

Peace Region Grass Seed Testing Program

Coordinated by:

Peace Region Forage Seed Association
Agriculture and Agri-Food Canada



2015 Report

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Beaverlodge, Alberta

Table of Contents	Page
Acknowledgments	4
PRGST Cooperating Research Sites & Contacts	5
Protocol for Peace Region Grass Seed Testing (PRGST) Program	5
Introduction	7
Materials and Methods	7
Results	8
Figure 1. Total monthly rainfall recorded in 2012 to 2015 growing season at Beaverlodge, AB.	9
Table 1. Daily rainfall distribution during the 2015 growing season at Beaverlodge, AB.	10
Creeping Red Fescue Seed Yield Trials:	11
Table 2. Seed yield in 2014 and 2015 for the fine fescue trials established in 2013 at Beaverlodge, AB.	11
Table 3. Plant height in 2015 for the fine fescue trials established in 2013 at Beaverlodge, AB.	11
Picture1. Creeping red fescue trial at Beaverlodge that established in 2013 and the picture for 2015 growing season.	11
Table 4. Seed yield in 2015 for the creeping red fescue trials established in 2014 at Beaverlodge, AB.	12
Table 5. Plant height in 2015 for the creeping red fescue trials established in 2014 at Beaverlodge, AB.	12
Picture 2. Creeping red fescue trial at Beaverlodge that established in 2014 and the picture for 2015 growing season.	13
Tall fescue Seed Yield Trials:	13
Table 6. Seed yield in 2015 for the tall fescue trials established in 2013 at Beaverlodge, AB.	13
Table 7. Plant height in 2015 for the tall fescue trials established in 2013 at Beaverlodge, AB.	13
Meadow fescue Seed Yield Trials:	14
Table 8. Seed yield in 2014 and 2015 for the meadow fescue trials established in 2013 at Beaverlodge, AB.	14
Table 9. Plant height in 2015 for the meadow fescue trials established in 2013 at Beaverlodge, AB.	14
Picture3. Meadow fescue trial at Beaverlodge that established in 2013 and the picture for 2015 growing season.	15
Table 10. Summary of seed yield (% of Boreal and Preval) in 2014and 2015 for the fine fescue, meadow fescue and tall fescue that established in 2013 and 2014 at Beaverlodge, AB.	16
Timothy Seed Yield Trials:	17
Table 11. Seed yield in 2013, 2014 and 2015 for the timothy trials established in 2012 at Beaverlodge, AB.	17
Table 12. Plant height in 2014 and 2015 for the timothy trials established in 2012 at Beaverlodge, AB.	17
Picture 4. Timothy trial at Beaverlodge that established in 2012 and the picture for 2015 growing season.	18
Table 13. Seed yield in 2014 and 2015 for the timothy trials established in 2013 at Beaverlodge, AB.	18

Table 14. Plant height in 2014 and 2015 for the timothy trials established in 2013 at Beaverlodge, AB.	19
Picture 5. Timothy trial at Beaverlodge that established in 2013 and the picture for 2015 growing season	19
Table 15. Seed yield in 2015 for the timothy trials established in 2014 at Beaverlodge, AB.	20
Table 16. Plant height in 2015 for the timothy trials established in 2014 at Beaverlodge, AB.	20
Picture 6. Timothy trial at Beaverlodge that established in 2014 and the picture dated on 4 July 2014.	21
Table 17. Summary of seed yield (% of Climax) in 2013 to 2015 for the timothy trials established 2012, 2013 and 2014 at Beaverlodge, AB.	22

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Calvin Yoder, Alberta Agriculture

Shirley Neighbour, Agriculture and Agri-Food Canada

PRGST Co-operating Research Sites and Contacts

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Protocol for Peace Region Grass Seed Testing Program (PRGST)

Revised December 2015

1. Research Sponsorship

The research sponsorship of **\$240 CAN/entry/year/location** is requested on an annual basis, as years of production will vary with the species being tested, and applies to the establishment year as well. The Peace Region Forage Seed Association will administer funds for the Peace Region Grass Seed Testing Program. The PRFSA General Manager will invoice each seed company annually.

2. Eligibility of Entries

Released and experimental lines of all tame and native grass species will be considered if they are of interest to commercial seed companies. We reserve the right not to 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
- if the germination % of the forage crop seed less than 75%

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 orchardgrass; creeping red, chewings, hard, meadow, sheep or tall fescue; annual or perennial ryegrass
- 200 gm of meadow or smooth brome grass, wheatgrasses
- The germination % of each variety

Approved seed entries shall supply seed by **April 1st** 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**.

Please ship approved seed to*:
 Peace Region Forage Seed Association
 904 102 Ave
 Dawson Creek, BC V1G 2B7

*European companies submitting entries need to ship their seed to their US or Canadian head office then to the PRFSA. Seed shipped from the US to Canada needs to be accompanied by all phytosanitation paperwork to clear customs.

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.

Peace Region Grass Seed Testing (PRGST) Program

2015 Application for Entry

1. Company: _____ Telephone: _____

Contact person: _____ Fax: _____

Mailing address: _____ Email: _____

Species	Type Forage or turf	Variety name/code	% Germ	Relative maturity early, medium, late

Send application form no later than March 15th, 2016 to:

Rahman Azooz
 Seed Production Program
 Agriculture and Agri-Food Canada
 Box 29, Beaverlodge, AB. T0H 0C0
 Phone (780) 354-5114
 Cell (780) 832-5947
 Fax (780) 354-5150
 Email : azoozr@agr.gc.ca

Introduction:

There is potential to increase grass seed production in Peace Region and to provide a consistently, clean quality product for the domestic and export market. There are several factors that limit quality seed production in the region such as weed seeds, insect pests, lack of registered herbicides/ insecticides and lack of regional appropriate species. The Peace Region Grass Seed testing trials (PRGST) are conducted in 2012, 2013, 2014 and 2015 under the Agriculture Projects Growing Forward 2 Program to evaluate the seed yield potential of forage grass seed varieties in western Canada. The PRGST trials were conducted to evaluate the agronomic performance of proprietary species and varieties of U.S. and European companies with the primary objectives to evaluate the performance of forage grass varieties for their potential and adaptability for contract seed production in western Canada. These cultivars are mainly developed outside of Canada and must be tested under Canadian conditions for seed yield and adaptability. The seed yield result of the cultivars under the PRGST trials are used to establish contacts between seed companies and growers. Agronomy practices including stand establishment, integrated weed control, fertility and removal of stands with direct seeding must be developed to ensure consistent seed yield production at economical costs of production. The main objectives of forage grass seed varieties testing trail are to increase the consistency, quality and marketability of turf and forage grass seed in an internationally important growing region and to increase the opportunities for contract seed production of American and European turf and forage seed cultivars and to generate seed yield data for varieties grown at regional sites under local growing conditions. Ultimately, all included varieties that perform well are directed for domestic and international markets.

MATERIALS AND METHODS

The Peace Region Grass seed testing (PRGST) trials were conducted at Beaverlodge, AB (lat. 55°12'N). The trials highlighted here were established in 2012, 2013 and 2014. Timothy (*Phleum pratense* L.), creeping red fescue (*Festuca rubra* L. var. *rubra*), meadow fescue (*Festuca pratensis* Huds.) and tall fescue (*Festuca arundinacea*) varieties were tested for their agronomic performance and seed production potential under the Peace Region soil and weather conditions. The varieties in the trials were evaluated according to their agronomic performance that required two harvested years of seed production for fine fescue and three harvested years of seed production of tall fescue, meadow fescue, timothy and brome grass. The forage grass varieties and the checks included in the trials were obtained from Canadian and international seed companies and their foreign associates. Several seed companies (Barenbrug, Deutsche Saatveredelung AG, Foster's Seed and Feed LTD, Imperial Seed, Moore Seed Processors and Snow Brand Seeds) participated in the Peace Region Grass Seed Testing Program (PRGST). The site at Beaverlodge, AB had been under pea-barley-wheat-canola rotation before seeding. The trials are direct seeded and fertilizer is applied in the fall according to results from the soil testing laboratory. During the trials, weeds were controlled by a combination of trimming, inter-row cultivation, and recommended herbicides. Individual experimental plots were comprised of four rows, each 6 m long with row spacing of 30 cm apart. The yield was collected from the central two rows. The experimental design for each species was a randomized complete block with four replications.

Timothy Trial 2012: Timothy varieties were established in 2012 at Beaverlodge. Three Moore Seed Processors varieties (Alma, APH1001, APH1002), four Snow Brand varieties (Horizon, SBT0002, SBT0314, SBT1005) and two AAFC varieties (S9537, S9520) were tested and compared to Climax in 2012. The trials are committed to companies from 2012 to 2015.

Timothy trial 2013: Three Moore Seed Processors varieties (Teuho, Tuukka, Varis) and six Barenbrug USA Timothy varieties (BAR BOO5, BAR D003, BAR 1006, BAR M002, BAR R001, BAR S004) were established in 2013 at Beaverlodge, AB site. The new entries were shipped from Netherlands, USA and Debolt, AB, Canada. Each variety was compared to Climax as the check variety. The trials are committed to companies from 2013 to 2016.

Timothy trials 2014: Nine timothy varieties were established in 2014 at Beaverlodge, AB site. The new varieties were one Moore Seed Processors (MST0513) and eight Barenbrug USA varieties (PHL1R99, Bor 01033, Bor 2005, Bor 01025, Bor 88060, Bor 01037, Barpenta, Barfleo). Each variety was compared to Climax as the check variety. The trials are committed to companies from 2014 to 2017.

Fine Fescue trial 2013: Two fine fescue varieties were established in 2013 at Beaverlodge, AB site. The new entries were one Imperial Seed variety (Reverent) and one Foster Seed and Feed variety (PPG-FRR103). Each variety was compared to Boreal as the check variety. The trials are committed to companies from 2013 to 2015.

Fine fescue 2014: Eleven creeping red fescue varieties were established in 2014 at Beaverlodge, AB site. The new entries were eight Moore Seed Processors varieties (MSU0113, MSK0213, MSB0313, MSR0413, MSP0613, MSP0713, MSP0813, MSP0913) and three Foster Seed and Feed varieties (B-13.0421, B-13.0428 and B-13.0429). Each variety was compared to Boreal as the check variety. The trials are committed to companies from 2014 to 2016.

Meadow Fescue trial 2013: Nine meadow fescue varieties were established in 2013 at Beaverlodge, AB site. The new entries were shipped from Romania, Netherlands and USA from the Barenbrug USA Seed Company. The varieties were FP75RO, COSMONAUT, BOR 20613, BOR 20614, 11-FPF12, 11-(09-FPF7), PRADEL, FP75RO1, and BARCRYPTO. Each variety was compared to Preval as the check variety. The trials are committed to Barenbrug from 2014 to 2017.

Tall Fescue trial 2013: Two Barenbrug USA tall fescue varieties (BAR FA 9125 and BAR FA 9017) were established in 2013 at Beaverlodge AB site. Each variety was compared to Courtenay as the check variety. The trials are committed to Barenbrug from 2014 to 2017.

Publication of Results

Data will undergo appropriate statistical analysis and each applicant will be provided with an annual report. Information on varieties will be made available in various annual reports and to seed producers upon request. Results will be posted by the end of the fiscal year on the research page of the website www.peaceforageseed.ca

All reasonable care will be taken to ensure a successful test; however, a guarantee cannot be made that a particular test will be successful. If required a test will be reseeded.

Some results in this report have been tested for one or two harvested years. It is advised not to use average yield figures to make variety comparisons for these years. Only after a minimum of two harvested years of creeping red fescue or three harvested years of timothy, meadow fescue, tall fescue, meadow brome grass and smooth brome grass as a recommended years for the test, the data should 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.

Disclaimer

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

Results

The seed yield of forage grass varieties trials that established in 2012, 2014 and 2015 have been influenced by drought during the first 3 weeks of May in 2013, throughout the growing season of 2014, and the first 4 weeks of May 2015 (Figure 1 and Table 1). As well the trials established in 2013 experienced wetter than normal weather conditions during June, July and August. Lower rainfall than 30 years average during May, June and July in 2014 slowed crops establishment and early growth under all trials that established in 2013, 2014 and 2015. The rain events that occurred between the 12th and 23rd of June 2015 produced 86.4 mm (3.4 inch) of rain water to the crops.

These rain events resulted in optimum growth conditions for all forage crops in all trials. This condition encouraged crop growth and improved the seed production under all varieties.

All crops under all trials, indicating either excess water stress or drought stress in 2013 and 2014, likely had limited seed production response compared to the varieties potential for seed production and adaptability at Beaverlodge in those growing seasons. On average, both seed quality and yield of forage grasses have been affected positively in 2015 for all trial that established 2012, 2013 and 2014. The 2015 seed yields of timothy and creeping red fescue (first harvested year) were above the average as compared to 2013 and 2014 for most forage grass varieties at Beaverlodge, AB. The data for seed yield for tall fescue trial at Beaverlodge were not reported due to the poor seed production for the new tall fescue varieties in 2015.

Creeping red fescue: The seed yield values of creeping red fescue ranged 207 to 470 kg ha⁻¹ (185 to 420 lbs acre⁻¹) in the second harvested year and the total seed yield over the two harvested years were ranged 734 to 1298 kg ha⁻¹ (656 to 1159 lbs acre⁻¹) for the creeping red fescue trial that **established in 2013**. In the creeping red fescue trial that **established in 2014**, the average seed yield values ranged 639 to 1687 kg ha⁻¹ (571 to 1507 lbs acre⁻¹) in the first harvested year in 2015. The average seed yields of creeping red fescue were above the seed yield average in 2015 as compared to 2013 and 2014.

Meadow fescue: The average seed yield values of meadow fescue ranged 399 to 808 kg ha⁻¹ (356 to 722 lbs acre⁻¹) in the second harvested year. All new varieties of meadow fescue matured earlier than the creeping red fescue. There are three meadow fescue varieties from Barenbrug USA (FP75RO, 11-FPF12, and COSMONAUT) showing some potential for Peace Region growers produced significantly higher seed yield than the check in the second harvested year. These three varieties increased the seed yield by 62 to 341 kg ha⁻¹ (55 to 305 lbs acre⁻¹) as compared to Preval as a check variety for meadow fescue in the second harvested year (Table 8).

Timothy: There were several Timothy varieties showing some potential for Peace Region growers, in spite of the extremely wet (2013) and drier than usual (2014) and optimum moisture conditions (2015). In the trial that **established in 2012**. The average total seed yield values were significantly higher by 478 (Alma) and 334 (APH1001) kg ha⁻¹ (427 and 298 lbs acre⁻¹) of the three harvested years (2013, 2014 and 2015) for the timothy varieties that established in 2012. In the timothy trial that **established in 2013**, the total seed yield values for 2014 and 2015 increased by 3 (Varis) to 119 (Teuho) kg ha⁻¹ (3 and 106 lbs acre⁻¹) in eight of nine new varieties that established in 2013 as compared to the Climax as a check variety. In the timothy trial that established in 2014, six of nine new varieties produced significantly higher seed yield than Climax as a check variety in 2015 under optimum weather conditions (table 1 and Figure 1).

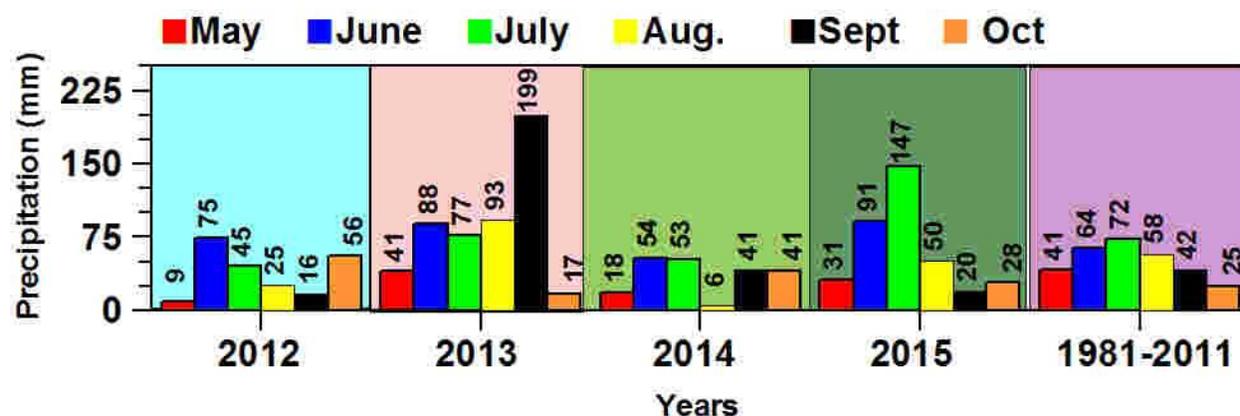


Figure 1. Total monthly rainfall recorded in 2012 to 2015 growing season at Beaverlodge AB.

Table 1. Daily rainfall distribution during the 2015 growing season at Beaverlodge, AB.

Day	May	June	July	Aug	Sept.	Oct
	mm					
1	0.4	0.0	0.0	0.0	0.2	5.4
2	5.2	0.2	0.0	0.8	0.4	6.0
3	0.0	0.0	0.0	24.0	0.4	0.0
4	1.8	0.0	0.0	0.0	0.2	0.2
5	4.6	0.0	0.0	3.0	0.0	0.0
6	0.0	0.0	0.0	2.0	0.0	0.0
7	0.0	0.0	0.0	0.0	0.4	0.0
8	0.0	0.0	0.0	2.0	3.0	0.0
9	0.0	0.0	0.0	0.2	0.2	1.6
10	0.0	0.0	0.2	0.0	0.0	7.6
11	0.0	0.2	0.0	0.0	0.0	0.4
12	0.0	12.6	0.0	0.0	11.0	0.0
13	0.0	3.4	0.8	0.0	1.6	0.0
14	0.0	7.8	0.2	0.0	0.0	0.0
15	4.0	0.2	0.0	0.0	0.2	0.0
16	0.0	1.6	4.6	0.0	0.0	0.0
17	0.0	0.2	0.2	0.2	0.2	0.0
18	0.0	0.4	1.0	0.0	0.0	0.0
19	0.0	58.6	0.2	0.8	0.2	3.2
20	0.0	0.4	5.0	4.0	0.0	0.0
21	0.0	0.4	0.2	0.2	0.0	0.0
22	0.0	0.8	1.2	0.0	0.0	0.0
23	0.0	0.2	0.8	0.0	0.0	0.0
24	0.0	0.0	2.2	0.4	0.8	0.0
25	0.0	0.0	0.2	0.0	0.0	0.0
26	9.0	0.0	0.0	0.0	0.0	0.6
27	2.8	0.0	0.0	0.0	0.6	0.0
28	0.2	0.0	0.0	1.2	0.2	0.2
29	0.0	0.0	0.0	4.6	0.0	0.0
30	1.6	4.2	0.0	0.0	0.0	0.0
31	1.8		130.6	7.0		3.0
total	31.4	91.2	147.4	50.4	19.6	28.2

Creeping Red Fescue Seed Yield Trials:

Table 2. Seed yield in 2014 and 2015 for the fine fescue trials established in 2013 at Beaverlodge, AB.

Company	Variety	2014	2015	Total	2014	2015
			kg ha ⁻¹		% of Boreal	
Imperial Seed	Reverent	584	470	1069	70	103
Foster's Seed	PPG-FRR103	500	207	734	60	45
Check	Boreal	838	457	1298	100	100
CV%		9	14	9		
LSD _{0.05}		127	95	209		

Seeding date was 15 May 2013, harvesting dates were 23 July 2014 and 20 July 2015.

Table 3. Plant height in 2015 for the fine fescue trials established in 2013 at Beaverlodge, AB.

Company	Variety	2015
		Cm
Imperial Seed	Reverent	74
Foster's Seed	PPG-FRR103	58
Check	Boreal	68
CV%		7
LSD _{0.05}		8

PRGST: Fescue-Established 2013



Picture 1. Creeping red fescue trial at Beaverlodge that established in 2013 and the picture for 2015 growing season.

Table 4. Seed yield in 2015 for the creeping red fescue trials established in 2014 at Beaverlodge, AB.

Company	Variety	2015 kg ha ⁻¹	2015 % of Boreal
Moore Seed Processors	MSB0313	1687	102
	MSK0213	1188	72
	MSP0613	756	46
	MSP0713	953	58
	MSP0813	1061	64
	MSP0913	747	45
	MSR0413	639	39
	MSU0113	1509	92
Foster's Seed	B130421	1530	93
	B130428	1282	78
	B130429	1364	83
Check	Boreal	1648	100
CV%		11	
LSD _{0.05}		190	

Seeding date was 13 May 2014 and harvesting date was 15 July 2015.

Table 5. Plant height in 2015 for the creeping red fescue trials established in 2014 at Beaverlodge, AB.

Company	Variety	2015 cm
Moore Seed Processors	MSB0313	80
	MSK0213	67
	MSP0613	61
	MSP0713	70
	MSP0813	62
	MSP0913	65
	MSR0413	75
	MSU0113	82
Foster's Seed	B130421	71
	B130428	72
	B130429	73
Check	Boreal	80
CV%		7
LSD _{0.05}		7

PRGST: Fine fescue-Established 2014



Picture 2. Creeping red fescue trial at Beaverlodge that established in 2014 and the picture for 2015 growing season.

Tall Fescue Seed Yield Trial:

Table 6. Seed yield in 2014 and 2015 for the tall fescue trials established in 2013 at Beaverlodge, AB.

Company	Variety	2014	2015	2014	2015
		kg ha ⁻¹		% of Courtenay	
Barenbrug USA	BAR FA 9125	490	-	49	-
	BAR FA 9017	388	-	39	-
Check	Courtenay	1006	938	100	100
CV%		14	-		-
LSD _{0.05}		152	-		-

Seeding date was 15 May 2013 and harvesting dates were 11 August 2014 and 22 July 2015.

Table 7. Plant height in 2014 and 2015 for the tall fescue trials established in 2013 at Beaverlodge, AB.

Company	Variety	2014	2015
		cm	cm
Barenbrug USA	BAR FA 9125	69	-
	BAR FA 9017	66	-
Check	Courtenay	101	-
CV%		7	-
LSD _{0.05}		9	-

Meadow Fescue Seed Yield Trial:

Table 8. Seed yield in 2014 and 2015 for the meadow fescue trials established in 2013 at Beaverlodge, AB.

Company	Variety	2014	2015	Total	2014	2015
		kg ha ⁻¹			% of Preval	
Barenbrug USA	FP75RO	946	529	1474	104	113
	COSMONAUT	865	590	1454	95	126
	BOR 20613	799	464	1263	88	99
	BOR 20614	804	459	1263	88	98
	11-FPF12	823	808	1631	91	173
	11-(09-FPF7)	908	461	1369	100	99
	PRADEL	768	399	1167	84	85
	FP75RO1	884	500	1383	97	107
	BARCRYPTO	834	516	1350	92	111
Check	Preval	909	467	1376	100	100
CV%		12	8	8		
LSD _{0.05}		142	60	159		

Seeding date was 15 May 2013 and harvesting dates were 17 July 2014 and 13 July 2015.

Table 9. Plant height in 2015 for the meadow fescue trials established in 2013 at Beaverlodge, AB.

Company	Variety	2015
		cm
Barenbrug USA	FP75RO	94
	COSMONAUT	98
	BOR 20613	97
	BOR 20614	92
	11-FPF12	99
	11-(09-FPF7)	103
	PRADEL	99
	FP75RO1	99
	BARCRYPTO	98
Check	Preval	99
CV%		5
LSD _{0.05}		6

PRGST: Meadow fescue-Established 2013



Picture 3. Meadow fescue trial at Beaverlodge that established in 2013 and the picture for 2015 growing season.

Table 10. Summary of seed yield (% of Boreal and Preval) in 2014 and 2015 for the fine fescue, meadow fescue and tall fescue that established in 2013 and 2014 at Beaverlodge, AB.

Seeding	Company	Variety	2014	2015
Fine Fescue Established in 2013			% of Boreal	
2013	Imperial Seed	Reverent	70	103
	Foster's Seed	PPG-FRR103	60	45
	Check	Boreal	100	100
			Seed yield (kg ha ⁻¹)	
		Boreal	838	457
Fine Fescue Established in 2014			2015	2016
			% of Boreal	
2014	Moore Seed Processors	MSB0313	102	
		MSK0213	72	
		MSP0613	46	
		MSP0713	58	
		MSP0813	64	
		MSP0913	45	
		MSR0413	39	
		MSU0113	92	
	Foster's Seed	B130421	93	
		B130428	78	
		B130429	83	
	Check	Boreal	100	
			Seed yield (kg ha ⁻¹)	
		Boreal	1646	
Meadow Fescue Established in 2013			2014	2015
			% of Preval	
2013	Barenbrug USA	FP75RO	104	113
		COSMONAUT	95	126
		BOR 20613	88	99
		BOR 20614	88	98
		11-FPF12	91	173
		11-(09-FPF7)	100	99
		PRADEL	84	85
		FP75RO1	97	107
		BARCRYPTO	92	111
	Check	Preval	100	100
			Seed yield (kg ha ⁻¹)	
		Preval	909	467

Timothy Seed Yield Trials:

Table 11. Seed yield in 2013, 2014 and 2015 for the timothy trials established in 2012 at Beaverlodge, AB.

Company	Variety	2013	2014	2015	Total	2013	2014	2015
		kg ha ⁻¹				% of Climax		
Snow Brand Seed	Horizon	715	557	339	1612	147	83	120
	SBT0002	548	521	259	1329	113	77	92
	SBT0314	596	572	377	1545	123	85	133
	SBT1005	265	367	200	832	55	54	71
Moore Seed Processors	Alma	500	984	437	1921	103	146	154
	APH1001	575	768	434	1777	118	114	153
	APH1002	338	609	246	1193	70	90	87
AAFC	S9537	598	687	335	1620	123	102	118
	S9520	555	651	380	1586	114	97	134
Check	Climax	486	674	283	1443	100	100	100
CV%		21	18	22	15			
LSD _{0.05}		160	166	105	318			

Seeding date was 16 May 2012 and harvesting dates were 7 August 2013, 13 August 2014 and 30 July 2015.

Table 12. Plant height in 2014 and 2015 for the timothy trials established in 2012 at Beaverlodge, AB.

Company	Variety	2013	2014	2015
		cm		
Snow Brand Seed	Horizon	-	100	102
	SBT0002	-	103	98
	SBT0314	-	106	98
	SBT1005	-	101	105
Moore Seed Processors	Alma	-	98	103
	APH1001	-	99	95
	APH1002	-	95	80
AAFC	S9537	-	104	101
	S9520	-	99	110
Check	Climax	-	106	102
CV%			4	8
LSD _{0.05}			6	11

PRGST: Timothy-Established 2012



Picture 4. Timothy trial at Beaverlodge that established in 2012 and the picture for 2015 growing season.

Table 13. Seed yield in 2014 and 2015 for the timothy trials established in 2013 at Beaverlodge, AB.

Company	Variety	2014	2015	Total	2014	2015
		kg ha ⁻¹			% of Climax	
Barenbrug USA	BAR BOO5	437	374	810	99	109
	BAR D003	465	438	903	105	127
	BAR 1006	360	373	733	81	109
	BAR M002	417	360	777	94	105
	BAR R001	497	407	905	113	118
	BAR S004	486	402	888	110	117
Moore Seed Processors	Teuho	525	411	936	119	120
	Tuukka	510	427	938	115	124
	Varis	410	379	789	93	110
Check	Climax	442	344	786	100	100
CV%		19	26	20		
LSD _{0.05}		123	145	247		

Seeding date was 15 May 2013 and harvesting dates were 12 August 2014 and 30 July 2015.

Table 14. Plant height in 2014 and 2015 for the Timothy trials established in 2013 at Beaverlodge, AB.

Company	Variety	2014	2015
		cm	
Barenbrug USA	BAR BOO5	92	101
	BAR D003	96	110
	BAR 1006	89	99
	BAR M002	91	97
	BAR R001	91	106
	BAR S004	95	98
Moore Seed Processors	Teuho	93	106
	Tuukka	94	104
	Varis	89	106
Check	Climax	95	110
CV%		5	6
LSD _{0.05}		7	9

PRGST: Timothy-Established 2013



Picture 5. Timothy trial at Beaverlodge that established in 2013 and the picture for 2015 growing season

Table 15. Seed yield in 2015 for the timothy trials established in 2014 at Beaverlodge, AB.

Company	Variety	2015 kg ha ⁻¹	2015 % of Climax
Barenbrug USA	Barfleo	1145	123
	Barpenta	824	88
	Bor01025	1287	138
	Bor01033	1248	134
	Bor01037	1147	123
	Bor2005	1223	131
	Bor88060	1229	132
	PHLR99	1231	132
Moore Sd Processors	MST0513	888	95
Check	Climax	933	100
CV%		14	
LSD _{0.05}		227	

Seeding date was 16 May 2014 and harvesting date was 10 August 2015.

Table 16. Plant height in 2015 for the timothy trials established in 2014 at Beaverlodge, AB.

Company	Variety	2015 cm
Barenbrug USA	Barfleo	116.8
	Barpenta	109.1
	Bor01025	110.9
	Bor01033	113.5
	Bor01037	111.8
	Bor2005	113.4
	Bor88060	119.8
	PHLR99	110.4
Moore Sd Processors	MST0513	107.5
Check	Climax	125.6
CV%		5
LSD _{0.05}		8

PRGST: Timothy-Established 2014



Picture 6. Timothy trial at Beaverlodge that established in 2014 and the picture dated on 4 July 2015.

Table 17. Summary of seed yield (% of Climax) in 2013 to 2015 for the timothy trials established 2012, 2013 and 2014 at Beaverlodge, AB.

			2013	2014	2015
Timothy established in 2012			% of Climax		
2012	Snow Brand Seed	Horizon	147	83	120
		SBT0002	113	77	92
		SBT0314	123	85	133
		SBT1005	55	54	71
	Moore Seed Processors	Alma	103	146	154
		APH1001	118	114	153
		APH1002	70	90	87
	AAFC	S9537	123	102	118
		S9520	114	97	134
	Check	Climax	100	100	100
			Seed yield kg ha ⁻¹		
Climax			486	674	283
			2014	2015	2016
Timothy established in 2013			% of Climax		
2013	Barenbrug USA	BAR BOO5	99	109	
		BAR D003	105	127	
		BAR 1006	81	109	
		BAR M002	94	105	
		BAR R001	113	118	
		BAR S004	110	117	
	Moore Seed Processors	Teuho	119	120	
		Tuukka	115	124	
		Varis	93	110	
	Check	Climax	100	100	
			Seed yield kg ha ⁻¹		
Climax			442	344	
			2015	2016	2017
Timothy established in 2014			% of Climax		
2014	Barenbrug USA	Barfleo	123		
		Barpenta	88		
		Bor01025	138		
		Bor01033	134		
		Bor01037	123		
		Bor2005	131		
		Bor88060	132		
		PHLR99	132		
	Moore Sd Processors	MST0513	95		
	Check	Climax	100		
			Seed yield kg ha ⁻¹		
Climax			933		