

British Columbia

Alberta

Western Canadian Grass Seed Testing Program



2001 Report

Saskatchewan

Manitoba

INTRODUCTION

This report provides a summary of the grass seed trials conducted under the Western Grass Testing Program during 2001. The main objective of these trials is to determine the seed production potential and adaptability of grass varieties for contract seed production for the domestic and export market. All attempts have been made to ensure the success of these trials, however, at times environmental conditions may adversely affect the yield results regardless of the management practices followed.

We thank the following companies for their sponsorship of our research endeavors and look forward to cooperating and working with them during the 2002 production year.

Alberta Research Council

Brett-Young Seeds Ltd.

Cascade International Seed Co.

Cebeco International Seeds, Inc.

Dawson Seed Company Ltd.

DLF-Trifolium

Deutsche Saatveredelung

Lesco, Inc.

Newfield Seeds

Northstar Seed Ltd.

Parsons Seeds

Pickseed

Proven Seed

Scott's Company

Tomorrow's Seed

Turf-Seed, Inc.

Data Collection Procedures

Seed Yield	reported on a clean seed basis in kg ha^{-1} ($\text{kg ha}^{-1} \times 0.9 = \text{lbs ac}^{-1}$)
Harvest Date	date the variety was swathed.
Plant Height	measured in centimeters and is the height of the plant at harvest from ground level to the tip of the seed head ($1 \text{ cm} \times 0.3937 = \text{inches}$).

Trial Procedures

For information on specific trial procedures, contact the respective location representative listed on the following page.

* Please Note *

Some varieties in this report have been tested for shorter periods of time than others. It is advised not to use average yield figures to make variety comparisons for single-year data. Only after a **minimum** of three years of testing should data be considered as 90% reliable. In some cases, data may not be reported due to extreme variations that cannot be accounted for in the statistical design.

Statistical information for this report was generated through an Analysis of Variation (ANOVA) . Least significant difference (LSD) values are presented at the bottom of each table when statistically significant differences are present using the 5% level of significance. This means there is a 95% probability that you can reject the hypothesis that the treatments are the same or there is only a 5% probability that the treatment differences occurred by chance. If the difference in treatment values is less than the LSD value, the treatments are not considered to be significantly different.

Disclaimer

Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement is implied.

WGST Co-operators and Technical Support

Bow Island & Brooks	Henry Najda (Testing Co-ordinator) Alberta Agriculture & Rural Development Phone (403) 362-1346 Fax (403) 362-1311 Henry.najda@gov.ab.ca	Art Kruger (Data Processing & Reporting) Alberta Agriculture & Rural Development Phone (403) 362-1349 Fax (403) 362-1311 art.kruger@gov.ab.ca
Beaverlodge	Dr. Nigel Fairey Agriculture & AgriFood Canada Box 29, Beaverlodge, AB. T0M 0C0 Phone (780) 354-5116 Fax (780) 354-8171 Faireyn@em.agr.ca	Lois Connelly Agriculture & AgriFood Canada Box 29, Beaverlodge, AB. T0M 0C0 Phone (780) 354-5141 Fax (780) 354-8171 connellyl@em.agr.ca
Fort St. John	Ken Nickel BCMAFF Rm. 350 10003-110 Ave. Fort St. John, BC. V1J 6M7 Phone (250) 787-3240 Fax (250) 787 3299 ken.nickel@gems2.gov.bc.ca	Sandra Burton Peace Region Forage Seed Association Box 141 Farmington, BC. V0C 1N0 Phone (250) 789-6885 Fax (250) 789-6884 Sburton@pris.bc.ca
Outlook & Melfort	Dr. Bruce Coulman Agriculture & AgriFood Canada 107 Science Place Saskatoon, SK. S7N 0X2 Phone (306) 956-7240 Fax (306) 956-7247 Coulmanb@em.agr.ca	Tim Nelson Saskatoon, SK. Phone (306) 956-7233 Fax (306) 956-7247 Nelsont@em.agr.ca Linden McFarlane Melfort, SK. Phone (306) 752-2776 Ext. 227 Fax (306) 752-4911 mcfarlanel@em.agr.ca
Arborg & Portage La Prairie	Gerald Huebner Manitoba Agriculture Box 2000 Arborg, MB. R0C 0A0 Phone (204) 376-3307 Fax (204) 376-5095 Huebnerg@agr.gov.mb.ca	Michelle Watts Manitoba Forage Seed Assoc. Arborg, MB. Phone (204) 763-3314 Fax (204) 376-5095 Vartest@ecn.mb.ca Gary Coukell ICMS Box 67, Highway 1A East Portage La Prairie, MB. R1N 3B2 Phone (204) 857-6609 Fax (204) 239-4478 Coukell@icms.inc.com

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Protocol for Western Grass Seed Testing (WGST) Program

1. Research Sponsorship Charge

The research sponsorship charge will be \$110CAN/entry/year/location and is requested on an annual basis as years of production will vary with the species being tested. The charge is applied for the establishment year. Funds will be administered by Alberta Agriculture, Food and Rural Development for the Western Grass Seed Testing Program.

2. Eligibility of Entries

Released and experimental lines of all tame grass species will be considered if they are of interest to commercial seed companies. We reserve the right to **NOT** initiate tests:

- if seed arrives late
- if there is lack of space in any year at a particular location
- if there are too few entries in any year for a particular location

3. Seed Requirements and Deadline for Seed Entry

The applicant will provide for **EACH TEST LOCATION**:

- 50 gm of bentgrass, Kentucky bluegrass or timothy
- 100 gm of creeping red, chewings, hard, meadow, sheep and tall fescue, annual or perennial ryegrass or orchard grass
- 200 gm of meadow or smooth brome grass

Submitted seed shall be supplied by **March 1** of the establishment year and will include the percent germination and relative maturity (early, medium or late) of each variety. Please indicate whether the submission is a forage or turf type. Also, in the case of fescues please indicate whether the submission is a creeping, chewings, hard, meadow, sheep or tall fescue.

4. Use of Seed

Seed submitted will only be used to establish the agreed upon trials. The seed will **NOT** be used for increase, selection or distribution

5. Test Locations (see map page 3)

- | | |
|------------------------------------|---|
| 1. Fort St. John, British Columbia | 6. Melfort, Saskatchewan |
| 2. Beaverlodge, Alberta | 7. Outlook, Saskatchewan (irrigated) |
| 3. Brooks, Alberta (irrigated) | 8. Portage La Prairie, Manitoba (irrigated) |
| 4. Bow Island, Alberta (irrigated) | 9. Arborg, Manitoba |
| 5. Vegreville, Alberta | |

The applicant selects the locations where they wish their material to be tested.

6. Test Description

Due to plot equipment differences and land availability at the various test sites, certain minimums will be met in establishing trials. Each test will be a randomized complete block consisting of a minimum of 4 replicates. No test will have more than 25 entries of a particular species. Plots will be seeded at appropriate seeding rates for the species being tested and normal cultural practices for the area will be carried out. A minimum of 3 sq. m is to be harvested.

Species, check varieties and years of testing (establishment year and seed production years):

Bentgrasses - 18th Green - 4 yrs.	Tall Fescue - Courtenay - 4 yrs
Kentucky Bluegrass - Abbey - 4 yrs	Orchard Grass - Kay - 3 yrs
Meadow Bromegrass - Fleet - 4 yrs	Annual Ryegrass - Aubade - 1 yr.
Smooth Bromegrass - Carlton - 4 yrs	Perennial Ryegrass - Norlea - 2 yr.
Meadow Fescue - Mimer - 4 yrs	Timothy - Climax - 4 yrs
Red Fescue - Boreal - 3 yrs	

Information to be recorded will include pure seed yield, % stand in fall and spring, plant height, harvest date and if available, climatic data for each test site.

7. Publication of Results

Data will undergo appropriate statistical analyses and each applicant will be provided with an annual report. Information on varieties will be made available in various annual reports and upon request to seed producers.

8. All reasonable care will be taken to ensure a successful test, however, a guarantee can not be made that a particular test will be successful.

9. For further information, contact:

Henry Najda, P.Ag.
Research Agronomist
Forage Unit - Animal Industry Division
Crop Diversification Centre South
Alberta Agriculture, Food and Rural Development
SS 4
Brooks, Alberta, Canada T1R 1E6
Tel 403/362-1346, Fax 403/362-1311
henry.najda@gov.ab.ca

Locations in Western Canada for Grass Seed Testing

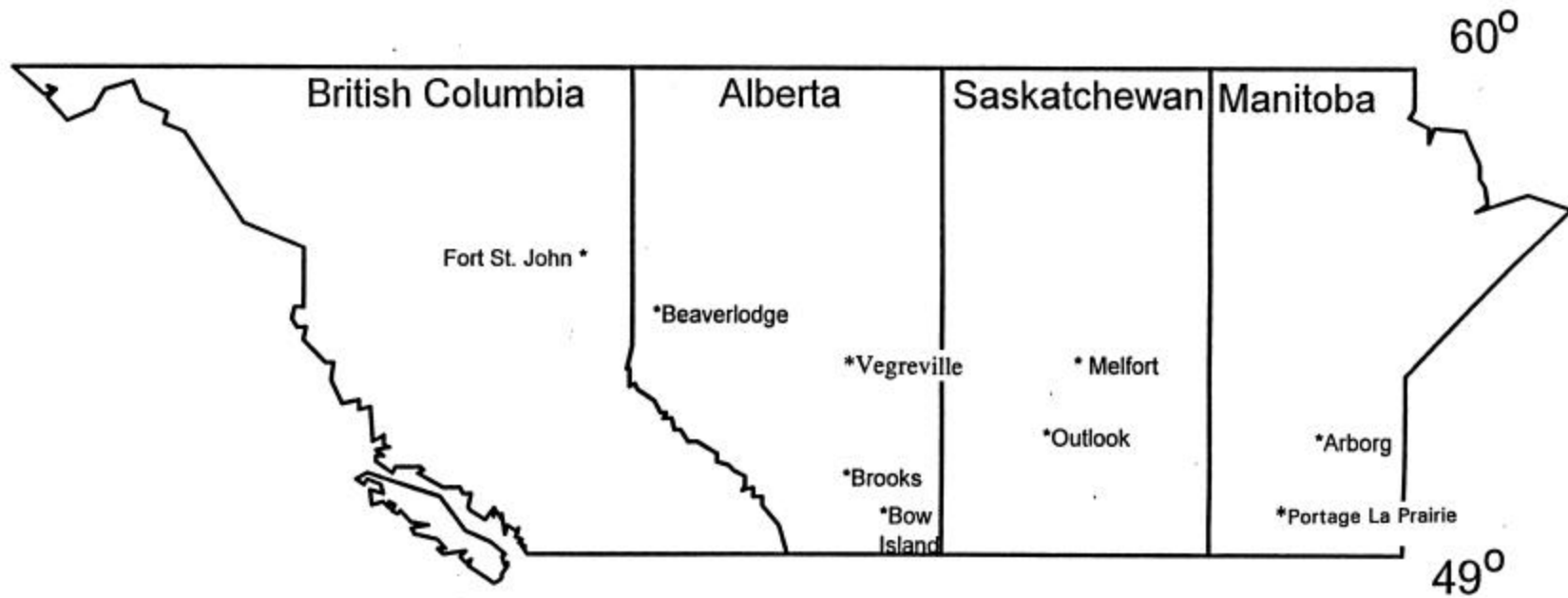


Table 1. Seed yields (kg ha⁻¹) for Kentucky Bluegrass 1998 seed production trials

Variety	Bow Island			Brooks			Beaverlodge			Outlook		
	1999	2000	2001	1999	2000	2001	1999	2000	2001	1999	2000	2001*
Abbey	994	1649	342	1113	605	778	317	387	186	471	349	
Dormie	1350	873	280	907	428	279	.	.	.	.	.	.
LSKB CT 98-1	1028	1585	334	.	.	.	335	474	256	.	.	.
Opal	986	863	183	693	299	304	.	.	.	.	.	.
PST 638	504	705	151	375	162	205	150	97	72	.	.	.
VB 17921	383	858	214	759	507	369	.	.	.	287	479	
VB19111	880	1044	298	989	604	600	.	.	.	253	437	
Mean	860	1082	257	806	434	422	267	319	172	337	422	
CV (%)	13.6	19.6	21.4	14.2	18.1	23	19.3	22.3	42.3	10	32.8	
LSD (0.05)	200	316	82	172	118	147	89	123	125	59	239	

* Outlook 2001 harvest not taken due to quackgrass infestation

Table 2. Harvest dates for Kentucky Bluegrass 1998 seed production trials

Variety	Bow Island			Brooks			Beaverlodge			Outlook		
	1999	2000	2001	1999	2000	2001	1999	2000	2001	1999	2000	2001
Abbey	21-Jul	12-Jul	16-Jul	22-Jul	18-Jul	10-Jul	28-Jul	25-Jul	8-Aug	16-Jul	4-Aug	
Dormie	21-Jul	17-Jul	16-Jul	22-Jul	18-Jul	13-Jul	.	.	.	.	.	.
LSKB CT 98-1	21-Jul	12-Jul	16-Jul	.	.	.	28-Jul	25-Jul	8-Aug	.	.	.
Opal	21-Jul	17-Jul	16-Jul	22-Jul	18-Jul	13-Jul	.	.	.	.	.	.
PST 638	21-Jul	17-Jul	16-Jul	22-Jul	18-Jul	17-Jul	9-Aug	14-Aug	8-Aug	.	.	.
VB 17921	21-Jul	17-Jul	16-Jul	22-Jul	18-Jul	13-Jul	.	.	.	16-Jul	4-Aug	
VB19111	21-Jul	17-Jul	16-Jul	22-Jul	18-Jul	10-Jul	.	.	.	16-Jul	4-Aug	

Table 3. Plant heights (cm) for Kentucky Bluegrass 1998 seed production trials

Variety	Bow Island			Brooks			Beaverlodge			Outlook		
	1999	2000	2001	1999	2000	2001	1999	2000	2001	1999	2000	2001
Abbey	71	60	46	76	64	67	49	38	27	66		
Dormie	78	70	57	83	63	71	.	.	.	.	.	.
LSKB CT 98-1	70	67	50	.	.	.	60	48	44	.	.	.
Opal	68	65	55	76	65	67	.	.	.	.	.	.
PST 638	68	59	47	76	54	63	55	40	38	.	.	.
VB 17921	71	66	58	79	66	68	.	.	.	76		
VB19111	71	67	53	81	59	65	.	.	.	68		
Mean	71	65	52	78	62	67	54	42	36	70		
CV (%)	8.2	8.5	9	7.9	4.4	6.6	5.7	13.3	10.9	5		
LSD (0.05)	ns	ns	7	ns	4	ns	5	ns	7	6		

Table 4. Seed yields (kg ha⁻¹) for Kentucky Bluegrass 1999 seed production trials

Variety	Bow Island		Brooks	
	2000	2001	2000	2001
Abbey	1836	929	1466	1043
Alpine	1178	368	645	581
America	1087	458	953	437
Banff	1264	326	838	439
Bluestar	1393	684	1470	944
Denim	1554	635	945	775
LSKB CT-1	1011	285	.	.
LSKB CT-2	1309	514	.	.
Pick 113-3	.	.	769	407
Pick H94-301	1146	503	838	594
Voyager	959	452	1045	554
Mean	1274	515	998	641
CV (%)	10	18.8	11.7	13.1
LSD (0.05)	177	141	170	122

Table 5. Harvest dates for Kentucky Bluegrass 1999 seed production trials

Variety	Bow Island		Brooks	
	2000	2001	2000	2001
Abbey	17-Jul	5-Jul	18-Jul	10-Jul
Alpine	20-Jul	11-Jul	27-Jul	10-Jul
America	20-Jul	11-Jul	18-Jul	17-Jul
Banff	17-Jul	11-Jul	24-Jul	17-Jul
Bluestar	17-Jul	11-Jul	18-Jul	10-Jul
Denim	20-Jul	11-Jul	24-Jul	13-Jul
LSKB CT-1	17-Jul	11-Jul	.	.
LSKB CT-2	17-Jul	5-Jul	.	.
Pick 113-3	.	.	27-Jul	17-Jul
Pick H94-301	17-Jul	5-Jul	18-Jul	13-Jul
Voyager	17-Jul	5-Jul	11-Jul	13-Jul

Table 6. Plant heights (cm) for Kentucky Bluegrass 1999 seed production trials

Variety	Bow Island		Brooks	
	2000	2001	2000	2001
Abbey	57	56	66	67
Alpine	65	52	61	62
America	56	56	63	67
Banff	63	71	71	71
Bluestar	57	57	71	66
Denim	63	60	67	73
LSKB CT-1	68	66	.	.
LSKB CT-2	70	65	.	.
Pick 113-3	.	.	65	67
Pick H94-301	60	60	57	63
Voyager	71	64	69	75
Mean	63	60	65	68
CV (%)	6.4	7.4	8	8.8
LSD (0.05)	6	6	8	ns

Table 7. Seed yields (kg ha⁻¹) for Kentucky Bluegrass 2000 seed production trials

Variety	Bow Island	Brooks	Beaverlodge	Outlook*	Portage la Prairie **
	2001	2001	2001	2001	2001
Abbey	869	1624	169		
Blue Star	.	.	253		.
Brilliant	534	.	.		.
Denim	.	.	124	.	.
HB-127	881	.	.	.	.
Lato	291	.	.	.	.
Moonlight	672	.	.		.
N-545	740	1550	.	.	.
N-551	603	1025	.	.	.
N-552	637	972	.	.	.
N-554	372	1186	.	.	.
Northstar	539	.	.		.
PPR 11-85	588	1117	.	.	.
VB 17921	553	.	.	.	
VB 19111	.	.	.	.
Voyager	.	.	11	.	.
Mean	607	1246			
CV (%)	25	15.6			
LSD (0.05)	218	294			

* Outlook 2001 harvest not taken due to quackgrass infestation

** Portage la Prairie 2001 harvest not taken due to poor growth

Table 8. Harvest dates for Kentucky Bluegrass 2000 seed production trials

Variety	Bow Island	Brooks	Beaverlodge	Outlook*	Portage la Prairie **
	2001	2001	2001	2001	2001
Abbey	19-Jul	10-Jul	8-Aug		
Blue Star	.	.	8-Aug		.
Brilliant	24-Jul	.	.		.
Denim	.	.	8-Aug	.	.
HB-127	19-Jul	.	.	.	.
Lato	16-Jul	.	.	.	.
Moonlight	24-Jul	.	.		.
N-545	16-Jul	10-Jul	.	.	.
N-551	24-Jul	10-Jul	.	.	.
N-552	19-Jul	10-Jul	.	.	.
N-554	24-Jul	10-Jul	.	.	.
Northstar	24-Jul	.	.		.
PPR 11-85	19-Jul	10-Jul	.	.	.
VB 17921	19-Jul	.	.	.	
VB 19111	.	.	.	.
Voyager			8-Aug		

* Outlook 2001 harvest not taken due to quackgrass infestation

** Portage la Prairie 2001 harvest not taken due to poor growth

Table 9. Plant heights (cm) for Kentucky Bluegrass 2000 seed production trials

Variety	Bow Island	Brooks	Beaverlodge	Outlook*	Portage la Prairie **
	2001	2001	2001	2001	2001
Abbey	67	62	36		
Blue Star	.	.	30		.
Brilliant	68	.	.		.
Denim	.	.	38	.	.
HB-127	71	.	.	.	.
Lato	82	.	.	.	.
Moonlight	59	.	.		.
N-545	60	61	.	.	.
N-551	69	68	.	.	.
N-552	73	66	.	.	.
N-554	49	69	.	.	.
Northstar	41	.	.		.
PPR 11-85	68	73	.	.	.
VB 17921	71	.	.	.	
VB 19111	.	.	.	.
Voyager	.	.	50	.	.
Mean	65	66	38		
CV (%)	5.3	10.6	5.5		
LSD (0.05)	5	ns	3		

* Outlook 2001 harvest not taken due to quackgrass infestation

** Portage la Prairie 2001 harvest not taken due to poor growth

Table 10. Summary of seed yield (kg/ha⁻¹) for Kentucky Bluegrass 1997-2001

Company	Variety	Seed yield (kg/ha) per Production year										
		Bow Island			Brooks			Beaverlodge			Outlook	
		1	2	3	1	2	3	1	2	3	1	2
Check	Abbey	1187	1402	914	1270	1049	894	317	387	186	471	349
DVS	N-545	740			1550							
	N-551	603			1025							
	N-552	637			972							
	N-554	372			1186							
	PPR 11-85	588			1117							
International	VB 17921	468	858	214	759	507	369				287	479
	VB 19111	880	1044	298	989	604	600				253	437
Lesco	LSKB CT 98-1	1028	1585	334				335	474	256		
	LSKB CT 1	1011	285									
	LSKB CT 2	1309	514									
Montana Turfgrass	MTT 483	831	795	749	586	890	492					
	MTT 683	799	865	732	655	843	444					
Newfield Seeds	Dormie	1350	873	280	907	428	279					
	Opal	986	863	183	693	299	304					
Pickseed	Alpine	1178	368		645	581						
	America	1087	458		953	437						
	Banff	1264	329		838	439						
	Pick 113-3				769	407						
	Pick H94-301	1146	503		838	594						
Scott's	HB-127	881										
Turf-Seed	Bluestar	1393	684		1470	944		253				
	Brilliant	534										
	Denim	1554	635		945	775		124				
	Lato	291										
	Moonlight	672										
	North Star	539										
	PST 638	504	705	151	375	162	205	150	97	72		
	Voyager	959	452		1054	554		11				
Mean		901	801	477	975	645	498	194	319	172	337	422

Table 11. Seed yields (kg ha⁻¹) for Smooth Bromegrass 1998 seed production trials

Variety	Brooks			Beaverlodge			Fort St. John		
	1999	2000	2001	1999	2000	2001	1999	2000	2001*
Bravo	969	288	375	378	222	109	416	642	
Carlton	1384	415	607	678	462	292	750	920	
Mean	1177	352	491	528	342	200	583	781	
CV (%)	10.3	7.8	5.5	28.2	21.6	8.8	11.7	38.5	

* no harvest data taken due to weed infestation

Table 12. Harvest dates for Smooth Bromegrass 1998 seed production trials

Variety	Brooks			Beaverlodge			Fort St. John		
	1999	2000	2001	1999	2000	2001	1999	2000	2001
Bravo	29-Jul	27-Jul	20-Jul	16-Aug	21-Aug	20-Aug		16-Aug	
Carlton	29-Jul	27-Jul	20-Jul	16-Aug	21-Aug	20-Aug		16-Aug	

Table 13. Plant heights (cm) for Smooth Bromegrass 1998 seed production trials

Variety	Brooks			Beaverlodge			Fort St. John		
	1999	2000	2001	1999	2000	2001	1999	2000	2001
Bravo	128	110	117	141	99	94			
Carlton	133	115	122	133	99	94			
Mean	130	113	119	137	99	94			
CV (%)	8.5	3.7	4	1.3		1.4			

Table 14. Seed yields (kg ha⁻¹) for Smooth Bromegrass 2000 seed production trials

Variety	Portage la Prairie	
	A	B
	2001	2001
Bravo	111	113
Carlton	207	220
Mean	159	167
CV (%)	9.5	28

Table 15. Harvest dates for Smooth Bromegrass 2000 seed production trials

Variety	Portage la Prairie	
	A	B
	2001	2001
Bravo	20-Jul	20-Jul
Carlton	20-Jul	20-Jul

Table 16. Seed yields (kg ha⁻¹) for Fine Fescue 1998 seed production trials

Variety	Bow Island			Brooks			Beaverlodge		Fort St. John		
	1999	2000	2001	1999	2000	2001	1999	2000	1999	2000	2001
Boreal	2090	2281	881	1515	787	1246	1207	518	666	528	269
Eugene	.	.	.	.	.	.	949	532	.	.	.
Jasper	.	.	.	.	.	.	714	316	1687	993	777
Kauni	.	.	.	.	.	.	956	687	1760	1274	1127
LSFF CT 98-1	1719	1777	604	.	.	.	702	448	1036	756	412
LSFF CT 98-2	1593	2137	712	.	.	.	417	589	715	1290	652
LSFF CT 98-3	1510	1588	145	.	.	.	91	607	250	1117	481
PST 4RU	1288	1654	179	1493	1016	1344	112	692	.	.	.
Seabreeze	1083	1191	343	726	199	595	171	207	.	.	.
SW Kristina	1222	1602	502	.	.	.	384	269	277	627	158
UGG 2001	.	.	.	.	.	.	566	255	759	654	188
UGG 2002	.	.	.	.	.	.	425	301	407	729	206
Mean	1501	1747	481	1244	667	1062	558	452	968	912	509
CV (%)	11.8	17.4	16.4	16.9	21.8	20.3	18	26.2	27.2	16.7	29.1
LSD (0.05)	263	452	117	363	252	488	144	170	444	226	215

Table 17. Harvest dates for Fine Fescue 1998 seed production trials

Variety	Bow Island			Brooks			Beaverlodge		Fort St. John		
	1999	2000	2001	1999	2000	2001	1999	2000	1999	2000	2001
Boreal	16-Jul	12-Jul	9-Jul	22-Jul	14-Jul	13-Jul	28-Jul	27-Jul		8-Aug	26-Jul
Eugene	.	.	.	.	.	.	28-Jul	27-Jul	.	.	.
Jasper	.	.	.	.	.	.	28-Jul	27-Jul		9-Aug	30-Jul
Kauni	.	.	.	.	.	.	28-Jul	27-Jul		9-Aug	31-Jul
LSFF CT 98-1	16-Jul	10-Jul	9-Jul	.	.	.	28-Jul	27-Jul		8-Aug	1-Aug
LSFF CT 98-2	16-Jul	10-Jul	5-Jul	.	.	.	28-Jul	25-Jul		4-Aug	26-Jul
LSFF CT 98-3	8-Jul	5-Jul	29-Jun	.	.	.	19-Jul	21-Jul		28-Jul	23-Jul
PST 4RU	8-Jul	5-Jul	29-Jun	14-Jul	14-Jul	10-Jul	19-Jul	21-Jul	.	.	.
Seabreeze	16-Jul	10-Jul	5-Jul	20-Jul	14-Jul	10-Jul	19-Jul	25-Jul	.	.	.
SW Kristina	16-Jul	12-Jul	9-Jul	.	.	.	28-Jul	27-Jul		5-Aug	30-Jul
UGG 2001	.	.	.	.	.	.	28-Jul	27-Jul		8-Aug	31-Jul
UGG 2002	.	.	.	.	.	.	28-Jul	25-Jul		5-Aug	31-Jul

Table 18. Plant heights (cm) for Fine Fescue 1998 seed production trials

Variety	Bow Island			Brooks			Beaverlodge		Fort St. John		
	1999	2000	2001	1999	2000	2001	1999	2000	1999	2000	2001
Boreal	78	82	72	77	77	86	75	70			
Eugene	.	.	.	.	.	.	82	69	.	.	.
Jasper	.	.	.	.	.	.	76	69			
Kauni	.	.	.	.	.	.	83	70			
LSFF CT 98-1	71	73	65	.	.	.	73	67			
LSFF CT 98-2	77	82	67	.	.	.	69	68			
LSFF CT 98-3	69	68	52	.	.	.	69	63			
PST 4RU	64	68	53	77	69	90	63	60	.	.	.
Seabreeze	71	83	68	78	79	81	72	68	.	.	.
SW Kristina	83	81	71	.	.	.	72	66			
UGG 2001	.	.	.	.	.	.	83	69			
UGG 2002	.	.	.	.	.	.	71	64			
Mean	73	77	64	77	75	86	74	67			
CV (%)	7	6.3	4.9	8.3	7.7	4.9	5.7	8.4			
LSD (0.05)	8	7	5	ns	ns	7	6	8			

Table 19. Seed yields (kg ha⁻¹) for Fine Fescue 1999 seed production trials

Variety	Bow Island		Brooks		Fort St. John		Melfort	
	2000	2001	2000	2001	2000	2001	2000	2001
ARCFS-1	.	.	.	.	632	1194	.	.
ARCFS-2	.	.	.	.	586	1280	.	.
ARCFS-V	.	.	.	.	1072	887	.	.
Boreal	2799	1595	1831	1353	1345	710	357	35
Casanova	.	.	.	.	1065	1681	.	.
Florentine	1549	590	828	614	.	.	.	.
Jasper E	2353	884	1408	766	.	.	.	.
RU1511	.	.	.	.	1789	1236	.	.
SW Kristina	.	.	.	.	.	.	146	17
Victory II	2685	718	1218	466	.	.	.	.
Mean	2347	947	1321	800	1127	1165	251	26
CV (%)	11.6	8.4	25	16	28.5	27.2	27	98.9
LSD (0.05)	436	128	510	197	530	477		

Table 20. Harvest dates for Fine Fescue 1999 seed production trials

Variety	Bow Island		Brooks		Fort St. John		Melfort	
	2000	2001	2000	2001	2000	2001	2000	2001
ARCFS-1	.	.	.	.	20-Jul	11-Jul	.	.
ARCFS-2	.	.	.	.	14-Jul	9-Jul	.	.
ARCFS-V	.	.	.	.	4-Aug	23-Jul	.	.
Boreal	13-Jul	9-Jul	14-Jul	13-Jul	9-Aug	27-Jul		16-Jul
Casanova	.	.	.	.	4-Aug	24-Jul	.	.
Florentine	13-Jul	9-Jul	14-Jul	13-Jul	.	.	.	.
Jasper E	13-Jul	5-Jul	14-Jul	13-Jul	.	.	.	.
RU1511	.	.	.	.	5-Aug	27-Jul	.	.
SW Kristina	.	.	.	.	.	.		16-Jul
Victory II	13-Jul	5-Jul	14-Jul	13-Jul	.	.	.	.

Table 21. Plant heights (cm) for Fine Fescue 1999 seed production trials

Variety	Bow Island		Brooks		Fort St. John		Melfort	
	2000	2001	2000	2001	2000	2001	2000	2001
ARCFS-1	.	.	.	.			.
ARCFS-2	.	.	.	.			.
ARCFS-V	.	.	.	.			.
Boreal	77	82	74	83				
Casanova	.	.	.	.			.
Florentine	68	68	71	76	.	.	.	
Jasper E	71	75	71	77	.	.	.	
RU1511	.	.	.	.			.
SW Kristina	.	.	.	.	.	.
Victory II	76	78	70	84				
Mean	73	76	71	80				
CV (%)	6.2	6.1	8.3	8.6				
LSD (0.05)	7	7	ns	ns				

Table 22. Seed yields (kg ha⁻¹) for Fine Fescue 2000 seed production trials

Variety	Bow Island	Brooks	Beaverlodge	Fort St. John	Arborg
	2001	2001	2001	2001	2001
ARCFS-1 (mf)	.	.	398	1651	.
ARCFS-2 (mf)	.	.	467	1514	.
ARCFS-V (mf)	.	.	372	1295	.
Boreal (cr)	1747	2041	629	1587	296
BY51751 (cr)	.	.	297	1221	.
Casanova (ch)	.	.	506	1735	.
Discovery (h)	996	1298	.	.	.
Florentine (cr)	.	.	269	.	.
Jasper E (cr)	1765	.	.	.	337
Miramar (cr)	1281	1380	372	.	.
RU1511 (cr)	.	.	629	2109	.
Shademaster II (cr)	1335	1604	.	.	.
Mean	1425	1581	437	1587	317
CV (%)	10.4	9.5	17.9	12.9	25.7
LSD (0.05)	229	241	114	305	

ch - chewings fescue

cr - creeping red fescue

h - hard

mf - mountain fescue

Table 23. Harvest dates for Fine Fescue 2000 seed production trials

Variety	Bow Island	Brooks	Beaverlodge	Fort St. John	Arborg
	2001	2001	2001	2001	2001
ARCFS-1 (mf)	.	.	3-Jul	11-Jul	.
ARCFS-2 (mf)	.	.	28-Jun	9-Jul	.
ARCFS-V (mf)	.	.	23-Jul	23-Jul	.
Boreal (cr)	9-Jul	13-Jul	23-Jul	27-Jul	19-Jul
BY51751 (cr)	.	.	23-Jul	30-Jul	.
Casanova (ch)	.	.	20-Jul	27-Jul	.
Discovery (h)	29-Jun	5-Jul	.	.	.
Florentine (cr)	.	.	23-Jul	.	.
Jasper E (cr)	5-Jul	.	.	.	19-Jul
Miramar (cr)	5-Jul	13-Jul	23-Jul	.	.
RU1511 (cr)	.	.	23-Jul	27-Jul	.
Shademaster II (cr)	9-Jul	13-Jul	.	.	.

ch - chewings fescue

cr - creeping red fescue

h -hard fescue

mf - mountain fescue

Table 24. Plant heights (cm) for Fine Fescue 2000 seed production trials

Variety	Bow Island	Brooks	Beaverlodge	Fort St. John	Arborg
	2001	2001	2001	2001	2001
ARCFS-1 (mf)	.	.	36	.	.
ARCFS-2 (mf)	.	.	30	.	.
ARCFS-V (mf)	.	.	31	.	.
Boreal (cr)	70	78	53	.	.
BY51751 (cr)	.	.	48	.	.
Casanova (ch)	.	.	44	.	.
Discovery (h)	57	62	.	.	.
Florentine (cr)	.	.	45	.	.
Jasper E (cr)	63	.	.	.	.
Miramar (cr)	58	77	45	.	.
RU1511 (cr)	.	.	50	.	.
Shademaster II (cr)	65	69	.	.	.
Mean	62	71	42	.	.
CV (%)	10.2	7.6	15.3	.	.
LSD (0.05)	ns	9	9	.	.

ch - chewings fescue

cr - creeping red fescue

h -hard fescue

mf - mountain fescue

Table 25. Summary of seed yield (kg/ha⁻¹) for Fine Fescues 1997-2001

			Seed yield (kg/ha) per Production year													
Species	Company	Variety	Bow Island			Brooks			Beaverlodge		Fort St. John			Melfort		Arborg
			1	2	3	1	2	3	1	2	1	2	3	1	2	1
	Check	Boreal	2212	1938	881	1796	1070	1246	918	518	1200	619	269	357	35	296
Chewings	International	Casanova							506		1400	1681				
	Pickseed	Victory II	2685	718		1218	466									
	Turf-Seed	Tiffany	1107	1509	2152	929	1274	732								
Creeping		Eugene							949	532						
	Brett-Young	BY511751							297		1221					
	International	RU1511							629		1949	1236				
	Newfield Seeds	SW Kristina	1222	1602	502				384	269	277	627	158	146	17	
	Parsons Seeds	Kauni							956	687	1760	1274	1127			
	Pickseed	Jasper							714	316	1687	993	777			
		Jasper E	2059	884		1408	766									337
	Turf- Seed	Florentine	1549	590		828	614		269							
		Miramar	1281			1380			372							
		Shademaster II	1381	1437	1391	1322	1171	396								
	Proven Seed	UGG 2001							566	255	759	654	188			
		UGG 2002							425	301	407	729	206			
Fine	Lesco	LSFF CT 98-1	1719	1777	604				702	448	1036	756	412			
		LSFF CT 98-2	1593	2137	712				417	589	715	1290	652			
		LSFF CT 98-3	1510	1588	145				91	607	250	1117	481			
Hard	Turf-Seed	Discovery	1161	985	1280	1575	1303	740								
		PST 4RU	1288	1654	179	1493	1016	1344	112	692						
Mountain	Research Council	ARCFS-1							398		1142	1194				
		ARCFS-2							467		1050	1280				
		ARCFS-V							372		1183	887				
Sheep	Turf-Seed	Bighorn	1304	1077	1196	2110	1465	842								
Slender	Peace Valley Seeds	Barcrown	404	492	790	0	587	369								
	Turf-Seed	Seabreeze	1083	1191	343	726	199	595	171	207						
Mean			1549	1345	848	1332	917	783	506	452	1144	977	474	252	26	317

Table 25. Seed yields (kg ha⁻¹) for Tall Fescue 1997 seed production trials

Variety	Brooks			
	1998	1999	2000	2001
ATF-188	2069	2068	1360	905
Courtenay	1214	1719	1156	724
Fuego	1129	1280	1057	415
Martin II	1215	1869	1487	740
Matador	2415	2043	1613	840
Regiment	1653	1802	1312	737
Seine	1379	1617	1408	551
Tarheel	1976	1625	1287	588
Tulsa	1784	1963	1362	642
Mean	1648	1776	1338	682
CV (%)	12.1	12.2	12.1	20.6
LSD (0.05)	347	317	237	205

Table 26. Harvest dates for Tall Fescue 1997 seed production trials

Variety	Brooks			
	1998	1999	2000	2001
ATF-188	16-Jul	22-Jul	18-Jul	13-Jul
Courtenay	14-Jul	22-Jul	16-Jul	13-Jul
Fuego	16-Jul	22-Jul	18-Jul	13-Jul
Martin II	14-Jul	22-Jul	18-Jul	13-Jul
Matador	16-Jul	22-Jul	18-Jul	17-Jul
Regiment	16-Jul	22-Jul	18-Jul	17-Jul
Seine	16-Jul	22-Jul	18-Jul	13-Jul
Tarheel	16-Jul	22-Jul	18-Jul	17-Jul
Tulsa	16-Jul	22-Jul	18-Jul	17-Jul

Table 27. Plant heights (cm) for Tall Fescue 1997 seed production trials

Variety	Brooks			
	1998	1999	2000	2001
ATF-188	106	94	98	81
Courtenay	127	118	130	112
Fuego	120	106	113	103
Martin II	122	109	116	95
Matador	108	94	87	84
Regiment	109	97	99	83
Seine	115	99	105	94
Tarheel	114	95	103	76
Tulsa	108	95	107	75
Mean	114	101	106	89
CV (%)	8.4	6.9	9.7	12.5
LSD (0.05)	14	10	15	16

Table 28. Seed yields (kg ha⁻¹) for Tall Fescue 1998 seed production trials

Variety	Bow Island			Brooks			Beaverlodge			Fort St. John		
	1999	2000	2001	1999	2000	2001	1999	2000	2001	1999	2000	2001
Antti (mf)	.	.	.	.	.	.	958	200	219	.	.	.
Courtenay	.	2352	996	2210	1473	886	1029	213	309	1661	.	881
Kokanee	.	.	.	.	.	.	575	196	171	.	.	.
LSTF CT 98-1	2216	2036	1053	.	.	.	917	174	81	1142	.	.
Mimer (mf)	.	.	.	.	.	.	1192	230	342	.	.	.
PST 5DU	2651	2990	1196	2926	1476	818	1247	198	110	.	.	.
PST 5E5	2665	2791	1213	3205	1655	966	933	175	76	.	.	.
PST 5LMD	1366	2412	800	2357	1425	716	669	170	28	.	.	.
Retu	.	.	.	.	.	.	791	190	188	.	.	.
Safari	2852	2367	1103	2688	1498	550	1227	236	115	.	.	.
Mean	2350	2499	1060	2677	1511	787	954	197	164	1402	.	881
CV (%)	11.6	13.5	17.1	14.5	12.5	17.3	16.7	41.3	30.6	27.8	.	.
LSD (0.05)	421	ns	273	299	ns	257	231	ns	73	.	.	.

mf - Meadow fescue

Table 29. Harvest dates for Tall Fescue 1998 seed production trials

Variety	Bow Island			Brooks			Beaverlodge			Fort St. John		
	1999	2000	2001	1999	2000	2001	1999	2000	2001	1999	2000	2001
Antti (mf)	.	.	.	.	.	.	28-Jul	9-Aug	24-Jul	.	.	.
Courtenay	21-Jul	12-Jul	11-Jul	29-Jul	18-Jul	13-Jul	4-Aug	9-Aug	3-Aug	.	.	11-Aug
Kokanee	.	.	.	.	.	.	4-Aug	9-Aug	13-Aug	.	.	.
LSTF CT 98-1	21-Jul	17-Jul	16-Jul	.	.	.	6-Aug	11-Aug	13-Aug	.	.	.
Mimer (mf)	.	.	.	.	.	.	28-Jul	9-Aug	24-Jul	.	.	.
PST 5DU	21-Jul	17-Jul	16-Jul	29-Jul	21-Jul	17-Jul	8-Aug	11-Aug	13-Aug	.	.	.
PST 5E5	21-Jul	17-Jul	16-Jul	29-Jul	21-Jul	17-Jul	6-Aug	11-Aug	13-Aug	.	.	.
PST 5LMD	21-Jul	17-Jul	16-Jul	29-Jul	21-Jul	17-Jul	8-Aug	11-Aug	13-Aug	.	.	.
Retu	.	.	.	.	.	.	4-Aug	9-Aug	3-Aug	.	.	.
Safari	21-Jul	13-Jul	16-Jul	29-Jul	21-Jul	17-Jul	6-Aug	11-Aug	13-Aug	.	.	.

mf - Meadow Fescue

Table 30. Plant heights (cm) for Tall Fescue 1998 seed production trials

Variety	Bow Island			Brooks			Beaverlodge			Fort St. John		
	1999	2000	2001	1999	2000	2001	1999	2000	2001	1999	2000	2001
Antti (mf)	.	.	.	.	.	.	84	76	54	.	.	.
Courtenay	128	136	115	112	119	122	97	98	78	.	.	.
Kokanee	.	.	.	.	.	.	107	97	79	.	.	.
LSTF CT 98-1	98	103	71	.	.	.	59	48	40	.	.	.
Mimer (mf)	.	.	.	.	.	.	84	74	67	.	.	.
PST 5DU	83	97	67	99	108	87	56	45	42	.	.	.
PST 5E5	95	102	74	93	93	87	65	53	51	.	.	.
PST 5LMD	93	101	64	88	91	84	50	43	37	.	.	.
Retu	.	.	.	.	.	.	98	94	67	.	.	.
Safari	111	112	86	102	106	87	71	57	49	.	.	.
Mean	101	108	79	99	104	94	77	68	57	.	.	.
CV (%)	9	11.4	7.7	9.5	9.3	6.2	5.7	8.4	14.9	.	.	.
LSD (0.05)	14	19	9	14	ns	11	6	8	12	.	.	.

mf - Meadow Fescue

Table 31. Seed yields (kg ha⁻¹) for Tall Fescue 1999 seed production trials

Variety	Beaverlodge		Fort St. John		Outlook	
	2000	2001	2000	2001	2000	2001
Cajun 2	.	.	.	.	1558	719
Cody	332	492	.	.	.	.
Courtenay	390	450	1212	511	1774	661
Martin 2	.	.	.	.	1808	820
Mimer (mf)	279	644	1601	795	.	.
Premil (mf)	232	419	980	272	.	.
TF9201	269	392	.	.	.	.
Wyatt	494	365	.	.	.	.
Mean	357	451	1264	526	1714	733
CV (%)	34.9	19.9	12.8	24	13	15.9
LSD (0.05)	185	133	280	218	397	202

mf - meadow fescue

Table 32. Harvest dates for Tall Fescue 1999 seed production trials

Variety	Beaverlodge		Fort St. John		Outlook	
	2000	2001	2000	2001	2000	2001
Cajun 2	.	.	.	.	18-Aug	24-Jul
Cody	10-Aug	13-Aug	.	.	.	.
Courtenay	10-Aug	3-Aug	6-Aug	11-Aug	18-Aug	24-Jul
Martin 2	.	.	.	.	18-Aug	24-Jul
Mimer (mf)	10-Aug	24-Jul	4-Aug	10-Aug	.	.
Premil (mf)	10-Aug	24-Jul	9-Aug	10-Aug	.	.
TF9201	10-Aug	13-Aug	.	.	.	.
Wyatt	10-Aug	13-Aug	.	.	.	.

mf - meadow fescue

Table 33. Plant heights (cm) for Tall Fescue 1999 seed production trials

Variety	Beaverlodge		Fort St. John		Outlook	
	2000	2001	2000	2001	2000	2001
Cajun 2	.	.	.	.		75
Cody	59	58	.	.	.	.
Courtenay	91	77				76
Martin 2	.	.	.	.		73
Mimer (mf)	66	81			.	.
Premil (mf)	67	77			.	.
TF9201	79	72	.	.	.	.
Wyatt	58	52	.	.	.	.
Mean	73	71				75
CV (%)	6.8	4.5				6.9
LSD (0.05)	7	7				9

mf - meadow fescue

Table 34. Seed yields (kg ha⁻¹) for Tall Fescue 2000 seed production trials

Variety	Bow Island	Beaverlodge	Fort St. John	Outlook	Arborg	Portage la Prairie (a)	Portage la Prairie
	2001	2001	2001	2001	2001	2001	2001
Antti (mf)	.	.	.	.	248	.	.
Courtenay	1292	425	.	573	458	526	571
Endeavor	1477	.	.	881	.	.	.
F.T.K.98	.	.	.	.	640	619	679
Kokanee	.	.	.	.	428	.	.
Maximize	828	.	.	668	.	.	.
Miner (mf)	.	.	1500	.	336	.	.
Olympic Gold	.	.	.	906	.	.	.
Pick MT3	1391	252	.	.	644	.	.
Pick RT-95	1380	208	.	.	715	.	.
Premil (mf)	.	.	997	.	.	.	.
Retu	.	.	.	.	527	.	.
Spring Green (f)	580	.	.	329	.	.	.
Tar Heel	.	.	.	667	.	.	.
TF9201	.	.	.	.	680	.	.
Wolfpack	1268	.	.	816	.	.	.
Mean	1174	295	1249	692	519	573	625
CV (%)	14.1	24.8	15.7	24.5	33.9	9.5	9.7
LSD (0.05)	245	126		252	257		

f - festulolium

mf - meadow fescue

Table 35. Harvest dates for Tall Fescue 2000 seed production trials

Variety	Bow Island	Beaverlodge	Fort St. John	Outlook	Arborg	Portage la Prairie (a)	Portage la Prairie
	2001	2001	2001	2001	2001	2001	2001
Antti (mf)	.	.	.	.	23-Jul	.	.
Courtenay	11-Jul	3-Aug	.	24-Jul	23-Jul	25-Jul	25-Jul
Endeavor	16-Jul	.	.	24-Jul	.	.	.
F.T.K.98	.	.	.	.	23-Jul	25-Jul	25-Jul
Kokanee	.	.	.	.	23-Jul	.	.
Maximize	16-Jul	.	.	24-Jul	.	.	.
Miner (mf)	.	.	10-Aug	.	23-Jul	.	.
Olympic Gold	.	.	.	24-Jul	.	.	.
Pick MT3	16-Jul	13-Aug	.	.	23-Jul	.	.
Pick RT-95	16-Jul	13-Aug	.	.	23-Jul	.	.
Premil (mf)	.	.	10-Aug	.	.	.	.
Retu	.	.	.	.	23-Jul	.	.
Spring Green (f)	24-Jul	.	.	24-Jul	.	.	.
Tar Heel	.	.	.	24-Jul	.	.	.
TF9201	.	.	.	.	23-Jul	.	.
Wolfpack	16-Jul	.	.	24-Jul	.	.	.

f - festulolium

mf - meadow fescue

Table 36. Plant heights (cm) for Tall Fescue 2000 seed production trials

Variety	Bow Island	Beaverlodge	Fort St. John	Outlook	Arborg	Portage la Prairie (a)	Portage la Prairie
	2001	2001	2001	2001	2001	2001	2001
Antti (mf)	.	.	.	.	.	.	.
Courtenay	106	83	.	87	.	.	.
Endeavor	66	.	.	69	.	.	.
F.T.K.98	.	.	.	.	.	.	.
Kokanee	.	.	.	.	.	.	.
Maximize	83	.	.	82	.	.	.
Miner (mf)	.	.	.	.	.	.	.
Olympic Gold	.	.	.	62	.	.	.
Pick MT3	71	47	.	.	.	.	.
Pick RT-95	72	49	.	.	.	.	.
Premil (mf)	.	.	.	.	.	.	.
Retu	.	.	.	.	.	.	.
Spring Green (f)	77	.	.	83	.	.	.
Tar Heel	.	.	.	64	.	.	.
TF9201	.	.	.	.	.	.	.
Wolfpack	68	.	.	68	.	.	.
Mean	77	60		74			
CV (%)	6.3	7.4		6.7			
LSD (0.05)	7	8		7			

f - festulolium

mf - meadow fescue

Table 37. Summary of seed yield (kg/ha⁻¹) for Meadow Fescue 1997-2001

Company	Variety	Seed yield (kg/ha) per Production year					
		Beaverlodge			Fort St. John		Arborg
		1	2	3	1	2	1
Check	Miner	735	437	342	1550	795	336
International	Premil	232	419		989	272	
Parsons Seeds	Antti	958	200	219			247
Mean		665	373	281	1270	534	292

Table 38. Summary of seed yield (kg/ha⁻¹) for Tall Fescues 1997-2001

Company	Variety	Type	Seed yield (kg/ha) per Production year															
			Bow Island			Brooks			Beaverlodge			Fort St. John			Outlook		Arborg	Portage la Prairie
			1	2	3	1	2	3	1	2	3	1	2	3	1	2	1	
Check	Courtenay	Forage	1227	1937	1487	1815	1335	1041	615	332	309	1437	511	881	1174	661	458	460
Advanta	Fuego	Forage	1057	1530	2140	1129	1280	1057										
	Regiment	Turf	1327	1977	2287	1653	1802	1312										
	Seine	Forage	1076	2405	2538	1379	1617	1408										
	Tulsa	Turf	1302	1819	2152	1784	1963	1362										
	International	Cajun 2	Forage												1558	719		
	Martin 2	Forage	1136	2131	2167	1215	1869	1487						1808	820			
Lesco	LSTF CT 98-1		2216	2036	1053				917	174	81	1142						
Northstar Seed	F.T.K. 98	Forage														639	649	
Parsons Seeds	Kokanee	Forage							575	196	171					428		
	Retu	Forage							791	190	188					527		
Pickseed	Pick MT3	Turf	1391						252							644		
	Pick RT-95	Turf	1380													715		
	TF9201								269	392						680		
Scotts	ATF - 188		1564	1992	2209	2069	2068	1360										
	Cody								332	492								
	RT-93								208									
	Wyatt								494	365								
Turf-Seed	Endeavor	Turf	1477											881				
	Matador	Turf	1875	2004	2325	2415	2043	1613										
	Maximize	Forage	828												668			
	Olympic Gold	Turf													906			
	PST 5DU	Turf	2651	2990	1196	2926	1476	818	1247	198	110							
	PST 5E5	Turf	2665	2791	1213	3205	1655	966	933	175	76							
	PST 5LMD	Turf	1366	2412	800	2357	1425	716	669	170	28							
	Safari	Turf	2852	2367	1103	2688	1498	550	1227	236	115							
	Spring Green (f)		580												329			
	Tarheel	Turf	1333	1386	2052	1976	1625	1287							667			
	Wolfpack	Turf	1268															
Mean			1561	2110	1747	2018	1578	1141	641	280	135	1338	511	881	1072	733	584	536

f - Festulolium

Table 39. Seed yields (kg ha⁻¹) for Orchard Grass 1999 seed production trials

Variety	Brooks		Beaverlodge	
	2000	2001	2000	2001
Haka	.	.	119	265
Kay	1312	194	48	174
Mammoth	822	25	.	.
Okay	.	.	71	166
Mean	1215	279	83	207
CV (%)	7.9	12.1	27.5	19.1
LSD (0.05)	153	54	35	61

Table 40. Harvest dates for Orchard Grass 1999 seed production trials

Variety	Brooks		Beaverlodge	
	2000	2001	2000	2001
Haka	.	.	4-Aug	23-Jul
Kay	14-Jul	13-Jul	4-Aug	23-Jul
Mammoth	14-Jul	13-Jul	.	.
Okay	.	.	4-Aug	23-Jul

Table 41. Plant heights (cm) for Orchard Grass 1999 seed production trials

Variety	Brooks		Beaverlodge	
	2000	2001	2000	2001
Haka	.	.	72	69
Kay	120	116	72	70
Mammoth	123	101	.	.
Okay	.	.	71	71
Mean	123	112	72	70
CV (%)	6.2	4.4	3	3.7
LSD (0.05)	ns		ns	ns

Table 42. Seed yields (kg ha⁻¹) for Orchard Grass 2000 seed production trials

	Bow Island	Arborg	Portage la Prairie (a)	Portage la Prairie
Variety	2001	2001	2001	2001
A2000	.	343	373	333
Aplus	.	343	323	267
Elsie	84	.	.	101
Haka	.	341	.	.
Kay	244	362	327	300
Megabite	156	.	.	333
Mean	161	347	341	267
CV (%)	17.5	4.6	9.6	25.8
LSD (0.05)	49	ns	ns	66

Table 43. Harvest dates for Orchard Grass 2000 seed production trials

	Bow Island	Arborg	Portage la Prairie (a)	Portage la Prairie
Variety	2001	2001	2001	2001
A2000	.	20-Jul	20-Jul	20-Jul
Aplus	.	20-Jul	20-Jul	20-Jul
Elsie	11-Jul	.	.	20-Jul
Haka	.	20-Jul	.	.
Kay	11-Jul	20-Jul	20-Jul	20-Jul
Megabite	11-Jul	.	.	20-Jul

Table 44. Plant heights (cm) for Orchard Grass 2000 seed production trials

	Bow Island	Arborg	Portage la Prairie (a)	Portage la Prairie
Variety	2001	2001	2001	2001
A2000	.	.	.	.
Aplus	.	.	.	.
Elsie	83	.	.	.
Haka	.	.	.	.
Kay	79	.	.	.
Megabite	78	.	.	.
Mean	80	.	.	.
CV (%)	8.9	.	.	.
LSD (0.05)	ns	.	.	.

Table 45. Summary of seed yield (kg/ha⁻¹) for Orchard Grass 1997-2001

		Seed yield (kg/ha) per Production year							
		Bow Island		Brooks		Beaverlodge		Arborg	Portage la Prairie
Company	Variety	1	2	1	2	1	2	1	1
Check	Kay	244		1312	194	48	174	362	313
Cascade	Mammoth			822	25				
Dawson Seed	Arctic	760	942	725	859				
	Lidacta	433	763	167	457				
Northstar Seed	A2000			1263	495	100	193	343	352
	APlus			1464	400	76	239	343	294
Parsons Seeds	Haka					119			
Pickseed	Okay					71			
Mean		410	853	830	468	83	207	347	294

Table 46. Seed yields (kg ha⁻¹) for Perennial Ryegrass 2000 seed production trials

Variety	Bow Island	Brooks	Arborg	Portage la Prairie (a)	Portage la Prairie
	2001	2001	2001	2001	2001
Brightstar II	1791	.	.	.	244
Catalina	1828	.	.	.	.
Charger II	1957	.	.	.	.
DS95-201	.	.	.	178	224
Gator II	.	.	567	130	229
LPR 98143	1787	1508	.	.	.
LPR 98144	2099	1731	.	.	.
Norlea	2220	2068	417	275	285
Pick PR 1-94	1605	.	690	.	.
Platinum	.	.	555	132	251
PST-2A6B	1982	.	.	.	290
Rutgers 8000	.	.	.	242	202
Total (ir)	.	.	325	73	32
Mean	1909	1769	511	172	220
CV (%)	7.9	7.4	24.5	40.5	30.4
LSD (0.05)	220	226	192	66	62

Table 47. Harvest dates for Perennial Ryegrass 2000 seed production trials

Variety	Bow Island	Brooks	Arborg	Portage la Prairie (a)	Portage la Prairie
	2001	2001	2001	2001	2001
Brightstar II	16-Jul	.	.	.	14-Aug
Catalina	16-Jul	.	.	.	.
Charger II	16-Jul	.	.	.	.
DS95-201	.	.	.	14-Aug	14-Aug
Gator II	.	.	8-Aug	14-Aug	14-Aug
LPR 98143	16-Jul	23-Jul	.	.	.
LPR 98144	16-Jul	23-Jul	.	.	.
Norlea	19-Jul	23-Jul	8-Aug	14-Aug	14-Aug
Pick PR 1-94	16-Jul	.	8-Aug	.	.
Platinum	.	.	8-Aug	14-Aug	14-Aug
PST-2A6B	16-Jul	.	.	.	14-Aug
Rutgers 8000	.	.	.	14-Aug	14-Aug
Total (ir)	.	.	8-Aug	14-Aug	14-Aug

ir - Italian ryegrass

Table 48. Plant heights (cm) for Perennial Ryegrass 2000 seed production trials

Variety	Bow Island	Brooks	Arborg	Portage la Prairie (a)	Portage la Prairie
	2001	2001	2001	2001	2001
Brightstar II	50	.	.	.	.
Catalina	55	.	.	.	.
Charger II	54	.	.	.	.
DS95-201	.	.	.	.	.
Gator II	.	.	.	.	.
LPR 98143	52	62	.	.	.
LPR 98144	52	63	.	.	.
Norlea	73	88	.	.	.
Pick PR 1-94	52	.	.	.	.
Platinum	.	.	.	.	.
PST-2A6B	51	.	.	.	.
Rutgers 8000	.	.	.	.	.
Total (ir)	.	.	.	.	.
Mean	55	71			
CV (%)	12.3	3.7			
LSD (0.05)	10	5			

ir - Italian ryegrass

Table 49. Summary of seed yield (kg/ha⁻¹) for Perennial Ryegrass 1997-2001

Company	Variety	Type	Seed yield (kg/ha)							
			Fort						Portage	
			Bow Island	Brooks	Beaverlodge	St. John	Melfort	Outlook	Arborg	la Prairie
Check	Norlea	Forage	2064	1663	862	1500	338	527	417	275
Advanta	Dimension	Turf	700	1081						
Cascade	Catia		692	1202						
	Pearl	Turf	966	1159						
Cebeco Zaden	ER2012		911	936						
	ET161		679	323						
	LP49		343	371						
DSV	LPR 98143	Turf	1787	1508						
	LPR 98144	Turf	2099	1731						
International	Cambridge		842	955						
	Gator II	Turf	1132	1543					567	179
	Minerva		686	292						
	Platinum								555	192
	Respect		982	862						
	Total (I)								325	52
Lesco	LSPR CT 98-1		1880		1103	1129				
	LSPR CT 98-2		1887		694	936				
Newfield Seeds	NSCL 32						31	590		
Pickseed	94-1		1605	1513					689	
	Cutter	Turf			566	772				
	Dancer		1754							
	Darius			883						
	Lex 86		1173	896						
	Lowgrow		2145	1604						
	LPEE 93		1124	974	792	573				
	Magyar			966						
	Pick F3 (Fiesta III)		2484	1979						

Table 49. Summary of seed yield (kg/ha⁻¹) for Perennial Ryegrass 1997-2001 (con't)

Company	Variety	Type	Seed yield (kg/ha)							
			Fort					Portage		
			Bow Island	Brooks	Beaverlodge	St. John	Melfort	Outlook	Arborg	la Prairie
Pickseed (con't)	Secretariat		1144	1304						
	Sunshine		2158	1577						
Scotts	DS95-201									201
	Majesty		979	1441						
	MB45		883	1247						
	Rutgers 8000		2609							222
Turf- Seed	2HO		2435	1734	243					
	Brightstar	Turf	1785	1303	794					
	Brightstar II	Turf	1791							244
	Catalina		1828							
	Chaparal		1860	1450	142					
	Charger II	Turf	1677	1687	236					
	Citation 3	Turf	628	1236						
	PST 2M3		1286	1457	922					
	PST-2A6B		1982							290
	Roadrunner		2762	2228	279					
Proven	Barball	Turf	900	1078						
	Barclay	Turf	573	587						
	Barlow		587	457						
	Barrage	Turf	857	1071						
	Penguin			1873						
	SR4010			2018						
	SR4100			1979						
	SR4200			2014						
Mean			1470	1322	625	982	185	559	557	218

I - Italian ryegrass

Table 50. Seed yields (kg ha⁻¹) for Timothy 1998 seed production trials

Variety	Beaverlodge			Fort St. John		
	1999	2000	2001	1999	2000	2001
BOR 72002	147	120	111	.	.	.
BOR 94301	122	113	108	.	.	.
BOR 94322	172	103	90	.	.	.
Climax	157	112	94	860	780	1044
Grasslands Charlton	40	47	153	.	.	.
UGG 1703	265	138	103	672	712	1047
Mean	151	106	110	753	746	1046
CV (%)	16.8	26.7	30.9	8.5	8.8	14.4
LSD (0.05)	38	43	ns			

Table 51. Harvest dates for Timothy 1998 seed production trials

Variety	Beaverlodge			Fort St. John		
	1999	2000	2001	1999	2000	2001
BOR 72002	17-Aug	11-Aug	20-Aug	.	.	.
BOR 94301	17-Aug	11-Aug	20-Aug	.	.	.
BOR 94322	17-Aug	11-Aug	20-Aug	.	.	.
Climax	17-Aug	11-Aug	20-Aug		17-Aug	21-Aug
Grasslands Charlton	17-Aug	11-Aug	20-Aug	.	.	.
UGG 1703	17-Aug	11-Aug	20-Aug		17-Aug	18-Aug

Table 52. Plant heights (cm) for Timothy 1998 seed production trials

Variety	Beaverlodge			Fort St. John		
	1999	2000	2001	1999	2000	2001
BOR 72002	88	70	55	.	.	.
BOR 94301	80	66	53	.	.	.
BOR 94322	91	72	48	.	.	.
Climax	81	69	52			
Grasslands Charlton	85	67	59	.	.	.
UGG 1703	84	68	58			
Mean	85	68	54			
CV (%)	8	6.3	8.4			
LSD (0.05)	ns	ns	7			

Table 53. Seed yields (kg ha⁻¹) for Timothy 1999 seed production trials

Variety	Beaverlodge	
	2000	2001
Climax	124	219
Fidanza	202	239
Latima	95	180
RVP03	141	167
Mean	148	204
CV (%)	29.7	20.3
LSD (0.05)	68	ns

Table 54. Harvest dates for Timothy 1999 seed production trials

Variety	Beaverlodge	
	2000	2001
Climax	21-Aug	20-Aug
Fidanza	21-Aug	20-Aug
Latima	21-Aug	20-Aug
RVP03	21-Aug	20-Aug

Table 55. Plant heights (cm) for Timothy 1999 seed production trials

Variety	Beaverlodge	
	2000	2001
Climax	61	71
Fidanza	63	66
Latima	50	46
RVP03	68	63
Mean	61	63
CV (%)	11.2	5.5
LSD (0.05)	10	5

Table 56. Seed yields (kg ha⁻¹) for Timothy 2000 seed production trials

Variety	Beaverlodge	Arborg
	2001	2001
BOR 72002	.	322
BOR 94301	.	374
BOR 94322	.	306
BOR 94372	296	.
BOR 94373	241	.
BOR 94374	329	.
Climax	128	312
Fidanza	134	.
Latima	126	293
RVP03	109	.
Mean	192	377
CV (%)	24.1	42.8
LSD (0.05)	68	269

Table 57. Harvest dates for Timothy 2000 seed production trials

Variety	Beaverlodge	Arborg
	2001	2001
BOR 72002	.	1-Aug
BOR 94301	.	1-Aug
BOR 94322	.	1-Aug
BOR 94372	20-Aug	.
BOR 94373	20-Aug	.
BOR 94374	20-Aug	.
Climax	20-Aug	1-Aug
Fidanza	20-Aug	.
Latima	20-Aug	8-Aug
RVP03	20-Aug	.

Table 58. Plant heights (cm) for Timothy 2000 seed production trials

Variety	Beaverlodge	Arborg
	2001	2001
BOR 72002	.	.
BOR 94301	.	.
BOR 94322	.	.
BOR 94372	70	.
BOR 94373	69	.
BOR 94374	70	.
Climax	68	.
Fidanza	58	.
Latima	44	.
RVP03	60	.
Mean	63	.
CV (%)	8.9	.
LSD (0.05)	8	.

Table 59. Summary of seed yield (kg/ha⁻¹) for Timothy 1997-2001

Company	Variety	Seed yield (kg/ha) per Production year								
		Beaverlodge			Fort St. John			Melfort		Arborg
		1	2		1	2		1	2	1
Check	Climax	136	166	94	620	575	1044	532	35	312
	Fidanza	168	239							
	Grasslands Charlton	40	47	153						
	RVP03	125	167							
International	Latima	111	180							293
Parsons Seeds	BOR 72002	147	109	111						322
	BOR 94301	122	113	108						374
	BOR 94322	172	103	90						306
	BOR 94372	296								
	BOR 94373	241								
	BOR 94374	329								
Proven	UGG 1703	265	138	103	672	712	1047			
Mean		167	149	110	681	576	1046	529	43	376

Appendix 1

Alberta Weather Data

Seasonal
Mean or
Total

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Beaverlodge CDA	2001	-1.8	-10.2	-3.2	3.7	9.1	-	-	-	10.7	3.3	-3.9		
Mean Monthly Temp. (C)	2000	-12.8	-7.5	-2.3	3.0	6.9	12.9	15.1	13.4	9.3	3.7	-2.2	-12.4	
	1999	-13.9	-7.5	-2.6	4.1	7.5	12.0	13.7	15.3	9.6	4.6	-2.8	-3.6	3.0
	1998	-18.4	-5.4	-3.0	5.8	13.8	14.2	17.3	16.5	11.0	4.1	-5.8	-11.8	3.2
	30 yr	-13.6	-10.0	-5.1	3.2	9.5	13.3	15.3	14.4	9.6	4.5	-7.0	-11.9	
Mean Monthly Precip. (mm)	2001	20.5	4.0	6.1	22.4	17.6	34.6	113.2	-	14.5	17.8	26.4		
	2000	2.2	4.2	1.4	15.6	26.4	43.2	42.4	104.0	47.4	33.8	9.2	6.6	
	1999	-	-	-	17.2	27.0	26.6	29.8	29.2	14.0	13.0	20.6	4.2	-
	1998	-	7.2	-	10.2	49.8	40.2	25.0	19.4	23.4	29.6	-	-	-
	30 yr	32.9	22.6	22.1	20.3	37.5	71.7	67.4	64.7	47.2	23.2	28.0	29.3	
Bow Island	2001	-	-12.3	1.8	6.1	13.5	15.7	20.1	21.1					
Mean Monthly Temp. (C)	2000	-9	-5.9	1.7	5.9	11.9	15.4	20.6	18.9	13	7	-3.4	-10.9	5.4
	1999	-7.3	1.2	3.1	7.2	11.6	15.9	17.4	19.9	12.8	8.9	4.5	0.2	7.9
	1998	-12	-0.6	-1.8	9	15.4	15.9	21.9	21.9	16.5	8.6	1.2	-6.9	7.5
	30 yr	-10.6	-6.3	0.9	6.6	12.4	17.6	19.7	19.6	12.9	7.6	-1	-7.9	5.8
Mean Monthly Precip. (mm)	2001	-	6.1	-	13.2	11.8	80.8	15	1.2					
	2000	3.5	9.4	14.2	16.4	8.4	50.6	11	16.2	27.4	10.2	6.8	7.6	181.8
	1999	10.1	0.5	0.3	37.9	43.9	102.8	37.7	41.8	9	26.9	15.2	8.2	334.3
	1998	7.4	0.3	41.2	13.3	29	109.2	20.8	15.2	20.6	13.2	2	11.5	283.7
	30 yr	18.6	11.3	13.1	34.2	44.9	69.8	30.9	32.4	30.4	12.3	12.8	19	329.6

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Seasonal Mean or Total
Brooks CDC South	2001	-3.7	-13.4	1.2	5.5	13.1	15.5	19.8	20					
Mean Monthly Temp. (C)	2000	-11.3	-8.1	0.9	5.5	11.3	15	20.2	18.3	11.8	6.3	-5	-11.8	4.4
	1999	-11.5	-1.3	1.1	6	10.1	14.3	16.2	18.2	11.8	6.8	2.6	-1.4	6.1
	1998	-15.1	-1.5	-3.2	7.9	13.8	15.3	21	20.4	15	6.9	-0.8	-8.8	5.9
	30 yr	-12.5	-8.2	-2.7	5.1	11.4	15.9	18.4	17.5	11.6	6.4	-3.7	-10.2	4.1
Mean Monthly Precip. (mm)	2001	5.1	2.7	7.7	7.9	29.4	43.6	13.8	1.4					
	2000	14.8	12.5	6.6	11.3	12.8	28.6	3.4	31.4	24.4	51.6	6.3	5.8	209.5
	1999	17.1	1.5	4.2	38.1	39.8	115	110.2	47.2	2.4	5.2	7.1	7.4	394
	1998	15.5	1.9	60.4	17.9	24.1	101.4	29.8	8.8	24.6	6.2	4.4	17.5	312.5
	30 yr	18.4	11.6	17	27.2	39	65.5	38.1	36.3	38.8	16	15	18	340.9

Provided by Shane Chetner of the Conservation and Development Branch, AAFRD. This information is based on unverified preliminary data obtained from Environment Canada.

Appendix 2

Saskatchewan Weather Data

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Seasonal Mean or Total
Melfort	2001	-9.1	-18.2	-5.4	-7.5	3.5	14.1	18.8	19.1	13.6	3.5	-3.3		2.6
Mean Monthly	2000	-18.6	-11.1	-1.5	2.8	9.1	13.0	17.6	16.5	11	4.4	3.2	-21.4	2.1
Temperature (C)	1999	-17.9	-10.9	-4.1	5.7	10.2	14.0	15.6	16.9	9.9	3.3	-1.2	-8.0	2.8
	1998	-18.8	-6.0	-8.4	6.6	13.1	14.0	17.9	19.2	12.2	3.0	-4.7	-5.6	3.5
	30yr	-19.1	-15.5	-9.0	2.2	10.6	15.5	17.6	16.3	10.4	3.9	-7.0	-16.2	0.8
Total Monthly	2001	4.5	9.6	2.6	60.0	11.1	20.4	46.4	11.4	12.0	9.9	9.1		197.0
Precipitation (mm)	2000	18.6	6.4	4.4	15	42.6	73.6	106.4	49.6	25.4	25.4	6.6	39.6	413.6
	1999	9.2	3.6	1.5	41.4	41.5	56.0	96.0	36.0	19.2	11.2	3.8	2.2	321.6
	1998	2.8	1.6	2.2	19.0	15.2	87.8	42.8	6.2	31.4	20.0	11.6	1.8	242.4
	30yr	17.7	13.9	18.5	20.7	41.4	61.9	66.6	53.1	41.4	26.6	18.2	22.5	402.5
Outlook (PFRA)	2001	-7.2	-15.5	-1.6	-4.8	5.8	15.2	19.7	19.8	14.7	3.9			5.0
Mean Monthly	2000	-14.2	-9.1	-0.2	4.8	11.8	14.4	19.2	17.9	12.7	5.7	5.2	-17.0	4.3
Temperature (C)	1999	-14.5	-6.1	-2.1	6.8	10.6	15.1	16.9	18.3	11.1	2.1	2.7	-3.3	4.8
	1998	-16.3	-8.9	-4.8	8.2	13.2	15.2	20.3	20.6	14.5	6.5	-1.8	-9.8	4.7
	30yr	-15.5	-11.8	-5.3	4.6	11.8	16.6	19.0	18.0	12.0	5.9	-4.5	-12.7	3.2
Total Monthly	2001	1.0	7.1	6.6	8.7	24.2	27.9	99.2	2.4	13.4	27.6			218.1
Precipitation (mm)	2000	29.3	7.9	12.7	33	15.4	50.8	82.2	49.5	34.6	6.1	56.2	31.4	409.1
	1999	3.6	4.0	4.4	12.0	61.4	63.2	91.2	37.8	11.6	2.4	3.8	10.2	305.6
	1998	1.4	2.6	3.2	7.2	12.4	112.4	21.0	73.4	45.2	38.2	9.6	13.0	339.6
	30yr	14.8	13.0	17.9	17.9	39.3	60.4	54.5	34.2	28.6	13.6	12.8	16.4	323.4

Western Grass Seed Testing (WGST) Program

Application for Entry

1. Company:_____ Contact person:_____

Mailing address:_____

2. 2000 entries: (if you wish to add more entries, please attach another sheet)

Species	Type (Forage, Turf)	Variety name/code	% germ	Relative maturity (early, medium, late)
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

3. Please indicate at which locations you wish your entries tested (see attached map). The applicant will be invoiced once test sites for the current test year are finalized.

Fort St. John, BC _____

Melfort, SK

Beaverlodge, AB _____

Outlook, SK (IRR)

Bow Island, AB (IRR) _____

Portage La Prairie, MB (IRR)

Brooks, AB (IRR) _____

Arborg, MB

Vegreville, AB _____

Send by March 1, 2002 to:

Henry Najda
Crop Diversification Centre South
SS 4
Brooks, AB Canada T1R 1E6

Phone: 403-362-1346, Fax: 403-362-1311, or
e-mail: henry.najda@gov.ab.ca.