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. Steve Johnson, Peak Plant Genetics LLC
Mr. Steve Tubbs, Turf Merchants, Inc.
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
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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 2008

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

TABLE A. 2008 LOCATIONS, SITE DESCRIPTIONS AND MANAGEMENT PRACTICES IN THE 2007 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	SILT LOAM AND SILT	7.1-7.5	151-270	376-500	1.1-2.0	FULL SUN	0.0-0.5	ONLY DURING SEVERE STRESS
KS1	SILTY CLAY LOAM	7.1-7.5	61-150	241-375	1.1-2.0	FULL SUN	0.6-1.0	TO PREVENT STRESS
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	1.6-2.0	TO PREVENT STRESS
TX1	SILTY CLAY AND CLAY	7.6-8.5	151-270	241-375	3.1-4.0	FULL SUN	1.1-1.5	TO PREVENT STRESS

TABLE B. LOCATIONS AND DATA COLLECTED IN 2008

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			
FL1								X		X	X	X	X		X
IN1					X	X	X	X	X	X			X	X	
KS1						X	X	X	X					X	X
NC1				X	X	X	X	X	X	X			X	X	X
NM1													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 2008

LOCATION	SPRING DENSITY	SUMMER DENSITY	FALL DENSITY	PERCENT COVER SPRING	PERCENT COVER SUMMER	WINTER COLOR	PERCENT WINTER KILL	DOLLAR SPOT	FALL COLOR SEPTEMBER	FALL COLOR OCTOBER	FALL COLOR NOVEMBER	FALL COLOR DECEMBER
CA3												
* FL1		X	X								X	X
IN1					X							
KS1				X			X				X	
NC1				X	X	X		X		X	X	
* NM1											X	
TX1	X	X	X						X	X	X	X

* MORE PERCENT ESTABLISHMENT DATA IN TABLE 7 AND 23.

TABLE 1.   MEAN TURFGRASS QUALITY RATINGS OF ZOYSIAGRASS CULTIVARS
AT RIVERSIDE, CA 1/
2008 DATA

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

NAME	AUG	SEP	NOV	DEC	MEAN
DALZ 0701	7.0	7.7	8.3	7.7	7.7
* ZORRO	7.7	8.0	7.7	7.0	7.6
DALZ 0702	7.0	7.3	7.7	7.0	7.3
* SHADOWTURF	6.3	7.3	8.0	7.0	7.2
DALZ 0501	6.0	7.0	8.0	7.0	7.0
29-2	7.3	7.3	7.0	6.0	6.9
* ZENITH	7.0	6.7	7.0	6.0	6.7
L1F	5.7	6.7	7.3	6.7	6.6
240	7.0	7.0	6.3	5.0	6.3
380-1	5.3	6.3	6.7	5.3	5.9
* MEYER	4.3	6.0	6.3	5.0	5.4
LSD VALUE	1.3	1.0	0.7	0.7	0.7
C.V. (%)	11.7	7.7	6.0	6.7	6.2

TABLE 2.   MEAN TURFGRASS QUALITY RATINGS OF ZOYSIAGRASS CULTIVARS
AT GAINESVILLE, FL 1/
2008 DATA

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

NAME	SEP	OCT	NOV	DEC	MEAN
SHADOWTURF	6.3	6.7	5.3	6.3	6.2
DALZ 0701	5.7	6.7	5.7	5.3	5.8
L1F	6.3	6.0	5.0	5.7	5.8
DALZ 0702	5.3	6.0	4.7	5.7	5.4
DALZ 0501	5.0	6.3	4.3	5.3	5.3
ZENITH	5.7	6.0	5.0	3.7	5.1
29-2	4.3	4.7	4.7	4.7	4.6
ZORRO	4.7	4.7	4.0	4.3	4.4
MEYER	4.3	4.7	4.0	4.0	4.3
240	4.3	4.3	4.0	3.0	3.9
380-1	4.7	4.7	3.3	2.7	3.8
LSD VALUE	1.5	2.1	1.2	1.4	1.1
C.V. (%)	14.7	18.4	14.2	17.5	12.9

*   COMMERCIALLY AVAILABLE IN THE USA IN 2009.

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 3.      MEAN TURFGRASS QUALITY RATINGS OF ZOYSIAGRASS CULTIVARS
                        AT WEST LAFAYETTE, IN  1/
                              2008 DATA

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

        NAME          MAY     JUN     JUL     AUG     SEP     OCT     MEAN

        ZENITH        5.7     6.3     6.3     6.7     6.3     5.7     6.2
        29-2          5.3     5.3     5.3     6.0     6.0     5.3     5.6
        MEYER         5.0     5.3     5.7     6.0     6.3     5.3     5.6
        240           3.0     3.7     3.7     4.3     4.0     3.7     3.7
        ZORRO         2.0     3.0     3.0     4.3     3.7     3.3     3.2
        DALZ 0501     1.0     1.7     1.7     2.0     2.0     2.0     1.7
        380-1         1.0     1.0     1.7     1.7     1.7     1.7     1.4
        L1F           1.0     1.0     1.3     1.7     1.7     1.7     1.4
        DALZ 0701     1.0     1.0     1.0     1.0     1.0     1.0     1.0
        DALZ 0702     1.0     1.0     1.0     1.0     1.0     1.0     1.0
        SHADOWTURF    1.0     1.0     1.0     1.0     1.0     1.0     1.0

        LSD VALUE     1.1     1.2     1.0     1.1     1.2     1.1     1.0
        C.V. (%)      28.4    27.2    22.8    22.2    24.2    25.3    22.3


TABLE 4.      MEAN TURFGRASS QUALITY RATINGS OF ZOYSIAGRASS CULTIVARS
                         AT MANHATTAN, KS  1/
                              2008 DATA

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

          NAME          JUN     JUL     AUG     SEP     MEAN

          ZORRO         6.3     8.0     6.7     8.0     7.3
          DALZ 0701     5.0     6.7     6.3     8.0     6.5
          380-1         6.3     7.3     5.7     5.7     6.3
          MEYER         7.3     7.0     4.7     5.7     6.2
          29-2          6.0     6.0     5.0     6.7     5.9
          DALZ 0702     4.7     5.0     6.3     7.7     5.9
          DALZ 0501     4.0     5.0     6.0     7.3     5.6
          240           5.3     6.0     3.7     5.0     5.0
          ZENITH        5.3     5.0     4.3     5.0     4.9
          SHADOWTURF    3.0     3.3     5.0     7.0     4.6
          L1F           1.3     0.7     2.7     3.3     2.0

          LSD VALUE     1.2     1.0     1.7     1.7     0.9
          C.V. (%)      15.5    12.1    18.6    15.8    10.1
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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.

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TABLE 5.   MEAN TURFGRASS QUALITY RATINGS OF ZOYSIAGRASS CULTIVARS
AT RALEIGH, NC 1/
2008 DATA

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

NAME	APR	MAY	JUN	JUL	AUG	SEP	OCT	MEAN
DALZ 0501	7.0	7.3	7.0	7.3	7.7	7.3	8.7	7.5
DALZ 0702	7.7	7.7	7.0	7.0	7.3	7.3	8.0	7.4
L1F	6.7	7.0	7.3	7.7	7.7	7.3	8.0	7.4
SHADOWTURF	7.7	7.3	7.0	7.0	7.3	7.0	8.7	7.4
380-1	6.0	8.0	7.3	7.7	7.3	6.7	6.7	7.1
DALZ 0701	8.0	7.7	7.0	6.3	6.3	6.7	8.0	7.1
ZORRO	7.0	7.0	6.3	6.3	7.0	7.0	7.3	6.9
MEYER	5.0	5.7	6.3	6.7	6.7	6.3	6.7	6.2
ZENITH	6.7	5.3	5.3	5.3	5.0	6.0	5.7	5.6
240	5.0	4.7	5.3	5.3	5.3	5.0	5.3	5.1
29-2	4.7	4.7	5.0	5.3	4.7	5.0	5.7	5.0
LSD VALUE	0.6	0.7	0.9	1.0	1.2	1.1	1.0	0.6
C.V. (%)	5.9	7.2	8.1	8.9	10.7	9.4	8.5	5.7

TABLE 6.   MEAN TURFGRASS QUALITY RATINGS OF ZOYSIAGRASS CULTIVARS
AT DALLAS, TX 1/
2008 DATA

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

NAME	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
ZORRO	2.0	2.0	2.7	2.7	3.3	5.7	6.7	7.0	7.0	7.0	7.0	5.7	4.9
DALZ 0702	2.0	2.0	2.0	2.3	3.0	5.3	7.3	7.3	7.0	7.3	6.3	6.0	4.8
L1F	2.7	2.7	2.0	1.7	3.0	5.3	6.7	7.0	7.0	7.7	7.3	5.0	4.8
SHADOWTURF	2.3	2.3	2.0	1.7	3.3	5.3	6.7	6.7	7.3	7.7	7.0	4.7	4.8
DALZ 0701	2.0	2.0	2.0	2.0	3.0	5.0	6.7	6.3	7.0	7.3	7.7	5.7	4.7
DALZ 0501	2.0	2.0	2.0	2.0	3.0	4.7	6.0	6.3	6.3	7.0	7.0	5.7	4.5
380-1	2.0	2.0	2.3	2.7	3.0	5.0	6.7	6.0	6.3	6.7	6.0	4.7	4.4
ZENITH	2.0	2.3	2.3	3.7	4.0	5.0	6.0	5.3	5.0	5.7	5.3	4.0	4.2
29-2	1.0	1.7	2.0	2.7	3.3	5.3	6.0	6.0	6.0	6.0	5.3	4.0	4.1
MEYER	1.0	1.0	2.0	2.3	2.7	4.3	5.7	5.7	6.0	6.0	5.7	4.0	3.9
240	1.0	1.3	2.0	2.3	2.3	4.0	5.0	5.7	5.3	6.0	5.3	4.0	3.7
LSD VALUE	0.7	0.6	0.6	0.8	1.0	1.6	3.2	2.0	1.0	0.7	0.7	1.0	0.6
C.V. (%)	21.8	18.4	13.2	18.5	15.5	13.6	18.7	13.6	9.2	6.4	6.5	11.8	7.8

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 7.   PERCENT ESTABLISHMENT AND OTHER RATINGS OF ZOYSIAGRASS CULTIVARS
GROWN UNDER SALT STRESS AT LAS CRUCES, NM 1/
2008 DATA

GENETIC COLOR AND OTHER RATINGS 1-9; 9=BEST 2/

| | | FALL | | | | | | |
NAME	GENETIC COLOR	COLOR NOVEMBER	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER
SHADOWTURF	7.0	5.7	14.7	35.7	59.0	85.7	93.7	96.3
DALZ 0701	8.0	6.0	13.0	23.3	34.7	63.0	88.3	91.7
DALZ 0702	7.0	5.3	23.3	37.7	68.7	75.7	93.3	91.7
L1F	8.0	5.7	12.7	21.3	48.0	68.0	92.7	87.0
DALZ 0501	7.0	5.0	12.0	12.3	28.3	44.0	60.0	70.3
380-1	8.3	3.0	8.0	6.7	20.7	53.3	64.7	66.7
240	7.7	2.0	6.3	10.7	31.3	43.0	55.0	54.3
29-2	7.3	2.3	6.7	8.0	14.3	31.3	59.3	53.3
ZORRO	5.7	3.0	6.7	7.7	15.0	34.3	44.7	46.0
ZENITH	5.7	2.3	6.0	3.0	7.3	16.0	20.7	25.7
MEYER	7.3	2.0	4.7	2.7	4.7	14.7	18.3	20.7
LSD VALUE	1.0	1.0	7.8	17.7	24.0	33.1	23.3	21.1
C.V. (%)	8.1	16.8	42.6	65.0	47.1	38.9	23.0	20.6

TABLE 8.   GENETIC COLOR RATINGS OF ZOYSIAGRASS CULTIVARS 1/
2008 DATA

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

NAME	FL1	IN1	NC1	TX1	MEAN
380-1	8.0	6.0	9.0	8.7	7.9
MEYER	7.0	8.0	7.3	8.7	7.8
240	7.0	7.7	8.0	6.7	7.3
DALZ 0702	7.7	.	7.0	7.3	7.3
SHADOWTURF	7.3	.	6.7	8.0	7.3
29-2	7.3	6.7	7.7	7.3	7.3
DALZ 0701	7.7	.	6.0	7.7	7.1
L1F	7.3	6.0	6.7	8.0	7.0
DALZ 0501	6.7	5.3	7.0	7.3	6.6
ZORRO	6.7	6.3	6.0	7.3	6.6
ZENITH	6.7	6.0	5.7	6.3	6.2
LSD VALUE	0.8	1.0	1.0	1.0	0.5
C.V. (%)	6.8	8.9	9.3	8.0	8.2

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 9.      SPRING GREENU RATINGS OF ZOYSIAGRASS CULTIVARS  1/
                            2008 DATA


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


            NAME          IN1     KS1     NC1     TX1     MEAN

            29-2          5.7     8.0     7.0     5.0     6.4
            ZENITH        6.0     7.0     5.7     4.0     5.7
            MEYER         5.3     7.7     6.3     2.7     5.5
            240           4.3     7.7     5.3     4.0     5.3
            380-1         3.0     5.3     8.0     4.3     5.2
            ZORRO         1.3     5.0     5.7     4.7     4.2
            DALZ 0701     2.0     3.3     6.7     3.3     3.8
            DALZ 0702     1.0     3.0     6.0     4.0     3.5
            DALZ 0501     1.0     0.3     5.3     4.0     2.7
            L1F           1.0     0.0     5.3     3.3     2.4
            SHADOWTURF    1.0     0.0     6.0     2.0     2.3


            LSD VALUE     1.8     0.6     1.0     0.9     0.6
            C.V. (%)     39.7     9.0    10.3    15.4    17.3
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TABLE 10.    LEAF TEXTURE RATINGS OF ZOYSIAGRASS CULTIVARS  1/
                            2008 DATA


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


            NAME          FL1     KS1     NC1     TX1     MEAN

            L1F           7.0     8.0     9.0     7.3     7.8
            SHADOWTURF    7.0     8.0     9.0     6.7     7.7
            DALZ 0701     7.0     8.0     8.3     6.7     7.5
            DALZ 0501     7.0     8.0     9.0     5.7     7.4
            DALZ 0702     7.0     8.0     8.3     6.3     7.4
            ZORRO         7.0     8.0     8.0     5.7     7.2
            380-1         6.7     8.0     7.3     5.7     6.9
            MEYER         6.0     6.0     6.3     4.3     5.7
            240           6.0     5.3     5.7     4.0     5.3
            29-2          6.0     5.0     6.0     4.0     5.3
            ZENITH        5.3     5.0     5.0     3.0     4.6


            LSD VALUE     0.4     0.3     0.6     0.8     0.3
            C.V. (%)      3.8     2.5     5.2     9.1     5.3
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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 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/
                          2008 DATA

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

NAME	TX1
ZENITH	3.7
29-2	2.7
ZORRO	2.7
DALZ 0501	2.0
DALZ 0701	2.0
DALZ 0702	2.0
240	1.7
380-1	1.7
L1F	1.7
MEYER	1.7
SHADOWTURF	1.3
LSD VALUE	1.3
C.V. (%)	37.2

TABLE 12.   SUMMER DENSITY RATINGS OF ZOYSIAGRASS CULTIVARS 1/
                          2008 DATA

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

NAME	FL1	TX1	MEAN
SHADOWTURF	8.0	7.7	7.8
DALZ 0702	7.0	8.3	7.7
ZENITH	7.0	8.3	7.7
L1F	8.0	7.3	7.7
DALZ 0701	7.0	7.0	7.0
ZORRO	5.0	8.7	6.8
29-2	4.3	8.3	6.3
DALZ 0501	6.0	6.7	6.3
380-1	5.0	7.0	6.0
MEYER	4.0	7.7	5.8
240	4.3	6.3	5.3
LSD VALUE	1.7	2.8	1.6
C.V. (%)	17.3	23.2	21.3

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 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/
                                2008 DATA

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

                    NAME           FL1      TX1      MEAN

                    SHADOWTURF     7.0      8.7      7.8
                    DALZ 0701      6.7      8.7      7.7
                    L1F            6.7      8.7      7.7
                    DALZ 0501      6.7      8.3      7.5
                    DALZ 0702      5.7      8.7      7.2
                    ZORRO          5.3      9.0      7.2
                    29-2           5.0      9.0      7.0
                    ZENITH         5.0      9.0      7.0
                    240            5.0      8.7      6.8
                    MEYER          4.3      9.0      6.7
                    380-1          4.0      8.3      6.2

                    LSD VALUE      1.5      0.9      0.9
                    C.V. (%)      16.2      6.3     10.5


      TABLE 14.   PERCENT LIVING GROUND COVER (SPRING) RATINGS OF ZOYSIAGRASS CULTIVARS  1/
                                2008 DATA

                 PERCENT LIVING GROUND COVER IN SPRING: LOCATIONS  2/

                       NAME           NC1

                       DALZ 0701      99.0
                       ZENITH         99.0
                       SHADOWTURF     97.7
                       ZORRO          97.7
                       DALZ 0501      96.0
                       240            94.7
                       L1F            93.3
                       DALZ 0702      92.7
                       29-2           88.0
                       MEYER          85.0
                       380-1          75.0

                       LSD VALUE       8.9
                       C.V. (%)        6.0
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1/ TO DETERMINE STATISTICAL DIFFERENCES AMONG ENTRIES, SUBTRACT ONE ENTRY'S MEAN FROM ANOTHER ENTRY'S MEAN.
    STATISTICAL DIFFERENCES OCCUR WHEN THIS VALUE IS LARGER THAN THE CORRESPONDING LSD VALUE (LSD O.05).

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

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      TABLE 15.     PERCENT LIVING GROUND COVER (SUMMER) RATINGS OF ZOYSIAGRASS CULTIVARS  1/
                                    2008 DATA


                   PERCENT LIVING GROUND COVER IN SUMMER: LOCATIONS  2/


                 NAME           IN1       KS1       NC1      MEAN


                 ZENITH         94.3      99.0      99.0      97.4
                 MEYER          93.3      99.0      93.3      95.2
                 29-2           91.7      99.0      94.7      95.1
                 240            70.0      99.0      96.3      88.4
                 ZORRO          45.0      88.3      97.7      77.0
                 380-1          16.0      93.0      91.7      66.9
                 DALZ 0701       0.0      66.7      99.0      55.2
                 DALZ 0501      21.7      33.3      99.0      51.3
                 DALZ 0702       0.0      51.7      97.7      49.8
                 SHADOWTURF      0.0      11.7      99.0      36.9
                 L1F             6.7       1.7      97.7      35.3


                 LSD VALUE      22.1      10.6       3.7       8.3
                 C.V. (%)       34.5       9.8       2.4      13.1



        TABLE 16.    WINTER COLOR RATINGS OF ZOYSIAGRASS CULTIVARS  1/
                                    2008 DATA


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


                       NAME           NC1


                       MEYER          8.0
                       ZENITH         7.0
                       240            6.3
                       29-2           6.3
                       380-1          5.7
                       DALZ 0702      5.3
                       ZORRO          5.3
                       DALZ 0501      4.7
                       DALZ 0701      4.3
                       L1F            4.3
                       SHADOWTURF     4.3


                       LSD VALUE      0.8
                       C.V. (%)       9.3


  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 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/
2008 DATA

PERCENT WINTER KILL RATINGS: LOCATIONS 2/

NAME	KS1
L1F	99.0
SHADOWTURF	99.0
DALZ 0501	96.3
DALZ 0702	68.3
DALZ 0701	66.7
380-1	26.7
ZORRO	14.7
ZENITH	5.0
240	0.0
29-2	0.0
MEYER	0.0
LSD VALUE	10.6
C.V. (%)	15.2

TABLE 18.   DOLLAR SPOT RATINGS OF ZOYSIAGRASS CULTIVARS 1/
2008 DATA

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

NAME	NC1
240	9.0
ZENITH	9.0
29-2	8.7
DALZ 0501	8.7
MEYER	8.7
380-1	8.3
L1F	7.7
SHADOWTURF	7.7
ZORRO	7.7
DALZ 0702	7.3
DALZ 0701	6.7
LSD VALUE	1.1
C.V. (%)	8.3

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 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/
                                  2008 DATA


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


                           NAME           TX1


                           380-1          9.0
                           MEYER          7.7
                           29-2           7.3
                           L1F            7.3
                           SHADOWTURF     7.3
                           DALZ 0701      7.0
                           DALZ 0702      6.7
                           DALZ 0501      6.3
                           ZORRO          6.3
                           240            6.0
                           ZENITH         5.0


                           LSD VALUE      1.0
                           C.V. (%)       9.1



            TABLE 20.   FALL COLOR (OCTOBER) RATINGS OF ZOYSIAGRASS CULTIVARS  1/
                                  2008 DATA


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


                           NAME         NC1    TX1    MEAN


                           L1F          7.7    8.0    7.8
                           SHADOWTURF   8.0    7.7    7.8
                           29-2         7.0    8.0    7.5
                           DALZ 0501    8.0    7.0    7.5
                           DALZ 0701    7.3    7.7    7.5
                           DALZ 0702    7.0    7.7    7.3
                           380-1        6.0    8.7    7.3
                           MEYER        6.3    8.0    7.2
                           ZORRO        6.0    7.3    6.7


                           240          5.3    7.3    6.3
                           ZENITH       5.3    6.7    6.0


                           LSD VALUE    0.9    0.7    0.6
                           C.V. (%)     8.6    6.0    7.3
```

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 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/
                                    2008 DATA


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


              NAME          FL1     KS1     NC1     TX1     MEAN

              L1F           5.7     2.3     8.0     7.3     5.8
              DALZ 0701     6.0     2.0     7.7     7.0     5.7
              29-2          7.0     5.0     4.7     5.7     5.6
              SHADOWTURF    6.7     2.0     6.7     6.7     5.5
              DALZ 0501     5.0     2.3     7.3     7.3     5.5
              DALZ 0702     5.7     2.0     6.7     6.3     5.2
              380-1         5.0     2.7     5.0     7.0     4.9
              240           6.3     2.7     4.7     5.7     4.8
              ZENITH        6.0     4.0     4.0     5.3     4.8
              ZORRO         5.0     2.3     5.7     6.3     4.8
              MEYER         5.3     2.0     5.0     6.0     4.6

              LSD VALUE     0.9     0.8     1.0     1.2     0.5
              C.V. (%)     10.0    18.5    10.6    11.2    11.7


       TABLE 22.    FALL COLOR (DECEMBER) RATINGS OF ZOYSIAGRASS CULTIVARS  1/
                                    2008 DATA


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


                 NAME          FL1     TX1     MEAN

                 DALZ 0701     6.7     5.7     6.2
                 DALZ 0501     6.3     6.0     6.2
                 DALZ 0702     6.3     5.7     6.0
                 L1F           7.0     4.3     5.7
                 SHADOWTURF    7.3     3.3     5.3
                 29-2          5.3     4.3     4.8
                 ZORRO         4.3     5.3     4.8
                 ZENITH        4.0     4.7     4.3
                 380-1         3.3     5.0     4.2
                 240           3.7     4.0     3.8
                 MEYER         3.3     4.0     3.7

                 LSD VALUE     1.1     2.0     1.1
                 C.V. (%)     12.9    25.6    19.7
```

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 O.05).

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

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TABLE 23.　　　　　　　　　　PERCENT ESTABLISHMENT RATINGS OF ZOYSIAGRASS CULTIVARS 1/
AT GAINESVILLE, FL 2/
2007-08 DATA

NAME	NOVEMBER 2007	DECEMBER 2007	JANUARY 2008	FEBRUARY 2008	MARCH 2008	APRIL 2008	MAY 2008	JUNE 2008	JULY 2008	AUGUST 2008	SEPTEMBER 2008	OCTOBER 2008	NOVEMBER 2008	DECEMBER 2008
SHADOWTURF	5.0	10.0	16.7	15.0	16.7	23.3	26.7	43.3	66.7	78.3	90.0	96.3	90.0	95.0
DALZ 0701	8.3	15.0	20.0	11.7	21.7	30.0	35.0	51.7	68.3	78.3	89.7	94.3	88.3	88.3
L1F	5.0	10.0	15.0	15.0	15.0	21.7	26.7	48.3	65.0	76.7	88.3	91.3	83.3	85.0
DALZ 0702	6.7	16.7	20.0	16.7	21.7	26.7	28.3	38.3	58.3	71.7	80.0	85.0	81.7	81.7
DALZ 0501	8.3	15.0	20.0	16.7	18.3	26.7	18.3	31.7	53.3	63.3	75.0	81.7	73.3	71.7
ZENITH	0.7	1.3	2.3	2.0	1.7	20.0	20.0	36.7	56.7	63.3	80.0	76.7	76.7	48.3
29-2	5.0	5.0	10.0	10.0	10.0	5.0	10.0	25.0	38.3	60.0	73.3	76.7	70.0	66.7
ZORRO	5.0	8.3	10.0	10.0	13.3	11.7	16.7	35.0	55.0	61.7	80.0	86.7	86.7	78.3
MEYER	5.0	6.7	10.0	10.0	10.0	10.0	15.0	21.7	40.0	50.0	68.3	66.7	60.0	43.3
240	5.0	5.0	10.0	10.0	6.7	5.0	10.0	18.3	36.7	48.3	66.7	66.7	61.7	51.7
380-1	5.0	6.7	10.0	10.0	11.7	10.0	15.0	23.3	43.3	56.7	70.0	70.0	56.7	45.0
LSD VALUE	2.6	2.7	1.7	6.3	4.0	4.3	8.2	10.3	13.3	19.4	29.5	22.6	21.0	18.2
C.V. (%)	27.9	19.3	8.7	30.3	19.3	15.9	24.6	18.6	14.9	15.8	15.7	13.9	14.8	16.1

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.