

**ONTARIO  
FORAGE CROP INVESTIGATIONS**



**1977 REPORT ON FIELD TRIALS  
OF VARIETIES AND MIXTURES**

- Kapuskasing
- Thunder Bay
- Ridgetown
- Kemptville
- New Liskeard
- Guelph
- Ottawa

## FOREWORD

This Forage Investigations Report contains data and information obtained from variety tests and production trials conducted under the auspices of the Ontario Forage Crops Committee. Generally, only data collected in 1977 are included. However, in some cases data from previous years are included. It should be noted however, that all data available on one variety or on one management practice, may not be included.

The trials reported here were carried out by personnel of the following research establishments in Ontario:

Research Station, Ottawa

Experimental Farm, Kapuskasing

Experimental Farm, Thunder Bay

College of Agricultural Technology, Kemptville

College of Agricultural Technology, New Liskeard

College of Agricultural Technology, Ridgetown

Ontario Agricultural College, University of Guelph, Guelph

Forage Seed Survey - 1977 Report

	<u>Lbs shipped - July 1/75 to June 30, 1976</u>	<u>Lbs shipped - July 1/76 to June 30, 1977</u>	<u>1977 as % of 1976</u>
<u>Alfalfa</u>			
<u>Total, Public Varieties</u>	2,124,400	1,747,400	82%
Algonquin	41,100	48,000	117%
Iroquois	182,000	309,900	170%
Saranac	550,600	367,400	67%
Vernal	1,342,300	980,900	73%
Other public varieties	8,400	41,200	490%
<u>Total, Proprietary Varieties</u>	678,900	733,600	108%
Total, Pedigreed Seed	2,803,300	2,481,000	88%
<u>Total, Commercial</u>	646,100	617,600	96%
Total, All Alfalfa Seed	3,449,400	3,098,600	90%
<u>Red Clover</u>			
<u>Total, Public Varieties</u>	47,500	33,300	70%
Lakeland	20,700	18,300	88%
Ottawa	26,800	15,000	56%
<u>Total, Commercial</u>	1,007,900	1,129,600	112%
Double Cut Comm.	739,300	880,200	119%
Single Cut Comm.	268,600	249,400	93%
Total, All Red Clover Seed	1,055,400	1,162,900	110%
<u>Birdsfoot Trefoil</u>			
<u>Total, Public Varieties</u>	333,400	180,400	54%
Empire	190,600	95,300	50%
Leo	142,800	85,100	60%
<u>Other Varieties (Public and Proprietary)</u>	17,900	10,100	56%
Total, Pedigreed Seed	351,300	190,500	54%
<u>Total, Commercial</u>	210,100	197,400	94%
Total, all Trefoil Seed	561,400	387,900	69%

	<u>1976</u>	<u>1977</u>	<u>1977 as % of 1976</u>
<u>White Clover</u>			
Ladino	119,800	109,500	91%
Commercial & other varieties	101,600	74,300	73%
Total, all White Clover	221,400	183,800	83%
<u>Alsike Clover</u>			
Commercial & varieties	449,500	406,400	90%
<u>Sweet Clover</u>			
Commercial	237,900	252,800	106%
<u>Timothy</u>			
Total, Public Varieties	1,500,700	1,242,600	83%
Climax	1,042,700	824,600	79%
Champ	424,200	418,000	98%
Other public	33,800	--	--
<u>Total, Proprietary Varieties</u>	109,000	54,100	50%
Total, Pedigreed Seed	1,609,700	1,296,700	80%
<u>Total, Commercial</u>	891,100	1,015,100	114%
Total, all Timothy Seed	2,500,800	2,311,800	92%
<u>Bromegrass</u>			
Saratoga	101,900	61,000	60%
Other varieties	273,400	175,900	64%
<u>Total, Pedigreed Seed</u>	375,300	236,900	63%
<u>Total, Commercial Seed</u>	616,700	451,000	73%
Total, all Brome Seed	992,000	687,900	69%

	<u>1976</u>	<u>1977</u>	<u>1977 as % of 1976</u>
<u>Orchard Grass</u>			
<u>Public Varieties</u>	34,400	15,300	44%
<u>Proprietary Varieties</u>	65,900	53,400	81%
Total, Pedigreed Seed	100,300	68,700	68%
<u>Total, Commercial</u>	99,700	76,300	76%
Total, all Orchard Grass	200,000	145,000	72%
<u>Reed Canary Grass</u>			
Pedigreed Seed	2,200	--	--
Commercial	26,200	12,600	48%
Total, all Reed Canary Seed	28,400	12,600	44%
<u>Meadow Fescue</u>			
Total, Commercial & varieties	133,000	98,000	74%
<u>Tall Fescue</u>			
Total, Commercial & varieties	130,300	75,400	58%
<u>Total Seed Sales</u> (above species)	9,959,500	8,823,100	88.5%

## Ontario Alfalfa Trials

- 1975 Seedings:
- a. Early Cultivars: Saranac, Anchor Thor, Angus, WL311, WL318, K1-7, K1-10, Maris Phoenix, 131, CW5, Pacer, Saranac A.R., Honeoye, Vista, Apollo, Victor, Olympic
  - b. Medium Cultivars: Vernal, Iroquois, Weevlcheck, Titan, WL202, WL210, WL215, 520, Algonquin, EA21, Polar-1, Agate, Ramsey, 521, K3-15, MLM 02015, MLM 02016, MLM 02017
  - c. Test Locations: Ridgetown, Ottawa, Kapuskasing.
- 1976 Seedings:
- a. Early Cultivars: Angus, Anchor, Thor, Saranac, Apollo, Victor, Olympic, Vista, 530, Atlas, NAPB51
  - b. Medium Cultivars: Iroquois, Vernal, Weevlcheck, Titan, WL202, WL210, WL215, 520, A21, Algonquin, Valor, 521, K3-15, MLM 02015, MLM 02016, MLM 02017, MLM 02018, MLM 02019, MLM 02020, G747, CW9
  - c. Test Locations: Ridgetown, Elora, Kemptville, Ottawa, Thunder Bay
- 1977 Seedings:
- a. Early Cultivars: Anchor, Angus, Banner, Saranac, Thor, Pacer, Ceres, Atlas, NaPB51, NaPB61(Trident), NaPB63(Answer), WL318, 531, P510, CW4, Syn C.T.
  - b. Medium Cultivars: Iroquois, Algonquin, Weevlcheck, 520, Titan, Valor, Vernal, WL202, WL215, MLM 02018, MLM 02019, MLM 02020, G747, CW9, 524, 540, WL220, CWZ, Dekalb 120.
  - c. Test Locations: Ridgetown, Guelph, Kemptville, Ottawa, New Liskeard.

Early Alfalfa Varieties

CURRENT STATUS OF VARIETIES - OCTOBER 1, 1977

<u>Variety</u>	<u>Entered by</u>	<u>Official Status</u>	<u>Station years of data</u>
Anchor	O.F.C.C.	Recommended, Pub. 296	-
Thor	"	" "	-
Angus	"	" "	-
Saranac	"	" "	-
Banner (Pioneer 530)	"	" "	-
Ceres (WL311)	"	" "	-
Citation (R.P.103)	N.A.P.B.	Licensed, Mar.'77, deferred rec. (1)	-
Pacer	OSECO	Licensed, Jan.'77, deferred rec. (1)	-
K1-7 (Primal)	Nat. N.K.	Support for lic., deferred rec. (1)	-
K1-10	Nat. N.K.	" "	-
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*131	Dekalb	Not supported, 1976, Examine	8*
*CW5	Cal/West	Not supported, 1976	8*
*Honeye	O.F.C.C.	" "	8*
*Saranac AR	O.F.C.C.	" "	8*
*Maris Phoenix	N.A.P.B.	" "	8*
Vista	Pickseed		6
Apollo	OSECO		6
Victor	OSECO		6
Olympic	OSECO		6
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Atlas	OSECO		4
NAPB 51	OSECO		4
WL 318	OSECO		4
NAPB 61 (Trident)	OSECO		0
NAPB 63 (Answer)	OSECO		0
Syn CT	U.C.O.		0
CW 4	Cal/West		0
PS 10	Pickseed		0
531	Pioneer		0

\*Examined in 1976 with 6 station years data, at which time performance did not warrant support.

Disposition of Varieties

At the November meeting (1977) of the Ontario Forage Crops Committee, the following decisions were made with regard to early varieties of alfalfa:

- Citation - recommend in 1978
- Pacer - " " "
- K1-7 (Primal) - defer recommendation (inadequate seed supplies)
- K1-10 - " " " " "
- 131 )
- CW5 )
- Honeoye ) No support for licensing or recommendation.
- Saranac AR ) Discontinue testing.
- Maris Phoenix )
- Vista - Recommend in 1978.
- Apollo - Recommend in 1978.
- Victor (Vanguard) -)
- Olympic ) Re-examine in 1978.



The following tests of early alfalfa varieties were harvested in 1977.

<u>Year Seeded</u>	<u>Location</u>
*1973	Ridgetown
*1974	Guelph
1975	Ridgetown
	Kapuskasing
1976	Ridgetown
	Guelph
	Kemptville
	Ottawa

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\*Yield data from these two tests were not used in variety comparisons.

Summaries of yield data for early alfalfa seeded in 1975 and 1976

	Angus	Vista	Apollo	Vanguard	Olympic
Kapuskasing 76	7500	7661	7835	6718	7347
77	6578	6749	6483	6086	5850
Ridgetown 77	15172	15270	14944	14961	14703
Guelph 77	14156	15373	14513	14598	15307
Kemptville 77	4713	4710	4802	4867	4806
Ottawa 77	9841	9976	9882	8463	9426
Mean North	7039	7205	7159	6402	6599
Mean South	10971	11337	11035	10722	11061
Mean Province	9660	9957	9743	9282	9573

Summary of yield data on CW5, 131, Honeoye, Saranac AR and Maris Phoenix.  
early alfalfas (not supported in 1976)

	CW5	131	Honeoye	Saranac AR	Maris Phoenix	Angus
Guelph 75	7492	8843	9231	9190	9101	8946
76	12544	12849	12930	12388	12409	12411
Ottawa 75	10674	12147	11161	10950	11230	11539
Thunder Bay 75	6351	5889	6351	5625	5636	6065
Ridgetown 76	12969	12239	13111	13589	13535	14037
77	14013	13324	13853	13690	13445	14569
Kapuskasing 76	7366	8136	7606	7306	7095	7314
77	6072	6315	6639	6441	6258	6578
Mean North	6596	6780	6865	6457	6330	6652
Mean South	11538	11880	12057	11961	11944	12300
Mean Province	9685	9968	10110	9897	9839	10182

Yields (Kg/ha) of Some Early Alfalfa Varieties  
in comparison with Angus

<u>Comparisons</u>	<u>N. Ontario</u>		<u>S. Ontario</u>		<u>Mean</u>	
	<u>Cut 1</u>	<u>Total</u>	<u>Cut 1</u>	<u>Total</u>	<u>Cut 1</u>	<u>Total</u>
Angus	3800	6710	5730	12,300	5010	10,200
131	3860	6780	5290	11,880	4760	9,970
CW5	3660	6600	5020	11,540	4510	9,680
Honeoye	3810	6870	5570	12,060	4910	10,110
Saranac AR	3580	6490	5350	11,960	4680	9,910
Maris Phoenix	3560	6330	5380	11,940	4700	9,840
Angus	3910	7040	4990	10,970	4630	9660
Vista	4150	7200	5080	11,330	4770	9960
Apollo	4080	7160	4940	11,040	4650	9740
Victor (Vanguard)	3630	6400	4840	10,720	4440	9280
Olympic	3710	6600	4990	11,060	4570	9570

Exp. 1031. Early Alfalfa (1973) Ridgetown

<u>Variety</u>	<u>Total Seasonal Yield</u>		
	<u>1974-75</u>	<u>1976</u>	<u>1977</u>
Thor	12,880	11,210	8,620
Angus	12,380	11,420	9,170
EA-91	12,380	10,680	8,680
Saranac	12,240	10,840	9,120
Citation	12,120	10,680	9,550
Anchor	12,110	11,400	9,880
Nuggett	11,820	10,460	9,220
		4.3	10.5
C.V.		N.S.	N.S.
L.S.D.			

Exp. 2738. Early Alfalfa (1974) Guelph

<u>Variety</u>	<u>Total Seasonal Yield</u>	
	<u>1975-76</u>	<u>1977</u>
Citation	11,280	12,440
WL 311	11,170	12,170
Anchor	11,080	12,170
131	10,850	12,070
Honeoye	11,080	11,960
KL-7	11,510	11,790
Saranac	10,730	11,740
Pacer	10,960	11,390
Angus	10,680	11,310
530	11,020	11,240
CW5	10,020	11,180
Nuggett	10,640	11,120
Thor	10,950	10,920
Saranac AR	10,750	10,600
Maris Phoenix	10,760	10,540
KL-10	10,700	10,270
		8.2
C.V.		N.S.
L.S.D.		

Early Alfalfa Tests

1975 SEEDING

RIDGETOWN (1038)

	1976	1977	2-YR MEAN
SARANAC	13074	13959	13517
ANCHOR	13050	14604	13827
THOR	13297	14352	13825
ANGUS	14032	14569	14301
WL 311	13675	14064	13870
WL 318	13337	13860	13599
K1-7	13440	14135	13788
K1-10	14026	13874	13950
131	12239	13324	12782
CW5	12968	14013	13491
PACER	13986	14565	14276
SARANAC AR	13588	13690	13639
HONEOYE	13111	13853	13482
MARIS PHOENIX	13535	13445	13490
L.S.D. 5% (KG/HA)	775	859	
C.V.	4.05%	4.29%	
F.	**	N.S.	

1975 SEEDING

KAPUSKASING (6484)

	1976	1977	2-YR MEAN
SARANAC	7307	6641	6974
ANCHOR	7418	6728	7073
THOR	7681	6776	7229
ANGUS	7500	6578	7039
WL 311	7828	6497	7163
WL 318	8219	6296	7258
K1-7	7170	6413	6792
K1-10	7677	6338	7008
131	8136	6315	7226
CW5	7366	6072	6719
PACER	7368	6647	7008
SARANAC A.R.	7390	6441	6916
HONEOYE	7605	6639	7122
VISTA	7661	6749	7205
APOLLO	7835	6483	7159
OLYMPIC	7347	5850	6599
VANGUARD	6718	6086	6402
MARIS PHOENIX	7094	6258	6676
L.S.D. 5% (KG/HA)	1227	654	
C.V.	9.85%	7.15%	
F.	N.S.	N.S.	

Exp. 1038 EARLY ALFALFA, Ridgetown

Seeded 1975

<u>VARIETY</u>	<u>Yield (Kg/ha) - 1977</u>			
	<u>CUT 1</u>	<u>CUT 2</u>	<u>CUT 3</u>	<u>TOTAL</u>
R.P. 38 (ANCHOR)	5990	5190	3420	14,600
OD-17 (ANGUS) CHECK	6240	5140	3190	14,570
PACER	6070	5190	3300	14,560
NK-150 (THOR)	5530	5490	3330	14,350
K1-7 (Primal)	5560	5150	3420	14,130
WL-311 (Ceres)	5400	5260	3400	14,060
CW5 (CAL WEST)	5550	5120	3340	14,010
SARANAC	5260	5310	3390	13,960
K1-10	5400	5260	3210	13,870
WL-318 (WL-218)	5170	5440	3250	13,860
HONEOYE	5550	5110	3190	13,850
SARANAC AR	5300	5160	3230	13,690
MARIS PHOENIX	5330	5000	3110	13,440
DEKALB 131	4970	5130	3220	13,320
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LSD 5%	570	N.S.	N.S.	N.S.
MEAN	5520	5210	3290	14,020
CV	7.2	6.6	7.1	4.3

Exp. 6484 EARLY ALFALFA, Kapuskasing

Seeded 1975

<u>VARIETY</u>	<u>Yield (Kg/ha) - 1977</u>		<u>TOTAL</u>
	<u>CUT 1</u>	<u>CUT 2</u>	
NK-150 (THOR)	3710	3070	6780
VISTA	3760	2990	6750
R.P.38 (ANCHOR)	3640	3090	6730
PACER	3590	3050	6640
SARANAC	3520	3120	6640
HONEOYE	3540	3100	6640
OD-17 (ANGUS) - CHECK	3600	2980	6580
WL-311 (CERES)	3320	3170	6490
APOLLO	3390	3100	6490
SARANAC AR	3450	2990	6440
K1-7 (PRIMAL)	3290	3130	6420
K1-10	3370	2970	6340
DEKALB 131	3380	2940	6320
WL-318 (WL-218)	3230	3060	6290
MARIS PHOENIX	3380	2880	6260
VANGARD (VICTOR)	3350	2730	6080
CW5 (CAL WEST)	3140	2930	6070
OLYMPIC	3140	2710	5850
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LSD 5%	N.S.	N.S.	N.S.
MEAN	3430	3000	6430
CV =	10.4	7.9	7.2

## 1976 SEEDING

## RIDGETOWN (1041)

	CUT 1	CUT 2	CUT 3	TOTAL KG/HA
ATLAS	6009	6151	3640	15800
ANCHOR	5838	6314	3360	15512
THOR	6040	5927	3532	15499
NAPB 51	5851	5886	3575	15312
SARANAC	5840	5899	3554	15293
VISTA	5840	5870	3560	15270
BANNER	5686	6040	3539	15265
ANGUS	5493	6302	3377	15172
VANGUARD	5848	5914	3200	14962
APOLLO	5374	5915	3654	14943
OLYMPIC	5606	5703	3394	14703
L.S.D. 5% (KG/HA)	657	621	313	1029
C.V.	7.90%	7.18%	6.22%	4.68%
F.	N.S.	N.S.	N.S.	N.S.

## 1976 SEEDING

## GUELPH (2764)

	CUT 1	CUT 2	CUT 3	TOTAL KG/HA
VISTA	6060	5650	3662	15372
OLYMPIC	6056	5400	3852	15308
BANNER	6090	5478	3672	15240
ATLAS	6085	5210	3408	14703
THOR	5791	5400	3430	14621
VANGUARD	5883	5385	3330	14598
APOLLO	5877	5346	3290	14513
SARANAC	5677	5301	3455	14433
ANCHOR	5388	5691	3240	14319
ANGUS	5884	5186	3086	14156
NAPB 51	5338	5298	3489	14125
L.S.D. 5% (KG/HA)	490	536	473	1011
C.V.	5.82%	6.88%	9.49%	4.77%
F.	*	N.S.	N.S.	N.S.



## 1976 SEEDING

## KEMPTVILLE (3001)

	CUT 1	CUT 2	CUT 3	TOTAL (KG/HA)
THOR	4352	1262	0	5614
BANNER	4077	1272	0	5349
SARANAC	4024	1285	0	5309
ATLAS	3703	1363	0	5066
ANCHOR	3773	1277	0	5050
VANGUARD	3672	1194	0	4866
OLYMPIC	3501	1305	0	4806
APOLLO	3617	1184	0	4801
ANGUS	3491	1221	0	4712
VISTA	3508	1202	0	4710
NAPB 51	3415	1217	0	4632
L.S.D. 5% (KG/HA)	811	290	0	889
C.V.	15.02%	16.05%	0	12.33%
F.	N.S.	N.S.	-	N.S.

## 1976 SEEDING

## OTTAWA (4011)

	CUT 1	CUT 2	CUT 3	TOTAL (KG/HA)
THOR	4955	2489	3003	10447
SARANAC	4886	2346	2829	10061
VISTA	4899	2383	2694	9976
APOLLO	4880	2285	2716	9881
ANGUS	5106	2243	2491	9840
BANNER	4524	2338	2870	9732
ATLAS	4662	2215	2644	9521
OLYMPIC	4817	2049	2560	9426
ANCHOR	4362	2340	2718	9420
NAPB 51	4236	1979	2422	8637
VANGUARD	3981	1997	2484	8462
L.S.D. 5% (KG/HA)	554	299	455	1086
C.V.	8.23%	9.24%	11.77%	7.85%
F.	**	*	N.S.	*

Medium Alfalfa Varieties

CURRENT STATUS OF VARIETIES - OCT. 1, 1977

<u>Variety</u>	<u>Entered by</u>	<u>Official Status</u>	<u>Station Years of Data</u>
Algonquin	O.F.C.C.	Recommended, Pub. 296	-
Iroquois	"	"	-
520	"	"	-
Titan	"	"	-
Valor	"	"	-
Vernal	"	"	-
WL 202	"	"	-
WL 215	"	"	-
Weevlchek	"	"	-
Klondike	M.L.M.	Support for licence, deferred rec. (2)	-
02015	M.L.M.		9
02016	M.L.M.		9
02017	M.L.M.		9
K3-15	Nat. N.K.		9
521	Pioneer		9
K3-11	Nat. N.K.		6
Agate	O.F.C.C.		6
Polar 1	Nat. N.K.		6
Ramsey	O.F.C.C.		4
02018	M.L.M.		5
02019	M.L.M.		5
02020	M.L.M.		5
CW9	Pickseed		5
G 747	Funks		5
A 21	O.F.C.C.		5
WL 220	O.S.E.C.O.		0
Dekalb 120	Dekalb		0
CW2	Cal West		0
524	Pioneer		0
540	Pioneer		0

Disposition of Varieties

At the November meeting (1977) of the O.F.C.C., the following decisions were made with regard to medium varieties of alfalfa:

- Klondike - Defer recommendation
- 02015 - Support for licence and defer recommendation
- 02016
- 02017
- K3-15 } - Re-examine in 1978
- 521
- K3-11
- Agate } - No support for licencing or recommendation. Discontinue testing
- Polar I }

The following tests of medium alfalfa varieties were harvested in 1977.

<u>Year Seeded</u>	<u>Location</u>
*1973	Ridgetown
*1974	Guelph
1975	Ridgetown
	Kapuskasing
1976	Ridgetown
	Guelph
	Kemptville
	Ottawa
	Thunder Bay

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\*Yield data from these two trials were not used in variety comparisons.

Summary of yield data of medium alfalfa varieties  
seeded in 1975 and 1976

		Iroquois	MLM 02015	MLM 02016	MLM 02017	K3-15	521
Ridgetown	76	14014	13592	13436	13539	13087	13371
	77	13904	14254	13765	14272	13864	13441
Kapuskasing	76	7552	7839	7769	7719	8013	7530
	77	6697	6716	6728	7420	6440	6664
Ridgetown	77	15298	15468	15303	15986	14841	14880
Ottawa	77	9957	8876	9002	9549	9191	9747
Kemptville	77	4575	5573	5267	5331	4707	5018
Guelph	77	14525	15878	15691	15902	14634	14736
Thunder Bay	77	11398	9931	10361	11151	10508	10718
Mean	North	8549	8162	8286	8763	8320	8304
Mean	South	12046	12274	12077	12430	11721	11866
Mean	Province	10880	10903	10814	11208	10587	10678

Summary of yield data of K3-11, Agate and Polar-1 medium alfalfa

		Iroquois	K3-11	Agate	Polar-1
Guelph	75	9668	8906	9117	9389
Thunder Bay	75	6384	4885	4815	5332
Ridgetown	76	14014	13674	12656	13835
	77	13904	13756	12333	13595
Kapuskasing	76	7552	7418	7668	7504
	77	6697	6397	6079	6670
Mean	North	6878	6233	6187	6502
Mean	South	12529	12112	11369	12273
Mean	Province	9703	9173	8778	9388

Yields (Kg/ha) of Some Medium Maturing Alfalfa Varieties  
(in comparison with Iroquois)

<u>Comparison</u>	<u>N. Ontario</u>		<u>S. Ontario</u>		<u>Mean</u>	
	<u>Cut 1</u>	<u>Total</u>	<u>Cut 1</u>	<u>Total</u>	<u>Cut 1</u>	<u>Total</u>
Iroquois	4680	8550	5470	12,050	5200	10,880
MLM 02015	4360	8160	5460	12,270	5100	10,900
MLM 02016	4400	8290	5340	12,080	5030	10,810
MLM 02017	4670	8760	5510	12,430	5230	11,210
K3-15	4450	8320	5090	11,720	4880	10,590
Pioneer 521	4430	8300	5400	11,870	5070	10,680
Iroquois	3920	6880	5940	12,530	4933	9700
K3-11	3600	6230	5540	12,110	4571	9170
A gate	3510	6190	5350	11,370	4430	8780
Polar I	3600	6500	5480	12,270	4540	9390

Exp. 1030. Standard Alfalfa (1973) Ridgetown

<u>Variety</u>	<u>1974-75</u>	<u>1976</u>	<u>1977</u>
520	12,710	12,580	11,700
Kodiac	12,670	11,040	10,540
Weelvcheck	12,650	11,510	10,350
Valor	12,600	12,380	10,680
WL 202	12,580	12,300	11,390
WL 210	12,490	11,590	9,740
Iroquois	12,490	12,530	10,980
Aztec	12,480	11,530	10,560
EA-21	12,420	11,500	10,070
Algonquin	12,350	11,110	9,740
N7-5	12,314	12,600	10,160
Titan	12,200	11,770	10,780
Vernal	12,000	11,560	10,680
WL-215	11,980	11,260	10,940
		<hr/>	
	C.V.	6.9%	5.9%
	L.S.D.	N.S.	890

In 1977, no variety yielded significantly more forage than Iroquois. The following varieties yielded significantly less:

EA-21  
WL 210  
Algonquin

Exp. 2737. Standard Alfalfa (1974) Guelph

<u>Variety</u>	<u>Total Seasonal Yield</u>		
	<u>1975</u>	<u>1976</u> (1 cut only)	<u>1977</u>
520	8,980	4,640	10,380
Kodiak	8,980	4,700	10,180
Iroquois	9,670	4,380	10,100
Klondike	9,130	4,910	9,950
Agate	9,120	4,580	9,840
WL-202	9,280	4,560	9,770
WL-210	9,270	4,770	9,590
Ramsey	8,130	4,600	9,510
Vernal	9,220	4,530	9,450
P-18 (Polar-1)	9,390	3,970	9,380
Weevlcheck	8,850	4,570	9,250
Valor	8,640	4,390	9,180
WL 318 (WL 218)	9,400	4,820	9,120
Titan	8,560	4,340	9,090
Aztec	8,620	4,000	8,940
Algonquin	8,600	4,400	8,900
K3-11	8,910	4,170	8,850
	11.1	9.8	6.9
C.V.	N.S.	N.S.	N.S.
L.S.D.			



Medium Alfalfa Tests

1975 SEEDING

RIDGETOWN (1037)

	1976	1977	2-YR MEAN
TITAN	14021	14005	14013
IROQUOIS	14014	13904	13959
WL-215	13896	13899	13898
WEEVLCHECK	13882	14001	13942
ALGONQUIN	13871	14231	14051
POLAR-1	13835	13595	13715
VERNAL	13813	13457	13635
520	13784	14084	13934
WL-202	13710	13726	13718
K3-11	13674	13755	13715
MLM 02015	13592	14254	13923
MLM 02017	13539	14272	13906
MLM 02016	13436	13765	13601
521	13371	13441	13406
WL-210	13369	13693	13531
K3-15	13087	13864	13476
AGATE	12656	12333	12395
L.S.D. 5% (KG/HA)	954	707	
C.V.	4.93%	3.61%	
F.	N.S.	**	

1975 SEEDING

KAPUSKASING (6457)

	1976	1977	2-YR MEAN
TITAN	8178	6498	7338
IROQUOIS	7552	6697	7125
WL-215	7941	6530	7236
WEEVLCHECK	7517	6828	7173
ALGONQUIN	7790	6456	7123
POLAR-1	7504	6670	7087
VERNAL	7446	6374	6910
520	8428	6559	7494
WL-202	7972	6536	7254
K3-11	7418	6397	6908
MLM 02015	7839	6716	7278
MLM 02017	7719	7420	7570
MLM 02016	7769	6728	7249
521	7530	6664	7097
WL-210	8593	6085	7339
K3-15	8013	6440	7227
AGATE	7668	6079	6874
RAMSEY	7478	5991	6735
L.S.D. 5% (KG/HA)	1461	747	
C.V.	11.30%	8.04%	
F.	N.S.	N.S.	

Exp. 1037 MEDIUM ALFALFA, Ridgetown

Seeded 1975

<u>VARIETY</u>	<u>Yield (Kg/ha) - 1977</u>			<u>TOTAL</u>
	<u>CUT 1</u>	<u>CUT 2</u>	<u>CUT 3</u>	
MLM 02017	5360	5530	3380	14,270
MLM 02015	5720	5200	3330	14,250
DR-16 (ALGONQUIN)	5570	5330	3330	14,230
ATRA 50 (PIONEER 520)	5370	5310	3400	14,080
TITAN (RP-25)	5820	4980	3210	14,000
FFR SYN-W (WEEVLCHECK)	5950	4910	3140	14,000
IROQUOIS (CHECK)	5490	5150	3260	13,900
WL-215	5740	5070	3090	13,900
K3-15	5480	4990	3390	13,860
MLM 02016	5040	5380	3340	13,760
K3-11	5310	5190	3260	13,760
WL-202	5510	5060	3150	13,720
WL-210	5380	5070	3240	13,690
P-18 (POLAR-1.K)	4870	5370	3350	13,590
VERNAL	5660	4830	2970	13,460
PIONEER-521	5090	5200	3150	13,440
A GATE	4910	4600	2820	12,330
<hr/>				
LSD 5%	550	340	260	710
MEAN	5430	5130	3220	13,780
CV =	7.2	4.7	5.6	3.6

Exp. 6457 MEDIUM ALFALFA, Kapuskasing

Seeded 1975

<u>VARIETY</u>	<u>Yield (Kg/ha) - 1977</u>		
	<u>CUT 1</u>	<u>CUT 2</u>	<u>TOTAL</u>
MLM 02017	3950	3470	7420
FFR SYN-W (WEEV)	3790	3040	6830
MLM 02016	3280	3450	6730
MLM 02015	3410	3300	6710
IROQUOIS (CHECK)	3470	3230	6700
P-18 (POLAR-1.K)	3380	3290	6670
PIONEER - 521	3450	3210	6660
ATRA 50 (PIONEER)	3340	3220	6560
WL-202	3660	2880	6540
WL-215	3570	2960	6530
TITAN (RP-25)	3620	2880	6500
OR-16 (ALGONQUIN)	3440	3010	6450
K3-15	3200	3240	6440
K3-11	3270	3130	6400
VERNAL	3360	3010	6370
WL-210	3140	2940	6080
AGATE	3200	2880	6080
RAMSEY	3370	2620	5990
<hr/>			
LSD 5%	N.S.	300	N.S.
MEAN	3440	3100	6540
CV =	13.9	6.8	8.0

1976 SEEDING

RIDGETOWN (1040)

	CUT 1	CUT 2	CUT 3	TOTAL (KG/HA)
MLM 02019	6217	5937	3849	16003
MLM 02017	6058	6365	3563	15986
520	6222	5896	3442	15560
MLM 02015	5892	5926	3649	15467
WEEVLCHECK	6132	5980	3328	15440
WL-202	6259	5857	3304	15420
TITAN	6611	5632	3168	15411
MLM 02018	5845	5943	3575	15363
MLM 02016	6031	5631	3641	15303
IROQUOIS	6000	5818	3480	15298
G 747	6073	5631	3498	15202
CW 9	5952	5836	3304	15092
MLM 02020	5874	5750	3432	15056
VERNAL	5718	5910	3408	15036
WL-215	5939	5739	3338	15016
WL-210	5638	5882	3483	15003
PIONEER-521	5909	5503	3468	14880
K3-15	5389	5870	3581	14840
VALOR	5894	5596	3295	14785
ALGONQUIN	5835	5603	3276	14714
PICKSTAR	5730	5646	3324	14700
L.S.D. 5% (KG/HA)	713	489	296	890
C.V.	8.45%	5.96%	6.07%	4.14%
F.	N.S.	N.S.	**	N.S.

1976 SEEDING  
GUELPH (2765)

	CUT 1	CUT 2	CUT 3	TOTAL (KG/HA)
MLM 02017	7028	5294	3580	15902
MLM 02015	7232	5139	3506	15877
MLM 02016	7106	5090	3494	15690
MLM 02019	6501	5034	3873	15408
CW 9	6926	4792	3324	15042
VALOR	6726	4910	3318	14954
MLM 02020	6598	4845	3495	14938
G 747	6731	4718	3472	14921
520	6539	4942	3428	14909
WL-202	6718	4770	3379	14867
PIONEER-521	6672	4722	3342	14736
TITAN	6963	4578	3177	14718
ALGONQUIN	6635	4751	3321	14707
PICKSTAR	6473	4838	3337	14648
WL-210	6721	4328	3592	14641
K3-15	6213	5210	3211	14634
WL-215	6337	4801	3462	14600
IROQUOIS	6531	4634	3360	14525
MLM 02018	6398	4861	3257	14516
VERNAL	6490	4532	3274	14296
WEEVLCHECK	6430	4647	3183	14260
L.S.D. 5% (KG/HA)	641	521	379	954
C.V.	6.80%	7.64%	7.89%	4.53%
F.	N.S.	N.S.	N.S.	*

## 1976 SEEDING

## KEMPTVILLE (3002)

	CUT 1	CUT 2	CUT 3	TOTAL (KG/HA)
MLM 02015	4029	1543	0	5572
WEEVLCHECK	4048	1403	0	5451
MLM 02017	3936	1395	0	5331
520	3913	1366	0	5279
MLM 02016	3899	1368	0	5267
CW 9	3694	1549	0	5243
MLM 02018	3777	1360	0	5137
WL-215	3680	1427	0	5107
MLM 02019	3658	1374	0	5032
PIIONEER-521	3749	1268	0	5017
TITAN	3484	1352	0	4836
G 747	3560	1276	0	4836
VALOR	3635	1149	0	4784
K3-15	3455	1252	0	4707
PICKSTAR	3339	1367	0	4706
MLM 02020	3400	1285	0	4685
VERNAL	3349	1296	0	4645
ALGONQUIN	3377	1205	0	4582
IROQUOIS	3377	1198	0	4575
WL-202	3187	1173	0	4360
WL-210	2980	1009	0	3989
L.S.D. 5% (KG/HA)	650	303	-	766
C.V.	12.78%	16.28%	-	11.03%
F.	N.S.	N.S.	-	*

1976 SEEDING  
OTTAWA (4012)

	CUT 1	CUT 2	CUT 3	TOTAL (KG/HA)
MLM 02019	4906	2851	3241	10998
ALGONQUIN	5833	2535	2517	10885
G 747	4764	2717	2617	10098
IROQUOIS	5069	2436	2452	9957
TITAN	5014	2386	2486	9886
MLM 02018	4633	2471	2755	9859
PIONEER-521	4717	2474	2556	9747
WL-210	4518	2567	2617	9702
VALOR	4710	2440	2400	9550
MLM 02017	4543	2542	2463	9548
WEEVLCHECK	4597	2304	2510	9411
MLM 02020	4417	2360	2630	9407
VERNAL	4774	2296	2233	9303
K3-15	4376	2389	2426	9191
WL-215	4630	2266	2291	9187
PICKSTAR	4558	2295	2287	9140
MLM 02016	4217	2359	2426	9002
CW 9	4118	2268	2529	8915
WL-202	4413	2269	2211	8893
MLM 02015	4157	2215	2503	8875
520	4302	2157	2250	8709
L.S.D. 5% (KG/HA)	612	429	465	1313
C.V.	9.34%	12.59%	13.19%	9.73%
F.	**	N.S.	*	N.S.

1976 SEEDING  
 THUNDER BAY (7095)

	CUT 1	CUT 2	CUT 3	TOTAL (KG/HA)
520	6667	5443	0	12110
VERNAL	6598	5469	0	12067
TITAN	6354	5476	0	11830
CW 9	6427	5097	0	11524
G 747	6299	5203	0	11502
IROQUOIS	6330	5068	0	11398
PICKSTAR	6238	4963	0	11201
MLM 02017	5765	5386	0	11151
MLM 02019	6263	4835	0	11098
MLM 02020	6172	4894	0	11066
VALOR	6059	5006	0	11065
WL-202	6208	4721	0	10929
ALGONQUIN	5954	4860	0	10814
PIONEER-521	5801	4917	0	10718
WL-215	5902	4794	0	10696
MLM 02018	5641	4967	0	10608
K3-15	5682	4826	0	10508
WL-210	5658	4798	0	10456
MLM 02016	5695	4665	0	10360
WEEVLCHECK	5238	4646	0	9984
MLM 02015	5332	4599	0	9931
L.S.D. 5% (KG/HA)	1321	525	-	1563
C.V.	15.53%	7.45%	-	10.04%
F.	N.S.	*		N.S.



## 1977 Bacterial Wilt Test

Infection in this years trial was not as severe as in the 1976 test, however the susceptible check Dupuits showed the highest average rating. The test included 5 replicates with 20 plants per rep.

Average ratings for entries:

Dupuits	3.06	MLM 02018	2.63
Afghanistan	2.79	MLM 02019	2.24
Vernal	2.21	MLM 02020	2.46
Iroquois	2.43	CW4	2.18
NaPB51	2.18	CW9	1.95
NaPB61	1.80	Atlas	2.44
NaPB63	2.33	WL220	2.04
524	2.52	Dekalb 120	2.12
531	2.09	G747	2.33
540	2.15	Syn C.T.	2.18
P.S.10	2.23		

Average wilt ratings from 2 tests:

Cultivar	1974	1975	1976
	1975	1976	1977
131	2.37		
CW5	1.94		
Saranac AR	2.00		
Honeoye	1.86		
Polar-1	1.98		
K3-11	2.44		
Agate	1.78		
Ramsey	1.90		
Apollo		2.10	
Vanguard		2.38	
Olympic		2.40	
Vista		2.98	
MLM 02015		1.93	
MLM 02016		2.54	
MLM 02017		2.81	
K3-15		2.45	
521		2.52	
Atlas			2.48
NaPB51			2.30
G747			2.52
CW9			2.19
Angus		2.31	-
Dupuits		4.02	3.78
MLM 02018			2.44
MLM 02019			2.40
MLM 02020			2.61

Birdsfoot Trefoil Varieties

CURRENT STATUS OF VARIETIES - OCTOBER 31, 1977

<u>Variety</u>	<u>Entered By</u>	<u>Official Status</u>	<u>Station Years Data</u>
Leo	O.F.C.C.	Licensed & Rec., O.F.C.C.	-
Empire	O.F.C.C.	Licensed & Rec., O.F.C.C.	-
Viking	O.F.C.C.	Licensed & Rec., O.F.C.C.	-
Maitland	O.F.C.C.	Licensed & Rec., O.F.C.C.	-
Carroll	O.F.C.C.	Licensed & Rec., O.F.C.C.	-
KO - 4	Nat. N.K.		3

Mean Yields of Trefoil At Ridgetown  
Established 1976, Harvested 1977

Variety	Dry Matter Yield kg/ha		Total
	Cut 1	Cut 2	
Leo	6620	3241	9861
Empire	5776	2509	8285
Viking	5098	3478	8576
Maitland	5363	3776	9139
Carroll	5731	3771	9503
KO-4	5314	3684	8998
LSD 5%	748	740	898
CV	7.30%	11.9%	5.4%

Mean Yields of Trefoil At Ottawa  
Established 1976, Harvested 1977

Variety	Dry Matter Yield kg/ha		Total
	Cut 1	Cut 2	
Leo	5667	3072	8739
Empire	5364	2166	7530
Viking	4488	2370	6858
Maitland	4787	2804	7591
Carroll	5371	2824	8196
KO-4	5154	2921	8076
LSD 5%	684	524	1099
CV	8.84%	12.91%	9.32%

Mean Yields Of Trefoil At Kapuskasing  
Established 1976, Harvested 1977

Variety	Dry Matter Yield kg/ha		
	Cut 1	Cut 2	Total
Leo	4394	1910	6304
Empire	4879	1231	6110
Viking	4184	2179	6363
Maitland	4131	2434	6563
Carroll	4786	1839	6624
KO-4	4347.5	2254	6602
LSD 5%	NS	368	NS
CV	9.69%	12.36%	8.48%

Mean Yields Of Trefoil At Kapuskasing  
Established 1974, Harvested 1977

Variety	Dry Matter Yield kg/ha		
	Cut 1	Cut 2	Total
Leo	2522	2705	5227
Empire	2086	2626	4712
Viking	1608	2226	3834
Maitland	1870	2490	4360
Carroll	2500	2798	5298
Cree	2359	2616	4975
Orsegi	1564.3	2183	3747
29035	2488	2593	5081
LSD 5%	446	309	625
C.V.	14.26%	8.31%	9.14%

Ontario Red Clover Trials

1975 Seedings: Double cut cultivars: Ottawa, Dollard, Arlington, Redland, MLM03007, Florex (K8-115).

Single cut cultivars: WWR 45, WWR 80, Altaswede, Norlac, MLM03006,

Test locations: Ridgetown, Kapuskasing.

1976 Seedings: Double cut cultivars: Dollard, Lakeland, Ottawa, Prosper-1 (K8-116)

Single cut cultivars: Altaswede, MLM03006

Test locations: Guelph, Kemptville, Kapuskasing, Thunder Bay, Ottawa.

1977 Seedings: Double cut cultivars: Ottawa, Lakeland, Florex, Prosper-1, Redland.

Test locations: Ridgetown, Ottawa, Thunder Bay, New Liskeard.

1976 RED CLOVER TESTS

TOTAL SEASONAL PRODUCTION (KG/HA)

	OTTAWA	KEMPTVILLE	GUELPH	KAPUSKASING	4 STATION MEAN
ALTASWEDE	9221	6775	10785	6918	8425
BORA	-	-	9660	-	-
MLM 03006	9593	5729	9209	6274	7701
LAKELAND	9981	6631	7047	6280	7485
OTTAWA	9172	7135	6658	5802	7192
DOLLARD	9039	7942	6498	6259	7435
REDLAND	-	6776	6464	6107	-
PROSPER 1	8282	7701	6378	6376	7184
REDON	-	-	6298	-	-

## 1976 SEEDINGS

GUELPH (2507)

	CUT 1	CUT 2	TOTAL (KG/HA)
ALTASWEDE	9220	1565	10785
BORA	6891	2769	9660
MLM 03006	7645	1564	9209
LAKELAND	3676	3371	7047
OTTAWA	3023	3635	6658
DOLLARD	3482	3016	6498
REDLAND	3243	3221	6464
PROSPER I	3195	3183	6378
REDON	3368	2930	6298
LSD 5% (KG/HA)	774	297	862
C.V.	10.92%	7.27%	7.71%
F.	**	**	**

## 1976 SEEDINGS

KEMPTVILLE (3003)

	CUT 1	CUT 2	TOTAL (KG/HA)
DOLLARD	4894	3048	7942
PROSPER I	4643	3058	7701
OTTAWA	4455	2680	7135
REDLAND	4738	2038	6776
ALTASWEDE	4990	1785	6775
LAKELAND	4521	2110	6631
MLM 03006	4297	1432	5729
LSD 5% (KG/HA)	955	978	1351
C.V.	13.84%	28.55%	13.08%
F.	N.S.	*	N.S.

## 1976 SEEDINGS

OTTAWA (4013)

	CUT 1	CUT 2	TOTAL (KG/HA)
LAKELAND	6783	3198	9981
MLM 03006	9593	-	9593
ALTASWEDE	9221	-	9221
OTTAWA	5813	3359	9172
DOLLARD	6029	3010	9039
PROSPER I	5480	2802	8282
LSD 5% (KG/HA)	1461	635	1511
C.V.	11.21%	13.27%	9.01%
F.	**	**	N.S.

## 1976 SEEDINGS

KAPUSKASING (6556)

	CUT 1	CUT 2	TOTAL (KG/HA)
ALTASWEDE	6550	368	6918
PROSPER 1	4082	2294	6376
LAKELAND	3857	2423	6280
MLM 03006	5601	673	6274
DOLLARD	3814	2445	6259
REDLAND	3676	2431	6107
OTTAWA	3230	2572	5802
LSD 5% (KG/HA)	330	279	483
C.V.	5.04%	9.97%	5.17%
F.	**	**	**

Bromegrass

Provincial bromegrass test results for 1977 are reported for 8 test locations. Three of these are from 1975 seedings and the other five are from 1976 seedings. Most of the entries were included in both seedings. Test results were sufficiently reliable to permit the elimination of some strains and final decision regarding support for two others, namely M.L.M. 13009 and K 1-105 (Table F12).

Performance of the recommended varieties Baylor and Saratoga was satisfactory. The deferred varieties Beacon and Barton also performed well.

No provincial performance tests of bromegrass varieties and strains were seeded in 1977 due to lack of entries. A small test to compare the performance of Deborah, a *Bromus carinatus*, with Baylor and Saratoga was seeded at five locations. Seeding year establishment appeared satisfactory at all locations.

F. S. Warren  
Coordinator

20/11/77



## Ontario Bromegrass Test

Expt 2751                      Elora                      Ontario

1977 Hay yields from 1975 seeding

Variety or strain	Yield Cut 1	DM kg/ha Cut 2	Total
Baylor	6190	1720	7911
Barton	6057	1653	7711
K1-105	6069	1616	7685
Saratoga	5755	1704	7460
Baylor C	5708	1630	7339
Beacon	5635	1696	7332
MLM 13009	5281	1937	7218
Tempo	5458	1476	6934
S 7380 A	5107	1607	6715
S 8805	5066	1472	6539
mean	5632	1651	7284
L.S.D. (5%)	1009.2	246.8	1075.4
C.V. (%)	12.35	10.30	10.18

## Ontario Bromegrass Test

Expt. 7084      Thunder Bay      Ontario

1977 Hay yields from 1975 seeding

Variety or strain	Yield Cut 1	DM kg/ha Cut 2	Total
Baylor	8129	5137	13266
Barton	7242	5609	12851
Saratoga	7329	4496	11825
Tempo	8022	3735	11757
MLM 13009	7451	4135	11586
K1-105	7796	3720	11516
Beacon	7853	3393	11246
S 8805	7610	3623	11233
Baylor C	7561	2977	10538
S 7380 A	7739	2091	9830
mean	7673	3892	11564
L.S.D. (5%)	NS	1941.7	2355.7
C.V. (%)	9.88	33.91	14.04

## Ontario Bromegrass Test

Expt. 8205      New Liskeard      Ontario

1977 Hay yields from 1975 seeding

Variety or strain	Yield		Total
	Cut 1	DM kg/ha Cut 2	
Baylor	3809	2233	6043
Saratoga	3960	1836	5796
Tempo	3384	2400	5783
Baylor C	3903	1739	5642
MLM 13009	3363	2237	5599
Barton	3772	1714	5486
S 7380 A	3843	1566	5408
S 8805	3680	1728	5407
Beacon	3471	1726	5197
K1-105	3322	1628	4951
mean	3651	1881	5531
L.S.D. (5%)	NS	NS	NS
C.V. (%)	13.86	26.24	15.74

Note: Rejected on summer tour

Ontario Bromegrass Tests

1977 Hay Yields from 1975 seedings at 3 Locations in Ontario  
(Total DM kg/ha, 2 cuts)

<u>Variety or strain</u>	<u>Location</u>			Mean (2)
	Elora 2751	Thunder Bay 7084	New Liskeard 8205	
Baylor	7911	13266	6043	10588
Barton	7711	12851	5486	10281
Saratoga	7460	11825	5796	9642
K1-105	7685	11516	4951	9600
M13009	7218	11586	5599	9402
Tempo	6939	11757	5783	9345
Beacon	7332	11246	5197	9289
Baylor C	7339	10538	5642	8938
S8805	6539	11233	5407	8886
S7380 A	6715	9830	5408	8272
mean	7284	11564	5531	9424
L.S.D. (5%)	1075	2355	NS	
C.V. (%)	10.1	14.0	15.7	

1. Not included in average due to being rejected on summer tour.

## Ontario Bromegrass Test

Expt. 1044      Ridgetown      Ontario

1977 Hay yields from 1976 seeding

Variety or strain	Yield Cut 1	DM kg/ha Cut 2	Total
Barton	7504	4341	11846
Saratoga	6907	4650	11557
Beacon	6968	4179	11146
Baylor	6801	3746	10546
Tempo	6180	4001	10180
K1-105	6341	3696	10037
MLM 13009	5843	4030	9873
S 7380	5827	3615	9442
mean	6546	4032	10578
L.S.D. (5%)	627.8	751.4	1180.5
C.V. (%)	6.52	12.67	7.59

## Ontario Bromegrass Test

Expt. 3004                      Kemptville                      Ontario

1977 Hay yields from 1976 seeding

Variety or strain	Yield Cut 1	DM. kg/ha Cut 2	Total
Baylor	5822	4884	10706
K1-105	5724	4514	10239
Beacon	5833	4361	10195
S 7380	5394	4571	9965
Barton	5692	4197	9888
MLM 13009	5230	4566	9796
Tempo	5360	3662	9022
Saratoga	4060	4854	8914
mean	5389	4451	9841
L.S.D.(5%)	556.2	1112.2	1346.5
C.V. (%)	7.02	16.99	9.30

## Ontario Bromegrass Test

Expt. 4773                      Ottawa                      Ontario

. 1977 Hay yields from 1976 seeding

Variety or strain	Yield Cut 1	DM kg/ha Cut 2	Total
Tempo	5324	3795	9118
Saratoga	4899	4072	8972
Beacon	4485	4474	8959
S 7380	4742	3970	8712
Baylor	4846	3767	8613
MLM 13009	4373	4136	8509
Barton	4538	3848	8387
K1-105	4567	3616	8183
mean	4737	3946	8682
L.S.D (5%)	551.0	601.0	615.6
C.V.(%)	7.97	10.44	4.86

## Ontario Bromegrass Test

Expt. 6006                      Kapuskasing                      Ontario

1977 Hay yields from 1976 seeding

Variety or strain	Yield Cut 1	DM kg/ha Cut 2	Total
Beacon	5080	3964	9044
S 7380	5299	3599	8898
K1-105	4974	3764	8738
MLM 13009	4901	3717	8617
Baylor	4672	3780	8451
Barton	4543	3686	8228
Saratoga	4798	3291	8089
Tempo	4472	3386	7859
mean	4842	3648	8491
L.S.D. (5%)	794.6	406.6	866.0
C.V.	11.16	7.58	6.93



## Ontario Bromegrass Test

Expt. 8206                      New Liskeard                      Ontario

1977 May yields from 1976 seeding

Variety or strain	Yield Cut 1	DM kg/ha Cut 2	Total
Beacon	4132	2794	6927
S 7380	4171	2375	6546
MLM 13009	3894	2460	6354
Barton	3710	2560	6270
Baylor	3784	2419	6203
K1-105	3397	2676	6073
Saratoga	3267	2235	5502
Tempo	3063	2263	5326
mean	3677	2473	6150
L.S.D.(5%)	927.9	NS	1241.8
C.V.(%)	17.16	17.21	13.73

Note: Rejected on summer tour

Ontario Bromegrass Tests

1977 Hay Yields from 1976 seedings at 5 Locations in Ontario (Total DM kg/ha 2 cuts)

<u>Variety or strain</u>	<u>Location</u>					Mean (4)
	Ridgetown 1044	Kemptville 3004	Ottawa 4773	Kapus. 6006	N. Liskeard <sup>1.</sup> 8206	
Expt. No.						
Beacon	11146	10195	8959	9044	6927	9836
Barton	11846	9888	8387	8228	6270	9587
Baylor	10546	10706	8613	8451	6203	9579
Saratoga	11557	8914	8972	8089	5502	9383
K1-105	10037	10239	8113	8738	6073	9282
S7380	9442	9965	8712	8898	6546	9254
M13009	9873	9796	8509	8617	6354	9199
Tempo	10180	9022	9118	7859	5326	9045
mean	10578	9841	8682	8491	6150	9398
L.S.D. (5%)	1180	1346	615	866	1242	
C.V. (%)	7.6	9.3	4.9	6.9	13.7	

1. Not included in average due to being rejected on summer tour.

## Provincial Bromegrass Tests

Comparison of strains eligible for licensing  
with the check variety Saratoga and Baylor.

Variety	Harvest Seeding	1976 1975 kg/ha	1977 1975 kg/ha	1977 1976 kg/ha	Mean
Baylor		10800	10588	9579	10269
Saratoga		8496	9642	9383	9080
K1 105		9597	9600	9282	9472
M 13009		9490	9402	9199	9356
Locations		4	2	4	10

Orchardgrass Varieties

November 9, 1977

Comments in November 1976

Juno - Recommended in 1977

K8-120

Hall } Support for license and deferred recommendation -  
 Dart } adequate seed stocks

Sumas Orchardgrass vs. Kay check (late)

Yield kg/ha

	Ridgetown -1975-	Ottawa	Kapuskasing -1976-	Ridgetown	Kemptville -1977-	Ridgetown	Mean 6 sta.yrs.
Sumas	9339	6904	4687	9076	9671	8547	8041
Kay	8727	6667	4985	8414	8824	8463	7680

The variety was bred by Doug Taylor at Agassiz, B.C. It has good aftermath growth. We have only one station year for northern Ontario where it is lower yielding than Kay. The seed situation is uncertain, I believe it was given to a B.C. firm with the reservation that if demand was forthcoming in eastern Canada, seed would be made available for the seed project.

W.R. Childers

Ridgetown, Ontario  
 Provincial Orchardgrass Test 1977  
 Seeded 1975  
 Yield in dry matter kg/ha

Variety	Cut 1	Cut 2	Total
3027 F.F.R. Hallmark	4971	4147	9119
3041 Dart	4389	4325	8715
3045 OX-1	4673	3973	8647
3044 Dayton	4695	3924	8620
3046 Sumas	4749	3797	8547
3043 Kitamidori	4708	3833	8542
3003 Kay	4769	3694	8463
3048 MLM 14009	4477	3952	8430
3049 MLM 14010	4396	3902	8298
3004 Forde	4468	3797	8266
3047 Ottawa 6	4386	3693	8079
3024 Ina	4128	3893	8021
3042 S-66-4-47/72	3609	3382	6992
LSD 5%	389.00	366.00	586.00
C.V.	6.02	6.58	4.88

Expt. 1039

Ontario Provincial Orchardgrass Test

Ridgetown, Ontario

Hay yields from 1975 seeding

Yield in dry matter kg/ha

Variety	Cut 1	Cut 2	1976 Total	Cut 1	Cut 2	1977 Total	2 Year Total Mean
Frode	5026	4069	9096	4468	3797	8266	8681
Ottawa 6	3056	3997	7053	4386	3693	8079	7566
Sumas	4806	4230	9036	4749	3797	8547	8792
Dayton	5506	3945	9451	4695	3924	8620	9036
MLM 14010	4790	4120	8911	4396	3902	8298	8605
OX-1	5320	4318	9638	4673	3973	8647	9143
Kitamidori	5889	3956	9845	4708	3833	8542	9194
MLM 14009	5114	4134	9249	4477	3952	8430	8840
Hallmark	6131	4158	10290	4971	4147	9119	9705
Dart	5227	4229	9456	4389	4325	8715	9086
Ina	4619	3781	8401	4128	3893	8021	8211
S-66-4-47/72	4134	4075	8209	3609	3382	6992	7601
Kay	4564	3850	8414	4769	3694	8463	8439

Kemptville, Ontario  
 Provincial Orchardgrass Test 1977  
 Seeded 1976  
 Yield in dry matter kg/ha

Variety	Cut 1	Cut 2	Total
3048 MLM 14009	3913	6314	10228
3027 F.F.R. Hallmark	4221	5681	9903
3053 K3-9	4257	5588	9845
3052 Comet	4286	5536	9821
3046 Sumas	4014	5657	9671
3024 Ina	4117	5475	9593
3009 Napier	3881	5565	9446
3016 Nordstern	3978	5452	9430
3054 K2-8	4045	5359	9405
3049 MLM 14010	3721	5677	9398
3045 OX-1	3887	5263	9150
3014 Tardus II	3548	5484	9032
3001 Juno	4193	4826	9019
3044 Dayton	3890	4990	8880
3003 Kay	3798	5026	8824
3004 Frode	3581	5199	8780
3047 Ottawa 6	3318	4991	8308
3055 K2-7	3335	4563	7898
LSD 5%	538.00	748.00	960.00
C.V.	9.73	9.80	6.54

Ottawa, Ontario  
 1977 Provincial Timothy Test  
 Hay yields from 1976 seeding  
 Yield in dry matter kg/ha

Variety	Cut 1	Cut 2	Total
Champ	5431	4690	10,031
Climax	5740	4377	10,117
Milton	5682	4413	10,095
Toro	6281	4661	10,942
Itasca	5766	4595	10,361
Timfor	5603	4733	10,336
Odenwalder	5842	4231	10,073
Basho	5973	4498	10,471
MLM Tim H7	5925	3962	9,887
Maris Polka	5385	3556	8,941
Pronto	5885	4252	10,137
MLM 17011	5904	4381	10,285
N7-126	5699	4402	10,101
MLM 17017	4875	3595	8,470
L.S.D.	752.25	583.46	
C.V.	9.21	9.47	



Ottawa, Ontario  
 1977 Provincial Orchardgrass Test  
 Hay Yields from 1976 seeding  
 Yield in dry matter kg/ha

Variety	Cut 1	Cut 2	Total
Juno	4461	4485	8946
Kay	4591	4318	8909
Frode	3939	4027	7966
Tardus II	3918	3897	7815
Nordstern	4504	4243	8747
Hallmark	3721	4238	7959
Ina	4403	4426	8829
Napier	3882	4005	7887
Dayton	4150	3875	8025
OX-1	4469	3994	8463
Sumas	4438	4428	8866
Ottawa 6	4023	4484	8507
Comet	4326	4205	8531
K3-9	4635	4336	8971
K2-8	4885	4329	9214
K2-7	4139	4482	8621
14009	4462	4534	8996
14010	5205	4541	9746
L.S.D.	624.50	418.46	
C.V.	10.17	6.93	

Timothy Varieties

CURRENT STATUS OF VARIETIES - OCT. 1, 1977

<u>Variety</u>	<u>Entered By</u>	<u>Official Status</u>	<u>Station Years of Data</u>
Champ	O.F.C.C.	Recommended, Pub. 296	-
Climax	O.F.C.C.	Recommended, Pub. 296	-
Toro	O.F.C.C.	Recommended, Pub. 296	-
Basho	O.F.C.C.	Recommended, Pub. 296	-
Itasca	O.F.C.C.	Recommended, Pub. 296	-
Timfor	O.F.C.C.	Recommended, Pub. 296	-
Milton	O.F.C.C.	Recommended, Pub. 296	-
Pronto	Nat. N.K.	Licensed, deferred rec. (2)	-
Richmond	M.L.M.	Licensed, deferred rec. (2)	-
N7-126	Nat. N.K.	Supported for licence, deferred rec. (2)	-
CIVBA	Pickseed		6
CIV2A	Pickseed		6
Gusto	Pickseed		6
Mahndorfer	O.S.E.C.O.		6
Odenwalder	O.S.E.C.O.		4
Tim H7	M.L.M.		4
Maris Polka	Nat. Seed		4
MLM 07017	M.L.M.		2

Disposition of Varieties

At the November (1977) meeting of the O.F.C.C. it was decided to discontinue the testing of the timothy varieties:

CIVBA  
CIB2A  
Gusto  
Mahndorfer

Mean Yields of Some Timothy Varieties

<u>Variety Comparison</u>	<u>N. Ontario</u>		<u>S. Ontario</u>		<u>Mean</u>	
	<u>Cut 1</u>	<u>Total</u>	<u>Cut 1</u>	<u>Total</u>	<u>Cut 1</u>	<u>Total</u>
Climax	6240	7180	7540	9820	7280	9290
CIVBA	3320	4430	5150	6830	4540	6030
CIV2A	4600	5350	6520	8270	5880	7290
Gusto	3940	4740	5510	7230	4990	6400
Mahndorfer	5290	6150	7220	9260	6570	8220

The following timothy tests were harvested in 1977:

<u>Location</u>	<u>Year Seeded</u>
Ridgetown	1976
Guelph	1975
Kemptville	1976

Exp. 2750

Timothy Provincial Trial, Guelph

Seeded 1975

<u>Variety</u>	<u>Yield</u>		<u>Total</u> KG/HA
	<u>Cut 1</u> KG/HA	<u>Cut 2</u> KG/HA	
Climax CHECK	9017	2775	11,792
Pronto	8246	2671	10,917
Milton	8019	2707	10,727
Medon	8058	2465	10,524
MLM Tim H7 (GOLIATH)	7921	2564	10,486
Itasca	7728	2705	10,434
Timfor (N7-128)	7817	2569	10,387
Champ	7551	2765	10,317
Mahndorfer	7763	2481	10,244
S3-9 (BASHO OR	7070	2994	10,064
L-84 (TORO)	6814	2897	9,711
CIV 2A	7101	2427	9,528
Oldenwalder	6775	2679	9,455
Maris Polka	6612	2564	9,177
Gusto	5863	2457	8,320
Winda (CIV BA)	5865	2067	7,932
LSD 5% (KG/HA)	1024	281	1,035
TOTAL MEAN (KG/HA)	7389.25	2612.12	10,001.36
CV	9.7	7.5	7.2

1043 Timothy Provincial Trial, Ridgetown Seeded 1976

<u>Variety</u>	<u>Yield</u>		<u>Total</u> KG/HA
	<u>Cut 1</u> KG/HA	<u>Cut 2</u> KG/HA	
MLM 17011 (RICHMOND)	7001	3821	10,822
Itasca	7116	3678	10,794
Timfor (N7-128)	6885	3844	10,730
Milton	7122	3489	10,612
S3-9 (BASHO)	6760	3646	10,406
L-84 (TORO)	6986	3389	10,376
Champ	6593	3718	10,312
Maris Polka	7186	3107	10,294
Climax CHECK	6857	3396	10,254
Oldenwalder	6385	3678	10,063
MLM 07017	6548	3326	9,874
N7-126	6319	3508	9,828
Pronto	6282	3510	9,793
MLM Tim H7 (GOLIATH)	6012	3236	9,249
LSD 5% (KG/HA)	700	420	830
TOTAL MEAN (KG/HA)	6720	3520	10,240
CV	7.34	8.29	5.68

3006 Timothy Provincial Trial, Kemptville Seeded 1976

<u>Variety</u>	<u>Yield</u>		
	<u>Cut 1</u> KG/HA	<u>Cut 2</u> KG/HA	<u>Total</u> KG/HA
Timfor (N7-128)	5934	3512	9447
Itasca	5069	3000	8069
Milton	4717	3160	7878
MLM 07017	4875	2979	7854
Champ	4440	3160	7601
N7-126	4499	2996	7495
MLM 17011 (RICHMOND)	4445	3047	7492
Climax CHECK	4500	2946	7447
MLM Tim H7 (GOLIATH)	4405	3025	7431
L-84 (TORO)	4720	2674	7394
Oldenwalder	4399	2631	7030
Pronto	4531	2486	7018
Maris Polka	4008	2831	6840
S 3-9 (BASHO)	3630	3008	6638
LSD 5% (KG/HA)	N.S.	N.S.	N.S.
TOTAL MEAN (KG/HA)	4580	2960	7540
CV	16.8	18.0	14.3

Cicer Milk Vetch Tests

Thunder Bay Exp:- 7081, 7086

Kg/ha d.m. (total yield)

Year of seeding Year of harvest	1974 1975	HARVEST 1		Ave.	HARVEST 2		Ave.	Season Total
		1975 1976	1975 1977		1974 1975	1975 1976		
Species Varieties	(June 18)	(July 6)	(July 13)		(July 31)	(Aug. 12)		
Cicer Milk Vetch Lutana	2800	4810	5770	4460	1570	1800	1680	6140
Oxley	2290	3300	6680	4090	580	780	680	4770
Wyoming	2570	5010	5100	4230	1300	1520	1410	5640
O.S.26	2570	3900	6380	4280	1470	1400	1435	5715
Birdsfoot Trefoil Leo	3300	5360	6710	5120	1780	1770	1770	6890

P.S. This data is rounded off to the nearest tenth.



Cicer Milk Vetch Tests

Thunder Bay Exp:- 2081 2086

Year of seeding	1974	1975	HARVEST 1				1974	1975		
	1975	1976			1974	1975	1975	1976		
	Date of harvest	June 18	July 6			June 18	July 6	June 18	July 6	
Species Varieties	Kgs./ha	d.m.	Ave.	% I.V.D.		Ave.	% Nitrogen		Ave.	
Cicer Milk Vetch Lutana	*2800	*4810	3800	71.2	66.0	68.6	2.34	2.91	2.62	
Oxley	2290	3300	2790	75.4	71.1	73.2	2.21	3.14	2.67	
Wyoming	2570	5010	3790	71.6	68.0	69.8	2.10	2.69	2.39	
O.S.26	2568	3900	3230	75.3	70.5	72.9	2.55	3.20	2.87	
Birdsfoot Trefoil Leo	3300	5360	4330	69.6	63.5	66.5	2.93	2.70	2.81	

N.B.\*This data is rounded off to the nearest tenth.

Cicer Milk Vetch Tests

N.L.C.A.T. Exp:- 8601, 8602

Kgs./ha d.m. (Total yield)

Year of seeding Year of harvest Date of harvest	HARVEST 1					HARVEST 2			Season Total
	1974	1974	1975	1975	Ave.	1974	1975	Ave.	
	1975	1977	1976	1977		1977	1977		
	July 4	June 23	June 22	June 21		Aug. 9	Aug. 9		
Cicer Milk Vetch Lutana	3590	4420	4050	4100	4040	1310	1570	1440	5480
Oxley	3220	4450	2840	3600	3530	1150	1910	1530	5060
Wyoming	2820	5030	3930	4480	4060	1820	1520	1670	5730
O.S.26	3520	4920	2490	3510	3610	1670	1660	1660	5270
Birdsfoot Trefoil Leo	3850	4180	6250	3630	4480	1100	2030	1560	6040

N.B. This data is rounded off to the nearest tenth.

Cicer Milk Vetch Tests

N.L.C.A.T. Exp. 8601, 8602

Year of seeding Year of harvest Date of harvest	1974		1975		HARVEST 1		1974		1975	
	1975		1976		1975		1975		1976	
	July 4	June 22	July 4	June 22	July 4	June 22	July 4	June 22	July 4	June 22
Species Varieties	Kgs./ha.	d.m.	Ave.	% I.V.D.	Ave.	% Nitrogen	Ave.			
Cicer Milk Vetch Lutana	*3590	*4060	3820	60.1	60.8	60.4	2.06	2.12	2.09	
Oxley	3220	2840	3030	63.3	59.6	61.4	2.23	2.49	2.36	
Wyoming	2820	3930	3370	67.2	63.8	65.5	2.71	2.28	2.49	
O.S.26	3520	2490	3000	62.2	59.6	60.9	2.34	2.47	2.40	
Birdsfoot Trefoil Leo	3850	6250	5050	61.4	63.4	62.4	2.36	3.08	2.72	

N.B.\*This data is rounded off to the nearest tenth.

Cicer Milk Vetch Trials

Kapusksing Exp:- 6601 6602

Kgs./ha d.m. (Total yield)

Year of seeding Year of harvest Date of harvest	HARVEST 1				HARVEST 2			Season Total
	1974	1974	1975	Ave.	1974	1975	Ave.	
	1975	1977	1977		1977	1977		
	July 23	July 7	July 6		Sept 28	Sept 28		
Cicer Milk Vetch Lutana	3480	4630	3610	3910	2450	1980	2210	6120
Oxley	2580	4230	2170	2990	1160	1030	1090	4080
Wyoming	3870	4642	3780	4100	2380	1960	2170	6270
O.S.26	3470	3930	3290	3560	1610	870	1240	4800
Birdsfoot Trefoil Leo	5860	5690	7030	6190	2320	2100	2210	8400

P.S. This data is rounded off to the nearest tenth

Astragalus Cicer Variety Trials

Ottawa Exp:- 0001, 0002

Kgs./ha d.m. (Total yield)

Year of seeding	1974	1974	HARVEST 1		Ave.	HARVEST 2		Ave.	Season Total
			1975	1976		1974	1975		
Year of harvest	1975	1976	1977	1977		1977	1977		
Date of harvest	June 19	June 29	July 7	July 7		Aug. 24	Aug. 24		
Cicer Milk Vetch Lutana	5000	2870	6100	4620	4650	2520	2200	2360	7010
O.S.26	5480	2960	5870	3990	4570	2570	1890	2230	6800
Oxley	3450	2370	5430	4190	3860	1650	590	1120	4980
Wyoming	5110	2620	6060	4590	4590	2620	1900	2260	6850
Birdsfoot Trefoil Leo	5120	3300	4590	5970	4740	1800	1700	1750	6490
Alfalfa Angus	4800	3310	3970	4660	4180	2770	2760	2760	6940

P.S. This data is rounded off to the nearest tenth.

Cicer Milk Vetch Evaluation Study

Guelph Exp:- 49171

1974 Seeding 1976 1977 Harvests

Kilograms per hectare D.M. (Total Yield)

SPECIES VARIETIES	HARVEST 1		HARVEST 2		HARVEST 3		SEASON 1976	TOTAL 1977
	1976 (June 9)	1977 (June 8)	1976 (July 27)	1977 (July 13)	1976	1977 (Aug. 30)		
Cicer Milk Vetch Lutana	4479	5350	3822	1429		1830	8301	8609
O.S.26	4396	5095	3682	1317		1745	8078	8157
6954	3887	4913	3374	1207		1516	7261	7636
7104	4304	4890	3570	1324		1864	7874	8078
Oxley	3590	4562	2847	958		1332	6437	6852
Wyoming	4515	5057	3825	1333		1757	8340	8147
Crown Vetch Penngift	3718	3929	3877	1062		1278	7595	6269
Emerald	4380	4080	4456	1227		1441	8836	6748
Chemung	4716	3946	4268	1159		1382	8984	6487
Birdsfoot Trefoil Leo	4035	3735	3262	996		982	7297	5713
Alfalfa Vernal	4331	4986	3752	3115		2864	8083	10965

NO HARVEST

Cicer Milk Vetch Evaluation Study

Guelph Exp:- 49172

1975 Seeding 1976 1977 Harvests

Kilograms per hectare D.M. (Total Yield)

SPECIES VARIETIES	HARVEST 1		HARVEST 2		SEASON 1976	TOTAL 1977
	1976 (June 24)	1977 (June 27)	1976 (Sept. 2)	1977 (Aug.31)		
Cicer Milk Vetch Lutana	5802	4619	3912	3363	9714	7982
O.S.26	5526	4512	3756	3189	9282	7701
Oxley	4573	4306	2810	2615	7383	6921
Wyoming	5871	4537	4115	3446	9986	7983
Crown Vetch Penngift	6242	3127	4780	2793	11022	5920
Emerald	5716	2477	4680	2097	10396	4574
Chemung	6279	2307	4771	2664	11050	4971
Birdsfoot Trefoil Leo	5098	3210	3293	2566	8391	5776
Alfalfa Vernal	4095	3486	3016	2761	7111	6247

Early-Late Bite

Thunder Bay Exp:- 7075

1974 Seeding 1975 1976 Harvests

Kilograms per hectare D.M. (Total Yield)

ZERO NITROGEN

SPECIES-VARIETIES	HARVEST 1		HARVEST 2		HARVEST 3		SEASON TOTAL	
	1975 (May 21)	1976 (May 27)	1975 (July 10)	1976 (July 14)	1975 (Sept. 12)	1976 (Sept. 8)	1975	1976
Empire Trefoil+Fawn Tall Fescue	950	312	3332	4752	588	657	4870	5721
Empire Trefoil+Frontier Reed Canary	1556	427	2528	3441	576	656	4660	4524
Empire Trefoil+Saratoga Brome	1173	673	3786	3845	811	754	5770	5272
Fawn Tall Fescue	794	365	2114	2250	250	691	3158	3306
Frontier Reed Canary	1341	400	1744	1068	441	579	3526	2047
Saratoga Brome	1042	828	2549	1547	702	493	4293	2868
			NITROGEN					
Empire Trefoil+Fawn Tall Fescue	1062	662	3656	5508	791	1558	5509	7728
Empire Trefoil+Frontier Reed Canary	1854	1538	3133	3817	1238	1262	6225	6617
Empire Trefoil+Saratoga Brome	1197	1462	3806	4463	1132	931	6135	6856
Fawn Tall Fescue	874	996	2671	4497	898	1373	4443	6866
Frontier Reed Canary	2018	1882	2963	3187	1233	1124	6214	6193
Saratoga Brome	1257	1886	3456	3819	1577	1220	6290	6925



Early-Late Bite

Kapuskasing Exp:- 6710

1974 Seeding 1975 1976 1977 Harvests

Kilograms per hectare D.M. (Total Yield)

ZERO NITROGEN

SPECIES-VARIETIES	HARVEST 1 Early Pasture				HARVEST 2 Hay Harvest				HARVEST 3 Late Pasture				Season Total
	1975 May 29	1976 June 4	1977 June 2	Ave. June 1	1975 July 29	1976 Aug. 3	1977 Aug. 2	Ave. July 31	1975 ?	1976 Sept.28	1977 Sept.20	Ave. Sept.24	
Empire Trefoil													
+Fawn Tall Fescue	1590	286	1785	1220	3170	3646	2912	3243	1577	708	1132	1139	5602
Empire Trefoil													
+Frontier Reed Canary	1560	483	1858	1300	3388	3750	3193	3444	1644	839	714	1066	5810
Empire Trefoil													
+Saratoga Brome	1764	789	1888	1480	3397	4147	3067	3537	1509	711	983	1068	6085
Fawn Tall Fescue	1333	231	472	679	1029	890	809	909	660	59	253	324	1912
Frontier Reed Canary	1414	1018	910	1114	1045	1193	780	1006	265	00	110	125	2245
Saratoga Brome	1568	1000	1036	1201	1496	951	779	1075	215	00	60	92	2368
NITROGEN													
Empire Trefoil													
+Fawn Tall Fescue	1630	627	2478	1578	3340	3667	3204	3404	1687	1295	1134	1372	6354
Empire Trefoil													
+Frontier Reed Canary	1801	1077	2875	1918	3209	3668	3082	3320	1656	1109	954	1240	6478
Empire Trefoil													
+Saratoga Brome	1828	1422	3163	2138	3870	4041	3783	3898	1439	1614	867	1307	7343
Fawn Tall Fescue	1143	1061	2058	1421	2166	2756	2739	2554	1348	1650	859	1286	5261
Frontier Reed Canary	1790	1761	2842	2131	1670	1985	3225	2293	636	673	703	671	5095
Saratoga Brome	1510	2146	3151	2269	2318	2300	3555	2724	834	834	820	849	5842

Early Late Bite

Kapuskasing Exp:- 6710

1974 Seeding 1975 1976 Harvests

Percent In Vitro Digestion

ZERO NITROGEN

SPECIES-VARIETIES	HARVEST 1			HARVEST 2			HARVEST 3		
	1975 May 29	1976 June 4	Ave.	1975 July 29	1976 Aug. 3	Ave.	1975 ?	1976 Sept. 28	Ave.
+Fawn Tall Fescue	62.25	64.88	63.56	67.95	65.28	66.61	77.59	77.22	77.40
+Frontier Reed Canary	63.54	67.11	65.32	66.92	66.60	66.76	77.05	77.76	77.40
+Saratoga Brome	67.69	73.62	70.65	66.01	64.38	65.19	78.76	77.07	77.91
Fawn Tall Fescue	59.89	65.75	62.82	61.74	60.31	61.02	71.66	71.30	71.48
Frontier Reed Canary	67.77	68.75	68.26	64.98	64.27	64.62	66.37	-	66.37
Saratoga Brome	63.11	71.24	67.17	68.45	68.80	68.62	74.52	-	74.52

NITROGEN

+Fawn Tall Fescue	64.36	70.72	67.54	66.36	64.23	65.29	75.93	75.01	75.47
+Frontier Reed Canary	64.94	71.36	68.15	66.77	65.55	66.16	75.67	73.29	74.48
+Saratoga Brome	68.89	74.25	71.57	67.07	65.48	66.27	75.51	75.00	75.25
Fawn Tall Fescue	62.28	68.34	65.31	59.18	59.42	59.30	70.76	72.97	71.86
Frontier Reed Canary	70.91	72.51	71.71	62.85	63.14	62.99	64.78	71.70	68.24
Saratoga Brome	70.88	72.07	71.47	67.79	67.82	67.80	75.02	76.13	75.57

Early-Late Bite

Kapuskasing Exp:- 6710

1974 Seeding 1975 1976 Harvests

Percent Nitrogen

ZERO NITROGEN

SPECIES-VARIETIES	HARVEST 1			HARVEST 2			HARVEST 3		
	1975 May 29	1976 June 4	Ave.	1975 July 29	1976 Aug. 3	Ave.	1975 ?	1976 Sept. 28	Ave.
Empire Trefoil +Fawn Tall Fescue	3.62	3.35	3.48	3.03	2.85	2.94	3.91	3.74	3.82
Empire +Frontier Reed Canary	3.78	3.40	3.59	3.04	2.84	2.94	4.24	3.87	4.05
Empire +Saratoga Brome	3.35	3.04	3.19	2.84	2.62	2.73	4.20	3.70	3.95
Fawn Tall Fescue	2.74	2.92	2.83	2.06	1.68	1.87	2.42	2.76	2.59
Frontier Reed Canary	3.36	2.83	3.09	2.71	2.06	2.38	3.46	-	3.46
Saratoga Brome	2.73	2.29	2.51	2.15	1.86	2.00	2.86	-	2.86
	NITROGEN								
Empire Trefoil +Fawn Tall Fescue	3.84	4.08	3.96	2.86	2.74	2.80	3.52	3.61	3.56
Empire +Frontier Reed Canary	4.07	4.12	4.09	2.88	2.75	2.81	3.96	3.79	3.87
Empire +Saratoga Brome	3.85	3.96	3.90	2.51	2.43	2.47	3.73	3.74	3.73
Fawn Tall Fescue	3.21	3.84	3.52	2.65	2.05	2.35	3.04	3.01	3.02
Frontier Reed Canary	3.90	3.97	3.93	2.85	2.65	2.75	4.02	3.77	3.89
Saratoga Brome	3.46	3.55	3.50	2.76	1.86	2.31	3.55	3.51	3.53

Early-Late Bite

N.L.C.A.T. Exp:- 8003

1974 Seeding 1975 1976 Harvest

Kilograms per hectare D.M. (Total Yield)

ZERO NITROGEN

SPECIES VARIETIES	HARVEST 1		HARVEST 2		SEASON TOTAL	
	1975 July 2	1976 June 9	1975 Aug. 19	1976 July 30	1975	1976
Empire Trefoil + Fawn Tall Fescue	4454	2078	491	3518	4945	5596
Empire Trefoil + Frontier Reed Canary	4613	2509	583	2930	5196	5439
Empire Trefoil + Saratoga Brome	4713	3090	657	2407	5370	5497
Fawn Tall Fescue	4556	1146	270	492	4826	1638
Frontier Reed Canary	5254	2210	387	856	5641	3066
Saratoga Brome	5504	3052	656	1748	6160	4800

NITROGEN

Empire Trefoil + Fawn Tall Fescue	4567	2725	792	3532	5359	6257
Empire Trefoil + Frontier Reed Canary	5011	3764	1264	2582	6275	6346
Empire Trefoil + Saratoga Brome	4361	4674	689	3670	5050	8344
Fawn Tall Fescue	5202	2377	897	2490	6099	4867
Frontier Reed Canary	5052	3954	1201	2636	6253	6590
Saratoga Brome	5206	4889	726	3442	5932	8331

Early Late Bite

N.L.C.A.T. Exp:- 8003

1974 Seeding 1975 Harvest

ZERO NITROGEN

SPECIE VARIETIES	HARVEST 1 (July 2)			HARVEST 2 (Aug. 19)			SEASON TOTAL
	Kgs. D.M. per ha.	% I.V.D.	% Nitrogen	Kgs. D.M. per ha.	% I.V.D.	% Nitrogen	Kgs. D.M. per ha.
Empire Trefoil + Fawn Tall Fescue	4454	59.2	2.32	491	76.0	3.24	4945
Empire Trefoil + Frontier Reed Canary	4613	60.9	2.16	583	77.2	3.44	5196
Empire Trefoil + Saratoga Brome	4713	61.4	2.08	657	74.6	2.92	5370
Fawn Tall Fescue	4556	56.2	1.95	270	72.7	2.81	4826
Frontier Reed Canary	5254	54.4	1.86	387	75.8	3.14	5641
Saratoga Brome	5504	60.0	2.01	656	75.7	2.88	6160
			NITROGEN				
Empire Trefoil + Fawn Tall Fescue	4567	59.9	2.28	792	75.3	3.50	5359
Empire Trefoil + Frontier Reed Canary	5011	59.4	2.04	1264	76.0	3.68	6275
Empire Trefoil + Saratoga Brome	4361	60.4	2.00	689	74.0	3.74	5050
Fawn Tall Fescue	5202	59.2	2.14	897	73.4	3.44	6099
Frontier Reed Canary	5052	57.0	2.18	1201	71.0	3.90	6253
Saratoga Brome	5206	57.9	1.75	726	71.2	3.72	5932

Early Late Bite

N.L.C.A.T. Exp:- 8003

1974 Seeding 1976 Harvest

ZERO NITROGEN

SPECIE VARIETIES	HARVEST 1 June 9			HARVEST 2 June 30			SEASON TOTAL
	Kgs. D.M. per ha.	% I.V.D.	% N	Kgs. D.M. per ha.	% I.V.D.	% N	
Empire Trefoil + Fawn Tall Fescue	2078	73.6	2.90	3518	66.2	2.83	5596
Empire Trefoil + Frontier Reed Canary	2509	75.3	2.75	2930	66.0	2.70	5439
Empire Trefoil + Saratoga Brome	3090	73.7	2.10	2407	69.3	2.44	5497
Fawn Tall Fescue	1146	72.2	2.22	492	67.5	2.09	1638
Frontier Reed Canary	2210	76.0	2.21	856	66.9	2.02	3066
Saratoga Brome	3052	75.2	1.74	1748	70.6	1.86	4800
		NITROGEN					
Empire Trefoil + Fawn Tall Fescue	2725	73.8	3.34	3532	67.0	2.86	6257
Empire Trefoil + Frontier Reed Canary	3764	73.3	2.88	2582	67.7	2.95	6346
Empire Trefoil + Saratoga Brome	4674	70.7	2.66	3670	65.2	2.92	8344
Fawn Tall Fescue	2377	73.8	3.05	2490	67.4	2.87	4867
Frontier Reed Canary	3954	72.1	3.21	2636	63.7	2.85	6590
Saratoga Brome	4889	71.2	2.53	3442	66.2	2.75	8331

Early Late Bite

Guelph Exp:- 49181

1974 Seeding 1975 1976 1977 Harvests

Kilograms per hectare D.M. (Total Yield)

ZERO NITROGEN

SPECIES - VARIETIES

SPECIES - VARIETIES	HARVEST 1			HARVEST 2			HARVEST 3			SEASON TOTAL					
	Early Pasture			Hay Harvest			Late Pasture			1975	1976	1977			
	1975 May 21	1976 May 19	1977 May 19	1975 July 18	1976 July 18	1977 July 14	1975 Oct. 19	1976 Oct. 13	1977 Oct. 17						
Empire Trefoil+ Fawn Tall Fescue	2446	1945	1849	4694	4144	4191	3624	2074	3036	10764	8163	9076			
Empire Trefoil+ Frontier Reed Canary	2090	1757	1833	4141	3892	3653	2506	1505	2674	8737	7154	8160			
Empire Trefoil+ Saratoga Brome	3114	1722	1954	4677	4214	3788	2719	1529	2571	10510	7465	8313			
Fawn Tall Fescue	2539	1672	1165	2704	2041	1298	3107	723	1030	8350	4436	3493			
Frontier Reed Canary	2318	1460	1095	1400	1805	1085	1794	376	857	5512	3641	3037			
Saratoga Brome	3547	1477	1070	1957	2293	1049	2377	303	524	7881	4073	2643			
				NITROGEN											
Empire Trefoil+ Fawn Tall Fescue	2881	2510	2570	5124	4770	3635	3644	2905	3667	11649	10185	9872			
Empire Trefoil+ Frontier Reed Canary	2910	2266	2735	4141	3942	2599	2448	1920	2810	9499	8128	8144			
Empire Trefoil+ Saratoga Brome	3597	2224	2801	4685	4232	2564	2726	2121	2643	11008	8577	8008			
Fawn Tall Fescue	3016	2592	2426	2988	3540	2225	3518	2510	3136	9522	8642	7787			
Frontier Reed Canary	3282	2476	2511	1759	2478	996	1873	1621	1934	6914	6575	5441			
Saratoga Brome	4341	2309	2552	2181	2994	1516	2242	1542	2146	8764	6845	6214			

Early Late Bite

Guelph Exp:- 49181

1974 Seeding 1975 1976 1977 Harvests

Percentage Grass

ZERO NITROGEN

SPECIES VARIETIES		HARVEST 1 Early Pasture				HARVEST 2 Hay Harvest				HARVEST 3			
		1975 May 21	1976 May 19	1977 May 19	Ave. May 20	1975 July 18	1976 July 18	1977 July 14	Ave. July 17	1975 Oct. 19	1976 Oct. 13	1977 Oct. 17	Ave. Oct. 16
Empire Trefoil	+Fawn Tall Fescue	59	50	47	52	18	35	20	24	46	29	23	33
	+Frontier Reed Canary	60	34	41	45	20	39	21	27	37	26	21	28
	+Saratoga Brome	68	65	56	63	32	47	43	41	75	29	39	48
	Fawn Tall Fescue	97	96	100	98	95	94	73	87	97	92	59	83
	Frontier Reed Canary	96	95	94	95	94	93	64	84	96	84	43	74
	Saratoga Brome	97	95	99	97	95	96	81	91	97	94	64	85
NITROGEN													
Empire Trefoil	+Fawn Tall Fescue	63	71	94	76	20	46	41	36	42	49	41	44
	+Frontier Reed Canary	73	61	87	74	27	44	33	35	42	51	36	43
	+Saratoga Brome	77	76	95	83	32	52	50	45	59	74	69	67
	Fawn Tall Fescue	97	99	100	99	94	97	91	94	96	97	88	94
	Frontier Reed Canary	98	95	97	97	91	95	83	90	96	96	84	92
	Saratoga Brome	98	94	99	97	87	97	87	90	97	96	92	95



Early Late Bite

Guelph Exp:- 49181

1974 Seeding 1975 1976 Harvests

Percent In Vitro Digestion

ZERO NITROGEN

SPECIES-VARIETIES

HARVEST 1  
Early Pasture

HARVEST 2  
Hay Harvest

HARVEST 3  
Late Pasture

	1975 (May 21)	1976 (June 19)	Ave. (June 20)	1975 (July 18)	1976 (July 18)	Ave. (July 18)	1975 (Oct. 19)	1976 (Oct. 13)	Ave. (Oct. 16)
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Empire									
Trefoil+Fawn Tall Fescue	73.2	78.4	75.8	59.3	61.2	60.2	65.8	72.9	69.3
Trefoil+Frontier Reed Canary	76.3	77.3	76.8	60.4	60.0	60.2	61.2	72.5	66.8
Trefoil+Saratoga Brome	78.9	80.7	79.8	58.8	60.5	59.6	58.2	72.2	65.2
Fawn Tall Fescue	71.8	78.8	75.3	55.0	62.1	58.5	66.1	67.9	67.0
Frontier Reed Canary	77.0	77.9	77.4	65.8	61.5	63.6	58.4	66.1	62.2
Saratoga Brome	75.2	80.5	77.8	67.2	62.7	64.9	59.5	65.9	62.7

NITROGEN

Empire									
Trefoil+Fawn Tall Fescue	72.3	78.4	75.3	61.5	61.9	61.7	66.2	69.4	67.8
Trefoil+Frontier Reed Canary	75.5	77.8	76.6	61.7	59.7	60.7	61.8	67.0	64.4
Trefoil+Saratoga Brome	78.2	79.6	78.9	58.5	61.1	59.8	66.0	68.8	67.4
Fawn Tall Fescue	71.9	77.8	74.8	58.4	63.0	60.7	67.6	69.2	68.4
Frontier Reed Canary	74.6	77.9	76.2	63.0	59.6	61.3	60.2	61.5	60.8
Saratoga Brome	72.6	80.0	76.3	63.0	62.8	62.9	63.6	68.0	65.8

Early Late Bite

Guelph Exp:- 49181

1974 Seeding 1975 1976 Harvests

Percent Nitrogen

ZERO NITROGEN

SPECIES-VARIETIES

HARVEST 1  
Early Pasture

HARVEST 2  
Hay Harvest

HARVEST 3  
Late Pasture

	1975 (May 21)	1976 (May 19)	Ave. (May 20)	1975 (July 18)	1976 (July 18)	Ave. (July 18)	1975 (Oct. 19)	1976 (Oct. 13)	Ave. (Oct. 16)
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Empire Trefoil

+Fawn Tall Fescue	3.09	2.79	2.94	2.34	2.49	2.41	2.32	2.48	2.40
+Frontier Reed Canary	3.25	3.58	3.41	2.56	2.59	2.57	2.65	2.85	2.75
+Saratoga Brome	2.68	2.60	2.64	2.16	1.95	2.05	2.12	2.67	2.39
Fawn Tall Fescue	2.94	2.22	2.58	1.42	1.32	1.37	1.80	1.63	1.71
Frontier Reed Canary	2.96	2.92	2.94	2.12	1.55	1.83	2.13	2.34	2.23
Saratoga Brome	2.60	2.44	2.52	1.58	1.11	1.34	2.04	1.84	1.94

NITROGEN

Empire Trefoil

+Fawn Tall Fescue	3.34	3.55	3.44	2.38	2.19	2.28	2.37	1.99	2.18
+Frontier Reed Canary	3.56	4.18	3.87	2.60	2.40	2.50	2.63	2.15	2.39
+Saratoga Brome	3.56	3.57	3.56	2.30	1.73	2.01	2.21	1.90	2.05
Fawn Tall Fescue	3.36	3.13	3.24	1.74	1.27	1.50	1.82	1.46	1.64
Frontier Reed Canary	3.40	3.77	3.58	2.24	1.69	1.96	2.21	1.70	1.95
Saratoga Brome	3.36	3.44	3.40	1.67	1.18	1.42	1.96	1.73	1.84