

1997 CREEPING BENTGRASS CULTIVAR EVALUATION TESTS

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Two creeping bentgrass cultivar trials were established in August of 1997. A 22 cultivar trial was established on the USGA specification research green and a 24 cultivar trial on a native soil area.

In general, all bentgrasses were well established within six weeks after seeding (1997 ATRC Report).

These cultivar tests were implemented to ascertain the adaptation of creeping bentgrass cultivars to the region. The cultivars included within the test came from the seed companies in the region, with the remainder being experimental lines produced either at the University of Manitoba or from Pickseed. With the exception of the January 1998 ice storm there was very little winter stress on the turf and all entries came through the winters in good shape. The winter of 2000-2001 will provide a better idea of the snow mold and winter stress conditions on the individual cultivars.

To date, the following cultivars or experimental lines have been in the top 10 turf quality for all three full years of evaluation (1998-2000) on the USGA Spec. Sand Green:

UM86-01, L-93, UM94-3-4, UM94-3-6 and 18th Green.

The experimental lines, with the exception of UM86-01 will not be commercially available in the 5 years. Registration of UM86-01 has been initiated. Other registered cultivars that have performed well are Putter, Providence and Cato.

To date, the following cultivars or experimental lines have been in the top 10 turf quality for all three full years of evaluation (1998-2000) on the Native Soil Green:

UM86-01, UM94-3-4, UM94-3-6, UM94-3-1 and 18th Green.

The expected availability of these experimental lines has been addressed above.

From amongst the available cultivars, it would appear that L-93, Putter, PROCUP, Cato, Providence, Cato, 18th Green and Penncross (native soil) are acceptable. The mowing height used in the studies was 4.5 mm (3/16") in 1998-99, and 3.75 mm (5/32") in 2000.

Another factor to take into consideration is the spring green-up ratings for the entries. If your course is dependent upon early spring green fees, choices such as 18th Green may not be appropriate for your course as it is later to green-up (1-2 weeks). This may have an economic impact on the golf course and needs to be at least considered. If golfers can be dissuaded from demanding that the greens be in place, this may allow for use of these cultivars and that play during times with reduced recuperative potential can be discouraged.

Dependent upon the survival of the 2000-01 winter (no fungicide) another year of data will be collected from these trials. This winter is the first with respect to this trial to have any long term

snow cover, so the dynamics of survival should be different than the past winters.

Table 1: USGA Sand Green-Creeping bentgrass cultivar trial turfgrass quality ratings for 2000.

Turfgrass Quality Ratings (9 - best, 1- poor)							
<u>Cultivar</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>Sept.</u>	<u>Mean</u>
UM86-01	6.00 a	6.00 ab	7.25 ab	8.50 a	8.00 a	8.50 a	7.38
UM94-3-4	5.75 ab	6.50 a	7.50 a	7.75 a-c	8.00 a	8.00 ab	7.25
CB 13-94-97	5.50 a-c	5.75 ab	7.25 ab	7.75 a-c	7.25 a-c	7.25 b-e	6.79
L-93	5.25 a-d	6.25 a	7.50 a	8.00 a-c	7.50 a-c	7.75 a-c	7.04
PROCUP	5.25 a-d	5.00 b	7.00 ab	8.00 a-c	7.50 a-c	6.75 d-g	6.75
UM94-3-6	5.25 a-d	6.75 a	7.50 a	7.75 a-c	8.00 a	7.75 a-c	7.17
UM86-02	5.00 a-e	5.75 ab	7.25 ab	7.25 bc	7.25 a-c	7.25 b-e	6.63
18 th Green	5.00 a-e	6.25 a	7.25 ab	7.50 a-c	7.50 a-c	7.50 b-d	6.83
Putter	5.00 a-e	6.25 a	7.25 ab	8.25 ab	7.25 a-c	7.00 c-f	6.83
CB 2-94-97	5.00 a-e	6.25 a	6.75 ab	7.50 a-c	6.75 cd	7.25 b-e	6.58
UM94-3-1	5.00 a-e	6.00 ab	7.00 ab	7.75 a-c	7.75 ab	7.75 a-c	6.88
Pennlinks	5.00 a-e	6.25 a	6.75 ab	7.75 a-c	7.25 a-c	6.25 f-h	6.54
Cato	4.75 b-e	6.00 ab	7.00 ab	7.75 a-c	7.50 a-c	7.50 b-d	6.75
CB16-94-97	4.75 b-e	5.75 ab	7.25 ab	7.50 a-c	7.25 a-c	7.25 b-e	6.63
Mariner	4.75 b-e	6.00 ab	6.25 bc	7.50 a-c	7.00 b-d	6.00 gh	6.25
CB 3-94-96	4.50 c-e	6.00 ab	7.00 ab	7.75 a-c	7.25 a-c	7.00 c-f	6.58
Emerald	4.50 c-e	6.00 ab	6.50 a-c	7.50 a-c	7.50 a-c	6.00 gh	6.33
Providence	4.50 c-e	5.75 ab	7.25 ab	7.50 a-c	7.75 ab	7.25 b-e	6.67
CBB 95-97	4.50 c-e	6.00 ab	7.00 ab	7.75 a-c	6.25 d	7.00 c-f	6.42
N101	4.25 de	6.00 ab	7.00 ab	7.75 a-c	7.00 b-d	6.50 e-g	6.42
Penncross	4.25 de	6.25 a	6.75 ab	8.25 ab	7.50 a-c	6.50 e-g	6.58
Prominent	4.00 e	6.00 ab	5.75 c	7.00 c	7.00 b-d	5.50 h	5.88
<i>Mean</i>	<i>4.90</i>	<i>6.03</i>	<i>7.00</i>	<i>7.73</i>	<i>7.36</i>	<i>7.07</i>	<i>6.68</i>

Table 2: USGA Sand Green-Spring green-up, July colour and July density for 2000.

<u>Cultivar</u>	<u>Spring Green-up</u> (9 - green, 1 brown)	<u>July Colour</u> (9- dark,1-light green)	<u>July Density</u> (9-densest, 1-no cover)
Cato	7.50 a	7.75 ab	7.75
Providence	6.67 ab	7.75 ab	7.25
PROCUP	6.50 ab	8.00 a	8.25
Emerald	6.50 ab	6.75 b	7.75
UM 94-3-4	6.50 ab	8.25 a	7.75
N101	6.50 ab	7.75 ab	7.75
CB13-94-97	6.25 ab	8.00 a	7.75
CBB 95-97	6.25 ab	7.75 ab	7.25
UM 94-3-6	6.25 ab	8.25 a	8.00
L-93	6.25 ab	7.75 ab	8.00
CB 2-94-97	6.25 ab	8.00 a	7.75
Putter	6.25 ab	7.75 ab	7.75
UM86-02	6.25 ab	8.25 a	7.75
CB 3-94-96	6.00 ab	7.25 ab	7.75
CB 16-94-97	5.50 b	7.75 ab	7.50
UM86-01	5.50 b	8.25 a	8.25
Pennlinks	5.50 b	7.50 ab	7.75
Penncross	5.00 bc	8.00 a	7.75
Prominent	5.00 bc	6.75 b	7.00
UM 94-3-1	4.75 bc	8.00 a	7.75
Mariner	4.75 bc	7.50 ab	7.25
18 th Green	3.75 c	8.00 a	7.50

Table 3: Native Soil-Creeping bentgrass cultivar trial turfgrass quality ratings for 2000.

<u>Turfgrass Quality Ratings (9 - best, 1- poor)</u>							
<u>Cultivar</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>Sept.</u>	<u>Mean</u>
Barbot	7.67 a	7.33 a	7.33 ab	8.33	7.00 bc	6.00 fg	7.28
UM 94-3-4	6.67 ab	6.67 a-c	7.67 a	8.67	8.00 a	7.67 a-c	7.56
Penncross	6.67 ab	7.00 ab	7.33 ab	8.67	7.33 a-c	7.00 c-e	7.33
Pennlinks	6.67 ab	6.67 a-c	7.67 a	8.33	7.00 bc	6.33 ef	7.11
CB 16-94-97	6.33 a-c	7.00 ab	8.00 a	8.67	7.33 a-c	7.00 c-e	7.39
Mariner	6.00 a-c	7.33 a	7.33 ab	8.33	7.00 bc	6.67 d-f	7.11
UM 94-3-6	6.00 a-c	6.00 b-d	7.67 a	8.00	8.00 a	7.33 b-d	7.17
N101	5.67 bc	6.33 b-d	7.00 ab	8.33	7.00 bc	6.33 ef	6.78
CB 13-94-97	5.67 bc	5.67 cd	7.00 ab	8.33	7.00 bc	7.00 c-e	6.78
L-93	5.67 bc	6.67 a-c	7.67 a	8.33	7.00 bc	7.33 b-d	7.11
Putter	5.67 bc	6.67 a-c	7.67 a	8.67	7.00 bc	6.67 d-f	7.06
PROCUP	5.67 bc	6.33 b-d	7.67 a	8.33	7.33 a-c	7.00 c-e	7.06
CBB 95-97	5.67 bc	5.67 cd	6.33 b	7.67	7.00 bc	6.67 d-f	6.50
CB 1-94-97	5.33 bc	5.33 d	7.00 ab	8.67	7.33 a-c	7.00 c-e	6.77
CB 3-94-96	5.33 bc	6.67 a-c	7.33 ab	8.33	7.00 bc	7.00 c-e	6.94
CB 2-94-97	5.33 bc	6.67 a-c	7.33 ab	8.00	7.67 ab	6.67 d-f	6.95
UM 94-3-1	5.33 bc	6.33 b-d	8.00 a	8.33	8.00 a	8.33 a	7.38
UM86-01	5.33 bc	5.67 cd	7.67 a	8.33	8.00 a	8.00 ab	7.17
18 th Green	5.00 bc	6.33 b-d	7.67 a	8.33	7.67 ab	7.00 c-e	7.00
UM86-02	5.00 bc	6.00 b-d	7.67 a	8.33	7.33 a-c	7.33 b-d	6.94
Emerald	5.00 bc	6.33 b-d	6.33 b	8.00	7.00 bc	6.33 ef	6.50
Providence	5.00 bc	6.00 b-d	7.33 ab	8.33	6.67 c	7.33 b-d	6.78
Cato	4.67 c	6.00 b-d	7.33 ab	8.33	7.00 bc	7.33 b-d	6.78
Prominent	4.67c	6.00 b-d	6.33 b	8.33	7.00 bc	5.33 f	6.22
<i>Mean</i>	<i>5.67</i>	<i>6.36</i>	<i>7.35</i>	<i>8.32</i>	<i>7.28</i>	<i>6.94</i>	<i>6.99</i>

Table 4. Native Soil-Spring green-up and July colour for 2000.

<u>Cultivar</u>	<u>Spring green-up</u> (9 - green, 1 brown)	<u>July Colour</u> (9- dark,1-light green)
Bardot	9.00 a	8.00 ab
CB 2-94-97	6.67 b	7.67 bc
CB 16-94-97	6.33 bc	8.33 ab
Putter	6.00 bc	8.00 ab
UM 94-3-4	6.00 bc	8.67 a
CBB 95-97	6.00 bc	8.00 ab
Cato	5.67 bc	8.00 ab
Penncross	5.67 bc	8.33 ab
Emerald	5.67 bc	8.00 ab
Pennlinks	5.67 bc	8.33 ab
CB 1-94-97	5.33 bc	7.67 bc
Prominent	5.33 bc	7.00 c
N101	5.33 bc	8.33 ab
UM 94-3-1	5.33 bc	8.67 a
L-93	5.33 bc	8.67 a
Mariner	5.33 bc	8.00 ab
CB 3-94-96	5.33 bc	7.67 bc
Providence	5.00 c	7.67 bc
CB 13-94-97	5.00 c	8.33 ab
UM86-01	5.00 c	8.33 ab
PROCUP	5.00 c	7.67 bc
UM94-3-6	5.00 c	8.67 a
18 th Green	2.67 d	8.67 a
UM86-02	2.67 d	8.33 ab
