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.

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

CURRENT POLICY COMMITTEE MEMBERS:

Dr. Melodee Fraser, Pure-Seed Testing, Inc.
Mr. Paul Hedgpeth, Columbia River Seeds
Dr. Jeff Nus, USGA Green Section
Dr. Michael Richardson, University of Arkansas
Dr. David Kopec, University of Arizona
Mr. Warren Bell, Biograss Sod Farms
Dr. Clark Throssell, Golf Course Superintendents Assoc. of America
Dr. Ken Diesburg, Southern Illinois University
Mr. Pat McClain, Burlingham Seeds
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2007 National Zoysiagrass Test - 2009 data

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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 2007 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.*

2007 NATIONAL ZOYSIAGRASS TEST

LOCATIONS SUBMITTING DATA FOR 2009

State	Location	Code
California	Riverside	CA3
Florida	Gainesville	FL1
Indiana	West Lafayette	IN1
Kansas	Manhattan	KS1
New Mexico	Las Cruces (Salt Tolerance)	NM1
North Carolina	Raleigh	NC1
Texas	Dallas	TX1

2007 NATIONAL ZOYSIAGRASS TEST

Entries and Sponsors

Entry No.	Name	Type	Sponsor
* 1	Zenith	seeded	Standard entry
* 2	Meyer	vegetative	Standard entry
* 3	Zorro	vegetative	Standard entry
4	DALZ 0501	vegetative	Texas A&M Dallas & Phillip Jennings Turf
5	DALZ 0701	vegetative	Texas A&M Dallas
6	DALZ 0702	vegetative	Texas A&M Dallas
* 7	Shadowturf	vegetative	Ivey Gardens
8	L1F	vegetative	Bladerunner Farms
9	29-2	vegetative	Bladerunner Farms
10	240	vegetative	Bladerunner Farms
11	380-1	vegetative	Bladerunner Farms

*   COMMERCIALLY AVAILABLE IN THE USA IN 2010.

2009 LOCATIONS, SITE DESCRIPTIONS AND MANAGEMENT PRACTICES IN THE 2002 NATIONAL ZOYSIAGRASS 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
CA3	SANDY LOAM	7.1-7.5	-	-	-	FULL SUN	1.6-2.0	TO PREVENT STRESS
FL1	SAND	6.6-7.0	-	-	0.0-1.0	FULL SUN	1.6-2.0	TO PREVENT STRESS
IN1	SANDY CLAY LOAM	7.1-7.5	61-150	241-375	2.1-3.0	FULL SUN	0.6-1.0	-
KS1	-	-	-	-	-	-	-	-
NC1	SILTY CLAY AND CLAY	6.1-6.5	61-150	0-150	3.1-4.0	FULL SUN	2.1-2.5	TO PREVENT STRESS
NM1	LOAMY SAND	7.6-8.5	-	-	5.1-6.0	FULL SUN	0.6-1.0	TO PREVENT STRESS
TX1	SILTY CLAY AND CLAY	7.6-8.5	151-270	241-375	3.1-4.0	FULL SUN	1.6-2.0	TO PREVENT DORMANCY

TABLE B. LOCATIONS AND DATA COLLECTED IN 2009

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	LEAF TEXTURE
CA3			X	X	X	X	X	X	X	X	X		X	X	X
FL1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
IN1					X	X	X	X	X	X			X	X	X
KS1					X	X	X	X					X	X	X
NC1				X	X	X	X	X	X	X	X		X	X	X
NM1							X	X	X	X			X	X	
TX1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

TABLE B. (CONT'D) LOCATIONS AND DATA COLLECTED IN 2009

LOCATION	SPRING DENSITY	SUMMER DENSITY	FALL DENSITY	PERCENT COVER SPRING	PERCENT COVER SUMMER	PERCENT COVER FALL	WINTER COLOR	PERCENT WINTER KILL	BROWN PATCH COOL TEMP.	FALL COLOR SEPTEMBER	FALL COLOR OCTOBER	FALL COLOR NOVEMBER	FALL COLOR DECEMBER	SEEDHEAD RATINGS	MOLE CRICKET	PERCENT BILLBUG	DOLLAR JULY	SPOT OCT
CA3							X						X					
FL1	X	X	X	X	X		X		X	X	X	X	X		X			
IN1								X										
KS1				X							X					X		
NC1		X					X					X		X			X	X
NM1				X	X	X				X	X	X						
TX1	X	X	X									X	X					

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       TABLE 1.           MEAN TURFGRASS QUALITY RATINGS OF ZOYSIAGRASS CULTIVARS
                                     AT RIVERSIDE, CA  1/
                                        2009 DATA


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


             NAME        MAR     APR     MAY     JUN     JUL     AUG     SEP     OCT     NOV    MEAN


         * ZORRO        7.0     6.7     7.3     6.7     7.3     8.3     7.7     8.0     7.0     7.3
           DALZ 0701    6.3     6.0     6.0     6.0     6.7     7.0     6.7     8.3     6.7     6.6
           DALZ 0501    6.7     6.3     6.3     6.0     6.3     5.7     5.3     7.7     5.7     6.2
           DALZ 0702    6.3     6.7     6.7     5.7     6.0     6.0     6.0     8.0     4.7     6.2
           L1F          6.3     6.3     6.7     5.7     6.0     6.3     5.0     8.0     5.3     6.2
         * SHADOWTURF   6.3     6.7     6.3     5.7     6.7     5.7     3.7     7.7     3.0     5.7
           29-2         5.3     7.0     5.0     5.0     5.7     6.0     4.7     5.3     4.7     5.4
         * ZENITH       5.0     6.7     4.3     4.0     5.3     6.0     4.3     5.0     4.0     5.0
           380-1        4.7     5.7     5.0     3.0     3.3     4.7     3.7     6.0     3.7     4.4
           240          3.0     5.7     3.3     3.0     3.7     5.0     4.0     4.0     2.7     3.8
         * MEYER        4.3     5.3     4.3     2.3     2.7     4.3     3.3     4.7     2.3     3.7


           LSD VALUE    1.4     1.0     1.2     1.3     1.2     1.9     1.3     0.8     1.3     0.9
           C.V. (%)    14.9     8.5    13.4    16.5    14.0    17.1    15.6     7.6    18.2    10.0



     TABLE 2.             MEAN TURFGRASS QUALITY AND RATINGS OF ZOYSIAGRASS CULTIVARS
                                       GAINESVILLE, FL  1/
                                          2009 DATA


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


   NAME        JAN     FEB     MAR     APR     MAY     JUN     JUL     AUG     SEP     OCT     NOV     DEC    MEAN


   DALZ 0701   6.0     4.3     4.0     5.0     4.0     5.3     5.0     5.0     5.7     7.3     8.3     5.3     5.4
   L1F         6.3     4.3     4.3     4.7     4.0     4.7     5.3     5.7     5.3     7.0     7.3     5.7     5.4
   SHADOWTURF  6.3     4.0     4.3     5.0     4.0     5.0     5.0     5.3     5.7     6.3     6.7     5.7     5.3
   DALZ 0702   5.3     3.7     3.3     4.3     4.0     5.3     4.7     6.0     3.7     6.7     7.0     6.3     5.0
   DALZ 0501   5.7     3.7     3.0     4.3     2.7     4.3     4.3     3.3     5.3     6.3     7.0     7.3     4.8
   ZORRO       4.3     3.0     3.0     4.0     2.3     3.3     4.0     4.7     5.0     5.0     5.7     5.0     4.1
   ZENITH      3.3     2.0     2.3     2.7     3.0     5.0     5.7     5.3     4.7     4.0     3.0     2.3     3.6
   240         2.7     1.0     1.3     2.3     2.7     3.7     4.7     4.0     4.3     3.0     3.3     3.3     3.0
   29-2        4.0     2.0     2.0     2.0     2.7     3.7     2.7     3.3     2.7     3.3     3.0     2.3     2.8
   380-1       2.7     1.3     2.3     3.0     2.3     4.0     2.3     4.0     3.0     2.0     1.0     1.3     2.4
   MEYER       3.0     1.0     1.0     1.3     2.0     3.3     3.0     2.3     2.3     2.3     2.3     1.7     2.1


   LSD VALUE   1.1     0.7     1.2     1.9     1.7     2.6     1.8     3.2     1.7     1.6     1.6     1.4     0.9
   C.V. (%)   15.2    16.9    26.2    30.2    27.0    25.5    22.7    32.2    22.2    20.0    20.3    20.4    14.6


   *   COMMERCIALLY AVAILABLE IN THE USA IN 2010.


   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 3.    MEAN TURFGRASS QUALITY RATINGS OF ZOYSIAGRASS CULTIVARS
                         AT WEST LAFAYETTE, IN  1/
                              2009 DATA


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


        NAME            MAY    JUN    JUL    AUG    SEP    OCT    MEAN


        29-2            6.0    7.7    6.0    7.0    7.7    6.3    6.8
        MEYER           6.7    7.3    7.3    7.0    6.7    5.7    6.8
        ZENITH          6.7    7.7    5.7    6.7    7.3    6.7    6.8
        240             5.3    6.3    6.0    5.7    6.7    5.7    5.9
        ZORRO           2.0    2.0    3.0    3.0    4.0    2.7    2.8
        380-1           2.3    2.0    2.7    3.0    2.7    2.7    2.6
        DALZ 0701       1.0    2.0    2.0    2.0    3.0    2.0    2.0
        DALZ 0501        .      .      .      .      .      .      .
        DALZ 0702        .      .      .      .      .      .      .
        L1F              .      .      .      .      .      .      .
        SHADOWTURF       .      .      .      .      .      .      .


        LSD VALUE       2.0    1.9    1.7    1.9    1.5    1.8    1.1
        C.V. (%)       19.9   18.2   17.2   17.8   13.6   18.5   11.6



     TABLE 4.   MEAN TURFGRASS QUALITY AND OTHER RATINGS OF ZOYSIAGRASS CULTIVARS
             IN THE 2007 NATIONAL ZOYSIAGRASS TEST AT MANHATTAN, KS  1/
                              2009 DATA


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


        NAME            MAY    JUN    JUL    AUG    MEAN


        380-1           4.3    7.0    8.7    8.7    7.2
        DALZ 0701       2.7    8.0    8.0    8.3    6.8
        ZORRO           4.0    6.7    8.0    8.3    6.8
        MEYER           5.3    6.7    7.0    7.0    6.5
        29-2            5.7    6.3    6.7    7.0    6.4
        240             4.7    7.0    7.0    6.7    6.3
        DALZ 0702       1.7    6.7    7.7    8.0    6.0
        ZENITH          6.3    5.3    6.0    6.3    6.0
        DALZ 0501       2.3    5.7    7.3    8.0    5.8
        SHADOWTURF      1.0    4.0    5.3    7.0    4.3
        L1F             1.0    1.0    1.0    1.0    1.0


        LSD VALUE       1.5    1.2    1.2    1.1    0.7
        C.V. (%)       26.4   12.6   11.2   10.5    8.2
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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 O.05).

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

TABLE 5.   MEAN TURFGRASS QUALITY RATINGS OF ZOYSIAGRASS CULTIVARS
AT RALEIGH, NC 1/
2009 DATA

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

NAME	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	MEAN
380-1	7.3	8.0	8.3	8.3	8.7	8.0	7.3	7.7	8.0
ZORRO	6.7	7.3	6.7	6.7	7.7	7.3	6.7	7.7	7.1
MEYER	6.3	6.3	7.0	7.7	7.7	7.0	6.7	7.0	7.0
DALZ 0702	6.3	7.0	6.0	6.0	6.7	6.7	7.0	7.7	6.7
DALZ 0501	4.3	4.7	7.0	7.0	7.0	8.0	7.7	7.3	6.6
29-2	5.3	5.7	6.7	6.3	7.0	7.0	5.7	6.0	6.2
240	4.7	5.3	7.0	6.3	7.0	7.0	5.7	5.3	6.0
DALZ 0701	5.3	6.0	4.7	5.0	6.7	6.7	6.0	7.0	5.9
ZENITH	5.0	5.7	6.7	6.0	5.7	5.7	6.0	5.7	5.8
SHADOWTURF	4.7	4.7	5.7	6.0	6.0	6.7	6.0	5.7	5.7
L1F	4.0	4.0	5.3	6.0	6.7	6.3	5.7	5.7	5.5
LSD VALUE	1.3	1.2	1.3	1.3	1.3	1.0	1.7	1.3	0.8
C.V. (%)	14.1	12.4	11.4	11.0	10.2	7.9	12.9	11.2	7.8

TABLE 6.   MEAN TURFGRASS QUALITY AND OTHER RATINGS OF ZOYSIAGRASS CULTIVARS
IN THE 2007 NATIONAL ZOYSIAGRASS TEST AT DALLAS, TX 1/
2009 DATA

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

NAME	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
ZORRO	6.0	5.0	6.3	5.7	7.0	7.0	7.7	8.0	7.0	8.0	7.3	7.3	6.9
DALZ 0702	6.0	5.0	5.7	6.0	7.0	6.7	8.0	7.3	7.0	7.7	6.7	7.0	6.7
DALZ 0701	6.0	5.0	6.3	6.0	7.0	7.0	7.0	6.7	7.0	7.3	7.3	7.0	6.6
DALZ 0501	6.0	5.0	6.7	5.0	6.7	6.0	7.0	7.0	6.7	7.0	7.7	7.0	6.5
L1F	5.7	4.7	6.3	5.0	6.3	6.0	7.0	7.0	7.0	7.3	8.0	7.0	6.4
380-1	4.3	3.3	6.0	7.0	7.0	7.3	7.3	7.3	6.3	7.7	6.7	5.3	6.3
SHADOWTURF	5.0	4.3	5.3	5.3	6.3	6.3	7.0	7.3	6.7	7.3	7.7	7.0	6.3
240	4.3	3.3	5.3	5.7	5.7	5.3	6.0	6.0	5.0	5.7	5.7	5.0	5.3
29-2	3.7	2.3	5.0	4.7	4.7	5.0	6.0	6.0	5.3	6.0	5.7	4.3	4.9
MEYER	4.0	2.3	5.3	5.0	4.7	4.3	5.7	5.3	4.7	5.3	5.0	4.3	4.7
ZENITH	4.0	2.3	5.0	5.0	4.3	4.0	5.7	5.7	5.0	5.7	5.7	4.0	4.7
LSD VALUE	0.9	1.1	1.4	3.1	1.9	2.1	1.8	1.3	1.2	1.0	0.9	1.0	0.9
C.V. (%)	10.9	17.1	11.8	21.5	16.3	18.2	12.8	10.6	11.3	8.8	8.4	10.6	9.1

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 O.05).

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

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TABLE 7. MEAN TURFGRASS QUALITY AND OTHER RATINGS OF ZOYSIAGRASS CULTIVARS 1/
GROWN UNDER SALT STRESS AT LAS CRUCES, NM */
2009 DATA
TURFGRASS QUALITY AND OTHER RATINGS 1-9; 9=BEST 2/

NAME	GENETIC COLOR	SPRING GREENUP	PERCENT COVER SPRING	PERCENT COVER SUMMER	PERCENT COVER FALL	FALL COLOR SEPTEMBER	FALL COLOR OCTOBER	FALL COLOR NOVEMBER	QUALITY RATINGS JUL	AUG	SEP	OCT	MEAN
SHADOWTURF	8.3	3.3	80.3	99.0	99.0	7.7	5.7	1.7	7.7	8.3	8.0	7.7	7.9
L1F	8.3	3.0	78.7	98.7	99.0	8.0	7.0	2.3	7.0	8.0	8.0	7.3	7.6
DALZ 0701	7.7	3.3	79.0	84.7	92.7	7.0	6.0	3.0	6.3	7.0	6.7	6.3	6.6
DALZ 0501	6.3	2.0	51.3	63.3	91.3	7.0	6.7	2.7	5.3	6.3	6.7	6.0	6.1
380-1	7.7	3.7	66.0	86.3	80.0	7.3	5.7	2.0	5.3	6.7	5.7	5.7	5.8
DALZ 0702	6.7	2.7	60.0	88.0	96.0	7.0	6.0	2.0	6.0	6.0	5.3	5.7	5.8
ZORRO	5.0	1.3	19.3	25.7	46.3	4.7	4.3	2.0	4.3	5.0	4.7	5.0	4.8
240	5.7	2.0	29.7	30.0	21.7	3.7	3.3	1.3	4.3	4.3	4.0	3.7	4.1
29-2	4.7	2.3	28.0	23.0	22.0	3.7	3.3	2.0	3.7	4.0	3.7	3.3	3.7
ZENITH	4.3	1.3	18.0	19.7	21.3	3.3	2.7	1.7	3.3	3.3	3.3	3.0	3.3
MEYER	4.7	1.7	7.0	14.3	15.0	2.7	2.3	1.3	2.0	2.3	2.3	3.0	2.4
LSD VALUE	0.7	0.8	27.2	19.9	22.2	1.3	1.3	0.8	1.5	1.3	1.2	1.3	1.1
C.V. (%)	7.1	19.3	35.1	22.1	22.7	14.6	17.2	21.8	18.6	15.2	14.5	15.6	12.8

*/ THE FOLLOWING IS INFORMATION ON SALINITY AT THIS SITE:
    WATER QUALITY: PH 7.9, TOTAL DISSOLVED SOLIDS 1800, SAR 2.06
    SOIL QUALITY (MEASURED IN JUNE, NOV.; 0-4 INCH DEPTH): PH 7.8, 7.8; EC (dS/m) 2.1, 5.2; SAR 2.1, 8.5
    SOIL QUALITY (MEASURED IN JUNE, NOV.; 4-8 INCH DEPTH): PH 8.4, 8.0; EC (dS/m) 1.6, 2.4; SAR 2.2, 4.1

TABLE 8.   GENETIC COLOR RATINGS OF ZOYSIAGRASS CULTIVARS 1/
2009 DATA
GENETIC COLOR RATINGS 1-9; 9=DARK GREEN 2/

NAME	CA3	FL1	IN1	KS1	NC1	TX1	MEAN
380-1	5.3	7.7	8.7	8.0	8.0	9.0	7.8
29-2	7.3	7.0	8.0	6.7	6.7	8.0	7.3
240	7.3	7.0	8.0	7.7	7.0	6.3	7.2
MEYER	5.3	6.7	7.3	7.0	6.3	7.3	6.7
ZORRO	6.7	6.3	7.7	7.0	4.0	7.7	6.6
ZENITH	7.3	6.3	7.0	7.0	5.7	5.7	6.5
DALZ 0501	5.7	6.7	.	7.3	6.0	6.7	6.5
SHADOWTURF	5.0	7.7	.	7.0	5.0	7.3	6.4
DALZ 0702	5.7	6.7	.	7.0	5.0	7.3	6.3
DALZ 0701	4.7	7.3	6.0	7.3	4.0	8.0	6.2
L1F	5.0	7.0	.	.	4.3	7.7	6.0
LSD VALUE	1.7	1.0	1.1	0.6	1.0	1.7	0.5
C.V. (%)	17.6	9.4	7.7	5.1	11.1	14.0	11.5

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 9.     SPRING GREENUP RATINGS OF ZOYSIAGRASS CULTIVARS  1/
                                    2009 DATA


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

        NAME         CA3     FL1     IN1     KS1     NC1     TX1    MEAN

        DALZ 0701    5.3     6.3     1.0      .      5.0     5.7     4.7
        DALZ 0702    5.0     5.7     1.0      .      5.0     5.3     4.4
        L1F          6.0     6.0     1.0      .      3.3     5.7     4.4
        29-2         1.3     4.7     4.0     5.3     5.3     5.0     4.3
        SHADOWTURF   5.7     6.3     1.0      .      2.7     5.0     4.1
        ZENITH       1.3     3.0     4.0     5.0     5.7     5.7     4.1
        380-1        2.7     3.3     1.3     2.0     6.7     8.0     4.0
        DALZ 0501    5.7     4.7     1.0      .      2.3     6.3     4.0

        MEYER        2.3     2.0     3.3     2.0     6.0     5.7     3.6
        ZORRO        4.0     3.7     1.0     1.0     4.3     7.0     3.5
        240          1.0     1.7     2.7     2.3     6.0     6.3     3.3

        LSD VALUE    0.7     1.3     0.5     0.8     1.1     1.7     0.5
        C.V. (%)    12.6    18.1    15.5    17.9    14.6    17.7    17.3




           TABLE 10.   LEAF TEXTURE RATINGS OF ZOYSIAGRASS CULTIVARS  1/
                                    2009 DATA


               LEAF TEXTURE RATINGS 1-9; 9=VERY FINE  2/

        NAME         CA3     FL1     IN1     KS1     NC1     TX1    MEAN

        DALZ 0501    8.3     8.0      .      9.0     8.3     7.3     8.2
        SHADOWTURF   9.0     8.0      .      9.0     8.7     6.3     8.2
        L1F          8.7     8.0      .       .      8.7     7.3     8.2
        ZORRO        8.3     8.0     9.0     9.0     8.0     6.7     8.2
        DALZ 0702    8.7     8.0      .      9.0     8.0     7.0     8.1
        380-1        7.0     8.0     8.3     9.0     7.7     6.3     7.7
        DALZ 0701    8.0     8.3     5.0     9.0     8.0     7.0     7.6
        MEYER        5.3     6.0     7.0     6.7     7.0     5.7     6.3
        29-2         5.3     6.0     7.0     7.0     5.7     5.3     6.1
        240          4.3     6.0     6.0     7.0     5.7     5.7     5.8
        ZENITH       4.0     5.7     5.3     5.3     5.0     5.0     5.1

        LSD VALUE    0.9     0.6     0.6     0.4     0.7     1.0     0.3
        C.V. (%)     7.9     5.4     4.9     3.2     5.8    10.3     6.5
```

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 O.05).

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

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              TABLE 11.   SPRING DENSITY RATINGS OF ZOYSIAGRASS CULTIVARS  1/
                                    2009 DATA


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


                    NAME          FL1     TX1     MEAN


                    DALZ 0701     6.0     6.7      6.3
                    SHADOWTURF    6.7     5.7      6.2
                    DALZ 0702     4.7     7.0      5.8
                    L1F           5.7     5.7      5.7
                    DALZ 0501     4.7     6.3      5.5
                    ZORRO         4.0     6.7      5.3
                    380-1         2.3     8.0      5.2
                    ZENITH        2.3     6.0      4.2
                    240           1.7     6.0      3.8
                    29-2          1.7     6.0      3.8
                    MEYER         2.0     5.7      3.8


                    LSD VALUE     2.2     2.1      1.5
                    C.V. (%)     36.2    20.2     26.2



              TABLE 12.   SUMMER DENSITY RATINGS OF ZOYSIAGRASS CULTIVARS  1/
                                    2009 DATA


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


                    NAME          FL1     NC1     TX1     MEAN


                    DALZ 0702     5.0     6.3     9.0      6.8
                    DALZ 0501     4.0     6.7     9.0      6.6
                    L1F           5.0     5.7     9.0      6.6
                    ZORRO         4.0     6.7     9.0      6.6
                    SHADOWTURF    5.0     5.7     8.7      6.4
                    DALZ 0701     4.7     5.7     8.7      6.3
                    ZENITH        6.0     6.3     6.7      6.3
                    380-1         2.3     7.3     8.3      6.0
                    240           4.3     5.7     6.7      5.6
                    29-2          3.0     5.7     7.0      5.2
                    MEYER         3.0     6.7     6.0      5.2


                    LSD VALUE     2.0     1.8     1.5      1.0
                    C.V. (%)     29.5    17.9    11.7     18.0
```

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 O.05).

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

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                    TABLE 13.    FALL DENSITY RATINGS OF ZOYSIAGRASS CULTIVARS  1/
                                          2009 DATA


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


                            NAME          FL1     TX1     MEAN


                            DALZ 0701     8.3     9.0     8.7
                            DALZ 0501     7.3     9.0     8.2
                            L1F           7.3     9.0     8.2
                            DALZ 0702     7.0     9.0     8.0
                            SHADOWTURF    7.0     9.0     8.0
                            ZORRO         7.0     9.0     8.0
                            29-2          4.3     9.0     6.7
                            ZENITH        4.3     8.3     6.3
                            240           3.3     7.7     5.5
                            MEYER         3.7     7.3     5.5
                            380-1         1.3     9.0     5.2


                            LSD VALUE     1.8     1.1     1.0
                            C.V. (%)     20.1     7.8    13.0


               TATLE 14.    PERCENT LIVING GROUND COVER (SPRING) RATINGS OF ZOYSIAGRASS CULTIVARS  1/
                                          2009 DATA


                         PERCENT LIVING GROUND COVER IN SPRING: LOCATIONS  2/


                            NAME          FL1     KS1     MEAN


                            29-2         50.0    88.3    69.2
                            ZENITH       38.3    90.0    64.2
                            MEYER        25.0    86.7    55.8
                            380-1        38.3    65.0    51.7
                            240          15.0    88.3    51.7
                            DALZ 0701    73.3    26.7    50.0
                            ZORRO        48.3    38.3    43.3
                            DALZ 0702    66.7    18.3    42.5
                            DALZ 0501    65.0    18.3    41.7
                            SHADOWTURF   75.0     3.0    39.0
                            L1F          73.3     0.0    36.7


                            LSD VALUE    13.7    19.6    12.0
                            C.V. (%)     16.5    25.7    21.2
```

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 O.05).

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

TABLE 15.   PERCENT LIVING GROUND COVER (SUMMER) RATINGS OF ZOYSIAGRASS CULTIVARS 1/
                                    2009 DATA

                        PERCENT LIVING GROUND COVER IN SUMMER: LOCATIONS 2/

                        NAME   FL1

                        ZENITH   98.0
                        L1F   93.3
                        SHADOWTURF   93.3
                        240   90.3
                        DALZ 0701   90.0
                        DALZ 0702   90.0
                        MEYER   90.0
                        29-2   88.3
                        DALZ 0501   88.3
                        ZORRO   86.7
                        380-1   76.7

                        LSD VALUE   10.0
                        C.V. (%)   7.0

TABLE 16.   WINTER COLOR RATINGS OF ZOYSIAGRASS CULTIVARS 1/
                                    2009 DATA

                        WINTER COLOR RATINGS 1-9; 9=COMPLETE COLOR RETENTION 2/

NAME	CA3	FL1	NC1	MEAN
DALZ 0501	6.3	7.0	4.7	6.0
DALZ 0702	5.0	6.7	4.7	5.4
L1F	4.7	7.0	4.3	5.3
SHADOWTURF	4.7	7.0	4.3	5.3
DALZ 0701	6.0	5.3	4.0	5.1
ZORRO	3.7	4.3	6.0	4.7
29-2	1.7	3.3	7.7	4.2
ZENITH	1.3	2.7	8.3	4.1
MEYER	1.0	2.7	8.7	4.1
240	1.0	3.0	7.7	3.9
380-1	1.7	1.0	7.0	3.2
LSD VALUE	1.8	1.6	1.3	0.9
C.V. (%)	32.7	22.0	13.6	21.1

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 O.05).

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

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TABLE 17.   PERCENT WINTER KILL RATINGS OF ZOYSIAGRASS CULTIVARS 1/
2009 DATA

PERCENT WINTER KILL RATINGS: LOCATIONS 2/

NAME	IN1
DALZ 0501	99.0
DALZ 0702	99.0
L1F	99.0
SHADOWTURF	99.0
DALZ 0701	97.3
380-1	83.0
ZORRO	80.7
240	22.3
29-2	4.0
ZENITH	2.7
MEYER	1.7
LSD VALUE	13.0
C.V. (%)	12.9

TABLE 18.   BROWN PATCH (WARM TEMPERATURE) RATINGS OF ZOYSIAGRASS CULTIVARS 1/
2009 DATA

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

NAME	FL1
DALZ 0501	7.7
L1F	7.7
DALZ 0702	7.3
SHADOWTURF	7.3
ZORRO	6.7
DALZ 0701	6.3
240	3.7
29-2	3.3
380-1	3.3
MEYER	3.0
ZENITH	3.0
LSD VALUE	1.8
C.V. (%)	20.9

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 O.05).

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

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       TABLE 19.     FALL COLOR (SEPTEMBER) RATINGS OF ZOYSIAGRASS CULTIVARS  1/
                                    2009 DATA


          FALL COLOR RATINGS 1-9; 9=COMPLETE COLOR RETENTION  2/


                         NAME            FL1

                         DALZ 0701       6.3
                         29-2            6.0
                         SHADOWTURF      5.7
                         240             5.3
                         DALZ 0501       5.0
                         L1F             5.0
                         DALZ 0702       4.7
                         380-1           4.3
                         MEYER           4.3
                         ZENITH          4.3
                         ZORRO           4.3

                         LSD VALUE       2.7
                         C.V. (%)       33.7




       TABLE 20.     FALL COLOR (OCTOBER) RATINGS OF ZOYSIAGRASS CULTIVARS  1/
                                    2009 DATA


          FALL COLOR RATINGS 1-9; 9=COMPLETE COLOR RETENTION  2/


                         NAME            FL1     KS1     MEAN

                         DALZ 0701       7.7     7.0     7.3
                         L1F             7.3      .      7.3
                         DALZ 0702       7.3     7.0     7.2
                         29-2            7.0     6.7     6.8
                         SHADOWTURF      7.0     6.7     6.8
                         DALZ 0501       6.3     6.7     6.5
                         ZORRO           4.7     6.7     5.7
                         ZENITH          4.3     5.0     4.7
                         240             4.0     5.0     4.5
                         380-1           3.7     5.3     4.5
                         MEYER           2.3     6.3     4.3

                         LSD VALUE       2.6     1.0     1.5
                         C.V. (%)       28.8    10.1    21.1
```

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 O.05).

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

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        TABLE 21.    FALL COLOR (NOVEMBER) RATINGS OF ZOYSIAGRASS CULTIVARS  1/
                                    2009 DATA


             FALL COLOR RATINGS 1-9; 9=COMPLETE COLOR RETENTION  2/


                 NAME         FL1      NC1      TX1      MEAN

                 DALZ 0702    7.7      7.7      7.0      7.4
                 DALZ 0701    7.0      7.7      7.0      7.2
                 380-1        8.0      6.3      6.3      6.9
                 L1F          7.3      6.0      7.3      6.9
                 DALZ 0501    5.0      7.3      7.3      6.6
                 SHADOWTURF   7.0      5.7      6.3      6.3
                 ZORRO        5.3      5.3      6.7      5.8
                 29-2         7.7      4.0      5.3      5.7
                 240          6.0      3.3      5.7      5.0
                 MEYER        5.0      3.3      5.7      4.7
                 ZENITH       4.7      2.3      5.0      4.0

                 LSD VALUE    1.5      1.0      1.0      0.7
                 C.V. (%)    14.6     11.2     10.3     12.3


        TABLE 22.    FALL COLOR (DECEMBER) RATINGS OF ZOYSIAGRASS CULTIVARS  1/
                                    2009 DATA


             FALL COLOR RATINGS 1-9; 9=COMPLETE COLOR RETENTION  2/


                 NAME         CA3      FL1      TX1      MEAN

                 DALZ 0501    5.0      8.3      7.3      6.9
                 L1F          4.7      7.3      7.3      6.4
                 DALZ 0702    4.7      7.0      7.0      6.2
                 DALZ 0701    5.0      5.7      7.0      5.9
                 SHADOWTURF   4.0      6.7      6.3      5.7
                 ZORRO        3.7      5.3      6.7      5.2
                 240          2.0      3.3      5.7      3.7
                 29-2         2.0      3.3      5.3      3.6
                 380-1        2.3      2.0      6.3      3.6
                 MEYER        2.0      2.3      5.7      3.3
                 ZENITH       2.0      3.0      5.0      3.3

                 LSD VALUE    0.7      1.5      1.0      0.7
                 C.V. (%)    13.6     19.0     10.3     14.5
```

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 O.O5).

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

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TABLE 23.     SEEDHEAD RATINGS OF ZOYSIAGRASS CULTIVARS  1/
                          2009 DATA


              SEEDHEAD RATINGS 1-9; 9=NONE  2/


                    NAME           NC1

                    380-1          9.0
                    DALZ 0501      9.0
                    DALZ 0701      9.0
                    DALZ 0702      9.0
                    L1F            9.0
                    SHADOWTURF     9.0
                    ZORRO          9.0
                    ZENITH         6.7
                    MEYER          6.0
                    29-2           4.3
                    240            3.7

                    LSD VALUE      0.5
                    C.V. (%)       4.0



    TABLE 24.   MOLE CRICKET RATINGS OF ZOYSIAGRASS CULTIVARS  1/
                          2009 DATA


            MOLE CRICKET RATINGS 1-9; 9=NO DAMAGE  2/


                    NAME           FL1

                    380-1          8.0
                    MEYER          8.0
                    240            7.7
                    ZENITH         7.7
                    L1F            7.3
                    29-2           7.0
                    SHADOWTURF     7.0
                    DALZ 0501      6.7
                    ZORRO          6.3
                    DALZ 0702      6.0
                    DALZ 0701      5.7

                    LSD VALUE      1.4
                    C.V. (%)      12.1
```

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.

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TABLE 25.   DOLLAR SPOT RATINGS OF ZOYSIAGRASS CULTIVARS
                     AT RALEIGH, NC 1/
                        2009 DATA

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

        NAME   JULY   OCTOBER   MEAN

        MEYER   9.0   8.0   8.5
        240   9.0   7.3   8.2
        29-2   9.0   7.3   8.2
        ZENITH   9.0   7.3   8.2
        380-1   8.7   7.0   7.8
        DALZ 0501   6.3   7.3   6.8
        SHADOWTURF   6.0   7.3   6.7
        ZORRO   5.7   7.0   6.3
        L1F   5.0   7.0   6.0
        DALZ 0702   4.0   5.0   4.5
        DALZ 0701   3.7   4.7   4.2

        LSD VALUS   1.3   1.6   0.8
        C.V. (%)   12.2   13.1   7.4

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 O.05).

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