

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 and an executive director. The program does not make variety recommendations. However, the data from tests can be used by extension specialists and others for making recommendations.

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

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Mr. Ryan Jeffries, Columbia Seeds, Inc.
Dr. Mike Kenna, USGA Green Section
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A Guide to NTEP Turfgrass Ratings

Introduction

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

General Considerations

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

Turfgrass Quality

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

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

Other Ratings

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

2015 NATIONAL LOW INPUT COOL-SEASON TEST

LOCATIONS SUBMITTING DATA FOR 2016

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

2015 National Low Input Cool-Season Test
Entries and Sponsors

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

2015 National Low Input Cool-Season Test Entries and Sponsors

Entry No.	Name	Species/Composition	Sponsor
*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
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 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 2017

TABLE A. 2016 LOCATIONS, SITE DESCRIPTIONS AND MANAGEMENT PRACTICES IN THE 2015 NATIONAL LOW INPUT COOL-SEASON TEST

LOCATION	SOIL TEXTURE	SOIL PH	SOIL PHOSPHOROUS (LBS/ACRE)	SOIL POTASSIUM (LBS/ACRE)	NITROGEN (LBS/1000 SQ FT)	SUN OR SHADE	MOWING HEIGHT (IN)	IRRIGATION PRACTICED
CT1	SANDY LOAM	6.1-6.5	0-60	151-240	-	FULL SUN	3.6-4.0	NO IRRIGATION
CT2	SANDY LOAM	6.1-6.5	0-60	151-240	-	FULL SUN	3.6-4.0	NO IRRIGATION
IN1	SILT LOAM AND SILT	7.1-7.5	61-150	151-240	1.1-2.0	FULL SUN	4.1+	NO IRRIGATION
IN2	SILT LOAM AND SILT	7.1-7.5	61-150	151-240	2.1-3.0	FULL SUN	4.1+	NO IRRIGATION
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	0.0-1.0	FULL SUN	3.1-3.5	NO IRRIGATION
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	-	-	-	-	-	-	-	-
UT1	-	-	-	-	-	-	-	-
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

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	SEEDLING VIGOR
CT1				X	X	X	X	X	X	X	X			
CT2				X	X	X	X	X	X	X	X			
IN1						X	X	X	X	X				
IN2						X	X	X	X	X				
MI1					X	X	X	X	X	X				
MN1				X	X	X	X	X	X	X				X
M01			X	X	X	X	X	X	X	X				
M02			X	X	X	X	X	X	X	X				
NC1			X	X	X	X	X	X	X	X	X	X		
NE1				X	X	X	X	X	X	X				
OR1				X	X	X	X	X	X	X	X			
PA2			X	X	X	X	X	X	X	X	X			X
UT1										X				
VA1					X	X	X	X	X	X				

TABLE B. (CONT'D)

LOCATIONS AND DATA COLLECTED IN 2016

LOCATION	PERCENT COVER SPRING	PERCENT COVER SUMMER	PERCENT COVER FALL	DROUGHT TOLERANCE DORMANCY	BROWN PATCH WARM TEMP.	PERCENT ESTABLISH- MENT	PERCENT ESTABLISHMENT NOV_15	PERCENT ESTABLISHMENT MAR_16	PERCENT ESTABLISHMENT JUN JUL AUG	PERCENT WEEDS	PERCENT JUN SEP OCT	PERCENT SUMMER FALL	HEIGHT MEASUREMENT BETWEEN MOWING JUNE JULY
CT1	X		X			X					X	X	
CT2	X		X			X					X	X	
IN1	X												X X
IN2	X												X X
MI1	X	X	X	X									
MN1	X		X							X			
MO1	X	X	X			X							
MO2	X	X				X							
NC1	X		X				X	X			X X		
NE1	X		X			X						X X	
OR1	X		X			X						X X	
PA2	X		X		X	X						X X	
UT1									X X X				
VA1	X		X			X							

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

**/ 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

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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 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 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.

Taken from the 2014 National Low Input Cool-Season Test - 2016 data report with permission from NTEP
 TABLE 4. MEAN TURFGRASS QUALITY AND OTHER RATINGS OF COOL-SEASON CULTIVARS
 GROWN UNDER LOW INPUT WITH INITIAL ANNUAL GRASS PRE-EMERGENCE AT STORRS, CT 1/
 2016 DATA
 TURFGRASS QUALITY AND OTHER RATINGS 1-9; 9=BEST 2/

NAME	PERCENT COVER SPRING	PERCENT COVER FALL	PERCENT ESTABLISH- MENT	PERCENT WEED SUMMER	PERCENT WEED FALL	APR	MAY	JUN	JUL	QUALITY RATINGS AUG	SEP	OCT	NOV	MEAN
DLFPS TF-A	97.7	95.0	71.7	2.3	4.3	7.3	7.0	7.3	6.7	6.3	7.3	7.3	6.3	7.0
DLFPS TFAM	96.3	97.7	73.3	1.3	3.3	7.7	7.7	6.7	7.0	6.3	7.3	7.3	6.3	7.0
DLFPS TFASTC	97.7	97.7	71.7	2.0	1.3	7.0	7.7	7.3	7.3	5.7	7.3	7.3	6.3	7.0
BULLSEYE	97.7	95.0	68.3	1.3	3.0	7.0	7.3	7.7	6.0	6.0	7.0	7.3	6.0	6.8
CRS MIX #2	93.3	96.3	58.3	3.7	5.7	5.0	6.3	7.0	6.7	7.0	6.3	8.0	7.0	6.7
MNHD-15	93.0	96.3	58.3	2.7	3.3	4.3	6.3	7.0	7.3	7.3	6.7	7.3	7.0	6.7
CRS MIX #1	96.0	97.7	58.3	3.7	5.3	5.3	6.7	7.0	7.0	7.3	6.0	7.0	6.7	6.6
VITALITY LOW	97.7	99.0	53.3	1.7	5.0	5.3	6.7	7.0	6.7	6.3	6.7	7.0	7.0	6.6
SPARTAN II	96.3	96.3	60.0	2.0	4.7	5.7	6.7	6.3	5.7	6.7	6.7	7.3	6.7	6.5
YAAK	99.0	90.0	75.0	0.0	1.3	7.7	7.0	7.3	6.7	7.0	5.3	6.0	5.3	6.5
7H7	95.0	96.3	53.3	5.0	8.0	4.0	5.7	6.7	6.7	7.0	6.3	7.7	7.0	6.4
CS MIX	97.7	93.3	65.0	2.0	7.0	6.0	7.3	7.0	5.7	6.3	6.0	6.3	6.3	6.4
DTTHO TF/KBG MIX	96.3	95.0	63.3	2.0	5.0	6.0	6.0	7.7	6.3	5.7	6.3	7.3	5.7	6.4
KINGDOM	94.7	93.3	65.0	3.0	9.3	6.0	6.7	7.3	5.7	5.0	6.7	7.7	5.7	6.3
RADAR	99.0	94.7	63.3	3.3	4.0	6.0	7.7	6.7	5.3	5.7	5.7	6.7	5.7	6.2
SOUTHERN MIXTURE	96.3	91.7	71.7	0.7	2.0	7.0	7.0	6.7	5.7	5.0	6.0	7.0	5.3	6.2
CRS MIX #3	99.0	91.7	50.0	0.0	1.0	6.0	6.0	5.7	6.3	6.0	5.3	6.7	6.7	6.1
DTT TALL FESCUE MIX	96.3	89.7	61.7	1.3	5.0	6.0	5.7	7.0	5.3	5.3	6.3	6.3	5.7	6.0
VITALITY DOUBLE	94.7	91.3	71.7	1.7	3.7	6.0	5.7	7.0	6.7	5.3	6.0	6.7	5.0	6.0
A-SFT	93.3	96.3	66.7	3.7	4.7	5.7	6.0	6.7	6.0	4.7	6.7	6.0	5.7	5.9
DLFPS CHCRSH	95.0	91.7	63.3	2.0	4.0	5.7	6.7	5.7	5.3	5.7	5.0	7.3	6.0	5.9
NATURAL KNIT ® PRG MIX	97.7	88.3	83.3	0.3	6.0	7.0	7.7	6.3	4.3	4.3	5.3	6.3	5.7	5.9
BGR-TF3	85.0	88.0	70.0	12.7	18.3	7.3	5.0	6.0	4.7	4.7	6.3	6.7	5.7	5.8
CHANTILLY	94.7	95.0	65.0	1.0	4.3	6.0	6.7	5.0	4.3	5.0	5.0	7.3	6.0	5.7
QUATRO	93.3	90.0	51.7	4.3	9.3	6.0	6.0	5.0	5.3	5.7	5.3	6.0	6.0	5.7
DLFPS CHCRM	97.7	91.7	65.0	0.0	3.7	6.3	6.3	5.7	5.7	5.3	4.7	5.7	5.3	5.6
DLFPS SHHM	93.0	93.3	48.3	0.0	4.0	5.0	6.0	4.7	5.7	5.7	5.0	6.0	5.7	5.5
KY-31 E+	96.3	85.0	76.7	0.3	3.0	7.0	6.0	4.7	6.0	5.0	5.7	5.0	4.7	5.5
DUTCH WHITE CLOVER	99.0	95.0	43.3	2.7	6.0	5.0	4.3	4.7	5.3	6.3	4.7	6.7	6.0	5.4
NORTHERN MIXTURE	90.0	80.0	68.3	3.3	16.0	5.0	5.3	4.7	4.0	4.0	3.7	5.7	4.0	4.5
BEWITCHED	66.7	75.0	45.0	7.7	71.7	3.3	3.7	5.0	4.3	3.7	4.0	4.7	4.7	4.2
KENBLUE	46.7	75.0	12.0	11.3	65.0	2.0	3.7	3.0	3.0	3.3	3.3	5.3	4.0	3.5
LSD VALUE	5.8	11.5	10.6	2.6	13.7	1.2	1.1	1.2	1.1	1.2	0.9	1.4	1.2	0.5
C.V. (%)	4.2	6.8	11.4	60.9	96.2	13.4	11.0	12.5	12.4	13.3	10.2	11.9	11.8	5.8

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 5.

MEAN TURFGRASS QUALITY AND OTHER RATINGS OF COOL-SEASON CULTIVARS
GROWN UNDER LOW INPUT WITH INITIAL ANNUAL GRASS PRE-EMERGENCE AT COLUMBIA, MO 1/
2016 DATA
TURFGRASS QUALITY AND OTHER RATINGS 1-9; 9=BEST 2/

NAME	PERCENT COVER SPRING	PERCENT COVER SUMMER	QUALITY RATINGS								MEAN
			MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	
DLFPS CHCRM	93.7	99.0	8.0	7.3	7.7	7.7	6.3	7.3	7.7	7.7	7.5
CRS MIX #3	94.0	99.0	7.0	6.7	7.0	8.0	6.7	7.3	8.3	7.3	7.3
DLFPS TFAM	97.3	99.0	7.0	7.0	7.0	7.7	7.0	7.3	6.7	6.3	7.0
DUTCH WHITE CLOVER	88.7	99.0	5.7	5.7	6.3	7.7	7.0	6.7	7.0	6.7	6.6
DLFPS SHHM	91.7	99.0	5.7	6.0	6.3	8.0	6.7	6.7	6.7	6.3	6.5
VITALITY LOW	89.7	96.0	6.0	6.3	6.0	6.0	6.3	6.7	6.3	6.7	6.3
RADAR	89.3	97.7	6.7	7.0	7.0	4.7	5.3	5.3	6.3	7.3	6.2
MNHD-15	88.3	96.0	5.3	5.0	5.0	6.3	6.7	6.7	7.0	7.0	6.1
CS MIX	90.0	97.7	6.0	6.3	6.7	4.3	5.7	5.3	6.7	7.0	6.0
DLFPS TFASTC	92.3	98.3	6.0	5.7	6.3	5.3	4.7	5.7	7.0	7.0	6.0
YAAK	92.3	94.7	6.0	6.7	4.7	5.7	6.7	5.7	6.3	6.0	6.0
7H7	86.7	94.7	4.3	4.7	5.3	6.3	6.3	6.7	6.7	6.3	5.8
DLFPS CHCRSH	94.3	97.7	5.3	5.7	6.7	5.0	5.0	5.3	6.3	7.3	5.8
SOUTHERN MIXTURE	95.7	98.3	6.0	6.0	5.7	3.7	5.3	6.3	7.0	6.7	5.8
QUATRO	89.0	97.7	5.0	5.3	5.3	5.3	6.0	6.3	6.0	6.3	5.7
VITALITY DOUBLE	92.3	97.0	5.0	6.0	6.3	5.0	4.7	6.0	6.7	6.0	5.7
CHANTILLY	91.7	98.3	6.7	6.7	7.3	4.7	4.3	4.0	5.3	5.7	5.6
CRS MIX #1	92.3	97.7	4.0	3.7	4.0	5.3	6.7	6.3	7.0	7.0	5.5
CRS MIX #2	90.0	94.7	4.0	4.3	4.7	5.0	6.3	6.0	6.7	7.3	5.5
DLFPS TF-A	97.0	99.0	6.0	6.0	5.7	4.0	4.0	5.0	6.0	6.3	5.4
NATURAL KNIT ® PRG MIX	97.3	94.7	6.7	7.3	8.0	2.7	3.7	4.7	5.3	5.0	5.4
DTTHO TF/KBG MIX	94.0	97.7	5.3	6.0	5.3	4.3	4.3	4.7	6.7	5.3	5.3
NORTHERN MIXTURE	94.0	95.7	5.3	6.3	6.7	4.0	4.3	4.7	5.0	6.0	5.3
A-SFT	93.3	97.7	5.0	6.3	5.3	4.0	3.7	5.7	5.7	6.0	5.2
SPARTAN II	94.7	97.7	5.0	5.0	5.3	5.0	5.0	4.7	5.3	6.0	5.2
BULLSEYE	96.3	97.7	6.0	5.3	5.3	3.3	3.7	5.3	6.3	5.3	5.1
BGR-TF3	91.3	94.7	5.0	5.7	5.3	3.3	4.0	6.0	5.7	5.0	5.0
DTT TALL FESCUE MIX	90.3	91.7	4.7	5.0	5.0	3.7	4.0	5.3	6.0	5.3	4.9
KINGDOM	91.0	96.3	4.3	5.3	5.0	4.0	4.3	5.0	5.0	6.0	4.9
BEWITCHED	90.7	41.7	3.7	3.3	2.7	3.3	3.7	4.7	7.0	7.0	4.4
KENBLUE	83.3	70.0	3.3	2.7	3.0	3.0	4.3	5.3	6.3	5.7	4.2
KY-31 E+	95.7	99.0	4.0	4.0	4.3	4.0	4.3	4.0	4.0	4.0	4.1
LSD VALUE	10.0	8.9	1.9	1.3	1.2	1.0	0.9	1.5	1.4	1.4	0.5
C.V. (%)	4.6	6.2	19.8	14.1	13.4	12.9	11.6	15.2	12.8	12.5	5.9

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 6.

MEAN TURFGRASS QUALITY AND OTHER RATINGS OF COOL-SEASON CULTIVARS
GROWN WITH ADDITIONAL FERTILIZER (MEDIUM INPUT) AT WEST LAFAYETTE, IN 1/
2016 DATA
TURFGRASS QUALITY AND OTHER RATINGS 1-9; 9=BEST 2/

NAME	PERCENT	HEIGHT MEASUREMENT		QUALITY RATINGS					
	COVER	BETWEEN MOWING	(INCHES)						
	SPRING	JUNE	JULY	JUN	JUL	AUG	SEP	OCT	MEAN
KINGDOM	96.3	4.3	3.7	7.3	6.3	7.3	5.3	5.7	6.4
DLFPS TFASTC	96.3	4.0	4.7	6.0	5.7	6.0	5.7	6.0	5.9
YAAK	93.3	3.3	3.7	6.0	6.0	5.7	5.3	6.3	5.9
DLFPS TFAM	96.3	7.0	6.3	5.3	6.0	5.7	5.7	6.3	5.8
BULLSEYE	96.3	4.7	5.0	6.0	5.3	5.7	5.3	6.0	5.7
CS MIX	91.7	4.7	4.3	5.3	5.7	5.7	6.0	5.7	5.7
RADAR	94.7	4.0	3.7	6.0	5.3	6.0	5.3	6.0	5.7
VITALITY DOUBLE	95.0	3.0	3.3	6.0	5.7	6.0	5.7	5.3	5.7
DLFPS SHHM	91.7	5.0	5.7	5.0	5.0	5.3	6.3	6.3	5.6
VITALITY LOW	93.3	3.7	4.3	5.0	6.0	6.0	5.7	5.3	5.6
DLFPS TF-A	95.0	3.7	4.3	5.0	5.0	5.7	6.0	5.7	5.5
DTT TALL FESCUE MIX	95.0	3.7	4.3	5.3	5.3	6.0	5.7	5.3	5.5
A-SFT	96.3	3.7	3.3	6.0	5.3	6.0	4.7	5.0	5.4
CRS MIX #3	93.3	8.0	7.7	5.0	6.0	5.0	5.3	5.0	5.3
DLFPS CHCRM	93.3	6.0	5.0	5.3	5.0	5.0	5.7	5.3	5.3
DTTHO TF/KBG MIX	95.0	3.0	4.3	5.3	5.0	5.7	5.0	5.3	5.3
DUTCH WHITE CLOVER	88.3	9.0	8.3	4.3	6.0	4.3	6.3	5.7	5.3
SOUTHERN MIXTURE	95.0	3.7	3.3	5.7	5.7	6.0	4.0	5.0	5.3
CHANTILLY	91.7	4.0	4.3	5.0	5.3	5.7	5.0	5.0	5.2
BGR-TF3	91.7	3.7	3.3	4.3	5.0	5.7	5.3	5.3	5.1
DLFPS CHCRSH	90.0	4.0	4.0	5.0	5.0	5.3	5.0	5.3	5.1
KENBLUE	91.7	4.3	3.7	4.7	4.3	4.7	5.7	6.3	5.1
KY-31 E+	90.0	5.3	5.0	6.0	5.0	6.3	4.0	4.3	5.1
QUATRO	90.0	3.0	2.3	5.0	4.3	4.7	5.7	5.7	5.1
SPARTAN II	90.0	4.7	3.7	4.3	5.0	5.3	5.3	5.3	5.1
7H7	90.0	2.7	3.0	4.3	4.0	4.3	6.0	6.3	5.0
NORTHERN MIXTURE	91.7	5.7	4.7	5.0	4.7	4.7	5.0	5.7	5.0
NATURAL KNIT ® PRG MIX	99.0	3.0	3.3	6.0	4.7	4.7	4.3	5.0	4.9
BEWITCHED	91.7	4.0	4.3	4.3	4.3	4.3	5.3	4.7	4.6
CRS MIX #1	93.3	3.3	3.7	4.3	4.0	4.3	4.7	5.7	4.6
MNHD-15	91.7	3.3	3.3	4.3	3.7	4.7	4.3	4.7	4.3
CRS MIX #2	93.3	2.3	2.7	4.3	3.7	3.7	4.7	4.7	4.2
LSD VALUE	5.1	1.0	1.2	0.9	1.3	1.6	2.9	2.1	0.7
C.V. (%)	2.9	15.4	18.4	10.5	14.3	15.6	18.2	14.6	8.1

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

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

TABLE 7. SPRING GREENUP RATINGS OF COOL-SEASON CULTIVARS
GROWN UNDER LOW INPUT IN THE U.S.
2016 DATA

SPRING GREENUP RATINGS 1-9; 9=COMPLETELY GREEN

NAME	NE1
BEWITCHED	5.7
KINGDOM	5.7
NATURAL KNIT ® PRG MIX	5.7
VITALITY DOUBLE	5.7
BGR-TF3	5.3
BULLSEYE	5.0
CHANTILLY	5.0
CRS MIX #2	5.0
CS MIX	5.0
DLFPS CHCRM	5.0
DLFPS CHCRSH	5.0
DLFPS TFAM	5.0
DLFPS TFASTC	5.0
DTT TALL FESCUE MIX	5.0
KY-31 E+	5.0
NORTHERN MIXTURE	5.0
QUATRO	5.0
SPARTAN II	5.0
VITALITY LOW	5.0
YAAK	5.0
CRS MIX #3	4.7
DLFPS SHHM	4.7
DLFPS TF-A	4.7
DUTCH WHITE CLOVER	4.7
MNHD-15	4.7
RESOLUTE (7H7)	4.7
A-SFT	4.3
CRS MIX #1	4.3
DTTHO TF/KBG MIX	4.3
KENBLUE	4.3
RADAR	4.3
SOUTHERN MIXTURE	4.3
LSD VALUE	1.2
C.V. (%)	15.6

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 8. 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.

TABLE 9. PERCENT LIVING GROUND COVER (SPRING) RATINGS OF COOL-SEASON CULTIVARS 1/
GROWN UNDER LOW INPUT IN THE U.S.
2016 DATA

PERCENT LIVING GROUND COVER IN SPRING: LOCATIONS 2/										
NAME	CT1	IN1	MN1	MO1	NC1	NE1	OR1	PA2	VA1	MEAN
DLFPS TFAM	96.0	97.7	91.7	98.7	99.0	86.7	91.7	95.0	71.7	92.7
BULLSEYE	95.0	97.7	95.0	97.7	85.0	93.0	95.0	90.0	71.7	91.9
DLFPS CHCRM	96.0	91.7	94.7	97.3	99.0	84.7	93.0	93.3	63.3	91.2
DLFPS TF-A	96.3	96.3	93.3	94.0	88.3	89.7	91.7	93.3	70.0	91.2
DTT TALL FESCUE MIX	96.3	96.3	91.7	94.3	85.0	94.3	91.7	88.3	66.7	90.4
SOUTHERN MIXTURE	96.0	97.7	94.7	95.3	91.7	88.3	88.3	90.0	61.7	90.3
DLFPS TFASTC	93.3	97.7	91.7	86.3	88.3	88.0	94.3	91.7	68.3	89.9
KY-31 E+	91.7	93.3	95.0	96.3	94.7	96.0	91.7	91.7	48.3	89.8
NATURAL KNIT ® PRG MIX	97.7	97.7	90.0	95.7	90.0	80.0	93.3	92.0	51.7	88.7
VITALITY DOUBLE	91.7	96.3	88.3	95.7	90.0	74.7	92.3	85.0	73.3	88.6
CHANTILLY	94.3	93.3	90.0	94.3	90.0	85.0	91.7	88.3	58.3	88.4
CRS MIX #3	97.7	86.7	99.0	95.7	93.3	85.0	60.0	90.0	70.0	87.6
NORTHERN MIXTURE	88.3	96.3	83.3	94.0	91.7	88.3	83.3	93.3	58.3	87.6
BGR-TF3	83.3	97.7	96.3	95.7	78.3	81.7	86.7	94.7	61.7	87.5
DLFPS CHCRSH	90.0	95.0	88.3	91.7	86.7	81.3	87.7	90.0	65.0	87.5
YAAK	99.0	94.7	90.0	96.3	88.3	81.7	92.3	80.0	53.3	87.5
A-SFT	90.0	95.0	90.0	94.3	80.0	86.3	91.7	86.7	61.7	87.5
KINGDOM	91.7	96.3	86.7	97.0	83.3	79.7	86.7	90.0	63.3	87.4
RADAR	95.0	97.7	81.7	94.3	81.7	80.0	80.0	91.7	71.7	87.3
DTTHO TF/KBG MIX	85.0	95.0	88.3	90.0	81.7	83.3	85.0	83.3	63.3	85.4
DLFPS SHHM	94.3	90.0	93.3	97.0	99.0	81.7	48.3	85.0	65.0	85.3
VITALITY LOW	94.7	93.3	88.3	90.0	83.3	86.7	36.7	86.7	68.3	82.7
CS MIX	91.7	93.3	83.3	93.3	80.0	70.0	66.0	80.0	66.7	82.3
SPARTAN II	93.0	93.3	88.3	97.0	80.0	94.7	26.7	91.7	58.3	82.2
QUATRO	91.7	91.7	90.0	93.0	78.3	88.0	41.7	85.0	53.3	81.2
DUTCH WHITE CLOVER	99.0	93.3	90.0	90.7	80.0	83.0	51.7	60.0	56.7	80.3
CRS MIX #1	96.3	95.0	83.3	94.0	78.3	90.0	16.7	91.7	56.7	80.1
MNHD-15	88.3	91.7	85.0	98.0	80.0	89.7	13.3	80.0	70.0	79.5
RESOLUTE (7H7)	94.3	93.3	85.0	95.0	80.0	88.3	3.7	85.0	55.0	77.9
CRS MIX #2	85.0	90.0	81.7	97.7	70.0	83.3	26.7	76.7	56.7	76.7
BEWITCHED	70.0	93.3	75.0	80.0	40.0	91.3	23.3	80.0	40.0	69.2
KENBLUE	56.7	93.3	60.0	92.0	11.7	96.0	8.3	50.0	48.3	61.5
LSD VALUE	9.3	4.2	6.4	8.6	8.7	17.8	24.8	19.8	14.7	4.3
C.V. (%)	6.3	2.8	4.5	5.7	6.6	12.9	23.2	14.3	14.8	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 10. PERCENT LIVING GROUND COVER (SUMMER) RATINGS OF COOL-SEASON CULTIVARS 1/
GROWN UNDER LOW INPUT IN THE U.S.
2016 DATA

PERCENT LIVING GROUND COVER IN SUMMER: LOCATIONS 2/

NAME	MI1	MO1	MEAN
BGR-TF3	99.0	98.7	98.8
BULLSEYE	98.0	99.0	98.5
DLFPS TFAM	97.7	99.0	98.3
NATURAL KNIT ® PRG MIX	98.7	97.7	98.2
DLFPS TFASTC	97.3	99.0	98.2
KY-31 E+	98.0	98.3	98.2
SOUTHERN MIXTURE	98.0	98.3	98.2
CHANTILLY	97.7	98.3	98.0
DLFPS TF-A	98.3	97.7	98.0
YAAK	98.0	97.7	97.8
DTT TALL FESCUE MIX	97.7	97.7	97.7
KINGDOM	96.0	99.0	97.5
NORTHERN MIXTURE	98.0	97.0	97.5
VITALITY DOUBLE	97.0	97.7	97.3
A-SFT	95.3	99.0	97.2
RADAR	93.7	99.0	96.3
DLFPS CHCRM	93.3	99.0	96.2
DLFPS CHCRSH	92.0	99.0	95.5
CRS MIX #3	92.0	98.7	95.3
CS MIX	91.7	99.0	95.3
DTTHO TF/KBG MIX	95.0	95.7	95.3
SPARTAN II	91.3	99.0	95.2
CRS MIX #1	86.7	99.0	92.8
MNHD-15	86.7	99.0	92.8
DLFPS SHHM	85.0	99.0	92.0
DUTCH WHITE CLOVER	84.3	99.0	91.7
CRS MIX #2	85.0	97.7	91.3
VITALITY LOW	85.0	97.7	91.3
QUATRO	84.7	97.7	91.2
RESOLUTE (7H7)	81.7	99.0	90.3
BEWITCHED	82.3	28.3	55.3
KENBLUE	34.3	20.0	27.2
LSD VALUE	5.0	3.6	3.1
C.V. (%)	3.4	2.4	2.9

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

PERCENT LIVING GROUND COVER IN FALL: LOCATIONS 2/										
NAME	CT1	MI1	MN1	MO1	NC1	NE1	OR1	PA2	VA1	MEAN
DLFPS TFAM	93.3	94.3	93.0	99.0	85.0	93.0	96.0	91.7	99.0	93.8
YAAK	88.3	89.7	93.7	99.0	73.0	89.7	93.3	76.7	99.0	89.1
DLFPS CHCRM	90.0	88.0	87.7	99.0	76.7	92.7	88.3	73.3	99.0	88.3
DLFPS TFASTC	90.0	91.7	54.7	99.0	64.7	93.0	97.0	92.3	99.0	86.8
SOUTHERN MIXTURE	90.0	96.0	52.3	98.7	66.7	89.7	97.0	91.7	99.0	86.8
DUTCH WHITE CLOVER	90.0	94.7	87.7	99.0	91.7	93.0	43.3	78.3	99.0	86.3
KY-31 E+	83.3	88.3	62.7	99.0	70.0	99.0	88.3	88.3	92.7	85.7
DLFPS TF-A	88.3	78.3	60.7	99.0	61.7	91.7	94.0	93.3	99.0	85.1
VITALITY DOUBLE	86.7	88.3	66.7	99.0	43.3	89.7	94.3	86.7	99.0	83.7
DLFPS SHHM	88.3	88.3	83.3	99.0	86.7	99.0	66.7	40.0	99.0	83.4
BGR-TF3	90.0	89.7	46.0	99.0	58.3	93.0	94.0	76.7	99.0	82.9
BULLSEYE	86.7	71.7	58.7	99.0	43.3	99.0	94.3	91.7	99.0	82.6
KINGDOM	91.7	78.3	50.0	99.0	63.3	89.3	92.7	70.0	99.0	81.5
DTTHO TF/KBG MIX	81.7	88.3	54.3	98.3	60.0	83.3	94.0	71.7	99.0	81.2
A-SFT	81.7	84.7	46.0	99.0	38.3	92.7	91.7	85.0	99.0	79.8
CRS MIX #3	93.3	81.7	79.3	99.0	80.0	86.7	31.7	61.7	99.0	79.1
CHANTILLY	86.7	93.0	66.7	99.0	55.0	83.3	86.7	36.7	96.0	78.1
NORTHERN MIXTURE	80.0	88.3	44.0	99.0	26.7	93.0	90.0	78.3	99.0	77.6
DTT TALL FESCUE MIX	88.3	76.7	56.3	99.0	33.3	96.0	96.0	51.7	99.0	77.4
DLFPS CHCRSH	89.7	81.7	52.3	99.0	30.0	92.7	85.0	51.7	99.0	75.7
VITALITY LOW	93.3	94.7	62.7	99.0	36.7	92.7	43.3	56.7	99.0	75.3
NATURAL KNIT ® PRG MIX	80.0	85.0	29.0	99.0	41.7	93.0	95.0	55.7	94.3	74.7
RADAR	88.3	81.7	33.3	99.0	31.7	90.0	71.7	70.0	99.0	73.9
CS MIX	93.0	71.7	54.3	99.0	20.0	89.7	75.0	56.7	99.0	73.1
CRS MIX #2	93.3	84.7	41.7	99.0	46.7	90.0	25.0	76.7	99.0	72.9
CRS MIX #1	95.0	78.3	62.7	99.0	16.7	93.0	20.0	65.7	99.0	69.9
SPARTAN II	95.0	89.7	37.7	99.0	31.7	86.7	35.0	33.3	99.0	67.4
RESOLUTE (7H7)	97.7	94.3	39.7	99.0	15.0	93.0	11.7	55.0	99.0	67.1
KENBLUE	56.7	94.7	41.7	99.0	45.0	99.0	26.7	41.7	99.0	67.0
BEWITCHED	81.7	89.7	12.7	99.0	21.7	89.7	25.0	70.0	91.0	64.5
MNHD-15	96.3	80.0	29.3	99.0	21.7	91.3	15.0	46.7	99.0	64.3
QUATRO	93.3	66.7	25.0	97.7	16.7	89.7	45.0	43.3	99.0	64.0
LSD VALUE	9.6	17.7	22.3	0.8	29.5	11.9	15.0	41.8	5.7	7.0
C.V. (%)	6.8	12.9	25.1	0.5	37.8	8.0	13.6	38.5	3.6	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.

TABLE 12. DROUGHT TOLERANCE (DORMANCY) RATINGS OF COOL-SEASON CULTIVARS 1/
GROWN UNDER LOW INPUT IN THE U.S.
2016 DATA

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.

TABLE 13. BROWN PATCH (WARM TEMPERATURE) RATINGS OF COOL-SEASON CULTIVARS 1/
GROWN UNDER LOW INPUT IN THE U.S.
2016 DATA

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

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

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

TABLE 14. PERCENT ESTABLISHMENT RATINGS OF COOL-SEASON CULTIVARS 1/
GROWN UNDER LOW INPUT IN THE U.S. 2/
2016 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.

TABLE 15. PERCENT ESTABLISHMENT RATINGS OF COOL-SEASON CULTIVARS 1/
GROWN UNDER LOW INPUT AT RALEIGH, NC 2/
2016 DATA

NAME	NOVEMBER 2015	MARCH 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 16. PERCENT ESTABLISHMENT RATINGS OF COOL-SEASON CULTIVARS 1/
GROWN UNDER LOW INPUT AT LOGAN, UT 1/
2016 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 17. PERCENT WEEDS RATINGS OF COOL-SEASON CULTIVARS 1/
GROWN UNDER LOW INPUT IN THE U.S. 2/
2016 DATA

NAME	MN1
BEWITCHED	87.3
QUATRO	75.3
MNHD-15	71.0
NATURAL KNIT ® PRG MIX	71.0
RADAR	66.7
SPARTAN II	62.7
RESOLUTE (7H7)	60.7
KENBLUE	58.7
CRS MIX #2	58.3
NORTHERN MIXTURE	56.3
A-SFT	54.3
BGR-TF3	54.3
KINGDOM	50.0
SOUTHERN MIXTURE	48.0
DLFPS CHCRSH	47.7
DLFPS TFASTC	46.3
DTTHO TF/KBG MIX	46.0
CS MIX	45.7
DTT TALL FESCUE MIX	44.0
BULLSEYE	41.7
DLFPS TF-A	39.3
CRS MIX #1	37.7
KY-31 E+	37.3
VITALITY LOW	37.3
CHANTILLY	33.3
VITALITY DOUBLE	33.3
CRS MIX #3	21.0
DLFPS SHHM	16.7
DUTCH WHITE CLOVER	12.7
DLFPS CHCRM	12.3
DLFPS TFAM	6.3
YAAK	6.3
LSD VALUE	22.3
C.V. (%)	30.8

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 18. PERCENT WEEDS (SUMMER) RATINGS OF COOL-SEASON CULTIVARS 1/
GROWN UNDER LOW INPUT IN THE U.S.
2016 DATA

PERCENT WEEDS IN SUMMER: LOCATIONS 2/

NAME	CT1	NC1	NE1	PA2	MEAN
KENBLUE	5.0	56.7	3.3	73.3	34.6
BEWITCHED	4.3	45.0	13.3	68.3	32.8
BGR-TF3	23.3	26.7	13.3	16.7	20.0
RESOLUTE (7H7)	3.0	23.3	10.0	36.7	18.3
KINGDOM	2.0	25.0	8.3	33.3	17.2
QUATRO	2.3	14.0	10.0	41.7	17.0
DTTHO TF/KBG MIX	2.0	13.3	11.7	38.3	16.3
CRS MIX #1	2.0	13.3	11.7	33.3	15.1
A-SFT	2.0	23.3	11.7	20.0	14.3
SPARTAN II	0.7	23.3	11.7	20.0	13.9
MNHD-15	3.3	20.0	6.7	25.0	13.8
CRS MIX #2	3.3	16.7	13.3	20.0	13.3
VITALITY LOW	2.3	8.3	13.3	25.0	12.3
RADAR	3.7	15.0	15.0	15.0	12.2
DUTCH WHITE CLOVER	1.0	15.0	20.0	12.3	12.1
DTT TALL FESCUE MIX	0.3	23.3	5.0	16.7	11.3
CS MIX	2.3	15.0	10.0	16.7	11.0
CHANTILLY	1.3	13.3	13.3	15.0	10.8
DLFPS TF-A	0.0	15.0	11.7	11.7	9.6
BULLSEYE	1.0	16.7	6.7	10.0	8.6
VITALITY DOUBLE	1.0	10.0	11.7	11.7	8.6
YAAK	0.0	8.3	15.0	8.3	7.9
DLFPS CHCRSH	1.3	10.0	6.7	13.3	7.8
CRS MIX #3	1.3	3.3	13.3	10.0	7.0
SOUTHERN MIXTURE	0.7	6.7	13.3	7.3	7.0
DLFPS TFASTC	0.3	8.3	6.7	11.7	6.8
NORTHERN MIXTURE	1.3	5.0	15.0	4.7	6.5
NATURAL KNIT ® PRG MIX	0.0	10.0	8.3	6.7	6.3
DLFPS SHHM	1.3	8.3	10.0	2.7	5.6
DLFPS TFAM	0.0	6.7	10.0	1.3	4.5
DLFPS CHCRM	0.0	1.7	10.0	2.3	3.5
KY-31 E+	0.3	6.7	3.3	2.3	3.2
LSD VALUE	2.3	11.5	10.4	16.6	5.7
C.V. (%)	62.5	45.2	60.5	52.5	58.6

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 19. PERCENT WEEDS (FALL) RATINGS OF COOL-SEASON CULTIVARS 1/
GROWN UNDER LOW INPUT IN THE U.S.
2016 DATA

PERCENT WEEDS IN FALL: LOCATIONS 2/

NAME	CT1	NC1	NE1	PA2	MEAN
DTT TALL FESCUE MIX	2.0	66.7	46.7	83.3	49.7
KENBLUE	9.3	76.7	43.3	66.7	49.0
CRS MIX #1	2.3	73.3	40.0	65.0	45.2
RESOLUTE (7H7)	4.0	73.3	23.3	80.0	45.2
NATURAL KNIT ® PRG MIX	2.0	53.3	46.7	78.3	45.1
QUATRO	2.3	55.0	43.3	78.3	44.8
MNHD-15	2.3	71.7	30.0	71.7	43.9
BEWITCHED	12.0	66.7	40.0	55.0	43.4
A-SFT	3.7	70.0	36.7	61.7	43.0
KINGDOM	3.0	36.7	58.3	70.0	42.0
SPARTAN II	1.7	56.7	30.0	70.0	39.6
CRS MIX #2	4.7	58.3	36.7	58.3	39.5
BGR-TF3	0.7	55.0	43.3	53.3	38.1
CS MIX	2.0	48.3	38.3	63.3	38.0
DTTHO TF/KBG MIX	2.7	48.3	36.7	60.0	36.9
DLFPS CHCRSH	2.0	38.3	43.3	60.0	35.9
BULLSEYE	1.3	56.7	50.0	33.3	35.3
DLFPS SHHM	6.0	26.7	53.3	55.0	35.3
NORTHERN MIXTURE	3.3	50.0	20.0	66.7	35.0
VITALITY DOUBLE	1.3	61.7	40.0	36.7	34.9
RADAR	5.7	50.0	40.0	41.7	34.3
CHANTILLY	5.0	35.0	20.0	76.7	34.2
VITALITY LOW	1.7	34.0	26.7	70.0	33.1
DLFPS TF-A	1.3	53.3	36.7	26.7	29.5
KY-31 E+	0.3	40.0	43.3	30.0	28.4
CRS MIX #3	2.3	10.0	30.0	66.7	27.3
SOUTHERN MIXTURE	1.0	45.0	23.3	25.0	23.6
DLFPS TFASTC	0.7	28.3	43.3	20.0	23.1
DLFPS CHCRM	1.0	10.0	40.0	38.3	22.3
DUTCH WHITE CLOVER	1.7	15.0	33.3	33.3	20.8
DLFPS TFAM	0.7	6.7	43.3	26.7	19.3
YAAK	0.7	21.7	33.3	16.7	18.1
LSD VALUE	4.1	30.8	22.2	35.8	13.1
C.V. (%)	89.3	41.0	36.4	41.0	45.9

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

NAME	SUMMER	FALL	MEAN
RESOLUTE (7H7)	87.7	21.7	54.7
KENBLUE	85.0	20.0	52.5
CRS MIX #2	81.7	16.7	49.2
CRS MIX #1	82.7	15.0	48.8
BEWITCHED	81.7	13.3	47.5
MNHD-15	78.3	15.0	46.7
SPARTAN II	76.7	16.7	46.7
VITALITY LOW	63.3	13.3	38.3
CRS MIX #3	66.0	8.3	37.2
DUTCH WHITE CLOVER	61.7	10.0	35.8
QUATRO	51.7	10.0	30.8
DLFPS SHHM	51.7	4.0	27.8
CS MIX	28.3	5.7	17.0
RADAR	21.7	4.0	12.8
DLFPS CHCRSH	21.7	2.3	12.0
NORTHERN MIXTURE	16.7	2.0	9.3
BGR-TF3	15.0	3.3	9.2
VITALITY DOUBLE	16.7	1.0	8.8
CHANTILLY	13.3	1.7	7.5
DLFPS TFAM	13.3	1.7	7.5
KY-31 E+	13.3	1.3	7.3
DLFPS TFASTC	13.3	1.0	7.2
DTTHO TF/KBG MIX	13.3	1.0	7.2
DLFPS CHCRM	11.7	2.3	7.0
DLFPS TF-A	11.7	1.7	6.7
KINGDOM	11.7	1.0	6.3
BULLSEYE	10.0	1.0	5.5
DTT TALL FESCUE MIX	10.0	1.0	5.5
SOUTHERN MIXTURE	10.0	1.0	5.5
YAAK	10.0	0.7	5.3
A-SFT	8.3	2.0	5.2
NATURAL KNIT ® PRG MIX	8.3	1.7	5.0
LSD VALUE	22.6	6.5	13.0
C.V. (%)	41.8	66.0	41.0

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.

TABLE 21. 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

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

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

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

TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF

NAME	QUALITY MEAN 1/	MAXIMUM IN TOP 25% 2/
A-SFT	5.0	9.1
BEWITCHED	4.1	9.1
BGR-TF3	5.0	0.0
BULLSEYE	5.2	27.3
CHANTILLY	5.0	18.2
CRS MIX #1	5.1	27.3
CRS MIX #2	5.0	9.1
CRS MIX #3	5.1	36.4
CS MIX	5.2	45.5
DLFPS CHCRM	5.5	27.3
DLFPS CHCRSH	5.3	9.1
DLFPS SHHM	5.0	18.2
DLFPS TF-A	5.5	36.4
DLFPS TFAM	5.5	63.6
DLFPS TFASTC	5.6	54.5
DTT TALL FESCUE MIX	5.2	18.2
DTTHO TF/KBG MIX	5.1	18.2
DUTCH WHITE CLOVER	4.5	0.0
KENBLUE	3.8	9.1
KINGDOM	5.1	18.2
KY-31 E+	4.8	27.3
MNHD-15	5.0	18.2
NATURAL KNIT ® PRG MIX	4.9	9.1
NORTHERN MIXTURE	5.1	18.2
QUATRO	4.7	0.0
RADAR	5.4	54.5
RESOLUTE (7H7)	5.0	27.3
SOUTHERN MIXTURE	5.4	45.5
SPARTAN II	5.0	9.1
VITALITY DOUBLE	5.4	18.2
VITALITY LOW	5.6	72.7
YAAK	4.8	18.2
LSD VALUE	0.3	
C.V. (%)	12.3	

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

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

1/ MEAN AN AVERAGE OF ALL THE TURFGRASS QUALITY RATINGS FROM ALL LOCATIONS.

2/ MAXIMUM IN TOP 25% THE PERCENTAGE OF LOCATIONS WHERE THAT ENTRY FINISHED IN THE TOP 25% OF ALL ENTRIES.