7	6.2
SOUTHERN MIXTURE	7.7	4.7	6.2
BGR-TF3	8.0	4.3	6.2
DTT TALL FESCUE MIX	7.7	4.3	6.0
YAAK	7.7	4.0	5.8
CRS MIX #3	8.7	3.0	5.8
CHANTILLY	7.3	3.7	5.5
KINGDOM	6.3	4.3	5.3
NORTHERN MIXTURE	6.0	4.3	5.2
VITALITY DOUBLE	6.0	4.3	5.2
DLFPS CHCRM	6.7	3.3	5.0
DTTHO TF/KBG MIX	6.0	3.3	4.7
DLFPS CHCRSH	6.0	3.0	4.5
DLFPS SHHM	6.3	2.3	4.3
RADAR	5.7	2.7	4.2
CS MIX	5.3	3.0	4.2
DUTCH WHITE CLOVER	6.0	2.0	4.0
MNHD-15	5.0	3.0	4.0
SPARTAN II	5.0	3.0	4.0
CRS MIX #1	5.0	2.7	3.8
VITALITY LOW	5.0	2.7	3.8
QUATRO	4.7	2.7	3.7
RESOLUTE (7H7)	4.7	2.3	3.5
CRS MIX #2	3.7	2.7	3.2
BEWITCHED	3.7	2.0	2.8
KENBLUE	2.0	1.3	1.7
LSD VALUE	1.1	1.2	0.8
C.V. (%)	11.1	22.0	15.0

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.

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TABLE 21.                          SUMMER DENSITY RATINGS OF COOL-SEASON CULTIVARS  1/
                                         GROWN UNDER LOW INPUT IN THE U.S.
                                               2019 DATA ONLY

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

                               NAME                        IN1

                               CRS MIX #1                  7.7
                               RADAR                       7.5
                               DLFPS CHCRSH                7.0
                               VITALITY LOW                6.8
                               DLFPS CHCRM                 6.8
                               CHANTILLY                   6.7
                               CS MIX                      6.7
                               VITALITY DOUBLE             6.7
                               A-SFT                       6.5
                               MNHD-15                     6.5
                               DTT TALL FESCUE MIX         6.3
                               CRS MIX #2                  6.2
                               NORTHERN MIXTURE            6.2
                               BGR-TF3                     6.0
                               DLFPS TFASTC                6.0
                               KINGDOM                     6.0
                               RESOLUTE (7H7)              5.7
                               SOUTHERN MIXTURE            5.7
                               KENBLUE                     5.5
                               DLFPS TFAM                  5.3
                               DTTHO TF/KBG MIX            5.2
                               YAAK                        5.2
                               DLFPS TF-A                  5.2
                               QUATRO                      5.2
                               SPARTAN II                  5.0
                               KY-31 E+                    4.7
                               BEWITCHED                   4.5
                               BULLSEYE                    4.5
                               DLFPS SHHM                  4.5
                               NATURAL KNIT ® PRG MIX      4.5
                               DUTCH WHITE CLOVER          3.3
                               CRS MIX #3                  3.0

                               LSD VALUE                   1.8
                               C.V. (%)                   19.6
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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.

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TABLE 22.                        FALL DENSITY RATINGS OF COOL-SEASON CULTIVARS  1/
                                    GROWN UNDER LOW INPUT IN THE U.S.
                                           2018 DATA ONLY

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

                            NAME                        IN1

                            DTT TALL FESCUE MIX         8.0
                            A-SFT                       7.7
                            BGR-TF3                     7.7
                            DLFPS TFASTC                7.7
                            DTTHO TF/KBG MIX            7.7
                            KINGDOM                     7.7
                            BULLSEYE                    7.3
                            DLFPS TF-A                  7.3
                            DLFPS TFAM                  7.3
                            VITALITY DOUBLE             7.3
                            KY-31 E+                    7.0
                            SOUTHERN MIXTURE            7.0
                            CRS MIX #2                  6.7
                            CS MIX                      6.7
                            NORTHERN MIXTURE            6.7
                            RADAR                       6.7
                            RESOLUTE (7H7)              6.7
                            YAAK                        6.7
                            CHANTILLY                   6.3
                            CRS MIX #1                  6.3
                            DLFPS CHCRM                 6.3
                            KENBLUE                     6.3
                            MNHD-15                     6.3
                            VITALITY LOW                6.3
                            DLFPS CHCRSH                6.0
                            BEWITCHED                   5.7
                            NATURAL KNIT ® PRG MIX      5.7
                            SPARTAN II                  5.7
                            QUATRO                      5.3
                            DLFPS SHHM                  4.0
                            CRS MIX #3                  3.7
                            DUTCH WHITE CLOVER          2.3

                            LSD VALUE                   1.2
                            C.V. (%)                   11.7
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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.

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TABLE 23.   PERCENT LIVING GROUND COVER (SPRING) RATINGS OF COOL-SEASON CULTIVARS 1/
                                      GROWN UNDER LOW INPUT IN THE U.S.
                                              2016-20 DATA

                        PERCENT LIVING GROUND COVER IN SPRING: LOCATIONS 2/

NAME	CT1	IN1	MD1	MN1	MO1	NC1	NE1	OR1	PA2	UT1	VA1	MEAN
YAAK	99.0	94.7	86.7	91.0	89.4	91.3	84.2	92.3	93.5	83.3	84.5	89.9
SOUTHERN MIXTURE	96.0	97.7	71.7	87.2	91.7	94.0	89.2	88.3	96.5	70.0	89.3	89.9
DLFPS TFASTC	93.3	97.7	75.8	90.1	88.8	90.5	87.3	94.3	96.8	63.3	88.7	89.1
DLFPS TF-A	96.3	96.3	62.5	83.2	94.1	93.7	89.8	91.7	96.4	66.7	90.6	89.0
DLFPS TFAM	96.0	97.7	82.5	71.8	95.9	99.0	85.0	91.7	96.5	63.3	89.9	88.6
VITALITY DOUBLE	91.7	96.3	70.8	85.3	92.8	94.5	80.7	92.3	89.9	73.3	92.2	88.5
KY-31 E+	91.7	93.3	75.0	85.8	90.8	87.3	93.0	91.7	96.1	80.0	83.8	88.3
BULLSEYE	95.0	97.7	60.0	82.4	91.6	91.3	91.5	95.0	95.4	73.3	90.6	87.9
DTT TALL FESCUE MIX	96.3	96.3	59.2	78.6	91.6	88.2	92.2	91.7	94.5	70.0	88.7	86.7
DTTHO TF/KBG MIX	85.0	95.0	58.3	82.6	90.1	82.5	86.7	85.0	94.8	76.7	88.3	86.5
BGR-TF3	83.3	97.7	65.0	84.0	91.8	88.7	82.5	86.7	93.8	60.0	88.7	86.3
DLFPS CHCRM	96.0	91.7	87.5	85.8	85.9	86.2	87.3	93.0	95.8	46.7	88.3	86.3
VITALITY LOW	94.7	93.3	83.2	81.3	87.4	85.2	88.3	36.7	95.1	63.3	88.2	85.8
RADAR	95.0	97.7	87.3	79.2	85.3	85.0	83.3	80.0	96.7	40.0	89.5	85.5
DLFPS CHCRSH	90.0	95.0	84.2	81.0	84.5	85.0	82.3	87.7	95.4	56.7	87.4	85.4
CRS MIX #3	97.7	86.7	90.0	86.0	87.1	85.8	87.5	60.0	95.3	16.7	90.6	85.3
NORTHERN MIXTURE	88.3	96.3	83.3	79.6	83.8	91.5	87.5	83.3	96.7	30.0	87.0	85.0
SPARTAN II	93.0	93.3	86.7	84.9	91.3	77.5	89.0	26.7	96.4	23.3	87.0	84.9
CRS MIX #1	96.3	95.0	77.2	82.2	89.7	72.5	90.0	16.7	96.6	33.3	87.0	83.7
A-SFT	90.0	95.0	40.0	76.0	89.1	86.7	88.2	91.7	95.7	53.3	87.7	83.1
KINGDOM	91.7	96.3	36.7	80.7	87.1	87.2	83.2	86.7	96.4	70.0	87.4	83.1
CRS MIX #2	85.0	90.0	87.3	82.4	90.6	70.8	86.7	26.7	92.2	16.7	86.6	83.1
MNHD-15	88.3	91.7	79.0	83.6	89.0	82.5	89.8	13.3	89.4	20.0	90.3	82.8
CHANTILLY	94.3	93.3	80.8	79.8	82.3	88.3	87.5	91.7	92.0	40.0	83.8	82.8
RESOLUTE (7H7)	94.3	93.3	75.0	84.8	90.9	75.8	89.2	3.7	94.9	23.3	82.8	82.5
CS MIX	91.7	93.3	77.5	80.6	79.7	80.0	80.0	66.0	93.4	46.7	86.8	82.3
DLFPS SHHM	94.3	90.0	81.7	75.3	83.3	83.7	77.5	48.3	90.3	23.3	85.0	78.9
QUATRO	91.7	91.7	65.0	74.4	84.8	65.8	89.0	41.7	93.9	23.3	83.7	78.7
KENBLUE	56.7	93.3	65.8	72.8	85.6	45.0	93.0	8.3	86.0	56.7	81.3	78.4
NATURAL KNIT ® PRG MIX	97.7	97.7	23.3	55.1	72.8	81.7	85.0	93.3	93.0	20.0	75.6	69.2
DUTCH WHITE CLOVER	99.0	93.3	18.3	80.6	64.8	72.5	83.2	51.7	88.0	16.7	75.4	68.0
BEWITCHED	70.0	93.3	13.3	61.7	71.5	59.2	87.3	23.3	94.1	26.7	70.4	67.1
LSD VALUE	9.3	4.2	17.4	12.4	12.1	13.8	13.7	24.8	7.7	15.9	10.2	6.2
C.V. (%)	6.3	2.8	16.5	10.1	8.9	10.3	9.8	23.2	5.4	20.7	8.2	9.9

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 24.

PERCENT LIVING GROUND COVER (SUMMER) RATINGS OF COOL-SEASON CULTIVARS 1/
GROWN UNDER LOW INPUT IN THE U.S.
2016-20 DATA

PERCENT LIVING GROUND COVER IN SUMMER: LOCATIONS 2/

NAME	MI1	MN1	MO1	NC1	MEAN
YAAK	92.2	86.8	97.7	96.0	89.9
KY-31 E+	95.5	77.6	98.3	86.7	86.1
DLFPS TFASTC	92.0	79.9	99.0	93.3	85.6
SOUTHERN MIXTURE	93.8	81.4	98.3	68.3	84.7
DUTCH WHITE CLOVER	87.2	74.4	99.0	91.7	83.8
BULLSEYE	89.0	76.1	99.0	93.3	82.3
VITALITY DOUBLE	90.2	74.2	97.7	94.7	81.6
DLFPS TF-A	90.8	71.6	97.7	97.7	80.3
KINGDOM	88.0	73.0	99.0	93.0	80.0
DTT TALL FESCUE MIX	88.8	71.8	97.7	94.0	79.6
CHANTILLY	85.5	77.7	98.3	70.0	79.5
BGR-TF3	91.2	68.8	98.7	93.3	78.4
DLFPS TFAM	95.3	59.1	99.0	96.3	78.0
DTTHO TF/KBG MIX	87.5	70.0	95.7	93.3	77.9
MNHD-15	71.7	80.2	99.0	86.3	77.7
CRS MIX #3	74.3	79.3	98.7	83.3	77.7
NORTHERN MIXTURE	80.7	75.9	97.0	79.0	77.6
CRS MIX #1	70.0	79.1	99.0	86.3	76.6
SPARTAN II	79.0	76.8	99.0	71.7	76.4
A-SFT	87.7	66.2	99.0	91.3	76.0
RESOLUTE (7H7)	70.8	76.6	99.0	88.3	75.4
DLFPS CHCRM	78.3	76.9	99.0	60.0	75.4
RADAR	73.5	77.4	99.0	73.3	75.2
CS MIX	74.2	77.9	99.0	66.7	75.0
CRS MIX #2	65.8	79.0	97.7	90.0	74.5
DLFPS CHCRSH	72.7	75.4	99.0	75.0	74.4
VITALITY LOW	64.2	78.9	97.7	63.3	71.6
QUATRO	60.7	63.1	97.7	88.3	63.6
KENBLUE	58.8	70.3	20.0	61.7	62.9
DLFPS SHHM	67.5	54.9	99.0	73.0	62.8
BEWITCHED	81.2	46.6	28.3	85.0	56.2
NATURAL KNIT ® PRG MIX	89.3	31.0	97.7	80.0	56.0
LSD VALUE	13.7	16.2	3.6	16.1	14.4
C.V. (%)	11.6	14.4	2.4	12.0	13.5

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.

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TABLE 25.                  PERCENT LIVING GROUND COVER (FALL) RATINGS OF COOL-SEASON CULTIVARS  1/
                                       GROWN UNDER LOW INPUT IN THE U.S.
                                               2016-20 DATA

                             PERCENT LIVING GROUND COVER IN FALL: LOCATIONS  2/

NAME                  CT1    IN1    MI1    MN1    MO1    NC1    NE1    OR1    PA2    UT1    VA1    MEAN

DLFPS TFAM            83.5   91.0   89.3   76.4   99.0   93.3   88.2   91.1   81.6   70.0   98.3   87.3
DLFPS TFASTC         79.7   99.0   93.1   81.4   99.0   80.7   90.7   84.7   82.9   73.3   96.3   86.4
DLFPS TF-A           74.0   99.0   89.5   80.1   99.0   77.1   91.2   82.7   80.7   66.7   96.7   84.0
BULLSEYE             76.8   99.0   86.7   80.5   99.0   67.9   95.1   81.9   81.3   76.7   98.3   83.8
VITALITY DOUBLE      64.3   99.0   92.1   79.9   99.0   68.9   87.2   84.8   84.8   73.3   99.0   82.7
SOUTHERN MIXTURE     62.9   99.0   91.3   79.7   98.7   61.7   89.1   91.7   77.9   73.3   95.8   81.6
BGR-TF3              79.7   99.0   88.3   70.3   99.0   71.3   85.3   82.9   75.6   66.7   96.8   81.3
DLFPS CHCRM          81.9   96.0   84.1   87.0   99.0   59.3   83.1   87.7   74.5   40.0   94.7   81.1
A-SFT                74.7   99.0   85.0   70.9   99.0   63.5   90.4   78.2   74.1   63.3   96.3   79.3
KINGDOM              74.5   99.0   89.1   77.6   99.0   58.2   83.1   81.7   65.9   66.7   95.5   78.7
DTTHO TF/KBG MIX     70.8   99.0   91.7   71.5   98.3   51.3   88.8   79.8   73.6   76.7   94.7   78.4
KY-31 E+             72.6   99.0   94.1   79.5   99.0   44.7   92.9   77.5   64.9   90.0   94.3   78.3
DTT TALL FESCUE MIX  73.3   99.0   84.5   72.5   99.0   53.3   90.1   81.7   66.1   73.3   96.7   77.8
RADAR                76.9   99.0   82.9   73.0   99.0   48.6   82.5   83.1   72.3   53.3   94.3   77.0
VITALITY LOW         77.8   97.7   87.7   80.7   99.0   46.9   81.1   72.3   67.6   70.0   94.7   76.8
NORTHERN MIXTURE     61.0   99.0   91.1   77.5   99.0   45.3   88.7   86.6   71.0   30.0   94.3   76.6
DLFPS CHCRSH         80.1   99.0   89.7   76.5   99.0   39.7   84.1   86.3   59.9   56.7   94.7   76.6
YAAK                 61.5   99.0   85.7   80.9   99.0   62.5   86.5   62.6   69.7   99.0   93.8   76.5
CS MIX               78.9   97.7   85.5   77.9   99.0   40.3   81.5   83.3   60.9   50.0   94.1   75.6
CRS MIX #1           79.9   94.7   86.0   78.7   99.0   43.8   88.4   54.0   67.3   43.3   97.4   74.6
CRS MIX #2           84.3   89.3   85.5   69.8   99.0   54.0   86.7   53.3   69.5   20.0   97.1   74.5
CHANTILLY            72.9   99.0   91.7   80.9   99.0   42.3   80.1   77.2   58.0   33.3   93.1   74.3
CRS MIX #3           87.5   26.7   88.9   82.9   99.0   66.9   85.1   37.9   66.8   10.0   94.7   74.0
DLFPS SHHM           74.7   35.0   89.7   65.8   99.0   56.3   82.7   65.0   55.5   16.7   96.8   71.2
MNHD-15              81.7   91.7   87.7   70.3   99.0   32.6   89.8   47.0   61.1   16.7   96.7   70.7
RESOLUTE (7H7)       79.8   88.3   89.1   69.6   99.0   38.3   88.2   39.0   63.5   16.7   99.0   70.5
SPARTAN II           69.0   84.7   89.3   68.3   99.0   33.8   82.7   64.0   54.5   16.7   96.7   69.4
QUATRO               69.3   71.7   84.7   57.6   97.7   24.5   85.1   71.7   53.3   30.0   95.5   67.5
KENBLUE              37.9   96.0   91.4   62.2   99.0   55.0   87.9   17.2   58.5   40.0   95.1   63.5
NATURAL KNIT ® PRG MIX 60.3  93.0   85.1   39.1   99.0   30.1   86.1   54.7   58.7   20.0   88.8   62.9
DUTCH WHITE CLOVER   40.4   10.0   95.3   59.9   99.0   58.3   87.7   10.9   61.0   10.0   93.6   60.8
BEWITCHED            53.1   94.7   84.1   41.1   99.0   25.3   83.2   12.3   70.1   13.3   90.6   57.7

LSD VALUE            27.2   19.1   16.1   16.2    0.8   28.5   15.4   20.3   17.6   17.4    5.3    7.2
C.V. (%)             24.8   13.3   11.4   14.5    0.5   38.1   11.3   18.9   24.9   22.2    3.6   17.2
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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.

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TABLE 26.               DROUGHT TOLERANCE (DORMANCY) RATINGS OF COOL-SEASON CULTIVARS  1/
                              GROWN UNDER LOW INPUT IN THE U.S.
                                    2016 DATA ONLY

                     DROUGHT TOLERANCE (DORMANCY) RATINGS 1-9; 9=NO DORMANCY  2/

                          NAME                        MI1

                          QUATRO                      5.7
                          SPARTAN II                  5.3
                          VITALITY LOW                5.0
                          SOUTHERN MIXTURE            4.7
                          DLFPS TFASTC                4.3
                          CRS MIX #1                  4.0
                          RESOLUTE (7H7)              3.3
                          DTTHO TF/KBG MIX            3.0
                          RADAR                       3.0
                          VITALITY DOUBLE             3.0
                          YAAK                        3.0
                          BGR-TF3                     2.7
                          DLFPS TF-A                  2.7
                          CHANTILLY                   2.3
                          CRS MIX #3                  2.3
                          DTT TALL FESCUE MIX         2.3
                          DUTCH WHITE CLOVER          2.3
                          DLFPS SHHM                  2.0
                          KINGDOM                     2.0
                          NORTHERN MIXTURE            2.0
                          A-SFT                       1.7
                          CRS MIX #2                  1.7
                          CS MIX                      1.7
                          KENBLUE                     1.7
                          MNHD-15                     1.7
                          NATURAL KNIT ® PRG MIX      1.7
                          DLFPS TFAM                  1.3
                          BEWITCHED                   1.0
                          BULLSEYE                    1.0
                          DLFPS CHCRM                 1.0
                          DLFPS CHCRSH                1.0
                          KY-31 E+                    1.0

                          LSD VALUE                   2.5
                          C.V. (%)                   61.4


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.
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TABLE 27.                    STEM RUST RATINGS OF COOL-SEASON CULTIVARS  1/
                                 GROWN UNDER LOW INPUT IN THE U.S.
                                       2017 DATA ONLY

                            STEM RUST RATINGS 1-9; 9=NO DISEASE  2/

                            NAME                        MD1

                            CHANTILLY                   9.0
                            CRS MIX #1                  9.0
                            CRS MIX #2                  9.0
                            CRS MIX #3                  9.0
                            DLFPS CHCRM                 9.0
                            DLFPS CHCRSH                9.0
                            DLFPS SHHM                  9.0
                            MNHD-15                     9.0
                            NORTHERN MIXTURE            9.0
                            QUATRO                      9.0
                            RESOLUTE (7H7)              9.0
                            SPARTAN II                  9.0
                            VITALITY LOW                9.0
                            YAAK                        9.0
                            CS MIX                      8.7
                            RADAR                       8.7
                            SOUTHERN MIXTURE            8.3
                            DUTCH WHITE CLOVER          7.7
                            DLFPS TFAM                  7.0
                            BGR-TF3                     6.7
                            VITALITY DOUBLE             6.7
                            DLFPS TF-A                  6.3
                            DLFPS TFASTC                6.3
                            DTTHO TF/KBG MIX            6.3
                            BULLSEYE                    5.7
                            DTT TALL FESCUE MIX         5.7
                            KY-31 E+                    5.7
                            A-SFT                       5.3
                            KINGDOM                     5.3
                            BEWITCHED                   4.7
                            NATURAL KNIT ® PRG MIX      3.7
                            KENBLUE                     3.0

                            LSD VALUE                   1.0
                            C.V. (%)                    8.7
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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 28.

DOLLAR SPOT RATINGS OF COOL-SEASON CULTIVARS 1/
GROWN UNDER LOW INPUT IN THE U.S.
2017 DATA ONLY

DOLLAR SPOT RATINGS 1-9; 9=NO DISEASE 2/

NAME	PA2
BEWITCHED	9.0
CRS MIX #1	9.0
CRS MIX #2	9.0
CRS MIX #3	9.0
DLFPS CHCRM	9.0
DLFPS CHCRSH	9.0
DLFPS SHHM	9.0
DLFPS TFAM	9.0
DTTHO TF/KBG MIX	9.0
KENBLUE	9.0
KY-31 E+	9.0
MNHD-15	9.0
NATURAL KNIT ® PRG MIX	9.0
QUATRO	9.0
RADAR	9.0
RESOLUTE (7H7)	9.0
SPARTAN II	9.0
VITALITY DOUBLE	9.0
VITALITY LOW	9.0
YAAK	9.0
BGR-TF3	8.3
BULLSEYE	8.3
CHANTILLY	8.3
CS MIX	8.3
DTT TALL FESCUE MIX	8.3
DUTCH WHITE CLOVER	8.3
KINGDOM	8.3
SOUTHERN MIXTURE	8.3
A-SFT	8.0
DLFPS TF-A	8.0
DLFPS TFASTC	8.0
NORTHERN MIXTURE	7.7
LSD VALUE	1.3
C.V. (%)	9.5

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.

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TABLE 29.                    BROWN PATCH (WARM TEMPERATURE) RATINGS OF COOL-SEASON CULTIVARS  1/
                                   GROWN UNDER LOW INPUT IN THE U.S.
                                        2016 DATA ONLY

                               BROWN PATCH RATINGS 1-9; 9=NO DISEASE  2/

                               NAME                         PA2

                               BEWITCHED                    9.0
                               CRS MIX #1                   9.0
                               CRS MIX #2                   9.0
                               CRS MIX #3                   9.0
                               CS MIX                       9.0
                               DLFPS CHCRSH                 9.0
                               DLFPS SHHM                   9.0
                               DLFPS TF-A                   9.0
                               DLFPS TFAM                   9.0
                               DTTHO TF/KBG MIX             9.0
                               DUTCH WHITE CLOVER           9.0
                               KENBLUE                      9.0
                               KINGDOM                      9.0
                               MNHD-15                      9.0
                               QUATRO                       9.0
                               RADAR                        9.0
                               RESOLUTE (7H7)               9.0
                               SOUTHERN MIXTURE             9.0
                               VITALITY DOUBLE              9.0
                               VITALITY LOW                 9.0
                               BULLSEYE                     8.7
                               DLFPS CHCRM                  8.7
                               DLFPS TFASTC                 8.7
                               DTT TALL FESCUE MIX          8.7
                               SPARTAN II                   8.7
                               YAAK                         8.7
                               A-SFT                        8.3
                               CHANTILLY                    8.3
                               NORTHERN MIXTURE             8.3
                               BGR-TF3                      8.0
                               NATURAL KNIT ® PRG MIX       8.0
                               KY-31 E+                     7.7

                               LSD VALUE                    0.8
                               C.V. (%)                     5.5
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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.

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TABLE 30.                       PINK/GRAY SNOW MOLD RATINGS OF COOL-SEASON CULTIVARS  1/
                                      GROWN UNDER LOW INPUT IN THE U.S.
                                             2017 DATA ONLY

                          PINK/GRAY SNOW MOLD RATINGS 1-9; 9=NO DISEASE    2/

                                 NAME                        UT1

                                 DUTCH WHITE CLOVER          9.0
                                 CRS MIX #3                  8.7
                                 YAAK                        8.7
                                 QUATRO                      8.3
                                 RADAR                       8.0
                                 CRS MIX #1                  7.7
                                 DLFPS CHCRSH                7.3
                                 DLFPS SHHM                  7.3
                                 KENBLUE                     7.3
                                 RESOLUTE (7H7)              7.3
                                 VITALITY LOW                7.3
                                 CHANTILLY                   7.0
                                 CS MIX                      7.0
                                 DLFPS CHCRM                 7.0
                                 MNHD-15                     7.0
                                 NORTHERN MIXTURE            7.0
                                 SPARTAN II                  7.0
                                 CRS MIX #2                  6.7
                                 KY-31 E+                    6.3
                                 SOUTHERN MIXTURE            6.3
                                 BEWITCHED                   6.0
                                 BULLSEYE                    6.0
                                 DLFPS TFAM                  6.0
                                 DLFPS TFASTC                6.0
                                 DTTHO TF/KBG MIX            6.0
                                 NATURAL KNIT ® PRG MIX      6.0
                                 DLFPS TF-A                  5.7
                                 KINGDOM                     5.7
                                 VITALITY DOUBLE             5.7
                                 A-SFT                       5.3
                                 BGR-TF3                     5.3
                                 DTT TALL FESCUE MIX         5.0

                                 LSD VALUE                   1.1
                                 C.V. (%)                   10.0
```

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.

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TABLE 31.                         PERCENT ESTABLISHMENT RATINGS OF COOL-SEASON CULTIVARS  1/
                                     GROWN UNDER LOW INPUT IN THE U.S.  2/
                                                2015 DATA

         NAME                      CT1      MO1      NE1      OR1      PA2      VA1      MEAN

         NATURAL KNIT ? PRG MIX    76.7     97.7     68.3     99.0     85.0     50.0     79.4
         KY-31 E+                  73.3     99.0     66.7     87.3     80.0     46.7     75.5
         DLFPS TFAM                65.0     98.7     68.3     87.3     73.3     60.0     75.4
         SOUTHERN MIXTURE          68.3     95.7     65.0     94.7     71.7     53.3     74.8
         DTT TALL FESCUE MIX       61.7     92.7     70.0     91.0     66.7     63.3     74.2
         DLFPS TF-A                65.0     96.3     48.3     92.0     76.7     60.0     73.1
         CRS MIX #3                53.3     90.0     78.3     83.3     63.3     63.3     71.9
         BULLSEYE                  66.7     99.0     45.0     83.0     65.0     66.7     70.9
         KINGDOM                   68.3     94.0     71.7     66.7     63.3     56.7     70.1
         DLFPS TFASTC              61.7     96.0     41.7     92.3     66.7     60.0     69.7
         BGR-TF3                   61.7     94.7     35.0     89.7     73.3     56.7     68.5
         YAAK                      78.3     85.0     48.3     90.3     65.0     40.0     67.8
         RADAR                     55.0     83.3     48.3     74.3     70.0     66.7     66.3
         VITALITY DOUBLE           58.3     89.7     36.7     80.3     70.0     60.0     65.8
         A-SFT                     61.7     94.3     33.3     81.0     61.7     56.7     64.8
         DLFPS CHCRM               61.7     76.7     45.0     72.3     68.3     63.3     64.6
         DTTHO TF/KBG MIX          56.7     83.3     71.7     67.7     50.0     53.3     63.8
         CHANTILLY                 61.7     85.0     33.3     76.0     60.0     60.0     62.7
         DLFPS CHCRSH              53.3     75.0     53.3     76.7     50.0     60.0     61.4
         NORTHERN MIXTURE          56.7     78.3     30.0     83.3     63.3     50.0     60.3
         CS MIX                    48.3     76.7     40.0     72.0     46.7     66.7     58.4
         VITALITY LOW              50.0     73.3     61.7     45.7     50.0     63.3     57.3
         RESOLUTE (7H7)            50.0     73.3     63.3     56.7     43.3     46.7     55.6
         MNHD-15                   50.0     65.0     63.3     42.0     46.7     63.3     55.1
         CRS MIX #2                40.0     76.7     46.7     64.0     43.3     46.7     52.9
         SPARTAN II                46.7     79.0     30.0     45.7     53.3     60.0     52.4
         DUTCH WHITE CLOVER        30.0     76.7     53.3     72.3     30.0     50.0     52.1
         CRS MIX #1                53.3     81.7     11.7     48.7     61.7     50.0     51.2
         QUATRO                    48.3     53.3     51.7     49.7     53.3     50.0     51.1
         DLFPS SHHM                48.3     76.7     11.7     51.3     43.3     56.7     48.0
         BEWITCHED                 36.7     45.0     48.3     41.3     40.0     26.7     39.7
         KENBLUE                    4.3     35.0     13.3     16.7      6.7     33.3     18.2


         LSD VALUE                 12.0     18.9     40.6     25.5     19.8     17.4      9.8
         C.V. (%)                  13.5     14.4     52.0     22.3     21.1     19.6     24.3


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.
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TABLE 32.   PERCENT ESTABLISHMENT RATINGS OF COOL-SEASON CULTIVARS 1/
                               GROWN UNDER LOW INPUT AT RALEIGH, NC 2/
                                          2015-16 DATA

                                      NOVEMBER   MARCH
                     NAME   2015   2016   MEAN

                     DLFPS TFAM   93.3   96.3   94.8
                     KY-31 E+   95.0   91.7   93.3
                     NATURAL KNIT ? PRG MIX 95.0   90.0   92.5
                     DLFPS CHCRM   88.3   96.3   92.3
                     NORTHERN MIXTURE   91.7   91.7   91.7
                     SOUTHERN MIXTURE   91.7   91.7   91.7
                     VITALITY DOUBLE   88.3   90.0   89.2
                     BULLSEYE   91.7   85.0   88.3
                     CHANTILLY   90.0   86.7   88.3
                     CRS MIX #3   95.0   81.7   88.3
                     DLFPS TF-A   90.0   86.7   88.3
                     DLFPS TFASTC   91.7   83.3   87.5
                     DTT TALL FESCUE MIX 91.7   81.7   86.7
                     A-SFT   91.7   80.0   85.8
                     DLFPS CHCRSH   85.0   85.0   85.0
                     YAAK   83.3   86.7   85.0
                     BGR-TF3   90.0   76.7   83.3
                     KINGDOM   88.3   78.3   83.3
                     DLFPS SHHM   70.0   93.3   81.7
                     RADAR   81.7   78.3   80.0
                     CS MIX   80.0   78.3   79.2
                     VITALITY LOW   78.3   78.3   78.3
                     SPARTAN II   75.0   80.0   77.5
                     MNHD-15   76.7   75.0   75.8
                     DTTHO TF/KBG MIX   76.7   73.3   75.0
                     RESOLUTE (7H7)   73.3   76.7   75.0
                     CRS MIX #1   70.0   75.0   72.5
                     QUATRO   70.0   73.3   71.7
                     CRS MIX #2   68.3   70.0   69.2
                     DUTCH WHITE CLOVER 68.3   56.7   62.5
                     BEWITCHED   63.3   41.7   52.5
                     KENBLUE   23.3   11.7   17.5

                     LSD VALUE   4.9   6.1   4.2
                     C.V. (%)   4.1   5.3   3.7

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 33.   PERCENT ESTABLISHMENT RATINGS OF COOL-SEASON CULTIVARS 1/
                                 GROWN UNDER LOW INPUT AT LOGAN, UT 1/
                                            2015 DATA

            NAME   JUNE   JULY   AUGUST   MEAN

            KY-31 E+   56.7   99.0   99.0   84.9
            NATURAL KNIT ? PRG MIX   63.3   80.0   99.0   80.8
            BULLSEYE   46.7   86.7   99.0   77.4
            BGR-TF3   50.0   80.0   99.0   76.3
            DLFPS TFAM   46.7   83.3   99.0   76.3
            DTT TALL FESCUE MIX   50.0   76.7   99.0   75.2
            DLFPS TF-A   43.3   80.0   99.0   74.1
            SOUTHERN MIXTURE   46.7   76.7   99.0   74.1
            DUTCH WHITE CLOVER   20.0   99.0   99.0   72.7
            A-SFT   43.3   73.3   99.0   71.9
            DLFPS TFASTC   46.7   70.0   99.0   71.9
            VITALITY DOUBLE   40.0   76.7   99.0   71.9
            CRS MIX #3   20.0   96.0   99.0   71.7
            DLFPS CHCRM   40.0   76.7   93.0   69.9
            DTTHO TF/KBG MIX   33.3   76.7   99.0   69.7
            KINGDOM   36.7   73.3   99.0   69.7
            YAAK   23.3   80.0   99.0   67.4
            CHANTILLY   40.0   66.7   89.7   65.4
            NORTHERN MIXTURE   33.3   60.0   99.0   64.1
            RADAR   30.0   70.0   90.0   63.3
            CS MIX   26.7   63.3   93.0   61.0
            VITALITY LOW   23.3   63.3   90.0   58.9
            DLFPS CHCRSH   26.7   53.3   93.0   57.7
            MNHD-15   23.3   63.3   76.7   54.4
            CRS MIX #2   16.7   50.0   93.0   53.2
            QUATRO   20.0   53.3   83.3   52.2
            SPARTAN II   20.0   60.0   76.7   52.2
            RESOLUTE (7H7)   20.0   53.3   76.7   50.0
            BEWITCHED   20.0   36.7   90.0   48.9
            DLFPS SHHM   13.3   36.7   76.7   42.2
            CRS MIX #1   13.3   33.3   73.3   40.0
            KENBLUE   5.0   26.7   63.3   31.7

            LSD VALUE   10.7   11.8   6.1   6.0
            C.V. (%)   21.8   11.7   4.5   6.4

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 34.

PERCENT WEED RATINGS OF COOL-SEASON CULTIVARS 1/
GROWN UNDER LOW INPUT IN THE U.S.
2016-20 DATA 2/

NAME	MD1	MI1	MN1	OR1	PA2	VA1	MEAN
BEWITCHED	90.0	20.0	87.3	75.0	91.7	58.3	69.6
KENBLUE	88.3	25.0	58.7	90.0	75.0	20.0	60.6
DUTCH WHITE CLOVER	75.0	23.3	12.7	70.0	78.3	53.3	49.7
RESOLUTE (7H7)	63.3	15.0	60.7	7.7	88.3	23.3	43.0
RADAR	43.3	35.0	66.7	0.3	85.0	9.0	42.6
MNHD-15	66.7	5.0	71.0	11.7	76.7	6.7	40.2
DTTHO TF/KBG MIX	33.3	40.0	46.0	0.0	88.3	8.3	39.0
NATURAL KNIT ® PRG MIX	5.0	36.7	71.0	1.7	70.0	25.0	38.9
KINGDOM	31.7	30.0	50.0	0.7	83.3	10.0	37.0
CRS MIX #2	88.3	3.3	58.3	4.0	70.0	8.3	36.8
QUATRO	41.7	5.0	75.3	2.0	73.3	15.0	36.8
CS MIX	51.7	6.7	45.7	1.3	90.0	14.0	35.3
SPARTAN II	45.0	6.7	62.7	4.7	70.0	10.0	34.3
CRS MIX #3	31.7	13.3	21.0	41.3	75.0	7.3	34.0
A-SFT	20.7	26.7	54.3	1.7	71.7	10.7	34.0
CRS MIX #1	71.7	6.7	37.7	3.3	78.3	8.3	33.2
BGR-TF3	20.0	35.0	54.3	0.0	60.0	6.7	32.5
DTT TALL FESCUE MIX	12.7	21.7	44.0	0.0	85.0	10.0	32.4
NORTHERN MIXTURE	30.0	15.0	56.3	1.3	61.7	8.3	30.7
CHANTILLY	21.7	13.3	33.3	1.3	86.7	15.0	30.6
VITALITY LOW	73.3	8.3	37.3	4.0	58.3	15.0	30.4
DLFPS TF-A	25.0	28.3	39.3	0.0	70.0	3.0	30.3
YAAK	10.0	28.3	6.3	13.3	90.0	13.3	29.9
DLFPS SHHM	25.0	5.0	16.7	16.7	88.3	15.0	29.3
VITALITY DOUBLE	16.0	28.3	33.3	0.0	75.0	3.0	29.2
DLFPS TFASTC	15.0	10.0	46.3	0.0	75.0	13.3	29.1
DLFPS CHCRSH	33.3	5.0	47.7	0.7	68.3	11.7	28.8
SOUTHERN MIXTURE	8.3	15.0	48.0	0.0	70.0	5.0	27.9
KY-31 E+	5.3	21.7	37.3	0.0	73.3	4.0	27.4
BULLSEYE	17.7	6.7	41.7	0.0	66.7	7.3	25.5
DLFPS TFAM	6.7	6.7	6.3	0.0	81.7	8.3	20.4
DLFPS CHCRM	15.3	8.3	12.3	0.3	56.7	8.3	17.9
LSD VALUE	15.5	26.2	22.3	13.2	20.7	17.4	18.8
C.V. (%)	26.0	94.0	30.8	74.3	16.9	79.4	51.3

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 35.

PERCENT WEED (SPRING) RATINGS OF COOL-SEASON CULTIVARS 1/
GROWN UNDER LOW INPUT IN THE U.S.
2016-20 DATA 2/

NAME	MN1	MO1	NC1	PA2	UT1	VA1	MEAN
BEWITCHED	39.8	31.7	60.7	80.0	63.3	38.9	53.7
NATURAL KNIT ® PRG MIX	50.2	30.8	55.7	57.2	56.7	43.9	45.1
KENBLUE	11.7	24.2	42.3	77.2	56.7	39.4	44.0
DUTCH WHITE CLOVER	6.3	45.0	34.0	63.6	70.0	51.7	40.9
QUATRO	29.2	23.3	42.8	68.1	40.0	39.4	40.0
KINGDOM	15.8	25.0	35.2	66.7	30.0	37.8	35.0
DTT TALL FESCUE MIX	24.2	16.7	43.0	58.3	16.7	36.7	33.8
RESOLUTE (7H7)	9.7	19.7	30.5	62.8	40.0	40.0	33.4
MNHD-15	12.5	19.7	40.7	50.6	40.0	35.6	33.2
CHANTILLY	17.3	16.7	40.0	58.3	26.7	37.1	33.0
A-SFT	25.5	20.5	40.2	48.9	30.0	35.8	32.7
SPARTAN II	13.3	18.3	34.3	58.9	40.0	35.6	32.3
DTTHO TF/KBG MIX	16.3	16.0	36.7	53.9	20.0	36.1	31.3
CS MIX	15.2	17.5	35.3	51.7	30.0	39.4	31.1
CRS MIX #1	12.5	15.0	27.3	51.1	30.0	38.3	28.6
NORTHERN MIXTURE	13.5	19.2	31.2	44.6	50.0	36.1	28.4
CRS MIX #2	11.7	14.7	29.9	42.8	46.7	36.1	28.1
BGR-TF3	12.8	15.8	30.3	48.9	20.0	34.4	27.4
DLFPS SHHM	16.2	25.8	17.8	44.6	53.3	39.4	27.3
DLFPS CHCRSH	11.2	12.2	26.0	55.0	26.7	37.8	27.0
DLFPS TF-A	15.3	16.7	28.3	45.6	20.0	36.1	25.9
VITALITY LOW	13.7	7.5	23.3	51.1	20.0	37.2	25.3
RADAR	14.5	9.2	30.0	36.1	20.0	38.1	25.0
YAAK	3.8	13.3	29.7	35.0	0.0	48.9	24.2
KY-31 E+	5.5	13.0	34.3	37.4	13.3	35.3	24.1
SOUTHERN MIXTURE	10.7	17.5	26.0	38.6	26.7	34.4	23.8
BULLSEYE	16.2	13.0	23.0	37.8	30.0	35.8	23.7
VITALITY DOUBLE	13.0	12.5	22.5	43.3	23.3	36.4	23.6
CRS MIX #3	9.8	15.8	8.5	38.3	63.3	35.3	21.5
DLFPS TFASTC	3.2	17.5	8.8	41.1	33.3	36.7	20.1
DLFPS CHCRM	12.3	10.8	8.3	36.9	36.7	36.1	18.9
DLFPS TFAM	8.8	10.8	4.5	46.0	30.0	37.6	18.7
LSD VALUE	12.0	14.2	23.3	25.6	16.0	16.3	11.0
C.V. (%)	51.9	54.1	49.0	36.5	28.9	50.8	45.2

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.

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TABLE 36.                    PERCENT WEED (SUMMER) RATINGS OF COOL-SEASON CULTIVARS  1/
                                 GROWN UNDER LOW INPUT IN THE U.S.
                                        2016-20 DATA  2/

NAME                      CT1     MI1     MN1     NC1     NE1     OR1     PA2     UT1     MEAN

BEWITCHED                65.2    11.7    43.0    73.7    27.5    81.7    80.3    23.3    56.9
NATURAL KNIT ® PRG MIX   47.0    13.3    61.8    73.0    24.6     8.3    85.8    33.3    53.5
QUATRO                   32.9    30.0    33.6    66.0    33.3    51.7    90.8    16.7    49.3
KENBLUE                  62.7    16.7    24.0    47.6    15.8    85.0    84.3    13.3    46.9
DUTCH WHITE CLOVER       47.4    20.0    13.4    51.1    23.3    61.7    79.9    43.3    45.6
DTT TALL FESCUE MIX      33.5    25.0    26.4    64.0    27.1    10.0    86.0     3.3    44.2
DTTHO TF/KBG MIX         32.7    23.3    28.6    62.0    23.8    13.3    77.9     3.3    41.9
CHANTILLY                39.9    26.7    17.4    51.7    25.8    13.3    82.8     6.7    41.4
RESOLUTE (7H7)           21.2    26.7    21.8    49.3    25.8    87.7    88.3    20.0    41.1
KINGDOM                  32.0    13.3    24.3    58.0    23.8    11.7    85.1     3.3    40.8
SPARTAN II               24.7    36.7    21.1    47.7    22.1    76.7    85.5    26.7    40.5
A-SFT                    35.4    13.3    28.9    57.0    17.1     8.3    79.7    10.0    40.4
MNHD-15                  18.1    21.7    17.2    57.0    22.5    78.3    78.8    23.3    39.6
NORTHERN MIXTURE         38.1    10.0    17.8    49.7    22.9    16.7    83.2    13.3    39.6
KY-31 E+                 19.9    10.0    13.9    73.7    23.3    13.3    77.8     0.0    39.4
BGR-TF3                  23.9    36.7    28.9    53.3    29.2    15.0    71.3     3.3    38.6
CS MIX                   24.0    20.0    17.8    50.9    23.3    28.3    82.5     3.3    37.2
CRS MIX #2               27.1    25.0    19.4    31.6    26.7    81.7    79.3    10.0    36.5
VITALITY LOW             14.5    40.0    17.6    42.1    26.7    63.3    83.4     6.7    36.0
DLFPS CHCRSH             24.2    26.7    18.2    42.0    21.7    21.7    81.5    13.3    35.5
RADAR                    28.5    15.0    17.4    41.3    27.9    21.7    71.0     0.0    34.7
BULLSEYE                 27.2     8.3    18.9    50.7    24.2    10.0    66.9     3.3    34.7
CRS MIX #1               12.0    26.7    16.2    39.1    24.6    82.7    79.6    10.0    34.4
YAAK                     30.1    15.0    10.4    41.6    28.8    10.0    64.6     0.0    33.4
DLFPS TF-A               19.7    23.3    25.2    41.7    21.3    11.7    69.4     3.3    32.3
DLFPS SHHM               10.3    23.3    33.6    34.2    15.0    51.7    77.3    13.3    32.0
VITALITY DOUBLE          23.7    11.7    23.2    45.3    28.8    16.7    53.8     3.3    32.0
SOUTHERN MIXTURE         21.7    11.7    15.3    38.7    23.3    10.0    67.3    10.0    30.9
CRS MIX #3                2.9    16.7    15.1    11.4    24.2    66.0    79.0    40.0    27.2
DLFPS CHCRM               9.8    15.0    19.4    27.7    21.7    11.7    64.9    10.0    25.8
DLFPS TFASTC              8.2    15.0    16.9    29.8    23.3    13.3    59.7    10.0    25.6
DLFPS TFAM               14.6    23.3    25.9    16.9    15.0    13.3    65.3     0.0    24.0

LSD VALUE                27.7    23.7    15.5    33.0    22.2    23.7    21.5    12.9    12.1
C.V. (%)                 68.2    72.3    49.8    43.4    61.4    41.2    19.8    67.7    44.3
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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.

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TABLE 37.                    PERCENT WEED (FALL) RATINGS OF COOL-SEASON CULTIVARS  1/
                                  GROWN UNDER LOW INPUT IN THE U.S.
                                       2016-20 DATA  2/

NAME                     CT1    MD1    MN1    NC1    NE1    OR1    PA2    UT1    VA1   MEAN

NATURAL KNIT ® PRG MIX   43.4   66.7   48.5   35.0   55.0    1.7   86.7   60.0   36.1   45.7
BEWITCHED                53.7   68.3   48.3   28.3   43.3   13.3   80.0   56.7   27.8   44.1
KENBLUE                  52.9   15.0   28.8   26.7   43.3   20.0   91.7   53.3   36.1   39.4
QUATRO                   39.5   27.7   31.9   30.0   54.2   10.0   76.7   56.7   35.9   38.8
DUTCH WHITE CLOVER       51.4   80.0   34.1   30.0   20.0   10.0   86.7   70.0   35.0   37.9
YAAK                     45.6   12.7   19.5    4.3   51.7    0.7   91.7    0.0   45.6   34.8
KINGDOM                  37.5   40.0   13.0   21.7   58.8    1.0   91.7    3.3   35.9   34.5
DTT TALL FESCUE MIX      34.8   14.7   21.8   13.3   58.3    1.0   93.3    3.3   35.0   33.9
SPARTAN II               38.9    8.7   23.1   16.7   36.7   16.7   86.7   60.0   35.4   32.9
CHANTILLY                42.3    8.3   12.8   35.0   40.0    1.7   93.3   46.7   37.7   32.4
MNHD-15                  26.8    7.7   17.8   45.0   50.0   15.0   85.0   53.3   35.6   32.4
NORTHERN MIXTURE         40.0   13.3   11.4   26.7   45.0    2.0   85.0   56.7   38.3   32.3
A-SFT                    25.4   36.0   20.5   16.7   57.5    2.0   86.7    6.7   35.7   32.0
CS MIX                   35.8    9.7   14.0   17.7   43.8    5.7   95.0   40.0   37.6   31.5
DTTHO TF/KBG MIX         34.7   18.3   23.3   15.0   45.0    1.0   93.3    3.3   37.6   31.5
RESOLUTE (7H7)           28.6   16.3   22.2   20.0   40.0   21.7   85.0   56.7   31.1   30.9
RADAR                    30.3    3.3   14.3   28.3   50.0    4.0   91.7   26.7   37.8   30.9
CRS MIX #2               25.3    3.3   22.8   16.7   42.5   16.7   83.3   60.0   35.3   30.7
BGR-TF3                  25.5    6.3   22.6   10.0   53.3    3.3   85.0    6.7   35.0   30.1
VITALITY LOW             30.4    6.7   13.0   21.7   49.2   13.3   76.7   26.7   36.9   29.8
CRS MIX #1               21.8    4.7   14.8   18.3   52.5   15.0   83.3   36.7   36.7   29.8
DLFPS SHHM               30.4   12.0   29.5   15.0   30.8    4.0   86.7   66.7   32.2   29.6
VITALITY DOUBLE          37.3    6.7   14.8    8.7   43.3    1.0   85.0    3.3   34.7   29.2
DLFPS CHCRSH             24.8    6.3   13.7   21.7   41.7    2.3   91.7   36.7   37.0   28.0
DLFPS TF-A               24.3   15.0   13.0    5.0   50.8    1.7   75.0    6.7   35.9   27.2
KY-31 E+                 18.1   19.0    8.5   20.0   55.8    1.3   70.0    0.0   36.7   26.1
SOUTHERN MIXTURE         31.0    7.3   11.4    5.0   36.7    1.0   88.3    3.3   38.1   26.1
BULLSEYE                 19.9    7.0    9.1   12.0   51.7    1.0   81.7    3.3   33.1   25.8
DLFPS CHCRM              24.4    9.3   11.5   25.0   22.5    2.3   71.7   50.0   37.6   23.9
CRS MIX #3                8.8    7.7   10.6   20.0   20.8    8.3   91.7   70.0   37.9   21.0
DLFPS TFASTC             16.2   12.7    9.8   11.7   23.3    1.0   86.7   10.0   35.3   20.4
DLFPS TFAM               12.1    6.3   15.3    2.3   25.8    1.7   85.0   10.0   33.7   19.5

LSD VALUE                26.6   21.9   13.4   22.8   26.1    6.6   12.3   17.5   10.9   10.2
C.V. (%)                 67.2   75.3   47.5   72.9   39.5   65.2    8.9   33.4   34.9   48.2
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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.

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TABLE 38.          PERCENT WEED AND BARE SOIL RATINGS OF COOL-SEASON CULTIVARS
                        GROWN UNDER LOW INPUT AT ST. PAUL, MN  1/
                                      2020 DATA  2/
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NAME	BARE SPOT SPRING	BARE SPOT SUMMER	BARE SPOT FALL	% WEEDS SPRING	% WEEDS SUMMER	% WEEDS FALL	% WEED MEAN
NATURAL KNIT ? PRG MIX	20.0	14.0	13.7	16.3	23.3	23.0	20.9
DLFPS SHHM	28.0	20.3	20.3	14.0	21.7	22.0	19.2
A-SFT	11.7	3.3	8.7	9.3	14.0	21.3	14.9
BEWITCHED	10.3	13.7	13.7	18.3	13.0	12.3	14.6
DTT TALL FESCUE MIX	7.0	4.7	7.3	8.0	11.3	18.3	12.6
BGR-TF3	6.7	2.7	2.7	7.3	11.0	15.3	11.2
DTTHO TF/KBG MIX	8.0	3.3	3.7	6.7	12.0	14.3	11.0
VITALITY DOUBLE	6.0	6.7	8.0	8.7	8.3	11.0	9.3
DLFPS TFAM	38.3	36.7	36.7	7.7	9.7	10.0	9.1
KINGDOM	12.7	6.7	9.3	6.0	7.0	12.3	8.4
KENBLUE	18.3	15.7	15.7	6.3	8.7	8.7	7.9
DUTCH WHITE CLOVER	31.3	28.3	27.3	6.0	8.3	7.0	7.1
DLFPS TF-A	9.0	7.0	7.0	4.0	6.7	7.7	6.1
YAAK	9.3	7.0	9.0	4.0	7.3	7.0	6.1
QUATRO	7.7	7.0	7.3	5.3	6.3	6.0	5.9
DLFPS CHCRM	10.0	7.0	6.0	4.7	6.3	5.7	5.6
DLFPS TFASTC	10.0	8.0	8.7	4.0	5.7	6.3	5.3
SOUTHERN MIXTURE	9.7	7.7	8.0	3.7	6.3	6.0	5.3
KY-31 E+	24.0	22.3	28.7	3.7	4.3	5.3	4.4
BULLSEYE	14.3	13.0	19.0	1.7	3.3	5.7	3.6
MNHD-15	7.0	7.0	6.7	3.0	3.3	3.7	3.3
RESOLUTE (7H7)	3.0	2.3	2.0	3.7	3.3	3.0	3.3
CHANTILLY	14.7	12.3	11.3	1.3	3.7	4.7	3.2
SPARTAN II	6.0	4.7	3.7	2.3	3.7	3.3	3.1
RADAR	13.0	11.3	11.0	2.7	3.3	3.0	3.0
NORTHERN MIXTURE	17.3	16.7	11.3	2.0	3.3	3.3	2.9
CRS MIX #2	6.0	2.0	2.3	2.7	2.7	2.3	2.6
CRS MIX #3	13.3	11.3	10.7	1.7	2.0	2.3	2.0
CS MIX	10.7	9.7	8.0	1.7	2.0	1.3	1.7
CRS MIX #1	11.0	11.3	10.0	1.0	1.3	1.7	1.3
DLFPS CHCRSH	16.7	17.0	16.0	1.3	1.3	1.3	1.3
VITALITY LOW	10.7	8.7	6.7	1.0	1.3	1.3	1.2
LSD VALUE	10.4	10.8	13.2	4.8	8.4	9.3	6.5
C.V. (%)	48.2	59.3	66.7	57.2	69.5	68.6	58.7

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 39.   PERCENT WEED RATINGS OF COOL-SEASON CULTIVARS
                                       GROWN UNDER LOW INPUT AT RALEIGH, NC 1/
                                                     2020 DATA 2/

| | | | | | | | | | | % WEEDS |
NAME	FEBRUARY	MARCH	APRIL	MAY	JUNE	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	MEAN
MNHD-15	35.0	46.7	51.7	50.0	56.7	60.0	80.0	81.3	45.0	56.3
BEWITCHED	60.0	65.0	66.7	55.0	51.7	61.7	68.3	46.7	28.3	55.9
QUATRO	21.7	36.7	46.7	53.3	60.0	61.7	84.7	65.0	30.0	51.1
DUTCH WHITE CLOVER	31.7	43.3	50.0	53.3	63.3	61.7	66.7	58.3	30.0	50.9
NATURAL KNIT ? PRG MIX	30.0	41.7	45.0	45.0	58.3	58.3	76.7	53.3	35.0	49.3
KINGDOM	21.7	28.3	38.3	46.7	55.0	66.7	83.3	45.0	21.7	45.2
DTT TALL FESCUE MIX	18.3	26.7	41.7	48.3	45.0	68.3	80.0	51.7	13.3	43.7
KY-31 E+	11.7	20.0	26.7	26.7	21.7	94.7	96.0	75.0	20.0	43.6
CHANTILLY	31.7	38.3	36.7	41.7	50.0	35.0	53.3	46.7	35.0	40.9
DTTHO TF/KBG MIX	11.7	16.7	31.7	38.3	35.0	63.3	76.3	38.3	15.0	36.3
KENBLUE	20.0	31.7	33.3	35.0	43.3	41.7	51.7	35.0	26.7	35.4
CRS MIX #3	28.3	31.7	36.7	35.0	31.7	28.3	55.0	43.3	20.0	34.4
RESOLUTE (7H7)	21.7	30.0	38.3	41.7	31.7	30.0	48.3	33.3	20.0	32.8
DLFPS CHCRM	21.7	25.0	26.7	25.0	28.3	31.7	58.3	38.3	25.0	31.1
SPARTAN II	23.3	25.0	28.3	28.3	41.7	27.0	51.7	35.0	16.7	30.8
A-SFT	11.7	16.7	23.3	26.7	30.0	56.7	68.3	26.7	16.7	30.7
RADAR	25.0	28.3	31.7	30.0	26.7	30.0	45.0	31.7	28.3	30.7
BULLSEYE	8.3	14.3	18.3	20.0	18.3	71.7	85.0	26.7	12.0	30.5
NORTHERN MIXTURE	25.0	25.0	26.7	23.3	25.0	30.0	50.0	31.7	26.7	29.3
CS MIX	16.7	21.7	26.7	25.0	31.7	35.0	48.3	33.3	17.7	28.4
DLFPS CHCRSH	16.7	21.7	28.3	28.3	25.0	28.3	53.3	31.7	21.7	28.3
BGR-TF3	7.7	13.3	18.3	21.7	23.3	56.7	70.0	30.0	10.0	27.9
VITALITY LOW	18.3	25.0	26.7	25.0	26.7	26.7	48.3	31.7	21.7	27.8
CRS MIX #2	16.7	23.3	33.3	35.0	31.7	21.7	33.3	26.7	16.7	26.5
DLFPS TFASTC	5.3	11.7	21.7	25.0	25.0	48.3	60.0	30.0	11.7	26.5
VITALITY DOUBLE	11.7	15.0	20.0	23.3	23.3	46.7	60.0	23.3	8.7	25.8
SOUTHERN MIXTURE	13.3	20.0	26.7	25.0	25.0	30.0	55.0	31.7	5.0	25.7
CRS MIX #1	16.7	18.3	26.7	23.3	31.7	21.7	41.7	26.7	18.3	25.0
DLFPS SHHM	10.0	11.7	16.7	15.0	33.3	28.3	46.7	24.3	15.0	22.3
DLFPS TF-A	3.7	6.7	15.0	15.0	20.0	38.3	55.0	21.7	5.0	20.0
DLFPS TFAM	5.0	7.0	15.0	13.3	11.7	45.0	60.0	16.7	2.3	19.6
YAAK	1.7	2.7	33.3	11.7	6.7	39.7	30.0	15.0	4.3	16.1
LSD VALUE	21.0	22.2	38.4	22.9	19.4	30.9	35.7	35.3	36.9	21.4
C.V. (%)	61.6	50.9	50.6	39.9	34.5	38.6	29.8	47.2	72.8	33.8

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 40.

PERCENT WEED RATINGS OF COOL-SEASON CULTIVARS 1/
GROWN UNDER LOW INPUT AT CORVALLIS, OR 2/
2016-20 DATA

NAME	GRASSY WEED SUMMER	BROADLEAF SUMMER	GRASSY WEED FALL	BROADLEAF FALL	% WEED MEAN
KENBLUE	61.1	18.6	64.2	13.7	40.0
BEWITCHED	45.2	28.2	44.2	16.5	35.9
DUTCH WHITE CLOVER	58.3	13.3	60.0	2.8	35.6
MNHD-15	31.7	27.2	21.7	19.5	26.9
CRS MIX #3	38.3	4.7	40.8	1.3	21.9
RESOLUTE (7H7)	21.7	16.6	24.2	9.7	18.0
CRS MIX #1	12.6	19.6	20.0	12.7	16.1
CRS MIX #2	13.2	16.8	13.0	15.3	14.7
DLFPS SHHM	22.3	7.4	17.7	3.7	14.5
SPARTAN II	14.4	12.6	19.2	8.5	13.9
QUATRO	12.8	14.1	20.0	6.3	12.9
CHANTILLY	8.0	17.8	7.3	3.7	12.6
DTTHO TF/KBG MIX	5.9	18.8	3.3	1.7	12.6
KINGDOM	5.7	19.9	0.8	1.0	12.4
NATURAL KNIT ® PRG MIX	7.2	16.6	1.0	4.8	11.9
VITALITY LOW	10.1	11.0	15.8	5.2	10.6
BULLSEYE	2.6	17.7	1.2	1.3	9.8
CS MIX	3.9	13.9	8.7	9.0	9.6
YAAK	11.1	6.1	10.5	2.2	9.3
BGR-TF3	3.4	13.8	0.7	1.0	8.5
DLFPS CHCRSH	3.0	13.2	2.8	3.7	7.9
A-SFT	3.0	12.4	2.2	0.7	7.7
KY-31 E+	3.6	12.1	0.5	1.0	7.7
DTT TALL FESCUE MIX	3.1	10.6	3.3	2.8	7.2
RADAR	4.7	8.9	5.5	5.7	7.2
DLFPS TF-A	1.1	12.8	1.5	1.7	6.9
DLFPS CHCRM	6.1	7.2	7.0	1.3	6.5
NORTHERN MIXTURE	3.2	8.0	1.8	4.5	5.8
VITALITY DOUBLE	1.1	10.2	0.7	4.0	5.7
SOUTHERN MIXTURE	1.1	9.4	0.2	0.8	5.0
DLFPS TFAM	1.2	5.8	0.8	1.2	3.5
DLFPS TFASTC	3.3	3.2	2.8	2.3	3.3
LSD VALUE	8.7	25.2	8.7	10.5	8.0
C.V. (%)	78.7	115.5	64.1	151.0	70.3

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.

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TABLE 41.          PERCENT COVER OF PLANTED SPECIES AND WEED RATINGS OF COOL-SEASON CULTIVARS
                                      AT BLACKSBURG, VA  1/
                                        2020 DATA  2/

                                                        PLANTED   PLANTED
                                  PERCENT WEEDS          SPECIES   SPECIES
                   NAME           SPRING    FALL         SPRING    FALL

                   BGR-TF3          5.0      5.0          95.0      95.0
                   BULLSEYE         7.3      5.0          92.7      95.0
                   DLFPS TFAM      10.0      6.7          90.0      93.3
                   VITALITY DOUBLE 10.0      6.7          90.0      93.3
                   DLFPS TF-A       5.7      8.3          94.3      91.7
                   KY-31 E+         5.0      8.3          95.0      91.7
                   MNHD-15          6.7      8.3          93.3      91.7
                   SPARTAN II       8.3      8.3          91.7      91.7
                   A-SFT            9.0     10.0          91.0      90.0
                   CRS MIX #2       8.3     10.0          91.7      90.0
                   CRS MIX #3       8.3     10.0          91.3      90.0
                   DTT TALL FESCUE MIX 10.0 10.0          90.0      90.0
                   SOUTHERN MIXTURE 6.7     10.0          93.3      90.0
                   DLFPS CHCRM      8.3     11.7          91.7      88.3
                   DLFPS TFASTC    11.7     11.7          88.3      88.3
                   DTTHO TF/KBG MIX 8.3     11.7          91.7      88.3
                   KINGDOM         11.7     11.7          88.3      88.3
                   CRS MIX #1      16.7     13.3          83.3      86.7
                   NORTHERN MIXTURE 8.3     13.3          91.7      86.7
                   DLFPS CHCRSH    11.7     15.0          88.3      85.0
                   DLFPS SHHM      20.0     15.0          80.0      85.0
                   RADAR           11.7     15.0          88.3      85.0
                   RESOLUTE (7H7)  21.7     15.0          78.3      85.0
                   VITALITY LOW    13.3     15.0          86.3      85.0
                   CHANTILLY       15.0     16.7          84.7      83.3
                   QUATRO          16.7     16.7          83.3      83.3
                   CS MIX          16.7     18.3          83.3      81.7
                   KENBLUE         20.0     20.0          80.0      80.0
                   BEWITCHED       30.0     30.0          70.0      70.0
                   NATURAL KNIT ? PRG MIX 33.3 31.7       66.7      68.3
                   YAAK            46.7     38.3          53.3      61.7
                   DUTCH WHITE CLOVER 60.0  46.7          40.0      53.3

                   LSD VALUE       14.1     10.0          14.0      10.0
                   C.V. (%)        58.6     42.9          10.3       7.4
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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.

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TABLE 42.                    PERCENT PLANTED GRASS RATINGS OF COOL-SEASON CULTIVARS  1/
                                    GROWN UNDER LOW INPUT IN THE U.S.
                                           2016-20 DATA  2/

                    NAME                        PA2      UT1      VA1      MEAN

                    YAAK                        10.0     99.0     86.7     65.2
                    BULLSEYE                    33.3     66.7     92.7     64.2
                    KY-31 E+                    26.7     70.0     96.0     64.2
                    SOUTHERN MIXTURE            30.0     66.7     95.0     63.9
                    VITALITY DOUBLE             25.0     63.3     97.0     61.8
                    BGR-TF3                     35.0     56.7     93.3     61.7
                    VITALITY LOW                41.7     56.7     85.0     61.1
                    DLFPS TF-A                  30.0     50.0     97.0     59.0
                    DTTHO TF/KBG MIX            11.7     73.3     91.7     58.9
                    KINGDOM                     16.7     66.7     90.0     57.8
                    DLFPS CHCRM                 43.3     33.3     91.7     56.1
                    DTT TALL FESCUE MIX         15.0     63.3     90.0     56.1
                    A-SFT                       28.3     46.7     89.3     54.8
                    DLFPS TFASTC                25.0     50.0     86.7     53.9
                    DLFPS TFAM                  18.3     50.0     92.7     53.7
                    NORTHERN MIXTURE            38.3     16.7     91.7     48.9
                    DLFPS CHCRSH                31.7     26.7     88.3     48.9
                    RADAR                       15.0     30.0     91.0     45.3
                    CRS MIX #2                  30.0     13.3     91.7     45.0
                    CRS MIX #1                  21.7     20.0     91.7     44.4
                    SPARTAN II                  30.0     10.0     90.0     43.3
                    QUATRO                      26.7     16.7     85.0     42.8
                    CRS MIX #3                  25.0     10.0     92.7     42.6
                    MNHD-15                     23.3     10.0     93.3     42.2
                    KENBLUE                     25.0     20.0     80.0     41.7
                    CS MIX                      10.0     23.3     85.0     39.4
                    CHANTILLY                   13.3     13.3     84.7     37.1
                    NATURAL KNIT ® PRG MIX      30.0     13.3     66.7     36.7
                    DLFPS SHHM                  11.7     10.0     81.7     34.4
                    RESOLUTE (7H7)              11.7     10.0     76.7     32.8
                    DUTCH WHITE CLOVER          21.7      6.7     45.0     24.4
                    BEWITCHED                   11.7      6.7     41.7     20.0

                    LSD VALUE                   21.4     15.1     17.1     17.9
                    C.V. (%)                    55.5     25.8     12.3     31.2
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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.

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TABLE 43.

TURF UNIFORMITY RATINGS OF COOL-SEASON CULTIVARS 1/
GROWN UNDER LOW INPUT IN THE U.S.
2020 DATA

TURF UNIFORMITY RATINGS 1-9; 9=COMPLETELY UNIFORM 2/

NAME	IN1
CHANTILLY	7.0
DLFPS CHCRM	7.0
DLFPS CHCRSH	7.0
RADAR	6.7
VITALITY DOUBLE	6.7
BGR-TF3	6.3
MNHD-15	6.3
NORTHERN MIXTURE	6.3
CRS MIX #1	6.0
CS MIX	6.0
KINGDOM	6.0
KY-31 E+	6.0
DLFPS TFAM	5.7
DTT TALL FESCUE MIX	5.7
A-SFT	5.3
DLFPS SHHM	5.3
DLFPS TFASTC	5.3
KENBLUE	5.3
VITALITY LOW	5.3
CRS MIX #2	5.0
DLFPS TF-A	5.0
SOUTHERN MIXTURE	5.0
YAAK	5.0
BULLSEYE	4.7
DTTHO TF/KBG MIX	4.7
NATURAL KNIT ? PRG MIX	4.7
SPARTAN II	4.7
BEWITCHED	4.3
RESOLUTE (7H7)	4.3
CRS MIX #3	3.7
QUATRO	3.7
DUTCH WHITE CLOVER	3.0
LSD VALUE	1.8
C.V. (%)	20.3

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.

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TABLE 44.    HEIGHT MEASUREMENTS BETWEEN MOWING OF COOL-SEASON CULTIVARS
                GROWN UNDER LOW INPUT AT WEST LAFAYETTE, IN  1/
                              2016 DATA

                    HEIGHT MEASURED IN INCHES  2/

         NAME                         JUNE        JULY        MEAN

         DUTCH WHITE CLOVER           9.7         9.3         9.5
         CRS MIX #3                   9.7         9.0         9.3
         DLFPS TFAM                   8.3         8.0         8.2
         KENBLUE                      6.0         6.7         6.3
         NORTHERN MIXTURE             5.7         6.3         6.0
         DLFPS CHCRM                  5.3         6.0         5.7
         DLFPS SHHM                   5.3         6.0         5.7
         KY-31 E+                     5.0         6.3         5.7
         CHANTILLY                    4.3         5.3         4.8
         DLFPS CHCRSH                 4.3         5.3         4.8
         DTTHO TF/KBG MIX             4.3         5.3         4.8
         CS MIX                       4.3         5.0         4.7
         DLFPS TFASTC                 4.0         5.3         4.7
         VITALITY DOUBLE              4.3         5.0         4.7
         BEWITCHED                    4.3         4.7         4.5
         RADAR                        4.3         4.7         4.5
         BGR-TF3                      3.7         5.0         4.3
         DLFPS TF-A                   3.7         5.0         4.3
         SPARTAN II                   4.0         4.7         4.3
         BULLSEYE                     3.7         4.7         4.2
         DTT TALL FESCUE MIX          3.3         5.0         4.2
         KINGDOM                      3.7         4.7         4.2
         VITALITY LOW                 4.0         4.3         4.2
         CRS MIX #1                   4.0         4.0         4.0
         SOUTHERN MIXTURE             4.0         4.0         4.0
         YAAK                         3.3         4.7         4.0
         QUATRO                       4.0         3.7         3.8
         A-SFT                        3.0         4.3         3.7
         MNHD-15                      3.3         3.7         3.5
         NATURAL KNIT ? PRG MIX       3.0         3.7         3.3
         RESOLUTE (7H7)               3.0         3.7         3.3
         CRS MIX #2                   2.7         3.0         2.8

         LSD VALUE                    1.0         1.3         0.9
         C.V. (%)                    14.3        15.8        12.6
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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.

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APPENDIX TABLE.   SUMMARY OF TURFGRASS QUALITY RATINGS FOR COOL-SEASON CULTIVARS
                              GROWN UNDER LOW INPUT
                                  2016-20 DATA

                       TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF

                                      QUALITY     MAXIMUM
                 NAME                 MEAN 1/   IN TOP 25% 2/

                 A-SFT                   4.4        8.3
                 BEWITCHED               3.5        0.0
                 BGR-TF3                 4.6       25.0
                 BULLSEYE                4.8       50.0
                 CHANTILLY               4.3        8.3
                 CRS MIX #1              4.8       33.3
                 CRS MIX #2              4.7       33.3
                 CRS MIX #3              4.5       41.7
                 CS MIX                  4.5       16.7
                 DLFPS CHCRM             4.7       16.7
                 DLFPS CHCRSH            4.6       25.0
                 DLFPS SHHM              4.1        0.0
                 DLFPS TF-A              4.9       41.7
                 DLFPS TFAM              4.9       50.0
                 DLFPS TFASTC            5.1       75.0
                 DTT TALL FESCUE MIX     4.6       25.0
                 DTTHO TF/KBG MIX        4.6       16.7
                 DUTCH WHITE CLOVER      3.3        0.0
                 KENBLUE                 3.7        0.0
                 KINGDOM                 4.5       16.7
                 KY-31 E+                4.3       25.0
                 MNHD-15                 4.7       41.7
                 NATURAL KNIT ® PRG MIX  3.6        0.0
                 NORTHERN MIXTURE        4.4        0.0
                 QUATRO                  4.0        8.3
                 RADAR                   4.6       41.7
                 RESOLUTE (7H7)          4.5       33.3
                 SOUTHERN MIXTURE        4.7       25.0
                 SPARTAN II              4.4       16.7
                 VITALITY DOUBLE         5.0       58.3
                 VITALITY LOW            4.8       50.0
                 YAAK                    4.5       16.7

                 LSD VALUE               0.3
                 C.V. (%)               13.4
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*/ 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/ THE PERCENTAGE OF LOCATIONS WHERE THAT ENTRY FINISHED IN THE TOP 25% OF ALL ENTRIES.