

**Kentucky bluegrass Varietal Trial**  
**National Turfgrass Evaluation Program - Final Report 2000**  
C.E. Miluch

**Abstract**

The National Turfgrass Evaluation Program (NTEP) Kentucky bluegrass (*Poa pratensis* L.) trial ran from 1996 – 1999. Spring green-up, genetic colour and overall quality of the turf was evaluated. Ba 81-220 and VB 16015 ranked highest in spring green-up ratings. Award and Limousine Kentucky Bluegrasses ranked number one overall in genetic colour and overall quality respectively. The data presented in this report will only be from 1997, 1998 and 1999 as 1996 was establishment data.

**Introduction**

Varietal testing is imperative to the turfgrass manager, ensuring that new and improved amenity turf is available for fluctuating climatic conditions. The National Turfgrass Evaluation Program sponsored by the United States Department of Agriculture is an organization that disseminates information regarding amenity grasses under various management systems. The Kentucky bluegrass trial established by the Prairie Turfgrass Research Centre was a high maintenance site for the Canadian Prairie Provinces. The trial period extended over 4 years from 1996 – 1999.

**Methods and Materials**

This trial consisted of 120 Kentucky Bluegrass cultivars (103 NTEP entries and 17 industry selections), replicated three times in a Randomized Complete Block Design (RCBD). Individual plot size was 1.5 metres by 2 metres. There was a one-metre border strip of hard fescue (*Festuca ovina* var. *duriuscula* (L.) Koch) between replications and around the outside perimeter of the trial. Hard fescue is a bunch type turf species and therefore would not encroach into adjacent plots

The plot area was mowed at a height of 2-cm ( $\frac{3}{4}$ "") and fertilized at a rate of 1.5 kg of nitrogen/100 m<sup>2</sup>/growing year (3 lb. of nitrogen/1000 ft<sup>2</sup>/growing year). Plots were irrigated to avoid drought stress.

Evaluations for this trial included monthly quality, which combines colour, density and area cover into one overall rating. In addition spring green-up (when the turf is coming out of dormancy), genetic colour (rated when turf is not under stress) and leaf texture (the fineness of the leaf blades) were rated. These ratings are based upon the NTEP 1-9 rating scale, where 1 is poorest and 9 is superior. A rating of 5 is considered acceptable.

## **Results**

The combined year's data (1997-1999) is presented in Table 1. The quality ratings from Table 1 include spring green-up, genetic colour and overall quality values for that period. Establishment data and leaf texture data is not presented.

Spring green-up is a measure of turfgrass colour when dormancy is broken in the spring. The two Kentucky bluegrass cultivars demonstrating the best spring green-up were Ba 81-220 and VB 16015 with an overall value of 4.78. There was not significant difference between cultivars ranking from 1 to 25. Of all the spring green-up ratings in the combined year analysis none were above the acceptable value of 5 as defined by NTEP.

Genetic colour is evaluated when the turf is under no physiological stress during the growing season, usually during the summer months of July or August. Award had the highest ranking in genetic colour of 8.44 followed by NuGlade and TCR-1738 (Total Eclipse) at 7.89. Significant difference was not expressed until the ranking of 27. All genetic colour ratings were above 5.

The overall quality evaluation combined colour, density and area cover ratings for the trial period. The cultivar Limousine had an overall rating of 7.15, Med-18 (Rugby II) and Award ranked second at values of 7.04. Quality ratings of the site proved interesting in that significant difference did not occur in cultivars ranking from 1 to 55, presenting the fact that almost half of the plots were very similar in overall quality. Again all the turfgrass cultivars in the trial were above the standard of 5 recognized by NTEP.

## **Conclusions**

When determining blends of Kentucky Bluegrass for fairways or other turfgrass situations take into consideration cultivars with good spring green-up characteristics, others with superior genetic colour and cultivars with respectable overall quality. By taking these factors into consideration you as a turf manager will have the basis to establish a top quality amenity Kentucky bluegrass sward for your area.

*The Prairie Turfgrass Research Centre would like to take this opportunity to thank the National Turfgrass Evaluation Program for sponsoring this trial. We look forward to establishing another varietal trial in the future.*

Table 1 – Kentucky bluegrass varietal trial.

Cultivar	Rank	Spring Green-Up	Cultivar	Rank	Genetic Colour	Cultivar	Rank	Overall Quality
Ba 81-220	1	4.78	Award	1	8.44	Limousine	1	7.15
VB 16015	2	4.78	NuGlade	2	7.89	MED-18 (Rugby II)	2	7.04
Kenblue	3	4.67	TCR-1738 (Total Eclipse)	3	7.89	Award	3	7.04
Able I	4	4.67	Wildwood	4	7.78	MED-1497 Absolute	4	7.01
HV 130 (ASP 130)	5	4.56	Pick 8	5	7.78	NuGlade	5	6.99
Pick-3561(Explorer)	6	4.56	MED-18 (Rugby II)	6	7.78	PST-B2-42	6	6.99
Abbey	7	4.56	J-1561 (Odyssey)	7	7.78	NJ 1190	7	6.95
Ba 70-060	8	4.56	Unique	8	7.78	Estate	8	6.94
Ba 76-372 (Misty)	9	4.56	Midnight	9	7.78	Chateau	9	6.93
Ba 81-113	10	4.56	J-1576 (Impact)	10	7.67	Unique	10	6.93
H86-690	11	4.56	Ba 75-173	11	7.67	J-2579 (Rambo)	11	6.92
PST-638 (Blackstone)	12	4.56	PST-638 (Blackstone)	12	7.67	Ba 76-372 (Misty)	12	6.92
ZPS-429 (Dragon)	13	4.56	PST-B2-42	13	7.67	Allure	13	6.92
Baronie	14	4.56	Blacksburg	14	7.67	Platini	14	6.91
Indigo	15	4.56	Indigo	15	7.67	Bartitia	15	6.90
Pick 151	16	4.56	Ba 75-163	16	7.56	PST-A7-245A (Serene)	16	6.89
Kelly	17	4.56	HV 130 (ASP 200)	17	7.56	Quantum Leap	17	6.89
Shamrock	18	4.44	MED-1497 Absolute	18	7.56	Midnight	18	6.88
Wildwood	19	4.44	J-1936 (Arcadia)	19	7.56	BAR VB 233	19	6.88
LTP-621 (Champagne)	20	4.44	J-1567 (Quantum Leap)	20	7.56	Pick 151	20	6.88
Limousine	21	4.44	SR 2000	21	7.56	ZPS-2572 (Liberator)	21	6.88
SR 2000	22	4.44	Ba 70-060	22	7.56	Wildwood	22	6.88
Ba 81-227	23	4.44	Ba 81-113	23	7.56	J-1567 (Quantum Leap)	23	6.87
Sodnet	24	4.44	PST-A418 (Moonlight)	24	7.56	Pick 3561 (Explorer)	24	6.87
Unique	25	4.44	VB 16015	25	7.56	VB 16015	25	6.86
Baron	26	4.33	Able I	26	7.56	PST-638 (Blackstone)	26	6.86
Haga	27	4.33	Quantum Leap	27	7.56	Pick 8	27	6.85
Ba 73-373	28	4.33	BAR VB 233	28	7.44	Blacksburg	28	6.85
Ba 75-490	29	4.33	Ba 77-702	29	7.44	BAR VB 5649	29	6.84
Ba 81-058	30	4.33	Pick-3561 (Explorer)	30	7.44	SR 2000	30	6.83
Ba 87-102 (Goldrush)	31	4.33	ZPS-2572 (Liberator)	31	7.44	Pick-3561 (Explorer)	31	6.83
NJ 1190	32	4.33	Coventry	32	7.44	PST-A7-60 (Northstar)	32	6.83
ZPS-2183	33	4.33	Ba 81-270	33	7.44	TCR-1738 (Total Eclipse)	33	6.82
Livingston	34	4.33	Ba 87-102 (Goldrush)	34	7.44	PST-BO-165	34	6.82
Touchdown	35	4.33	Sodnet	35	7.44	Able I	35	6.81
Banff	36	4.33	PST-P46	36	7.44	Ba 81-220	36	6.80
Pick 3561 (Explorer)	37	4.33	NJ 1190	37	7.44	Touchdown	37	6.79
Pick 4	38	4.33	Challenger	38	7.44	Caliber	38	6.78
Washington	39	4.33	Platini	39	7.44	Kelly	39	6.78
A88-744	40	4.22	NJ-54	40	7.44	BAR VB 6820	40	6.78

Cultivar	Rank	Spring	Cultivar	Rank	Genetic	Cultivar	Rank	Overall
		Green-Up			Colour			Quality
Lipoa	41	4.22	Kelly	41	7.44	Challenger	41	6.77
Ba 75-163	42	4.22	Princeton 105	42	7.33	Ba 81-227	42	6.77
MED-1580	43	4.22	Baron	43	7.33	ZPS-309	43	6.77
MED-1991 (Bluechip)	44	4.22	A88-744	44	7.33	Shamrock	44	6.77
Classic	45	4.22	Chateau	45	7.33	Ba 77-702	45	6.77
TCR-1738 (Total Eclipse)	46	4.22	Lipoa	46	7.33	Baron	46	6.76
Coventry	47	4.22	Marquis	47	7.33	PST-P46	47	6.76
Ba 75-173	48	4.22	HV 242	48	7.33	PST-BO-141	48	6.76
LTP-620	49	4.22	Raven	49	7.33	ZPS-2183	49	6.76
Allure	50	4.22	J-1555	50	7.33	Ba 70-060	50	6.75
Bartitia	51	4.22	Eclipse	51	7.33	A88-744	51	6.75
NJ-54	52	4.22	Abbey	52	7.33	Ba 81-270	52	6.74
Quantum Leap	53	4.22	Ba 75-490	53	7.33	BAR VB 3115B	53	6.74
Marquis	54	4.11	Ba 76-372 (Misty)	54	7.33	HV 242	54	6.74
Raven	55	4.11	Ba 81-227	55	7.33	Ba 75-173	55	6.74
MED-1497 (Absolute)	56	4.11	H86-690	56	7.33	MED-1991 (Bluechip)	56	6.73
NuStar	57	4.11	PST-BO-165	57	7.33	Nimbus	57	6.72
Award	58	4.11	PST-A7-60 (Northstar)	58	7.33	Coventry	58	6.72
NuGlade	59	4.11	PST-A7-245A (Serene)	59	7.33	Ba 81-058	59	6.72
J-2579 (Rambo)	60	4.11	PST-BO-141	60	7.33	SR 2109	60	6.72
J-2582 (Chicago)	61	4.11	ZPS-309	61	7.33	Marquis	61	6.71
ZPS-2572 (Liberator)	62	4.11	ZPS-2183	62	7.33	SR 2100	62	6.71
SR 2100	63	4.11	Glade	63	7.33	Ba 87-102 (Goldrush)	63	6.71
Ascot	64	4.11	Livingston	64	7.33	J-1555	64	6.71
PST-P46	65	4.11	Nimbus	65	7.33	LKB-95	65	6.71
PST-B2-42	66	4.11	Allure	66	7.33	Ba 75-490	66	6.70
PST-A7-245A (Serene)	67	4.11	Bartitia	67	7.33	Sodnet	67	6.69
PST-BO-141	68	4.11	Touchdown	68	7.33	Abbey	68	6.69
Challenger	69	4.11	Pick 151	69	7.33	HV 130 (ASP 200)	69	6.69
Blacksburg	70	4.11	Shamrock	70	7.22	PST-A418 (Moonlight)	70	6.69
Midnight	71	4.11	LKB-95	71	7.22	NuStar	71	6.68
ZPS-309	72	4.11	DP 37-192 (Pepaya)	72	7.22	Princeton 105	72	6.68
Jefferson	73	4.11	America	73	7.22	Haga	73	6.67
Nimbus	74	4.11	BAR VB 5649	74	7.22	NJ-GD	74	6.67
Baruzo	75	4.11	MED-1991 (Bluechip)	75	7.22	Ascot	75	6.67
Pick 3	76	4.11	Caliber	76	7.22	DP 37-192 (Pepaya)	76	6.67
NuBlue	77	4.11	SR 2100	77	7.22	Lipoa	77	6.66
Chateau	78	4.00	Ascot	78	7.22	Ba 73-373	78	6.66
America	79	4.00	Sidekick	79	7.22	Livingston	79	6.66
BAR VB 5649	80	4.00	Ba 73-373	80	7.22	J-1561 (Odyssey)	80	6.65

Cultivar	Rank	Spring	Cultivar	Rank	Genetic	Cultivar	Rank	Overall
		Green-Up			Colour			Quality
Ba 77-702	81	4.00	Ba 79-260 (Seabring)	81	7.22	Baronie	81	6.64
NJ-GD	82	4.00	Ba 81-220	82	7.22	LTP-621 (Champagne)	82	6.64
Pick 8	83	4.00	Conni	83	7.22	Cynthia	83	6.64
Caliber	84	4.00	PST-B3-180 (Apollo)	84	7.22	Indigo	84	6.64
J-1567 (Quantum Leap)	85	4.00	Banff	85	7.22	Classic	85	6.63
Sidekick	86	4.00	Pick 3561 (Explorer)	86	7.22	Raven	86	6.63
PST-BO-165	87	4.00	Estate	87	7.22	Ba 75-163	87	6.62
PST-A418 (Moonlight)	88	4.00	Washington	88	7.22	America	88	6.62
Conni	89	4.00	Haga	89	7.11	Alpine	89	6.61
Alpine	90	4.00	BAR VB 6820	90	7.11	J-1576 (Impact)	90	6.61
A 34	91	4.00	NJ-GD	91	7.11	J-2582 (Chicago)	91	6.61
Estate	92	4.00	MED-1580	92	7.11	J-1936 (Arcadia)	92	6.60
Princeton 105	93	3.89	Classic	93	7.11	Ba 76-197	93	6.60
LKB-95	94	3.89	J-2582 (Chicago)	94	7.11	NuBlue	94	6.59
MED-18 (Rugby II)	95	3.89	Limousine	95	7.11	Banff	95	6.58
J-1555	96	3.89	Pick 855	96	7.11	PST-B3-180 (Apollo)	96	6.58
J-1561 (Odyssey)	97	3.89	Ba 76-197	97	7.11	Glade	97	6.58
Eclipse	98	3.89	Ba 81-058	98	7.11	Cardiff	98	6.57
Ba 76-197	99	3.89	Fortuna	99	7.11	NJ-54	99	6.57
Ba 79-260 (Seabring)	100	3.89	Baronie	100	7.11	Washington	100	6.57
Cynthia	101	3.89	BAR VB 3115B	101	7.00	Ba 81-113	101	6.56
Rugby	102	3.89	LTP-621 (Champagne)	102	7.00	Eclipse	102	6.56
BAR VB 6820	103	3.78	NuStar	103	7.00	Pick 4	103	6.55
J-1576 (Impact)	104	3.78	J-2579 (Rambo)	104	7.00	ZPS-429 (Dragon)	104	6.54
J-1936 (Arcadia)	105	3.78	SR 2109	105	7.00	Fortuna	105	6.54
Ba 81-270	106	3.78	ZPS-429 (Dragon)	106	7.00	Pick 3	106	6.53
PST-A7-60 (Northstar)	107	3.78	Jefferson	107	7.00	Rugby	107	6.53
Glade	108	3.78	Baruzo	108	7.00	H86-690	108	6.51
Cardiff	109	3.78	Pick 3	109	7.00	Conni	109	6.51
Fortuna	110	3.78	Cynthia	110	7.00	Sidekick	110	6.50
BAR VB 233	111	3.67	A 34	111	7.00	Ba 79-260 (Seabring)	111	6.47
BAR VB 3115B	112	3.67	Rugby	112	7.00	Pick 855	112	6.45
Pick 855	113	3.67	NuBlue	113	7.00	MED-1580	113	6.43
Platini	114	3.67	LTP-620	114	6.89	LTP-620	114	6.43
SR 2109	115	3.56	Cardiff	115	6.89	Baruzo	115	6.41
SRX 2205	116	3.56	Alpine	116	6.89	Jefferson	116	6.39
DP 37-192 (Pepaya)	117	3.44	SRX 2205	117	6.78	A 34	117	6.37
Compact	118	3.44	Compact	118	6.67	SRX 2205	118	6.33
PST-B3-180 (Apollo)	119	3.44	Pick 4	119	6.56	Compact	119	6.29
HV 242	120	3.33	Kenblue	120	6.22	Kenblue	120	6.07
<b>LSD (0.05)</b>		<b>0.45</b>			<b>0.40</b>			<b>0.42</b>