

Bentgrass Variety Field Day.

Keysborough Golf Club



28th October 2010

Trial Site Locations



Bentgrass varieties being assessed

*007

*Authority

*CY 2

*Cobra 2

*Declaration

Dominant *X-treme*

*Mackenzie

*Penn A1

Penn G2

*Shark

SR1150

SRP1GMC

SRP1RH93

*T-1

*Tyee

AGCSA vegetative

Mariner^

RAGC blend^

**Evaluated in 2003 NTEP trials*

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NTEP Ratings

TABLE 8B.

GENETIC COLOR RATINGS OF CREEPING BENTGRASS CULTIVARS
GROWN ON A GREEN 1/
2004-07 DATA

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

NAME	AR1	A21	IA1	IL1	IN1	KY1	ME1	MI1	MN1	NC1	NE1	NJ1	NM1	OK1	PA1	QE1	SD1	TX1	UT1	VA1	WI1	MEAN
T-1	7.8	7.4	7.0	7.9	8.7	8.3	6.2	6.8	7.9	7.0	8.0	6.0	6.2	7.5	8.6	7.7	7.0	7.3	7.1	7.7	8.6	7.5
LS-44	7.3	6.6	7.3	6.6	8.7	8.0	6.0	5.9	6.7	7.0	7.6	5.3	6.2	6.7	7.3	7.5	6.6	6.8	6.8	7.3	7.8	6.9
COBRA 2 (IS-AP 9)	7.1	6.4	7.3	6.8	8.3	7.8	6.0	5.9	7.0	7.4	7.1	5.6	5.5	6.8	6.8	7.7	6.9	6.4	7.1	7.5	7.2	6.9
BENCHMARK DSR	6.9	6.2	6.9	6.3	8.2	7.2	6.3	6.2	7.2	6.8	7.2	4.8	5.8	6.3	7.3	7.8	6.8	7.3	6.8	6.9	8.4	6.9
KINGPIN (9200)	7.1	6.7	6.8	6.4	7.6	6.3	6.3	6.3	7.5	6.7	8.1	4.8	5.3	6.7	6.9	7.8	6.8	6.8	6.4	6.8	8.5	6.8
TYEE (SRX 1GD)	6.9	6.9	7.3	6.3	7.4	7.3	6.0	5.8	6.2	6.9	7.1	6.8	4.7	6.5	6.2	7.5	6.2	6.8	6.6	6.8	7.5	6.7
INDEPENDENCE	7.0	6.9	7.2	6.2	7.8	7.0	6.3	6.1	6.1	6.8	7.8	5.4	5.3	6.3	6.3	7.7	6.4	6.8	6.2	6.9	7.8	6.7
ALPHA	6.8	6.5	7.0	6.8	7.8	7.2	6.0	5.4	6.3	6.8	7.4	4.7	5.5	5.7	6.8	7.7	6.6	6.8	6.5	7.2	8.3	6.7
PENN A-1	7.4	6.3	6.9	6.3	8.6	7.0	6.0	6.1	5.9	7.0	7.4	5.6	5.3	6.8	6.1	7.3	5.9	6.8	6.7	6.9	7.3	6.7
007 (DSB)	7.3	6.8	7.3	6.1	7.8	7.7	6.2	6.4	6.4	6.7	7.7	5.5	4.5	6.3	5.9	7.5	6.3	6.6	6.6	6.5	7.1	6.7
BENGAL	6.9	6.7	6.8	6.1	7.8	7.2	6.2	5.8	5.8	7.2	7.1	4.7	5.8	6.5	6.1	7.6	6.1	6.3	6.3	6.9	7.7	6.5
AUTHORITY (235050)	6.9	6.2	7.1	6.0	8.2	7.8	6.0	5.7	5.7	7.3	7.0	5.3	5.5	6.5	6.2	7.3	5.9	6.6	6.7	6.8	7.0	6.5
DECLARATION	7.0	6.3	7.3	6.0	7.9	7.8	6.2	5.9	5.6	6.9	7.0	5.3	5.2	6.0	5.5	7.3	5.8	6.8	6.4	6.4	7.2	6.4
PENNLINKS II	6.3	6.2	6.8	6.0	8.1	6.0	6.0	5.4	7.1	6.6	7.4	4.4	5.2	5.8	6.3	7.5	6.6	6.3	5.8	6.8	7.8	6.4
SHARK (23R)	6.9	6.0	7.7	6.1	7.9	7.2	6.0	6.0	5.4	6.9	5.9	4.9	4.3	6.7	5.8	7.5	6.0	6.3	6.2	6.5	6.6	6.3
13-M	6.7	6.3	6.8	6.0	7.1	6.8	6.0	6.0	5.2	6.7	7.2	4.8	5.3	5.7	5.7	7.4	6.1	6.7	5.9	6.8	7.3	6.3
MEMORIAL (A03-EDE)	6.0	6.3	6.7	6.2	7.7	6.7	6.0	6.4	5.6	7.0	6.8	4.0	5.3	6.5	5.8	7.1	6.1	6.8	6.5	6.4	7.4	6.3
MACKENZIE (SRX 1GPD)	6.9	6.2	7.0	5.7	7.4	7.0	6.0	6.0	5.0	6.8	6.9	5.8	4.8	5.0	5.7	7.6	6.0	6.3	5.6	6.5	6.8	6.3
CY-2	6.8	5.8	7.2	5.7	7.4	6.8	6.0	5.0	5.5	6.8	7.3	5.6	5.0	5.2	5.5	7.3	6.3	6.6	6.0	6.1	6.9	6.3
PENNCROSS	5.7	6.1	6.8	5.8	7.9	5.0	6.3	5.1	6.3	6.1	7.1	2.8	5.7	5.2	5.8	7.3	6.0	6.2	5.3	6.9	7.0	6.0
LSD VALUE	1.3	0.9	1.1	0.9	1.0	1.2	0.5	1.4	1.3	1.0	1.1	1.8	1.6	0.9	0.9	0.6	0.9	1.0	1.1	0.7	0.9	0.3
C.V. (%)	11.6	8.7	9.4	8.8	9.7	10.5	5.0	15.6	13.6	9.1	9.6	23.0	19.7	10.0	9.6	5.3	8.9	9.4	10.9	6.9	7.7	10.8

Participating Companies



Initial Establishment



Germination (0 – 5)

Variety	7 DAS	11 DAS	14 DAS
007	1.3	3.7	3.7
Penn A1	1.3	3.7	3.7
Authority	1.3	4.0	4.0
CY 2	1.0	3.7	3.7
Cobra 2	1.7	4.0	4.0
Declaration	2.0	4.3	4.7
Dominant Xtreme	2.0	3.3	3.7
Penn G2	1.7	4.3	4.0
Mackenzie	3.0	4.7	4.7
Shark	1.7	4.3	4.3
SR1150	1.3	4.0	4.0
SRP1GMC	3.0	4.3	4.3
SRP1RH93	1.7	4.0	4.0
T-1	1.7	3.7	3.7
Tyee	2.0	4.3	4.3
LSD (P<0.05)	ns	ns	ns

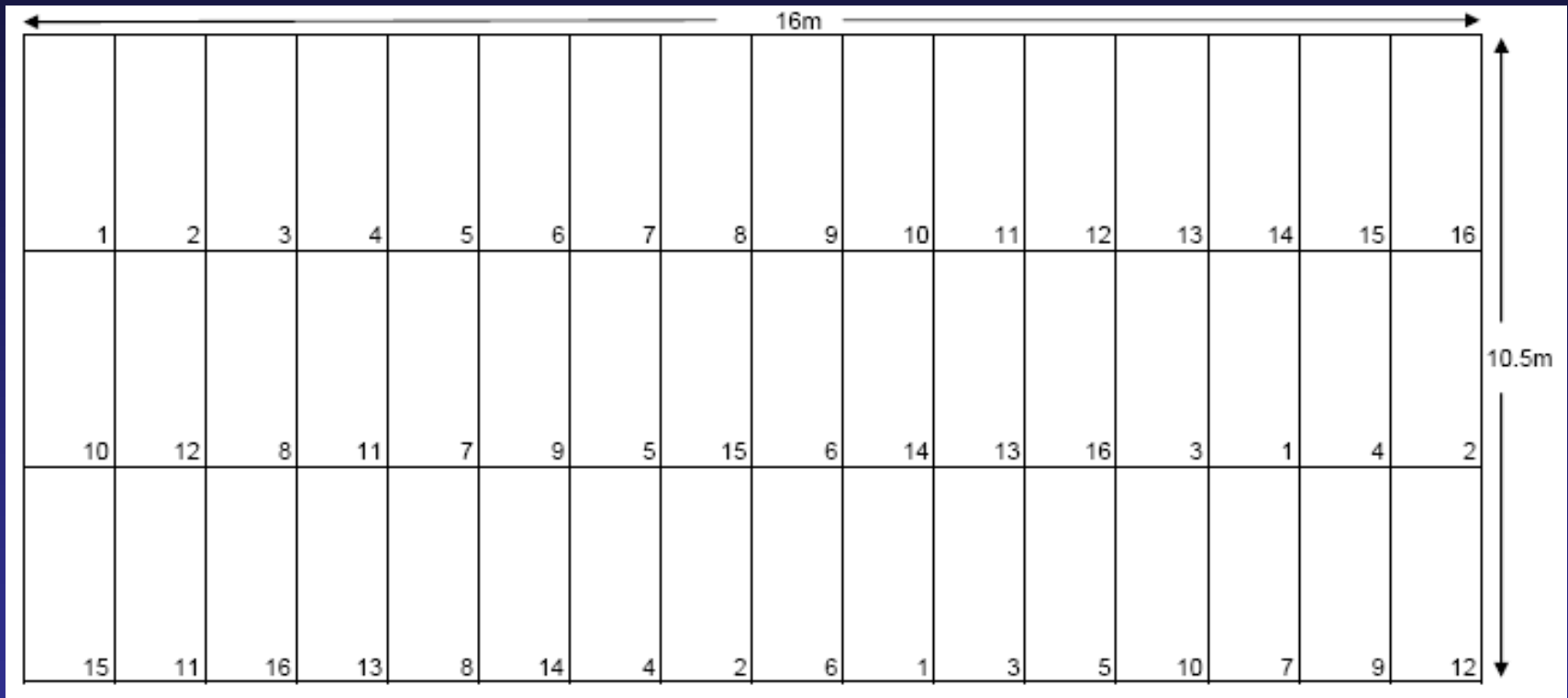
Vigour (0 – 5)

Variety	20 DAS	45 DAS
Dominant Xtreme	2.0	5.0
Tyee	2.0	4.7
Penn G2	2.3	4.7
SR1150	1.7	4.3
Authority	2.0	4.3
Penn A1	2.0	4.3
Shark	2.3	4.0
Mackenzie	2.7	4.0
SRP1RH93	1.3	3.7
Declaration	1.7	3.7
007	1.2	3.7
T-1	1.3	3.3
SRP1GMC	1.7	3.3
CY 2	2.0	3.3
Cobra 2	2.0	3.3
LSD (P<0.05)	ns	1.0

% Cover

Variety	19 DAS	31DAS	40DAS	49DAS	60DAS	82DAS
Declaration	47	62	82	92	83	88
SRP1GMC	40	55	80	90	88	87
Penn G2	38	62	80	90	82	87
CY 2	38	43	73	83	80	87
Authority	42	62	85	92	83	87
Shark	40	58	77	92	87	87
SRP1RH93	32	52	77	87	82	85
Mackenzie	43	62	78	88	82	85
Penn A1	37	50	75	85	78	83
Tyee	33	50	75	85	82	82
Dominant Xtreme	33	58	80	87	77	82
Cobra 2	43	60	77	88	82	82
007	25	43	73	87	78	82
SR1150	32	58	80	90	83	82
T-1	22	38	67	77	73	80
AGCSA 1	-	-	-	67	72	65
LSD (P<0.05)	ns	ns	ns	13	ns	8

Inspection of Trial Area



- Conduct an assessment on each plot for overall turfgrass quality (0-9) and anything else that appears worth noting
- Plot names will be displayed once assessments have been made

Recent Wear Assessments

During the past week wear trialling was undertaken on the top third of each plot



90 passes



160 passes



Results to Date

- Since October results for;
 - turfgrass colour,
 - turfgrass density
 - and overall turfgrass qualityhave been recorded every two months
- Measurements of thatch accumulation, ball roll and surface hardness have also been taken

Turfgrass Colour (0 - 9)

Variety	1/07/2009	19/8/09	3/9/09	8/10/09	26/10/09	29/1/10	15/3/10	4/6/10	16/7/10	10/9/10
007	6.7	6.5	7.0	7.5	7.2	5.8	6.7	6.8	6.5	6.5
Penn A1	6.8	6.7	7.0	7.3	7.2	5.7	6.7	6.8	6.8	6.5
Authority	6.8	6.7	6.7	7.3	7.0	6.0	6.7	6.7	6.7	6.3
CY 2	6.0	5.7	6.2	7.3	7.0	5.7	6.5	6.3	6.2	5.8
Cobra 2	7.5	7.2	7.3	8.0	7.7	6.2	6.8	7.2	7.0	6.8
Declaration	6.3	6.0	6.3	7.5	7.0	5.8	6.5	6.0	6.3	6.0
Dominant Xtreme	6.8	6.8	7.0	7.5	6.5	5.5	6.8	7.0	7.0	7.0
Penn G2	7.2	6.7	7.0	7.5	6.7	6.5	6.5	6.8	7.0	6.5
Mackenzie	7.0	6.5	6.5	7.5	6.8	5.5	6.3	6.5	6.5	6.3
AGCSA 1	7.0	8.0	7.2	7.8	7.8	5.7	7.0	6.5	6.3	6.5
Shark	7.2	6.3	7.0	7.8	7.5	6.2	6.3	6.2	6.7	6.3
SR1150	6.8	6.2	7.0	7.2	6.8	5.5	6.3	6.2	6.3	6.3
SRP1GMC	6.8	6.3	6.8	8.0	7.5	6.2	6.2	6.3	6.2	6.3
SRP1RH93	6.5	6.2	7.0	7.5	7.2	5.5	6.8	6.8	6.3	6.5
T-1	7.2	6.7	7.0	8.0	8.0	5.2	7.3	7.5	7.3	7.3
Tyee	6.7	6.2	6.7	7.2	6.3	5.7	6.2	6.3	6.5	6.2
LSD (P<0.05)	0.5	0.5	0.4	0.4	0.6	ns	0.5	0.5	0.4	0.4

Turfgrass Density (0 - 9)

Variety	18/6/09	7/8/09	19/8/09	3/9/09	16/9/09	8/10/09	26/10/09	29/1/10	19/3/10	16/7/10	10/9/10
007	4.8	6.7	6.8	7.1	7.2	7.5	7.3	6.2	6.7	6.7	7.2
Penn A1	4.8	6.8	6.8	6.9	8.0	7.7	7.0	6.0	6.5	6.3	7.3
Authority	5.7	7.8	7.0	7.3	8.0	7.8	7.5	6.5	7.0	7.0	7.7
CY 2	5.5	7.7	7.2	7.3	7.8	7.2	6.8	6.3	6.8	6.7	7.2
Cobra 2	5.3	7.3	6.7	7.4	8.0	7.5	7.3	6.7	6.8	6.5	7.5
Declaration	5.7	7.5	7.2	7.6	7.8	7.8	7.8	7.0	7.0	6.8	7.8
Dominant Xtreme	5.3	7.2	6.8	7.3	7.7	7.3	6.8	6.2	6.5	6.0	6.8
Penn G2	5.8	7.3	7.0	7.3	8.0	7.5	7.0	6.7	6.7	6.5	7.7
Mackenzie	5.7	7.7	7.0	7.4	7.7	7.5	7.2	7.0	6.7	6.7	7.3
AGCSA 1	3.7	5.0	5.0	6.3	6.7	6.3	6.8	6.8	7.2	7.7	7.3
Shark	5.5	7.7	7.0	7.5	7.8	7.8	7.5	7.3	7.3	6.8	7.3
SR1150	5.0	7.2	6.8	7.1	7.8	7.5	7.0	6.5	6.5	6.2	7.0
SRP1GMC	6.3	7.5	7.2	7.3	8.0	7.5	7.5	7.3	7.0	7.0	7.3
SRP1RH93	5.3	7.5	6.8	7.2	7.7	7.3	7.3	6.2	6.8	6.5	7.5
T-1	4.7	6.3	6.3	6.9	7.3	7.2	7.0	5.8	6.3	6.2	7.2
Tyee	5.3	7.3	6.8	7.0	7.7	7.7	6.8	6.3	6.5	6.5	7.2
LSD (P<0.05)	ns	ns	0.5	ns	ns	0.6	0.6	0.7	0.4	0.2	ns

Turfgrass Quality (0 - 9)

Variety	17/6/09	7/8/09	19/8/09	3/9/09	16/9/09	8/10/09	26/10/09	29/1/10	19/3/10	4/6/10	16/7/10	10/9/10
007	3.0	6.3	6.2	7.0	7.2	7.5	7.2	6.2	5.8	6.2	6.2	7.0
Penn A1	3.0	6.7	6.5	6.9	8.0	7.7	7.0	6.0	6.3	6.3	6.7	7.5
Authority	3.7	7.7	6.8	7.5	7.8	8.0	7.5	6.5	6.8	6.8	7.0	7.8
CY 2	3.3	7.3	7.0	7.3	7.8	7.2	6.8	6.5	6.5	6.7	6.8	7.3
Cobra 2	3.0	7.0	6.7	7.3	7.8	7.5	7.3	6.3	6.5	6.0	6.7	7.2
Declaration	3.7	7.3	7.2	7.4	7.8	7.8	7.8	7.0	6.5	6.8	7.2	8.0
Dominant Xtreme	3.3	7.0	6.7	7.3	7.7	7.3	6.5	6.2	6.2	6.3	6.5	7.3
Penn G2	3.3	7.0	6.7	7.3	8.0	7.5	7.0	6.7	6.5	6.3	6.8	7.5
Mackenzie	3.3	7.0	6.5	7.2	7.7	7.5	7.0	6.8	6.8	6.5	6.7	7.5
AGCSA 1	2.0	5.0	5.0	6.3	6.7	6.5	5.8	6.5	5.5	6.0	6.0	6.8
Shark	3.3	7.0	6.8	7.5	7.8	7.8	7.7	7.2	6.5	5.7	6.5	7.0
SR1150	3.0	6.8	6.3	7.0	7.8	7.5	6.8	6.5	6.3	6.0	5.8	6.8
SRP1GMC	4.3	7.2	7.0	7.4	8.0	7.7	7.3	6.8	6.5	5.8	6.2	6.8
SRP1RH93	3.0	7.0	6.5	7.2	7.7	7.3	7.2	6.2	6.5	6.5	7.0	7.7
T-1	2.3	6.3	5.8	6.8	7.3	7.2	6.8	6.0	6.0	5.7	6.7	7.2
Tyee	3.0	7.0	6.5	7.0	7.7	7.7	6.8	6.2	6.0	5.8	6.2	7.0
LSD (P<0.05)	ns	1.1	0.9	0.6	0.7	0.6	0.7	0.6	0.7	ns	ns	ns

Thatch Accumulation (mm)

Variety	26/10/09	19/3/10	16/7/10
007	7	11	13
Penn A1	7	11	12
Authority	7	13	15
CY 2	6	11	13
Cobra 2	8	12	12
Declaration	8	11	14
Dominant Xtreme	8	9	12
Penn G2	8	11	13
Mackenzie	9	10	13
AGCSA 1	7	10	13
Shark	8	13	15
SR1150	8	11	12
SRP1GMC	9	13	14
SRP1RH93	7	13	14
T-1	7	11	13
Tyee	7	13	12
LSD (P<0.05)	ns	ns	ns

Ball Roll (cm)

<i>Variety</i>	16/12/09	4/6/10	9/10/10
007	120	147	154
Penn A1	112	132	142
Authority	116	135	148
CY 2	110	136	147
Cobra 2	120	134	151
Declaration	123	146	144
Dominant <i>Xtreme</i>	109	130	155
Penn G2	124	128	140
Mackenzie	117	128	138
AGCSA 1	99	156	150
Shark	121	152	146
SR1150	118	133	148
SRP1GMC	121	155	159
SRP1RH93	113	144	141
T-1	115	145	144
Tyee	111	140	143
LSD (P<0.05)	10.0	12.8	10.0

Surface Hardness (g)

Variety	16/12/09	4/6/10	9/10/10
007	70	80	70
Penn A1	77	75	70
Authority	73	63	67
CY 2	75	77	62
Cobra 2	70	67	62
Declaration	68	73	65
Dominant <i>Xtreme</i>	75	73	67
Penn G2	70	68	60
Mackenzie	70	75	70
AGCSA 1	70	78	70
Shark	70	72	67
SR1150	73	75	70
SRP1GMC	70	63	68
SRP1RH93	72	80	70
T-1	75	82	67
Tyee	72	72	73
LSD (P<0.05)	ns	ns	ns

Wear Resistance

Variety	22/10/10	
	none	160 passes
007	7.3	6.2
Penn A1	7.0	5.7
Authority	7.5	6.5
CY 2	7.0	6.3
Cobra 2	7.3	6.3
Declaration	8.2	6.8
Dominant <i>Xtreme</i>	6.5	6.0
Penn G2	7.2	6.3
Mackenzie	7.5	6.7
AGCSA 1	7.8	6.3
Shark	7.3	7.0
SR1150	6.3	5.8
SRP1GMC	7.3	6.3
SRP1RH93	7.8	6.7
T-1	7.0	6.0
Tyee	7.0	5.5
LSD (P<0.05)	0.8	0.7



Summary of Results at Other Locations

Royal Adelaide

- Colour – the darkest green are generally T-1 and the vegetative variety (AGCSA1).
- Density – the densest varieties have been Shark, CY2, 007, Penn A1, Mackenzie and the vegetative variety (AGCSA1).
- Quality – no significant difference between any varieties, although at the field day AGCSA1 was rated poorly against the seeded varieties.

Surface Quality Assessment

Variety	22/04/10	Field Day Attendees
007	6.8	6.4
Penn A1	6.7	6.4
Authority	6.8	6.2
CY 2	7.0	6.4
Cobra 2	6.8	6.4
Declaration	6.5	5.8
Dominant Xtreme	6.3	6.2
Penn G2	6.7	6.2
RAGC blend	6.5	5.8
MacKenzie	6.8	5.8
Mariner	6.5	6.1
AGCSA 1	6.3	4.5
Shark	6.5	6.0
SR1150	6.5	5.1
SRP1GMC	6.5	5.6
SRP1RH93	7.0	6.0
T-1	6.7	5.4
Tyee	7.0	5.9
LSD (P<0.05)	ns	ns

Results to the right are a comparison of my assessment of surface quality compared to the average of the other field day attendees as at 22nd April 2010.



Summary of Results at Other Locations

Royal Adelaide

- Thatch Accumulation – the vegetative variety (AGCSA1) has produced more thatch, but not significantly more at this stage.
- Ball roll – AGCSA1 significantly less than all but two varieties on the 11/3/10.
- Surface Hardness – no significant difference between any variety.

Summary of Results at Other Locations

Cromer

- Colour – the darkest green are generally T-1 and the vegetative variety (AGCSA1).
- Density – the densest varieties have been Shark, Tyee, SRP1GMC, SRP1RH93, SR1150 and the vegetative variety (AGCSA1).
- Quality – AGCSA1 and Shark are two of the better varieties to date.

Autumn Field Day – 18th May

Variety	A. Peart	Attendees
007	7.0	5.1
Penn A1	7.3	6.4
Authority	6.7	5.5
CY 2	7.0	6.3
Cobra 2	6.5	6.5
Declaration	7.5	6.9
Dominant <i>X-treme</i>	6.3	5.9
Penn G2	6.5	5.9
Mackenzie	6.8	5.8
AGCSA 1	7.0	6.5
Shark	7.3	7.0
SR1150	7.3	6.6
SRP1GMC	6.8	6.5
SRP1RH93	7.3	6.9
T-1	7.0	7.1
Tyee	7.0	7.0
LSD (P<0.05)	ns	ns



Summary of Results at Other Locations

Cromer

- Thatch Accumulation – the vegetative variety (AGCSA1) has produced more thatch.
- Ball roll – no significant difference between any variety.
- Surface Hardness – no significant difference between any variety.

Acknowledgements

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