

1997 KENTUCKY BLUEGRASS CULTIVAR AND MOWING HEIGHT TRIAL

There has been a proliferation of Kentucky bluegrass cultivars released by turfgrass companies over the last few years and it appears that this will continue in the foreseeable future. In order to select those cultivar that are; 1) suited to Atlantic Canada conditions, and 2); to find cultivars that are suited to the different end uses we have established a trial at the NSAC. A smaller trial has been planted at Oakfield G.C. & C. and was rated through early July 1998 and was removed due to the colour differences of the cultivars and its effect on the aesthetics of the fairway. A third trial was established at a nursery site at Hartlen Point . C., however it did not establish well and was discarded in the spring of 1998.

A 26 cultivar Kentucky bluegrass trial was seeded at the NSAC turfgrass research field on August 27 and 28 of 1997. There will be 3 mowing heights imposed upon this trial and 4 complete replicates. Mowing height treatments of 12.5, 18.75 and 25 mm were started in May of 1999.

Fertility was at 3 lbs N per 1000 ft² per year. No pesticides have been used on this trial since its establishment. Irrigation was used to prevent turf loss.

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 (2) being experimental lines produced at 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. This trial has the cultivars being mown at three heights; ½", 1" and 1 ½" in 2000. These last heights are an increase from ¾" and 1" respectively from the previous year. These height measurements more accurately reflect the canopy heights seen in the field.

The main addition to this test was the inclusion of a divot being removed from each plot (using a modified sod cutter blade). The higher heights of cut were quickly covered over with the remaining vegetation and no differences were noted. However at the lowest height of cut, ½", differences were found to be significant. The plots were rated with respect to the filling in of the turf through the growth of rhizomes from underneath the divot area. In general, higher tiller density cv's were slower to fill in. However, this higher tiller density allowed for greater density and quality ratings under the ½" height of cut.

The top 10 cultivars in 2000 were alphabetically; Alpine, Amazon, Award, Chateau, Jefferson, Nugget, Pick 113-3, Pick 301, Princeton (P-105) and Touchdown.

Table 5. 1997 Kentucky Bluegrass Cultivar Evaluation Trial, 2000 ratings.

<u>Cultivar</u>	<u>Spring Green-up</u>	<u>Colour (9-dk green, 1-light green)</u>		<u>Density (9-densest, 1- least)</u>	
		<u>June</u>	<u>July</u>	<u>May</u>	<u>July</u>
Alene	7.50 a	6.33 gh	7.75 c-g	5.75 h	6.67 f
America	6.67 b	6.83 d-f	7.75 c-g	6.83 b-e	7.25 c-e
Crest	6.67 b	6.67 e-h	8.08 a-e	6.50 e-g	7.17 d-f
Raven	6.67 b	6.75 d-g	8.50 ab	6.58 d-f	7.50 b-e
Pick 301	6.58 b	7.17 b-d	7.92 b-f	7.42 ab	7.83 ab
Jefferson	6.50 b	6.50 f-h	7.67 c-g	6.67 c-f	7.58 b-d
Classic	6.25 bc	5.83 i	7.58 d-g	6.00 g-h	7.00 ef
Marquis	6.25 bc	6.92 ef	8.08 a-e	6.50 e-g	7.33 b-e
Indigo	6.17 bc	6.75 d-g	8.17 a-d	6.17 f-h	7.00 ef
Nublue	5.58 cd	6.25 h	7.50 e-g	6.75 c-e	7.08 d-f
Amazon	5.17 de	6.75 d-g	7.50 e-g	7.00 b-e	7.50 b-e
Nustar	5.08 d-f	6.67 e-h	7.75 c-g	6.67 c-f	7.08 d-f
Limousine	4.92 d-g	6.50 f-h	7.42 fg	6.67 c-f	7.58 b-d
Touchdown	4.75 e-h	6.33 gh	7.58 d-g	7.08 a-e	7.42 b-e
Sebring	4.75 e-h	7.00 b-e	8.00 b-f	6.92 b-e	7.42 b-e
Welcome	4.58 e-i	6.83 d-e	7.50 e-g	6.50 e-g	7.17 d-f
Award	4.50 e-i	8.00 a	8.67 a	7.00 b-e	7.58 b-d
Pick 113-3	4.33 f-j	7.33 bc	7.08 a-e	7.17 a-d	7.50 b-e
Midnight	4.17 g-k	7.92 a	8.25 a-c	7.08 a-e	7.00 ef
P-105	4.08 h-k	7.33 bc	7.67 c-g	7.00 b-e	7.50 b-e
Nuglade	4.08 h-k	7.92 a	8.17 a-d	7.08 a-e	7.25 c-e
Alpine	3.83 i-k	7.83 a	7.17 g	7.67 a	8.25 a
Quantum Leap	3.67 j-l	7.92 a	8.08 a-e	7.17 a-d	7.42 b-e
Chateau	3.67 j-l	6.75 d-g	7.50 e-g	7.17 a-d	7.50 b-e
Explorer	3.50 kl	6.92 c-f	7.92 b-f	7.25 a-c	7.42 b-e
Nugget	3.00 l	7.42 b	7.92 b-f	7.08 a-e	7.75 bc

Table 6. 1997 Kentucky Bluegrass Cultivar Evaluation Trial, 2000 turf quality ratings.

	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>	<u>Mean</u>
Classic	7.08 a	6.08 e	6.08 ij	7.08 d-f	7.50 bc	6.76
Chateau	7.00 ab	6.92 b-d	7.00 be	7.58 b-d	7.58 bc	7.22
Amazon	6.75 a-c	6.83 b-d	6.75 c-h	7.33 b-f	7.58 bc	7.05
Jefferson	6.75 a-c	6.58 c-e	6.67 d-h	7.50 b-e	7.58 bc	7.02
Limousine	6.75 ac	6.50 c-e	6.33 h-j	7.42 b-e	7.58 bc	6.82
Touchdown	6.75 a-c	7.00 b-d	6.58 e-h	7.33 b-f	7.75 b	7.08
Pick 301	6.58 a-d	7.00 b-d	7.33 b	7.83 ab	8.25 a	7.40
P-105	6.58 a-d	7.08 a-c	6.92 b-f	7.42 b-e	7.25 c	7.05
Crest	6.42 b-e	6.50 c-e	6.42 g-i	7.42 b-e	7.67 bc	6.89
Raven	6.42 b-e	6.50 c-e	6.67 d-h	7.50 b-e	7.50 bc	6.92
Marquis	6.42 b-e	6.42 de	6.58 e-h	7.42 b-e	7.50 bc	6.87
Pick 113-3	6.33 c-f	6.92 b-d	7.08 b-d	7.33 b-f	7.58 bc	7.05
Nublue	6.33 c-f	6.50 c-e	6.50 f-i	6.83 f	7.50 bc	6.73
Award	6.17 c-g	7.17 ab	6.92 b-f	7.33 b-f	7.58 bc	7.03
Explorer	6.08 d-h	6.83 b-d	6.75 c-h	7.33 b-f	7.50 bc	6.90
Midnight	6.08 d-h	6.83 b-d	6.67 d-h	7.00 ef	7.50 bc	6.82
America	6.08 d-h	6.83 b-d	6.50 f-i	7.17 c-f	7.75 b	6.87
Indigo	6.08 d-h	6.42 de	6.42 g-i	7.17 c-f	7.33 bc	6.68
Sebring	6.08 d-h	6.83 b-d	6.75 c-h	7.58 b-d	7.33 bc	6.91
Quantum Leap	6.00 d-h	7.25 ab	6.67 d-h	7.25 c-f	7.50 bc	6.93
Alene	6.00 d-h	5.42 f	6.00 j	7.00 ef	7.50 bc	6.38
Nuglade	5.92 e-h	7.08 a-c	6.83 c-g	7.17 c-f	7.58 bc	6.92
Nustar	5.92 e-h	6.50 c-e	6.67 d-h	7.17 c-f	7.67 bc	6.79
Welcome	5.75 f-h	6.42 de	6.83 c-g	7.08 d-f	7.50 bc	6.72
Nugget	5.58 gh	7.25 ab	7.17 bc	7.67 bc	7.33 bc	7.00
Alpine	5.50 h	7.58 a	7.75 a	8.17 a	7.50 bc	7.30

Table 7. 1997 Kentucky Bluegrass Cultivar Evaluation Trial, divot recovery ratings @ ½" cut.

<u>Entry</u>	<u>Width (cm)</u>	<u>Divot Recovery Rating - (9, - completely filled, 1 - no regrowth)</u>				
		<u>Aug 11</u>	<u>Aug 18</u>	<u>Aug 25</u>	<u>Sept 1</u>	<u>Sept 8</u>
Classic	11.75 a	1.50 bc	2.75 fg	5.00 c-f	6.75 cf	8.50 a
Indigo	11.25 ab	2.00 a-c	4.00 b-e	5.25 b-f	7.00 b-e	8.75 a
Alene	11.00 a-c	2.00 a-c	3.00 e-g	5.25 b-f	6.75 c-f	8.00 a
Welcome	11.00 a-c	1.50 bc	3.00 e-g	4.50 ef	6.75 c-f	8.50 a
Crest	10.75 b-d	2.50 a	4.50 a-c	6.25 a-c	7.25 b-e	8.00 a
Sebring	10.75 b-d	1.75 a-c	2.75 f-g	5.00 c-f	6.50 d-f	8.25 a
Quantum Leap	10.75 b-d	1.75 a-c	2.50 g	4.75 d-f	6.75 c-f	8.00 a
Nublu	10.50 b-e	1.75 a-c	3.25 d-g	5.25 b-f	6.75 c-f	8.25 a
Nuglade	10.50 b-e	2.00 a-c	3.50 c-g	4.75 d-f	6.75 cf	7.75 a
Pick 301	10.50 b-e	1.25 c	3.00 e-g	4.25 f	5.75 f	8.00 a
Raven	10.50 b-e	1.50 bc	3.75 b-f	5.00 c-f	6.250 d-f	7.50 a
Nugget	10.25 c-f	1.75 a-c	3.25 d-g	5.00 c-f	6.25 ef	8.00 a
Jefferson	10.25 c-f	2.50 a	4.00 b-e	6.00 a-d	7.75 a-c	8.50 a
Nustar	10.25 c-f	2.00 a-c	3.25 d-g	5.25 b-f	7.50 a-d	8.50 a
Limousine	10.25 c-f	2.00 a-c	3.50 c-g	6.00 a-d	7.25 b-e	8.50 a
Pick 113-3	10.25 c-f	1.75 a-c	3.75 b-f	5.50 b-f	7.00 bc	8.25 a
Award	10.25 c-f	2.00 a-c	4.25 a-d	5.75 a-e	7.25 bc	8.50 a
Explorer	10.00 d-g	1.50 bc	2.75 fg	5.00 c-f	6.25 ef	7.75 a
Chateau	10.00 d-g	2.50 a	4.75 ab	6.50 ab	7.50 a-d	8.00 a
Marquis	10.00 d-g	2.00 a-c	3.25 d-g	5.25 b-f	7.00 b-e	8.75 a
P-105	10.00 d-g	2.25 ab	3.50 c-g	5.50 b-f	6.75 c-f	8.50 a
Touchdown	10.00 d-g	1.75 a-c	2.75 fg	4.50 ef	6.25 ef	7.75
Midnight	9.75 e-g	2.25 ab	4.50 a-c	6.00 a-d	7.25 b-e	8.25 a
Amazon	9.75 e-g	2.25 ab	5.25 a	7.00 a	8.50 a	8.50 a
Alpine	9.50 fg	2.50 a	4.50 a-c	6.50 ab	7.75 a-c	8.75 a
America	9.25 g	2.50 a	4.50 a-c	6.50 ab	8.00 ab	8.75 a

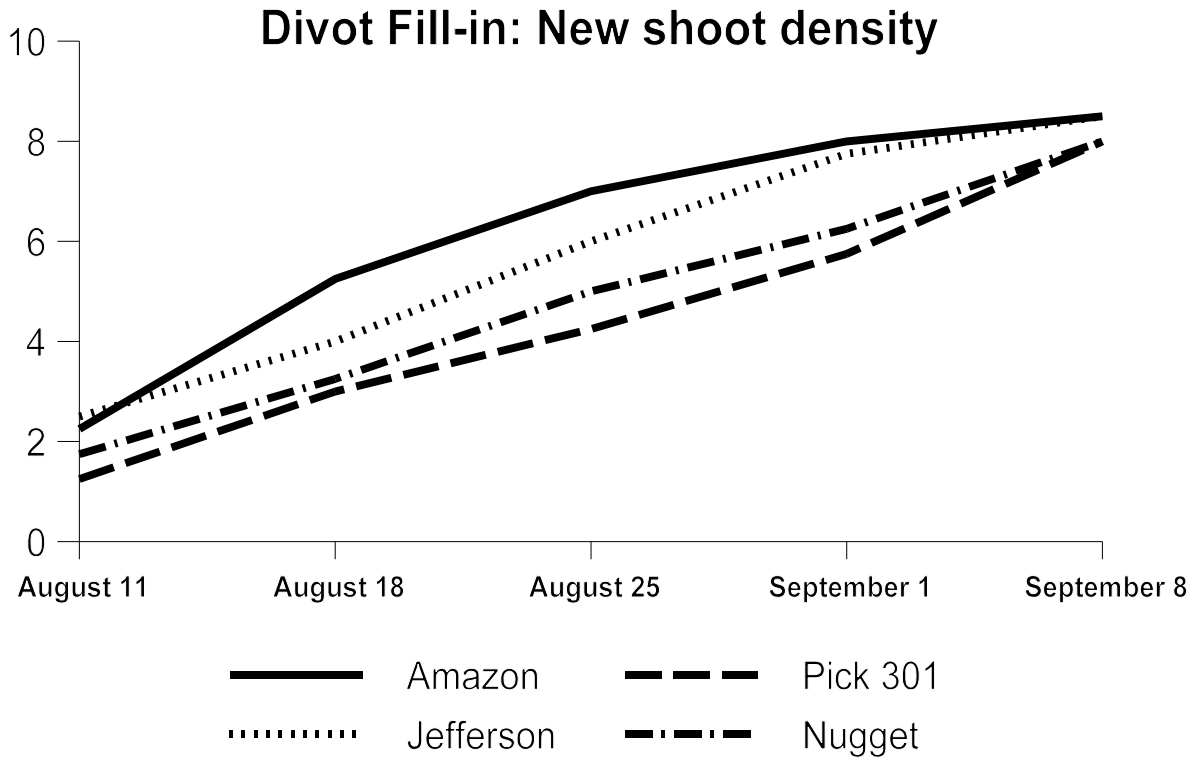


Figure 1. Regrowth ratings for tillers emerging form beneath the divot area for four *cv*'s.