Western Canadian Grass Seed Testing Program



2009 Report

Coordinated by:



Peace Region Forage Seed Association
Sandra Burton

With Cooperating Research Sites in: British Columbia Alberta

Manitoba

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Introduction

This report provides a summary of the grass seed trials conducted under the Western Grass Seed Testing Program during 2009. 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 and agencies for their seed entries and sponsorship of our 2009 research endeavours:

Barenbrug USA Brett Young Pickseed Canada Snow Brand Seeds

The following groups and agencies are also thanked for cooperating with the program and managing the research sites:

Alberta Agriculture & Rural Development Agriculture & Agri-Food Canada Alberta Research Council Manitoba Forage Seed Association Peace Region Forage Seed Association

We thank the following for their partnership and help with custom seeding, spraying and mowing at the Fort St. John, BC site:

Peace River Agriculture Development Fund (PRAD)
BC Grain Producers Association

We especially appreciate the collaboration to hire/ share summer students and jointly share warehouse space for the last two seasons with:

Peace River Forage Association of BC

WGST Co-operating Research Sites and Contacts

Fort St. John, BC	Sandra Burton, PRFSA Coordinator Peace Region Forage Seed Association Box 6135, Fort St. John, BC V1J 4H6 Phone 877 630 2198 or (250) 789 6885 Fax (250) 789 6884 Email: coordinator@peaceforageseed.ca	Courtney Thompson, Summer Student c/o Peace Region Forage Seed Association Box 6135, Fort St. John, BC V1J 4H6 Phone 877 630 2198 or (250) 789 6885 Fax (250) 789 6884 Email: coordinator@peaceforageseed.ca
Beaverlodge, AB	Sandra Burton (interim contact) Peace Region Forage Seed Association Box 6135, Fort St. John, BC V1J 4H6 Phone 877 630 2198 or (250) 789 6885 Fax (250) 789 6884 Email: coordinator@peaceforageseed.ca	Owen Lee, Forage Technician Agriculture & AgriFood Canada Box 29, Beaverlodge, AB. T0M 0C0 Phone (780) 354-5140 Fax (780) 354-8171 Email: leeo@agr.gc.ca
Vegreville, AB	Jay Woosaree, Researcher Alberta Research Council Hwy. 16A, 75 Street Vegreville, Alberta Phone: (780) 632-8209 Fax: (780) 632-8612 E-mail: jay@arc.ab.ca	Marshall McKenzie, Technician Alberta Research Council Hwy. 16A, 75 Street Vegreville, Alberta Phone: (780) 632-8254 Fax: (780) 632-8612 E-mail: Marshall.McKenzie@arc.ab.ca
Arborg, MB	Heather McBey, MFSA Administrator Manitoba Forage Seed Association Box 2000 Arborg, MB. R0C 0A0 Phone (204) 376-3309 Fax (204) 376-3311 Email: hmcbey@forageseed.mb.ca	Laura Grzenda, MFSA Researcher Manitoba Forage Seed Association Box 2000 Arborg, MB. R0C 0A0 Phone (204) 376-3314 Fax (204) 376-3311 Email: lwgrzenda@forageseed.net

Date Collection Procedures

Seed Yield reported on a clean seed basis in kg per ha (yield in lb / ac = kg per ha x 1.1)

Harvest Date date the variety was swathed or cut

Plant Height measured in centimeters and is the height of the plant at harvest from ground level to the tip

of the seed head (height in inches = cm / 2.54)

Trial Procedures

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

* Please Note * Statistical Analysis Procedures *

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 3 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 Variance (ANOVA). Least significant difference (LSD) values are presented at the bottom of each table, when statistically significant differences are present at the 5% level of significance. This means there is a 95% probability that you can reject the hypothesis that the treatments are the same; in other words 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.

Protocol for Western Grass Seed Testing (WGST) Program

Revised February 2009

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 Western Grass Seed Testing Program.

The Peace Region Forage Seed Association and Manitoba Forage Seed Association will honour the commitment made to companies for entries prior to 2009, and will continue to collect data on those entries for the originally agreed upon \$120 CAN/entry/year/location.

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

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 bromegrass, wheatgrasses

Submitted seed shall be supplied by **March 31** 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. For 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 in 2009

- 1. Fort St. John, British Columbia
- 2. Beaverlodge, Alberta
- 3. Arborg, Manitoba

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



6. Test Description

Due to plot equipment differences and land availability at the various test sites, certain conditions must 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 will be harvested.

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

Bentgrasses - 18th Green - 4 yrs. Kentucky bluegrass - Abbey - 4 yrs Meadow bromegrass - Fleet - 3 yrs Smooth bromegrass - Carlton - 4 yrs Meadow fescue - Mimer - 4 yrs Red fescue - Boreal - 3 yrs Tall fescue - Courtenay - 4 yrs Orchardgrass - Kay - 3 yrs Annual ryegrass - Aubade - 1 yr Perennial ryegrass - Norlea - 2 yr Timothy - Climax - 4 yrs

Information to be recorded will include clean 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 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

8. 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.

9. For further information, contact:

Sandra Burton, Coordinator
Peace Region Forage Seed Association
Box 6135
Fort St. John, British Columbia
Canada V1J 4H6
Telephone 1 877 630 2198 or (250) 789 6885
Fax (250) 789-6884
coordinator@peaceforageseed.ca

Western Grass Seed Testing (WGST) Program

2009 Application for Entry

1. Company:		Telephone:				
Contact person:	Contact person:		Fax:			
Mailing address	:	Email:				
2. 2009 entries: P attach anoth		able completely. (if you wish	n to add more	e entries, plea		
	Type forage		%	Relative maturity early, medium,		
Species	or turf	Variety name/code	Germ	late		
		you wish your entries teste the current test year are fir		ap). The app		
Fort St. John, B Beaverlodge, Al						
Arborg, MB						
Send no later	than March 31,	2009 to:				

Sandra Burton, Coordinator
Peace Region Forage Seed Association
Box 6135
Fort St. John, British Columbia
Canada V1J 4H6
Telephone 1 877 630 2198 or (250) 789 6885
Fax (250) 789-6884
coordinator@peaceforageseed.ca

Fine Fescue Trials

Fine Fescue Trials Established in 2007
Fort St. John, British Columbia: 2009 Seed Production Results

		Seed Yield	Harvest	Plant Height
Company	Variety	(kg /ha)	Date	(cm)
Barenbrug USA	Hardtop	44	22-Jul	18
Check	Boreal	45	29-Jul	18
	Mean	44		18
	CV (%)	30		7.3
	LSD (0.05)	NS		NS
		$NS = not \ significantly \ different$		

^{***} extremely dry conditions in summer/fall 2008 & in spring/ summer 2009

Fine Fescue Trials Established in 2007 Beaverlodge, Alberta: 2009 Seed Production Results

		Seed Yield	Harvest	Plant Height
Company	Variety	(kg /ha)	Date	(cm)
Barenbrug USA	Hardtop	489	22-Jul	65
Brett Young	IS FRR 23	505	28-Jul	57
	IS FRR 29	530	28-Jul	57
Check	Boreal	630	28-Jul	74
	Mean	539		63
	CV (%)	20		5.2
	LSD (0.05)	NS		5.2

^{**} very dry conditions in summer 2008 & in spring 2009

Fine Fescue Trials Established in 2008 Fort St. John, BC: 2009 Seed Production Results

		Yield	Harvest	Height
Company	Variety	(kg /ha)	Date	(cm)
Brett Young	IS FRR 23	590	30-Jul	57
	IS FRR 29	573	30-Jul	57
Check	Boreal	558	30-Jul	74
	Mean	555		63
	CV (%)	10.2		7.6
	LSD (0.05)	NS		8.7

^{***} extremely dry conditions in summer/fall 2008 & in spring/ summer 2009

Fine Fescue Trials Established in 2008 Beaverlodge, Alberta: 2009 Seed Production Results

		Seed		Plant
		Yield	Harvest	Height
Company	Variety	(kg /ha)	Date	(cm)
Barenbrug USA	Hardtop	895	28-Jul	66
Brett Young	IS FRR 23	520	28-Jul	60
	IS FRR 29	894	28-Jul	67
Check	Boreal	280	28-Jul	52
	Mean	647		61
	CV (%)	27		10
	LSD (0.05)	282		NS

^{**} very dry conditions in summer 2008 & in spring 2009

Summary of Seed Yield (kg per ha) for Fine Fescues in Western Canada WGST 2007- 2009

				Seed yield / production year			
Year of				Fort Jol		Beave	rlodge
seeding	Species	Company	Variety	1	2	1	2
2006	Creeping red	Barenbrug USA	01-FR-1			856	733
			Barena III			439	459
			Barthema			451	325
			Barustic			742	527
		Turf Care	TL10709			945	502
		Check	Boreal			978	778
2007	Hard fescue	Barenbrug USA	Hardtop	470	44	349	489
	Creeping red	Brett Young	IS FRR 23			769	505
			IS FRR 29			798	530
		Check	Boreal	762	45	931	630
2008	Hard fescue	Barenbrug USA	Hardtop			895	
	Creeping red	Brett Young	IS FRR 23	590		520	
			IS FRR 29	573		894	
		Check	Boreal	558		280	

Tall Fescue Trials

Tall Fescue Trials Established in 2007 Beaverlodge, Alberta: 2009 Seed Production Results

		Seed		Plant
		Yield	Harvest	Height
Company	Variety	(kg/ha)	Date	(cm)
Barenbrug USA	BARFA 1005	454	11-Aug	51
	BAR 3FABRT9	420	11-Aug	94
	Bariane	504	11-Aug	92
	Barcarella	381	4-Aug	90
Check	Courtenay	814	4-Aug	99
	Mean	515		85
	CV (%)	20.1		12.3
	LSD (0.05)	159		16

^{**} very dry conditions in summer 2008 & in spring 2009

Tall Fescue Trials Established in 2008 Fort St. John, BC 2009: Seed Production Results

		Seed		Plant
		Yield	Harvest	Height
Company	Variety	(kg/ha)	Date	(cm)
Barenbrug USA	BARFA 1005	555	11-Aug	45
	BAR 3FABRT9	496	11-Aug	77
	Bariane	651	11-Aug	86
	Barcarella	383	11-Aug	76
Check	Courtenay	387	11-Aug	90
	Mean	494		75
	CV (%)	21.2		4.5
	LSD (0.05)	162		5.3

^{***} extremely dry conditions in summer/fall 2008 & in spring/ summer 2009

Tall Fescue Trials Reseded in 2008 Arborg, MB: 2009 Seed Production Results

		Seed		Plant			
		Yield	Harvest	Height			
Company	Variety	(kg/ha)	Date	(cm)			
Barenbrug USA	BARFA 1005	2072	13-Aug	112			
	BAR 3FABRT9	1314	13-Aug	112			
	Bariane	1102	13-Aug	122			
	Barcarella	1395	13-Aug	118			
Check	Courtenay	2430	13-Aug	126			
	Mean	1663		118			
	CV (%)	26.6		6.6			
	LSD (0.05)	681		12			
*							

^{*}very wet conditions in fall 2008 & spring/ summer 2009

Summary of Seed Yield (kg per ha) for Tall Fescues in Western Canada WGST 2007-2009

				Seed yield / production year					
Year of							Beav	erlodg	е
seeding	Company	Variety	Type	1	2	3	1	2	3
2007	Barenbrug USA	BARFA 1005	Turf				1305	454	
	•	BAR 3FABRT9	Forage				780	420	
		Bariane	Forage				713	503	
		Barcarella	Forage				903	381	
	Check	Courtenay	Forage				982	814	
Year of				For	t St. Jo	hn	Aı	borg	
seeding	Company	Variety	Type	1	2	3	1	2	3
2008	Barenbrug USA	BARFA 1005	Turf	555			2072		
		BAR 3FABRT9	Forage	496			1314		
		Bariane	Forage	651			1102		
		Barcarella	Forage	383			1395		
	Check	Courtenay	Forage	387			2430		

Orchard Grass Trials

Orchard Grass Trials Established in 2007 Beaverlodge, Alberta: 2009 Seed Production Results

		Seed		Plant
		Yield	Harvest	Height
Company	Variety	(kg/ha)	Date	(cm)
Barenbrug USA	Baridana	54	11-Jul	82
	Intensiv	58	11-Jul	93
Check	Kay	167	11-Jul	94
				·
	Mean	93		105
	CV (%)	68.0		10.1
	LSD (0.05)	NS		NS
		NS = not	significantly di	ifferent

^{**} very dry conditions in summer 2008 & in spring 2009

Orchard Grass Trials Established in 2007 Arborg, Manitoba: 2009 Seed Production Results

		Seed		Plant
		Yield	Harvest	Height
Company	Variety	(kg/ha)	Date	(cm)
Barenbrug USA	Baridana	132	10-Jul	115
	Intensiv	248	10-Jul	122
Check	Kay	271	10-Jul	128
	Mean	217		122
	CV (%)	16.5		2.9
	LSD (0.05)	81		8

^{*}very wet conditions in fall 2008 & spring/ summer 2009

Orchard Grass Trials Established in 2008 Fort St. John, British Columbia: 2009 Seed Production Results

		Seed		Plant
		Yield	Harvest	Height
Company	Variety	(kg/ha)	Date	(cm)
Barenbrug USA	Baridana	107	5-Aug	89
	Intensiv	102	5-Aug	89
Check	Kay	112	5-Aug	96
	Mean	107		91
	CV (%)	33.5		3.6
	LSD (0.05)	NS		6

^{***} extremely dry conditions in summer/fall 2008 & in spring/ summer 2009

Summary of Seed Yield (kg per ha) for Orchard Grass in Western Canada WGST 2007- 2009

					Seed yi	n year			
Year of				Ве	averlod	ge		Arborg	
seeding	Company	Variety	Type	1	2	3	1	2	3
2007	Barenbrug USA	Baridana	Forage	346	54		320	132	
	_	Intensiv	Forage	351	58		373	248	
	Check	Kay	Forage	346	167		368	271	
Year of				Fo	rt St. Jo	hn			
seeding	Company	Variety	Type	1	2	3			
2008	Barenbrug USA	Baridana	Forage	107	·				
		Intensiv	Forage	102					
	Check	Kay	Forage	112					

Timothy Trials

Timothy Trials Established in 2006 Beaverlodge, Alberta 2009 Seed Production Results

		Seed Yield	Harvest	Plant Height
Company	Variety	(kg / ha)	Date	(cm)
Brett Young	BY 19004	160	24-Aug	83
J	BY 98665	128	24-Aug	78
	BY 98667	146	24-Aug	78
	BY 99966	217	24-Aug	83
	BY 99984	84	24-Aug	84
	CT70-9704	126	24-Aug	83
	FLP 07	58	24-Aug	80
	INDH 9803	153	24-Aug	77
Check	Climax	119	24-Aug	81
	Mean	132		81
	CV (%)	37.0		10.8
	LSD (0.05)	71		NS
		NS = not	significantly of	lifferent

NS = not significantly different

^{**} very dry conditions in summer 2008 & in spring 2009

Timothy Trials Established in 2007 Fort St. John, British Columbia: 2009 Seed Production Results

		Seed		Plant
		Yield	Harvest	Height
Company	Variety	(kg /ha)	Date	(cm)
Barenbrug USA	Bor 9911	62	14-Aug	81
	Bor 2005	75	14-Aug	77
Brett Young	BY 19004	41	14-Aug	75
	BY 98665	76	14-Aug	75
	BY 98667	56	14-Aug	73
	BY 99966	59	14-Aug	69
	BY 99984	36	14-Aug	75
	CT 70-9704	51	14-Aug	72
	FLP07	21	14-Aug	76
	INPH 9803	61	14-Aug	76
Check	Climax	64	14-Aug	83
	Mean	55		76
	CV (%)	75.5		10.8
	LSD (0.05)	NS		NS
		NS = nc	ot significantly	different

Timothy Trials Established in 2007 Arborg, Manitoba: 2009 Seed Production Results

		Seed		Plant
		Yield	Harvest	Height
Company	Variety	(kg/ha)	Date	(cm)
Barenbrug USA	Bor 9911	414	21-Aug	106
	Bor 2005	467	21-Aug	110
Check	Climax	593	21-Aug	106
	Mean	492		107
	CV (%)	25.7		3.2
	LSD (0.05)	NS		NS
		NS = no	t significantly	different

^{*}very wet conditions in fall 2008 & spring/ summer 2009

NS = not significantly different ***extremely dry conditions in summer/fall 2008 & in spring/ summer 2009

Timothy Trials Established in 2008

Fort St. John, British Columbia: 2009 Seed Production Results

	Seed		Plant
	Yield	Harvest	Height
Variety	(kg /ha)	Date	(cm)
Hokuei	65	14-Aug	93
Horizon	72	14-Aug	73
Sirius	26	14-Aug	82
Zepher	124	14-Aug	71
SBT0001	89	14-Aug	74
SBT0301	75	14-Aug	75
SBT0308	79	14-Aug	73
SBT0309	68	14-Aug	71
SBT0310	93	14-Aug	74
Climax	133	14-Aug	73
Mean	82		76
CV (%)	65.6		8.9
LSD (0.05)	NS		10
	Hokuei Horizon Sirius Zepher SBT0001 SBT0301 SBT0308 SBT0309 SBT0310 Climax Mean CV (%)	Variety Yield Variety (kg /ha) Hokuei 65 Horizon 72 Sirius 26 Zepher 124 SBT0001 89 SBT0308 79 SBT0309 68 SBT0310 93 Climax 133 Mean 82 CV (%) 65.6	Variety Yield (kg /ha) Harvest Hokuei 65 14-Aug Horizon 72 14-Aug Sirius 26 14-Aug Zepher 124 14-Aug SBT0001 89 14-Aug SBT0301 75 14-Aug SBT0308 79 14-Aug SBT0309 68 14-Aug SBT0310 93 14-Aug Climax 133 14-Aug Mean 82 CV (%) 65.6

^{***} extremely dry conditions in summer/fall 2008 & in spring/ summer 2009

Timothy Trials Established in 2008 Arborg, Manitoba: 2009 Seed Production Results

		Seed Yield	Harvest	Plant Height
			i iai vest	· ·
Company	Variety	(kg /ha)	Date	(cm)
Snow Brand Seeds	Hokuei	411	13-Aug	122
	Horizon	958	14-Aug	120
	Sirius	420	14-Aug	128
	Zepher	816	13-Aug	121
	SBT0001	792	13-Aug	124
	SBT0301	732	13-Aug	123
	SBT0308	702	14-Aug	121
	SBT0309	602	14-Aug	124
	SBT0310	787	14-Aug	126
Check	Climax	850	13-Aug	117
				_
	Mean	707		123
	CV (%)	10.3		3.2
	LSD (0.05)	105		6

^{*}very wet conditions in fall 2008 & spring/ summer 2009

Summary of Seed Yield (kg per ha) for Timothy in Western Canada 2006 – 2009

			Seed yield / production year								
Establ			For	t St.Jo		Beaverlodge			F		
Year	Company	Variety	1	2	3	1	2	3	1	2	3
2006	Brett Young	BY 19004				221	145	160			
		BY 98665				452	257	128			
		BY 98667				387	213	146			
		BY 99966				425	341	217			
		BY 99984				242	236	84			
		CT 70-9704				371	123	126			
		FLP07				281	57	58			
		INPH 9803				392	276	153			
	Check	Climax	004			404	220	119	400	44.4	
2007	Barenbrug USA	Bor 9911	291	62					439	414	
	Draft Value	Bor 2005	220	75					568	467	
	Brett Young	BY 19004 BY 98665	170 285	41 76							
		BY 98667	214	56							
		BY 99966	328	59							
		BY 99984	228	36							
		CT 70-9704	132	51							
		FLP07	103	21							
		INPH 9803	351	61							
	Check	Climax	283	64					516	593	
2008	Snow Brand Seeds	Hokuei	65			*			411		
		Horizon	72			*			958		
		Sirius	26			*			420		
		Zepher	124			*			816		
		SBT0001	89			*			792		
		SBT0301	75			*			732		
		SBT0308	79			*			702		
		SBT0309	68			*			602		
		SBT0310	93			*			787		
	Check	Climax	133			*			850		

^{*} Due to droughty conditions, poor establishment at both Peace Region sites in 2008.

Decision made in consultation with Snow Brand to keep FSJ site, to evaluate variety response to drought; but reseed Beaverlodge in 2009.

Summary of all WGST Trials At 3 Sites Established 2006 - 2009

Company	Species	Variety	F	ort S	t. Johr	ı	E	Beave	rlodge		Α	rborg	
	<u>-</u>	_	2006	2007	2008	2009	2006	2007	2008	2009	2007	2008	2009
Barenbrug USA		Hardtop		X				X		X			
	Tall fescue	BARFA 1005			X			X			X	X	
	Tall fescue	BAR3FABRT9			X			X			X	X	
	Tall fescue	Bariane			X			X			X	X	
	Tall fescue	Barcarella			X			X			X	X	
	Timothy	Bor 9911		X							X		
	Timothy	Bor 2005		X							X		
	Kentucky bluegrass	BAR PP 0468									X		
	Kentucky bluegrass	BAR VV 8536									X		
	Orchard grass	Baridana			X			X			X		
	Orchard grass	Intensiv			X			X			X		
	Perennial ryegrass	Remington									X		
Brett Young	Timothy	BY19004	Х	Х			х						
	Timothy	BY 98665	х	X			х						
	Timothy	BY 98667	x	X			х						
	Timothy	BY 99966	x	X			х						
	Timothy	BY 99984	x	X			х						
	Timothy	CT70-9704	x	X			х						
	Timothy	FLP 07	x	X			х						
	Timothy	INPH 9803	x	X			х						
	Creeping red fescue	IS FRR 23			X			X		X			
	Creeping red fescue	IS FRR 29			X			X		X			
Pickseed	Creeping red fescue	Garnet				х				х			
	Creeping red fescue	SR 5250				X				х			
Snow Brand	Timothy	Hokuei			Х				Х	X		х	
	Timothy	Horizon			X				X	X		X	
	Timothy	Sirius			X				X	X		X	
	Timothy	Zepher			X				X	X		X	
	Timothy	SBT0001			X				X	X		X	
	Timothy	SBT0301			X				X	X		X	
	Timothy	SBT0308			X				X	X		X	
	Timothy	SBT0309			X				X	X		X	
	Timothy	SBT0310			X				X	X		X	
Total Entries Fror	n All Years & All Co.	112	8	11	17	2	8	9	12	14	11	13	0
Total plots comple	eted in 2009	8									1		
Total plots reseed	ded for co./ no charge	41	8	8	6				3	12	4		
Total 2006 Resea		8	8										
Total 2007 Resea	•	8		8									
Total 2008 Resea	•	13			6				3			4	
Total 2009 Resea	eding	12								12			
Total Entries Inv	oiced for in 2009	68	0	11	17	2	8	9	0	2	6	13	0