

Bowley

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ONTARIO FORAGE CROP INVESTIGATIONS



1981 REPORT ON FIELD TRIALS OF VARIETIES AND MIXTURES

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

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OF VARIETIES AND MIXTURES

Kapuskasing
Thunder Bay
Ridgetown

Ottawa

Kemptville
New Liskeard
Guelph

1981 REPORT ON FORAGE CROPS TRIALS

ONTARIO FORAGE CROP COMMITTEE

Conducted cooperatively by the various Ontario
Agricultural Experiment Stations of Agriculture
Canada, University of Guelph, and Technical
Colleges of Agriculture in Ontario

Not for Publication: This is a progress report of
cooperative investigations containing data, the
interpretation of which may be modified with
additional experimentation. Therefore, publication of
any data or statements herein should not be
made without prior written approval of the
organization and personnel concerned.

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1981 Report of Forage Crops Trials

Ontario Forage Crop Committee

compiled by

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INTRODUCTION

This is the 1981 Ontario Forage Crop Investigations. Some changes were made to include information on experimental design, method of seeding, management practices used, such as: herbicides, fertilizer, cutting dates, etc. Names and addresses of each crop coordinator are provided to facilitate further inquiries if such a need arises.

Ontario Forage Crop Committee

Variety Sub-Committee

<u>Members</u>	<u>Organization</u>
Dr. M. A. Faris Chairman, Variety Sub-Committee Alfalfa Coordinator	Ottawa Research Station
Dr. D. T. Tomes Chairman, O.F.C.C. Birds'-foot Trefoil Coordinator	OAC University of Guelph
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Mr. J. Madill Red and White Clover Coordinator	Kemptville College of Agricultural Technology
Dr. F. S. Warren Bromegrass and Reed Canarygrass Coordinator	Ottawa Research Station
Mr. R. W. Suitor Orchardgrass Coordinator	Ottawa Research Station

Testing Locations

Name of Cooperators

Kapuskasing	Dr. J. Proulx; Mr. L. Guillemette
Thunder Bay	Mr. J. Wilson
Ridgetown	Mr. A. McLaren
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New Liskeard	Mr. A. V. Skepasts
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Early Alfalfa Varieties

CURRENT STATUS OF VARIETIES - Jan. 15, 1982

<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	-
Angus	"	" "	-
Apollo	"	" "	-
Banner	"	" "	-
Ceres	"	" "	-
Citation	"	" "	-
Classic	"	" "	-
Pacer	"	" "	-
Primal	"	" "	-
Saranac	"	" "	-
Thor	"	" "	-
Vista	"	" "	-
130	"	" "	-
Trident	"	" "	-
Answer	"	" "	-
532	"	" "	-
Atlas	OSEC O	Support for lic., Deferred (4)	-
PS 10 (Hunter)	Pickseed	Support for lic., Deferred (3)	-
Blazer (P455A)	OSEC O	Not supported, wilt resistance unsatisfactory	-
SQ Syn 2 (Apica)	O.F.C.C.	Support for lic., Deferred (2)	-
Hi-Phy	U.C.O.	Support for lic., Deferred (1)	-
WL 312	OSEC O	Not supported 1981, re-examine 1982	9
Epic	OSEC O	Not supported 1981, re-examine 1982	9
G 7730	NAPB	Not supported 1981, re-examine 1982	9
CW 27	Pickseed	Not supported 1981, re-examine 1982	10
CW 62	Pickseed	Not supported 1981, re-examine 1982	10
77-2	U. of Guelph	Not supported 1981, re-examine 1982	9
78-1	U. of Guelph	Not supported 1981, re-examine 1872	9
Honeye	U.C.O.	Not supported 1981, re-examine 1982	9

Early Alfalfa Varieties (cont'd.)

<u>Variety</u>	<u>Entered by</u>	<u>Official Status</u>	<u>Station Years of Data</u>
IAB 75	Labonte		3
Multileaf	O.F.C.C.		3
CW 940	Pickseed		3
PS 79049	Pickseed		3
ISC-004E	Landis		3
ISC-008E	Landis		3
ISC-003E	Landis		3
78015	N.K.		3
78013	N.K.		3
WL 313	OSECO		3
Peak	OSECO		3
76-105	U. of Guelph		3
77-101	U. of Guelph		3
75 T12	OSECO		0
Armor	NAPB		0
WL315	King & Speare		0
77-8CaB	King & Speare		0
Ca670-71	King & Speare		0
80334	King		0
OF78-1	Ottawa		0
OF78-2	Ottawa		0

EARLY ALFALFA. ENTRIES ELIGIBLE FOR CONSIDERATION IN 1981

		Total Yield (kg/ha)				Check
		Honeoye	Angus	Saranac	Banner	Average
1974 Seeding						
Guelph	1975	9231	8946	-	-	8946
	1976	12930	12411	-	-	12411
Ottawa	1975	11161	11539	-	-	11539
Thunder Bay	1975	6351	6065	-	-	6065
1975 Seeding						
Ridgetown	1976	13111	14032	-	-	14032
	1977	13853	14569	-	-	14569
Kapuskasing	1976	7605	7500	-	-	7500
	1977	6639	6578	-	-	6578
1979 Seeding						
Ridgetown	1980	15560	-	15263	15943	15603
	1981	14622	-	14727	15079	14903
Guelph	1980	12831	-	13154	13558	13356
	1981	12423	-	12049	12556	12302
Kemptville	1980	11692	-	11316	11484	11400
Thunder Bay	1980	5344	-	4735	4634	4684
1980 Seeding						
Ridgetown	1981	15227	-	15154	15640	15397
Guelph	1981	11725	-	11807	11339	11572
Ottawa	1981	12739	-	13448	14140	13794
Mean						
North		6485	6714	4735	4634	6207
South		12855	12299	13365	13717	13063
Province		11356	10205	12406	12708	11450
Station year of data		17	8	9	9	17

EARLY ALFALFA, ENTRIES ELIGIBLE FOR CONSIDERATION IN 1981

		Hi-Phy	WL312	Epic	G7730	CW27	CW62	77-2	78-1	532	Saranac	Banner	Check Average
<u>1979 Seeding</u>													
Ridgetown	1980	16346	14981	15183	15130	16177	15761	15188	14718	15308	15263	15943	15603
	1981	14371	13521	14399	13722	14015	13446	13245	13465	15328	14727	15079	14903
Guelph	1980	13393	13327	12124	12524	12588	12470	11645	13430	12733	13154	13558	13356
	1981	12243	11906	12306	11664	12010	11610	11093	12110	12414	12049	12556	12302
Kemptville	1980	12134	11883	11015	11207	10719	11621	10814	11502	12701	11316	11484	11400
Thunder Bay	1980	4615	4451	4628	4515	4055	4384	4555	5111	4792	4735	4634	4684
<u>1980 Seeding</u>													
Ridgetown	1981	15715	15470	15101	15270	14941	15649	14171	14343	15572	15154	15640	15397
Guelph	1981	11000	11141	11049	10484	11285	11602	10766	10979	11795	11807	11339	11572
Ottawa	1981	14846	13430	14494	13117	13985	13822	13523	12343	14611	13448	14140	13794
Mean													
North		4615	4451	4628	4515	4055	4384	4555	5111	4792	4735	4634	4684
South		13756	13207	13208	12890	13215	13248	12556	12861	13808	13365	13717	13541
Province		12740	12234	12255	11959	12197	12263	11667	12000	12806	12406	12708	12557
Station year of data		9	9	9	9	9	9	9	9	9	9	9	9

TABLE 1 Alfalfa yield trial (Early). Experiment 1061
Ridgetown, 1980-81 yield data. Seeded 1979

Entry	Dry matter yield (Kg/ha) 1981				Total 1980	Mean 2-year
	Cut 1	Cut 2	Cut 3	Total		
532	6049	5291	3988	15328	15308	15318
Banner	5998	5071	4010	15079	15943	15511
Saranac	6248	4584	3894	14727	15263	14995
Pacer	6142	4909	3589	14640	15011	14826
Honeoye	5739	5037	3846	14622	15560	15091
130	5312	5085	4194	14591	15583	15087
Epic	5565	4979	3855	14399	15183	14791
HI-Phy	5280	4709	4383	14372	16346	15359
Iroquois	6210	4543	3555	14307	15960	15134
Citation	6367	4340	3599	14306	16681	15494
S.Q. Syn.2	5169	4896	4070	14134	15318	14726
CW 27	5937	3909	4168	14015	16177	15096
Blazer	5547	4466	3978	13991	16130	15061
Ceres	5326	4906	3740	13972	15644	14808
G7730	5496	4451	3775	13723	15130	14427
Vista	5241	4545	3819	13605	14683	14144
Thor	4993	4646	3946	13585	15323	14454
WL 312	4871	4700	3950	13521	14981	14251
Angus	5359	4521	3593	13472	15839	14656
OAC 78-1	4808	5185	3473	13465	14718	14092
CW 62	5559	4227	3660	13446	15761	14604
Apollo	5536	4285	3517	13338	15537	14438
Anchor	4744	4945	3632	13320	15520	14420
OAC 77-2	5303	4066	3877	13245	15188	14217
LSD 5% :	696	443	237	920	1039	
Mean :	5533	4679	3838	14050	15533	
C.V. % :	8.94	6.72	4.38	4.65	4.76	

Location: Ridgetown

Plot Size: 1.6 m X 5.0 M

Design: Randomized complete
block

Soil Type: Clay Loam

Seeding Method: Broadcast

Replications: 4

Seeding Date: May 7, 1979

Cuttings: 1979- July 18, Aug. 31
1980- June 23, July 25,
Sept. 8
1981- June 11, July 14,
Sept. 15

Herbicide: 2, 4-DB

Fertilizer: May 1979 prior to
seeding 250 lbs/acre of 6-24-24
Sept. 13, 1979, 450 lbs/acre of
0-25-25

TABLE 2 Alfalfa yield trial (Early). Experiment 1069
Ridgetown 1981 yield data. Seeded 1980

Entry	Dry matter yield (Kg/ha) 1981			
	Cut 1	Cut 2	Cut 3	Total
Peak	5811	6747	3627	16185
Syn. C.T.	5782	6484	3719	15985
Lab 75	6120	6279	3519	15918
LSC 004-E	5617	6606	3621	15844
78015	5496	6499	3765	15760
H1-Phy	5353	6470	3892	15715
CW 62	5400	6107	4142	15649
Banner	5532	6417	3691	15640
CW 940	5450	6377	3808	15635
Pioneer 532	5770	6290	3513	15572
79049	5638	6393	3502	15532
OAC 76-105	5317	6927	3260	15504
WL 312	5625	6062	3783	15470
78013	5511	6365	3551	15427
K1-7	5575	6322	3499	15396
G7730	5357	6385	3527	15270
Honeoye	5425	6536	3266	15227
Saranac	5592	6332	3230	15154
Epic	5445	6167	3489	15101
LSC 003-E	5618	6224	3223	15065
Multileaf	5182	6532	3294	15008
WL 313	5487	6176	3338	15001
CW 27	5125	6195	3621	14941
LSC 008-E	5032	6313	3573	14918
OAC 77-101	5501	5765	3167	14434
OAC 78-1	5246	6033	3064	14343
OAC 77-2	5153	5568	3450	14171
LSD 5%	561	747	480	1018
Mean	5487	6317	3523	15328
C.V. %	7.31	8.40	9.69	4.72

Location: Ridgetown

Plot Size: 1.6 m X 5.0 m

Design: Randomized complete
block

Soil Type: Clay Loam

Seeding Method: Broadcast

Replications: 4

Seeding Date: May 6, 1980

Cuttings: 1980-July 17, Sept. 12
1981-June 12, July 15,
Sept. 9

Herbicide: 2, 4-DB

Fertilizer:

TABLE 3 Alfalfa yield trial (Early). Experiment 2801
Guelph 1981 yield data. Seeded 1979

Entry	Dry matter yield (Kg/ha) 1981				Total 1979	Mean 2-year
	Cut 1	Cut 2	Cut3	Total		
Iroquois	6120	3315	3587	13022	13175	13098
Pacer	6363	2991	3234	12588	13251	12919
Banner	5696	3550	3311	12556	13558	13057
Honeoye	5709	3300	3415	12423	12831	12627
Pioneer 532	5595	3326	3493	12414	12733	12573
S.Q. Syn 2	5596	3404	3397	12397	13226	12811
Ceres (WL-311)	5350	3318	3689	12357	12711	12534
Epic	5486	3284	3536	12306	12124	12215
HI-Phy	5382	3260	3601	12243	13393	12818
Vista	5594	3332	3298	12224	13125	12674
Anchor	5853	3250	3051	12155	12593	12374
OAC78-1	5301	3527	3282	12110	13430	12770
Citation	5671	3250	3183	12104	13012	12558
Saranac	5414	3253	3382	12049	13154	12601
P 445A	5339	3295	3404	12038	13567	12802
CW 27	5267	3287	3456	12010	12588	12299
WL312	5292	3326	3288	11906	13327	12616
Apollo	5257	3205	3433	11895	12566	12230
NK-150 (Thor)	5278	3350	3206	11834	12314	12074
130	5257	3289	3279	11825	13236	12530
G7730	5445	2948	3272	11664	12524	12094
Angus	5180	3222	3253	11655	12716	12185
CW 62	5030	3116	3463	11610	12470	12040
OAC 77-2	5229	2789	3075	11093	11645	11369
LSD 5% :	1046	293	348	1186		
Mean :	5488	3258	3358	12103		
C.V. % :	13.55	6.39	7.36	6.97		

Location: Elora Research Station

Plot Size: 1.5 m by 6.0 m

Design: Randomized complete
block

Soil Type: Connestoga silt loam

Seeding Method: 10 row plot
seeder

Replications: 4

Seeding Date: May 11, 1979

Cuttings: C1 June 11
C2 July 9
C3 Aug. 18

Herbicide:

Fertilizer: 350 Kg/ha of 5-20-20
applied Aug. 1, 1980

TABLE 4 Alfalfa yield trial (Early).Experiment 2812
Guelph 1981 yield data. Seeded 1980

Entry	<u>Dry matter yield (Kg/ha) 1981</u>			
	Cut 1	Cut 2	Cut 3	Total
K1-7	6085	3054	3831	12570
LSC 003-E	5191	3317	3626	12134
Saranac	4768	3392	3647	11807
Pioneer 532	5193	3229	3374	11795
Honeoye	4782	3497	3446	11725
WL 313	4729	3357	3631	11716
Syn. C.T.	5597	2696	3396	11688
78015	5205	2968	3465	11638
CW 62	4753	3269	3580	11602
CW 940	4654	3289	3622	11565
OAC77-101	4731	3325	3420	11477
OAC76-105	4514	3337	3518	11369
Banner	4621	3137	3581	11339
CW 27	4612	3082	3590	11285
LSC 004-E	4564	3391	3267	11222
79049	4360	3445	3367	11171
WL312	4099	3403	3639	11141
Peak	4569	3051	3448	11068
Epic	4487	3283	3280	11049
Lab 75	4214	3419	3409	11042
HI-Phy	4117	3543	3340	11000
OAC78-1	4255	3416	3308	10979
LSC 008-E	4281	3224	3267	10771
OAC 77-2	4572	2618	3576	10766
Multileaf	4365	2779	3546	10690
G7730	4301	2741	3442	10484
78013	3714	3186	3376	10276
LSD 5% :	1058	579	372	1219
Mean :	4682	3202	3466	11310
C.V. % :	16.19	12.85	7.63	7.66

Location: Elora Research Station Plot Size: 1.5 m by 6.0 m

Design: Randomized complete block Soil Type: Connestoga Silt
Loam

Seeding Method: 10 row plot seeder Replications: 4

Seeding Date: May 13, 1980 Cuttings: C₁ June 9

Herbicide: C₂ July 9

C₃ Aug. 17

Fertilizer: 350 kg/ha of
5-20-20 applied
Aug. 1980

TABLE 5 Alfalfa yield trial (Early). Experiment 4001
Ottawa 1981 yield data. Seeded 1980

Entry	Dry matter yield (Kg/ha) 1981			
	Cut 1	Cut 2	Cut 3	Total
K1-7	7911	3201	4054	15166
HI-Phy	7748	3202	3896	14846
Syn. C.T.	7709	2844	4171	14724
Pioneer 532	7985	3193	3433	14611
Peak	7880	3003	3649	14532
OAC77-101	7600	3085	3810	14495
Epic	8086	2695	3713	14494
CW 940	7590	3038	3733	14361
Banner	7737	2857	3546	14140
CW 27	7332	2859	3795	13985
CW 62	6995	2955	3871	13822
LSC 008-E	7091	2944	3602	13637
OAC 77-2	7983	2397	3143	13523
78015	7710	2487	3308	13505
Saranac	7050	2997	3400	13448
WL 312	6617	2918	3895	13430
LSC 003-E	7293	2758	3311	13362
OAC76-105	6924	2742	3550	13215
78013	6301	3416	3461	13177
G7730	6629	2931	3557	13117
Lab 75	6600	2963	3414	12977
LSC 004-E	6425	2893	3594	12912
Honeoye	6280	2949	3509	12739
WL 313	5834	3205	3486	12525
79049	6095	2932	3353	12380
OAC78-1	5934	3209	3200	12343
Multileaf	5654	3042	3463	12159
LSD 5% :	1384	578	484	1507
Mean :	7074	2952	3589	13616
C.V. % :	13.90	13.90	9.58	7.87

Location - Ottawa Research Station

Plot size - 1.5m by 6.0m

Design - Randomized complete block

Soil type - North Gower
clay loam

Seeding method - eight row plot seeder

Replications - 4

Seeding date - May 14, 1980

Cuttings - C1 June 35
C2 July 27
C3 Sept.17

Herbicide - Treflan

Fertilizer - 448 Kg/ha of
8-16-16, Sept.1980

Medium Alfalfa Varieties

CURRENT STATUS OF VARIETIES - Jan. 15, 1982

<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	-
120	"	" "	-
Iroquois	"	" "	-
Magnum	"	" "	-
Pickstar	"	" "	-
520	"	" "	-
Titan	"	" "	-
Valor	"	" "	-
Vernal	"	" "	-
WL 215	"	" "	-
Weevlchek	"	" "	-
524	"	" "	-
Futura	Pickseed	Withdrawn from rec. list at Co. request	-
Glory (02019)	MIM	Supported for licence, Deferred (4)	-
74D111	Landis	Not supported 1981, Testing completed	12
CW 3	Pickseed	Not supported 1981, Testing completed	13
CW 68	Pickseed	Not supported 1981, Testing completed	13
T 7801	Thompson	Not supported 1981, Testing completed	12
K6-11 (Spreader)	N.K.	Not supported 1981, re-examine 1982	10
76-1	U. of Guelph	Supported for licence, Deferred (1)	10
CW 69	Pickseed	Not supported 1981, re-examine 1982	11
Luz 84	Malon		4
MIM 02025	MIM		4
Lab 78	Labonte		4
Oneida	O.F.C.C.		4
CW 6306	Pickseed		4
PS 79051	Pickseed		4
CW 927	Pickseed		4

Medium Alfalfa Varieties (cont'd.)

<u>Variety</u>	<u>Entered by</u>	<u>Official Status</u>	<u>Station Years of Data</u>
ISC 7801	Landis		4
ISC 006	Landis		4
ISC 007	Landis		4
79161	King Grain		4
76-102	U. of Guelph		4
526	Pioneer		0
NAPB 90 (Thunder)	NAPB		0
MIM 02042	MIM		0
WL 221	King & Speare		0
Ca 838	King & Speare		0
77T1	King & Speare		0
80335	N.K.		0
79172	King		0
Far-14	Ottawa		0

MEDIUM ALFALFA. ENTRIES ELIGIBLE FOR CONSIDERATION IN 1981

Total Yield (kg/ha)

1978 Seeding		74D111	CW3	CW68	T7801	Iroquois	520	Check Average
Ridgetown	1979	14879	14223	14063	14322	14598	13956	14277
	1980	12017	11387	12232	12525	12784	13857	13321
Guelph	1979	12002	11916	12064	12514	12092	12643	12368
	1980	13389	13052	13616	13255	13445	12196	12821
Ottawa	1979	9612	8323	8944	9961	10420	10294	10357
Kapuskasing	1980	6607	4980	6075	6784	6668	6344	6506
1979 Seeding								
Ridgetown	1980	15582	14817	15544	15293	14608	15165	14887
	1981	13376	13284	14139	13427	14182	15145	14664
Guelph	1980	13810	13491	14473	14040	13674	14002	13838
	1981	11797	10643	11022	11183	10931	11324	11128
Kemptville	1980	11946	10978	11499	11721	12246	11487	11867
Thunder Bay	1980	5914	5301	5777	5548	5680	5833	5757
Mean								
North		6261	5141	5926	6166	6174	6089	6132
South		12841	12211	12760	12824	12898	13007	12953
Province		11744	11033	11621	11714	11777	11854	11816
Station year of date		12	12	12	12	12	12	

MEDIUM ALFALFA. ENTRIES ELIGIBLE FOR CONSIDERATION IN 1981

		ENTRIES				CHECK	
		Spreader-II	76-1	CW69	520	Iroquois	Average
1979 Seeding							
Ridgetown	1980	14504	15665	15867	15165	14608	14887
	1981	12082	14786	13686	15145	14182	14664
Guelph	1980	12673	13892	13195	14002	13674	13838
	1981	9931	11620	10679	11324	10931	11128
Kemptville	1980	11109	12177	11625	11487	12246	11867
Thunder Bay	1980	5592	6119	5877	5833	5680	5757
1980 Seeding							
Ridgetown	1981	13280	14442	15024	15159	-	15159
Guelph	1981	12364	12377	11696	12882	-	12882
Ottawa	1981	12378	16205	16186	16250	-	16250
New Liskeard	1981	9736	10109	10170	10276	-	10276
Mean							
North		7664	8114	8024	8055	5680	8016
South		12290	13895	13494	13926	13128	13835
Province		11365	12739	12400	12752	11887	12671
Station year of data		10	10	10	10	6	

TABLE 6 Alfalfa yield trial (Medium). Experiment 1060
Ridgetown 1980-81 yield data. Seeded 1979

Entry	Dry matter yield (Kg/ha) 1981				Total 1980	Mean 2-year
	Cut 1	Cut 2	Cut 3	Total		
Pioneer 520	5686	5380	4078	15145	15165	15155
OAC 76-1	5743	5081	3962	14786	15665	15226
Valor	5563	4940	3859	14362	14674	14518
Iroquois	5438	4932	3812	14182	14608	14395
CW 68	5462	4815	3862	14139	15544	14842
Vernal	5657	4615	3694	13966	15080	14523
Angus	5707	4661	3586	13955	15282	14619
Weevlchek	4882	5072	3964	13918	15235	14577
Algonquin	5658	4748	3314	13720	15145	14433
CW 69	5145	4400	4141	13686	15867	14777
Pickstar	5304	4859	3454	13616	15163	14390
Titan	5808	4240	3521	13569	15383	14476
T7801	5422	4464	3540	13426	15293	14360
74D111	5255	4356	3765	13376	15582	14479
CW 3	5328	4367	3589	13284	14817	14051
WL 215	4540	4563	3698	12800	15011	13906
Spredor II	4611	4151	3319	12082	14504	13293
LSD 5% :	852	406	288	878	1148	
Mean :	5365	4685	3715	13765	15177	
C.V. % :	11.17	6.09	5.46	4.49	5.32	

Location: Ridgetown

Plot Size: 1.6m x 5.0m

Design: Randomized complete
block

Soil Type: Clay Loam

Seeding Method: Broadcast

Replications: 4

Seeding Date: May 7, 1979

Cuttings:

Herbicide: 2,4-DB

<u>1979</u>	<u>1980</u>	<u>1981</u>
July 18	June 26	June 11
Aug. 31	July 25	July 14
	Sept 8	Sept 15

Fertilizer: May 1979 prior to
seeding 250 lbs/acre of
6-24-24 Sept. 13, 1979
450 lbs/acre of
0-25-25

TABLE 7 Alfalfa yield trial (Medium). Experiment 1068
Ridgetown 1981 yield data. Seeded 1980

Entry	Dry matter yield (Kg/ha) 1981			
	Cut 1	Cut 2	Cut 3	Total
Dekalb 120	6636	5638	4232	16505
Iroquois	5602	6750	3808	16160
79-051	6235	5742	3827	15804
Luz 84	5612	6175	3898	15686
CW 927	5718	5865	4089	15672
OAC 76-102	6123	5921	3452	15496
LSC 007	6105	5559	3683	15347
CW 6306	5810	5647	3817	15273
Pioneer 520	5882	5561	3716	15159
MLM 02015	5997	5348	3779	15123
79161	5796	5573	3687	15056
CW 69	5545	5549	3930	15024
Oneida	5825	5484	3696	15005
LSC 006	5821	5627	3537	14985
LSC 7801	5540	5532	3754	14826
Lab 78	5841	5231	3749	14821
OAC 76-1	5329	5610	3503	14442
MLM 02025	5679	4903	3559	14141
Spredor II	5435	4432	3413	13280
LSD 5% :	514	350	326	815
Mean :	5817	5587	3744	15148
C.V. % :	6.25	4.44	6.16	3.80

Location: Ridgetown

Plot Size: 1.6m x 5.0m

Design: Randomized complete
block

Soil Type: Clay Loam

Seeding Method: Broadcast

Replications: 4

Seeding Date: May 6, 1980

Cuttings:

Herbicide: 2,4-DB

1980

July 21
Sept 12

1981

June 11
July 15
Sept 8

Fertilizer:

TABLE 8 Alfalfa yield trial (Medium). Experiment 2802
Guelph, 1980-81 yield data. Seeded 1979

Entry	Dry matter yield (kg/ha) 1981				1980 Total	2-year Mean
	Cut 1	Cut 2	Cut 3	Total		
74D111	5155	3719	2923	11797	13810	12804
OAC 76-1	4785	3940	2895	11620	13892	12756
Algonquin	5214	3667	2684	11565	12897	12231
520	4674	3784	2866	11324	14002	12663
Valor	4689	3767	2850	11306	13075	12191
T7801	4652	3589	2943	11183	14040	12612
Angus	4757	3722	2689	11168	14007	12588
CW 68	4313	3797	2911	11022	14473	12748
Vernal	4179	3874	2908	10961	13706	12334
Iroquois	4294	3945	2692	10931	13674	12303
Titan	4625	3281	2910	10816	13498	12157
WL-215	4002	3887	2843	10731	13877	12304
CW 69	4259	3663	2756	10679	13195	11937
CW 3	4535	3484	2623	10643	13491	12067
Weevilchek	4077	3597	2914	10588	13376	11982
Pickstar	4307	3545	2670	10522	14038	12280
Spredor II	4395	3072	2464	9931	12673	11302
LSD 5% :	1020	335	252	1118	884	
Mean :	4524	3667	2797	10988	13631	
C.V. % :	15.87	6.43	6.33	7.16	4.56	

Location: Elora Research
Station

Plot Size: 1.5m x 6.0m

Design: Randomized complete
block

Soil Type: Connestoga silt loam

Seeding Method: 10 row plot
seeder

Replications: 4

Seeding Date: May 11, 1979

Cuttings: C₁ June 23

Herbicide :

C₂ July 23

C₃ Aug. 24

Fertilizer: 350 kg/ha of
5-20-20 applied
August 1980

TABLE 9 Alfalfa yield trial (Medium). Experiment 2814
Guelph 1981 yield data. Seeded 1980

Entry	Dry matter yield (Kg/ha) 1981			
	Cut 1	Cut 2	Cut 3	Total
79-051	6770	2583	4068	13422
LSC 7801	7053	2562	3499	13115
Luz 84	7030	2646	3435	13112
CW 6306	6797	2451	3696	12944
Iroquois	6688	2637	3563	12888
Pioneer 520	6464	2477	3942	12882
Lab 78	6269	2648	3964	12881
79161	6584	2380	3839	12803
Dekalb 120	6507	2429	3678	12614
CW 927	6634	2553	3360	12546
MLM 02025	6397	2336	3671	12404
OAC 7601	6242	2539	3595	12377
MLM 02015	6188	2646	3540	12374
Spredor II	6566	2043	3755	12364
LSC 007	6239	2443	3576	12258
OAC76-102	6196	2509	3511	12217
Oneida	5915	2584	3427	11926
LSC 006	5784	2507	3628	11919
CW 69	5506	2665	3525	11696
LSD 5% :	889	290	709	1101
Mean :	6412	2507	3646	12565
C.V. % :	9.80	8.18	13.75	6.20

Location: Elora Research
Station

Plot Size: 1.5m x 6.0m

Design: Randomized complete
block

Soil Type: Connestoga silt
loam

Seeding Method: 10 row plot
seeder

Replications: 4

Seeding Date: May 13, 1980

Cuttings: C₁ June 19

Herbicide:

C₂ July 15

C₃ Aug. 24

Fertilizer: 350 kg/ha of
5-20-20 applied
August, 1980

TABLE 10 Alfalfa yield trial (Medium). Experiment 4002
Ottawa 1981 yield data. Seeded 1980

Entry	Dry matter yield (Kg/ha) 1981			
	Cut 1	Cut 2	Cut 3	Total
Dekalb 120	10803	3413	3353	17569
CW 927	9700	3461	3588	16748
Pioneer 520	9661	3242	3348	16250
OAC 76-1	9164	3648	3393	16205
CW 69	9236	3278	3672	16186
CW 6306	8708	3222	3433	15363
Oneida	8447	3523	3308	15278
LSC 006	9026	2884	3169	15079
MLM 02015	8157	3486	3371	15014
LSC 7801	8153	3309	3383	14845
79-051	7919	3427	3413	14759
79161	7891	3515	3265	14671
MLM 02025	8275	2917	3437	14628
LSC 007	7971	3045	3239	14256
Lab 78	7743	3038	3248	14029
Luz 84	7409	3062	3315	13786
OAC76-102	7252	3126	3235	13612
Spredor II	6876	2940	2562	12378
Iroquois	6419	2841	3080	12341
LSD 5% :	2207	474	406	2516
Mean :	8358	3230	3306	14895
C.V. % :	18.67	10.38	8.69	11.94

Location - Ottawa Research Station

Plot size - 1.5m by 6.0m

Design - Randomized complete block

Soil type - North Gower
clay loam

Seeding method - eight row plot seeder

Replications - 4

Seeding date - May 14, 1980

Cuttings - C1 June 25
C2 July 27
C3 Sept.16

Herbicide - Treflan

Fertilizer - 448 Kg/ha of
8-16-16, Sept.1980

TABLE 11 Alfalfa yield trial (Medium). Experiment 8003
New Lisheard 1981 yield data. Seeded 1980

Entry	Dry matter yield (Kg/ha) 1981			
	Cut 1	Cut 2	Cut 3	Total
Luz 84	6380	2852	1933	11165
OAC76-102	5783	3125	1962	10870
LSC 007	6256	2679	1922	10857
79-051	5960	2952	1901	10814
MLM 02015	5515	2994	2231	10740
79161	5748	2923	2067	10738
Dekalb 120	5971	2774	1943	10689
CW 6306	5676	2933	2034	10643
MLM 02025	5681	2739	2197	10617
Iroquois	6240	2539	1758	10537
LSC 7801	5386	2868	2031	10285
Pioneer 520	5427	2960	1889	10276
CW 69	5249	2837	2083	10170
OAC 76-1	5119	2914	2075	10109
LSC 006	5280	2554	2142	9976
Oneida	5374	2745	1832	9952
CW 927	5210	2671	1932	9813
Lab 78	5352	2452	1997	9801
Spredor II	5997	2130	1609	9736
LSD 5% :	740	377	247	776
Mean :	5663	2771	1976	10410
C.V. % :	9.25	9.63	8.86	5.27

TABLE 12 Alfalfa performance trial (Early).Experiment 4003
Ottawa 1981 yield data. Seeded 1980

Entry	Dry matter yield (Kg/ha) 1981			
	Cut 1	Cut 2	Cut 3	Total
Pacer	7239	3183	3222	13644
Citation	7300	3049	3075	13423
Angus	7144	2854	3294	13291
Saranac	6811	3039	3086	12937
Anchor	6548	3265	3083	12896
Banner	6139	3243	3394	12776
Classic	6394	2940	3360	12694
Thor	6892	3008	2781	12681
Ceres	6142	3224	3088	12453
Primal	6096	3035	3320	12452
Vista	5700	3213	3201	12113
Apollo	6046	2954	2973	11973
LSD 5% :	886	369	626	1138
Mean :	6537	3084	3156	12778
C.V. % :	8.00	7.07	11.71	5.26

Location - Ottawa Research Station

Plot size - 1.5m by 6.0m

Design - Randomized complete block

Soil type - North Gower
clay loam

Seeding method - eight row plot seeder

Replications - 4

Seeding date - May 15, 1980

Cuttings - C1 June 29
C2 July 28
C3 Sept.18

Herbicide - Treflan

Fertilizer - 448 Kg/ha of
8-16-16, Sept.1980

TABLE 13 Alfalfa performance trial (Medium). Experiment 4004
Ottawa 1981 yield data. Seeded 1980

Entry	Dry matter yield (Kg/ha) 1981			
	Cut 1	Cut 2	Cut 3	Total
Futura	6977	2665	3452	13094
Dekalb 120	7007	2437	3101	12545
Valor	6536	2832	3139	12507
Pickstar	6360	2846	3267	12473
WL-215	6111	3013	3231	12356
Weevlecek	6724	2305	3077	12107
520	6464	2629	2935	12028
Algonquin	6806	2488	2643	11937
Magnum	6056	2547	2981	11584
Titan	6524	2179	2757	11461
Vernal	6573	2204	2617	11394
Iroquois	5144	2302	3068	10514
LSD 5% :	1034	574	380	1454
Mean :	6440	2537	3022	12000
C.V. % :	9.48	13.35	7.42	7.16

Location - Ottawa Research Station	Plot size - 1.5m by 6.0m
Design - Randomized complete block	Soil type - North Gower clay loam
Seeding method - eight row plot seeder	Replications - 3
Seeding date - May 15, 1980	Cuttings - C1 June 30 C2 July 28 C3 Sept.18
Herbicide - Treflan	Fertilizer - 448 Kg/ha of 8-16-16, Sept.1980

TABLE 14 Alfalfa yield trial (Early performance). Experiment 2811
Guelph, 1981 yield data. Seeded 1980

Entry	Dry matter yield (Kg/ha) 1981			
	Cut 1	Cut 2	Cut 3	Total
Citation	5517	2989	3456	11962
Primal	5141	3079	3557	11776
Ceres	4515	3691	3540	11745
Classic	5148	3035	3536	11719
Vista	4894	3078	3584	11555
Thor	4968	3138	3362	11468
Banner	5071	2742	3538	11352
Apollo	4594	3107	3556	11257
Anchor	4780	3174	3271	11225
Saranac	4828	2942	3420	11190
Pacer	4985	2754	3214	10953
Angus	4865	2626	3363	10854
LSD 5% :	512	795	228	865
Mean :	4942	3030	3450	11421
C.V. % :	7.18	18.18	4.58	5.25

Location: Elora Research
Station

Plot Size: 1.5m x 6.0m.

Design: Randomized complete
block

Soil Type: Connestoga silt
loam

Seeding Method: 10 row plot
seeder

Replications: 4

Seeding Date: May 13, 1980

Cuttings: C₁ June 8

Herbicide:

C₂ July 9

C₃ Aug. 17

Fertilizer: 350 kg/ha of
5-20-20 applied
August 1980

TABLE 15 Alfalfa yield trial (Medium performance). Experiment 2813
Guelph, 1981 yield data. Seeded 1980

Entry	Dry matter yield (Kg/ha) 1981			
	Cut 1	Cut 2	Cut 3	Total
Futura	6438	3096	3609	13142
Dekalb 120	6291	2769	3731	12790
WL-215	5926	3030	3798	12754
Weevlchek	6105	2794	3764	12663
Titan	6441	2465	3544	12450
Algonquin	6176	2822	3349	12348
Iroquois	6122	2670	3473	12265
Valor	6248	2409	3592	12249
Magnum	5886	2619	3704	12210
520	6018	2674	3478	12170
Pickstar	6262	2327	3479	12069
Vernal	5741	2442	3398	11581
LSD 5% :	901	633	324	895
Mean :	6138	2676	3577	12391
C.V. % :	10.18	16.40	6.28	5.01

Location: Elora Research
Station

Plot Size: 1.5m x 6.0m

Design: Randomized complete
block

Soil Type: Connestoga silt
loam

Seeding Method: 10 row plot
seeder

Replications: 4

Seeding Date: May 13, 1980

Cuttings: C₁ June 19

Herbicide:

C₂ July 15

C₃ Aug. 24

Fertilizer: 350 kg/ha of
5-20-20 applied
August 1980

TABLE 16 Alfalfa yield trial (Early performance). Experiment 8001
New Liskeard, 1981 yield data. Seeded 1980

Entry	Dry matter yield (Kg/ha) 1981			
	Cut 1	Cut 2	Cut 3	Total
Primal	5641	3191	2524	11357
Thor	5830	2970	2519	11318
Angus	5830	2947	2239	11016
Citation	5534	2999	2479	11013
Classic	6510	2451	2001	10962
Saranac	5738	2878	2297	10912
Banner	5233	3142	2505	10880
Vista	5412	2734	2257	10403
Pacer	5465	2668	2234	10368
Apollo	5030	2932	2212	10174
Anchor	5326	2625	2183	10133
Ceres	5074	2925	2056	10055
LSD 5% :	1255	377	235	1148
Mean :	5552	2872	2292	10716
C.V. % :	13.35	7.76	6.05	6.33

Alfalfa Varieties Up for Consideration, 1981 (Nov.)

Phytophthora Resistance Information

(Minnesota official ratings)

<u>Early Alfalfa</u>	<u>% Plants Resistant</u>
S.Q. Syn 2	4
Blazer	26
Hi-Phy	27
WL312	25
Epic	34
G7730	63
CW27	*
CW62	35
77-2	*
78-1	*
Honeyoye	1
532	*
 <u>Medium Alfalfa</u>	
74 D111	6
CW3	30
CW68	2
T7801	2
K6-11	*
76-1	*
CW69	16
 <u>Deferred Varieties</u>	
Atlas	*
PS10	3
Glory (02019)	3

* Resistance not claimed on entry of variety. No data on hand.

-28-
1981 ALFALFA PHYTOPHTHORA ROOT ROT
FIELD TRIAL
FORAGE CROPS SECTION
OTTAWA RESEARCH STATION

Entry	Ottawa Code No.	Disease* Severity Index	Duncan's** Multiple Range Test
Saranac	17	3.21	a
S.Q.Syn.2	21	3.20	a
74D111	5	2.99	ab
WL315	23	2.88	abc
77-8	22	2.84	abc
T7801	4	2.79	abc
80335 Ca.B.	20	2.71	abc
80334 Ca.B.	19	2.62	abc
Armor	27	2.56	abc
Apollo	28	2.46	abc
Ca. 670-71	18	2.36	abc
Peak	9	2.20	abc
G7730	10	2.16	abc
75-T-12	14	2.07	abc
79161	3	2.04	abc
CW927	13	1.96	abc
Trident	6	1.81	abc
77T1	24	1.77	abc
Ot-78/1	8	1.73	abc
FAR-14/1	7	1.63	abc
NAP B90	2	1.61	abc
780/3	25	1.59	abc
Answer	26	1.57	abc
Agate	1	1.55	abc
120	16	1.48	bc
Ot-78/3	12	1.41	bc
Ot-78/2	15	1.40	bc
Oneida	11	1.19	c

S.E. = 0.54; Average = 2.11; C.V. = 36%

*Average severity index from scoring individual plants grown in the field in each of two replications (about 75 plants per entry).

**P = 0.05

28.

$t_n = 1.314$ $LSD_{10\%} = 0.71$

1981 ALFALFA BACTERIAL WILT TRIAL

FORAGE CROPS SECTION
OTTAWA RESEARCH STATION

Entry	Ottawa Code No.	Disease* Severity Index	Duncan's** Multiple Range
Depuit	18	3.11	a
Honeoye	12	2.55	ab
Blazer	15	2.51	abc
Vernal	19	2.47	abc
Ot-78-1	16	2.34	bcd
Ot-78-2	17	2.25	bcd
CW69	3	2.12	bcd
CW27	8	2.10	bcd
S.Q.Syn.2	14	2.10	bcd
78-1	11	2.08	bcd
Epic	6	2.07	bcd
Hi-Phy	4	2.04	bcd
532	13	2.03	bcd
WL312	5	1.98	bcd
K6-11	1	1.97	bcd
CW62	9	1.91	bcd
77-2	10	1.79	bcd
G7730	7	1.70	cd
76-1	2	1.58	d

S.E. = 0.244; Mean = 2.14; C.V. = 25%

*Average severity index from scoring individual plants grown in the greenhouse in each of 5 replications (about 20 plants per entry per pot).

**P = 0.05

19x

18x4 = 72

t_n = 1.296

LSD_{10%} = 0.32

EXPT 3001 76 SEEDED EARLY ALFALFA 1981 KCAT

<u>CODE</u>	<u>NAME</u>	<u>CUT 1</u>	<u>CUT 2</u>	<u>TOTAL KG/HA</u>
1056	Olympic	4593.52	3194.08	7787.61 (1)
1053	Vista	4300.65	3340.58	7641.23 (2)
1018	OD-17 (Angus)	4238.42	3291.98	7530.40 (3)
1058	NAPB 51	4216.21	3249.45	7465.66 (4)
1057	Atlas	4354.59	2989.20	7343.78 (5)
1054	Apollo	4169.53	3131.34	7300.87 (6)
1022	Banner (Pioneer)	3755.04	3527.90	7282.93 (7)
1003	R.P. 38 (Anchor)	4015.40	3108.33	7123.73 (8)
1001	Saranac	3925.77	3165.28	7091.05 (9)
1005	NK-150 (Thor)	3922.31	2902.46	6824.77 (10)
1055	Vangard (Victor)	3495.16	3271.00	6756.16 (11)
L.S.D. 5% (kg/ha):		865.97	677.38	1281.48
Total Mean (kg/ha):		4088.77	3197.40	7286.18
C.V.		14.67	14.67	12.18

1981 Agronomic data

- Harvested - June 18/81 - Cut 1
 Aug. 21/81 - Cut 2
 No 3rd Cut
- Fertilizer - Fall '80 - 300 lb/ac of 0-25-25
 Fall '81 - 200 lb/ac of 0-25-25
- Herbicide - N/A

SUMMARY OF '76 MEDIUM ALFALFA AT KCAT

YEARLY YIELD IN KG/HA

	<u>1977</u>	<u>1978</u>	<u>1980</u>	<u>1981</u>
MLM 02015	5572 (1)	8506 (2)	9994 (4)	6146 (16)
Weevlcheck	5451 (2)	9321 (1)	9484 (10)	6482 (8)
MLM 02017	5331 (3)	8150 (7)	10069 (2)	6647 (7)
520	5279 (4)	8174 (6)	9907 (6)	7082 (3)
MLM 02016	5267 (5)	8273 (4)	10056 (3)	7262 (1)
CW9	5243 (6)	7612 (18)	9075 (17)	6114 (17)
MLM 02018	5137 (7)	8361 (3)	10296 (1)	6682 (6)
WL 215	5107 (8)	7665 (16)	9549 (9)	6206 (13)
MLM 02019	5032 (9)	7575 (19)	9263 (14)	6198 (14)
Pioneer 521	5017 (10)	8107 (8)	9440 (12)	6298 (12)
Titan	4836 (11)	7520 (20)	8490 (20)	5758 (20)
G 747	4836 (11)	7922 (11)	9381 (13)	6360 (10)
Valor	4784 (13)	7884 (12)	9731 (7)	6376 (9)
K3-15	4707 (14)	7829 (13)	9130 (15)	6075 (18)
Pickstar	4706 (15)	7934 (10)	9058 (18)	5717 (21)
MLM 02020	4685 (16)	7703 (14)	9455 (11)	6166 (15)
Vernal	4645 (17)	8204 (5)	9632 (8)	6768 (4)
Algonquin	4582 (18)	7664 (17)	8900 (19)	6699 (5)
Iroquois	4575 (19)	7991 (9)	9931 (5)	7261 (2)
WL 202	4360 (20)	7697 (15)	9127 (16)	6357 (11)
WL 210	3989 (21)	7432 (21)	8396 (21)	6046 (19)
L.S.D. 5%	766	1224	914	997
C.V.	11.03%	10.85%	6.84%	11.00%

1977 Yield data correlated with

1981 $r = + 0.18$ ns

SUMMARY OF '76 EARLY ALFALFA AT KCAT

YEARLY YIELD IN KG/HA

	<u>1977</u>	<u>1978</u>	<u>1980</u>	<u>1981</u>
Thor	5614 (1)	8061 (6)	10928 (1)	6825 (10)
Banner	5349 (2)	8268 (3)	9928 (8)	7283 (7)
Saranac	5309 (3)	7928 (9)	10443 (3)	7091 (9)
Atlas	5066 (4)	7991 (7)	10029 (5)	7344 (5)
Anchor	5050 (5)	7964 (8)	9994 (6)	7124 (8)
Vanguard	4866 (6)	8359 (2)	9333 (10)	6756 (11)
Olympic	4806 (7)	8187 (5)	9590 (9)	7788 (1)
Apollo	4801 (8)	7474 (11)	9937 (7)	7301 (6)
Angus	4712 (9)	8203 (4)	10040 (4)	7530 (3)
Vista	4710 (10)	7841 (10)	10623 (2)	7641 (2)
NAPB51	4632 (11)	8479 (1)	9131 (11)	7466 (4)
L.S.D., 5%	889	1001	803	1281
C.V.	12.33%	8.60%	5.56%	12.18%

1977 Yield data correlated with

1981 $r = -0.61^*$

EXPT 3002 '76 SEEDED MEDIUM ALFALFA 1981 KCAT

<u>CODE</u>	<u>NAME</u>	<u>CUT 1</u>	<u>CUT 2</u>	<u>TOTAL KG/HA</u>
1051	MLM 02016	4079.70	3182.08	7261.77 (1)
1501	Iroquois	4234.54	3026.93	7261.46 (2)
1504	Atra 50 (Pioneer)	4298.59	2783.48	7082.07 (3)
1502	Vernal	3942.81	2825.37	6768.18 (4)
1017	OR-16 (Algonquin)	3684.61	3014.83	6699.44 (5)
1059	MLM 02018	3974.84	2707.03	6681.87 (6)
1052	MLM 02017	3770.68	2876.74	6647.42 (7)
1503	FER SYN-W (Weevil)	3642.20	2840.00	6482.20 (8)
1033	Valor	3456.87	2919.26	6376.13 (9)
1062	G 747	3835.02	2524.89	6359.91 (10)
1720	WL-202	3457.81	2899.07	6356.88 (11)
1048	Pioneer-521	3650.81	2646.96	6297.77 (12)
1510	WL-215	3547.75	2658.58	6206.32 (13)
1060	MLM 02019	3676.89	2521.29	6198.17 (14)
1061	MLM 02020	3466.19	2699.67	6165.86 (15)
1050	MLM 02015	3528.87	2617.51	6146.38 (16)
1063	CW 9	3571.16	2543.78	6114.94 (17)
1049	K3-15	3668.26	2406.66	6074.91 (18)
1721	WL-210	3421.04	2625.16	6046.20 (19)
1719	Titan (RP-25)	3034.34	2724.06	5758.40 (20)
1025	Pickstar (EA-21)	3082.55	2634.79	5717.34 (21)
L.S.D. 5% (kg/ha):		624.30	578.61	997.41
Total Mean (kg/ha):		3667.86	2746.56	6414.43
C.V. =		12.04	14.90	11.00

1981 Agronomic Data

Harvested - June 18/81 - Cut 1

Aug. 21/81 - Cut 2

No 3rd Cut

Fertilizer - Fall - '80 300 lb/ac of 0-25-25

Fall - '81 200 lb/ac of 0-25-25

Herbicide - N/A

Bird's-foot Trefoil Varieties

CURRENT STATUS OF VARIETIES - Jan. 15, 1982

<u>Variety</u>	<u>Entered by</u>	<u>Official Status</u>	<u>Station Years of Data</u>
Empire	O.F.C.C.	Recommended, Pub. 296	-
Leo	O.F.C.C.	" "	-
Maitland	O.F.C.C.	" "	-
Viking	O.F.C.C.	" "	-
KO-4	N.K.	Not supported 1981, testing completed	10
Dawn	NAPB	Not supported 1981, testing completed	9
Mirabel	O.F.C.C.	Not supported 1981, testing completed	9
NC-83 Norcen	O.F.C.C.	Supported for licence, deferred (1)	6
Kentucky Ecotype	O.F.C.C.	Not supported, re-examine 1982	6
RC3SP3	U. of Guelph		3
FC 4SY2	U. of Guelph		3
FC 3SY3	U. of Guelph		2
01004	MIM		1
PS79055	Pickseed		1

Birdsfoot trefoil varieties eligible for consideration.

Seeded 1976 ¹		Seeded 1978 ²		Seeded 1979 ³		Seeded 1980 ⁴		Mean yield		Grand mean	
Station years	Variety	Mean yields 1977 & 1978		Mean yields 1979 & 1980		Mean yields 1980 & 1981		1981			
		Cut 1	Total	Cut 1	Total	Cut 1	Total	Cut 1	Total	Cut 1	Total
11	KO4	4529	6985			4443	7439			4530	7307
11	Leo	5017	7307			4777	8201			4908	7714
9	Dawn			5266	6789	4905	8314			5066	7636
9	Mirabel			5168	6666	4766	8339			4945	7595
9	Leo			5347	6954	4777	8201			5030	7647
6	NC-83					4810	8362	5882	10325	4988	8689
6	Kent Eco					4413	7744	7098	11159	4860	8313
6	Leo					4777	8201	6026	9517	4986	8421

¹ 1977 yields from Ridgetown, Ottawa and Kapuskasing. 1978 yields from Ottawa, Elora and Kapuskasing.

² 1979 yields from Ottawa, Thunder Bay and Ridgetown. Ottawa and Thunder Bay have only Cut 1 date.
1980 yields from Ridgetown only.

³ 1980 results from Elora, Kapuskasing and Kemptville. 1981 results from Elora and Kapuskasing.

⁴ 1981 results from Ottawa only.

Provincial trefoil variety trial. Seeded 1979.

Variety	Forage yield (kg/ha)											
	Kemptville		Kapuskasing				Elora				Mean	
	1980		1980		1981		1980		1981			
	Cut 1	Total	Cut 1	Total	Cut 1	Total	Cut 1	Total	Cut 1	Total	Cut 1	Total
RC4 Syn 2			3495	7197	3810	5313	6572	9927	4858	8435	4684	7718
Kent Ecotype	4906	9429	2604	5676	3568	5882	5870	8988	5115	8743	4413	7744
Dawn	5955	10724	3330	7073	4185	5707	6655	10170	4402	7895	4905	8314
KO-4	5387	9735	3110	6146	3912	5827	5546	8799	4703	7959	4532	7693
Maitland	5767	10385	2826	6050	3738	6222	5985	9136	5353	9546	4734	8268
NC-83	5528	10276	3282	6968	3877	5716	6425	9999	4936	8851	4810	8362
Leo	5469	10262	3529	7204	3799	5197	6191	9820	4899	8523	4777	8201
Mirabel	5933	11067	3429	7749	4011	5628	5859	9440	4599	7810	4766	8339
Empire	5413	9962	2217	6260	3840	6023	6527	9649	4808	8390	4561	8057
Viking	5489	9816	2987	6530	3834	6112	5712	9106	5494	9470	4703	8207
Carroll	5544	10276	3521	7307	3754	5248	6538	10114	4778	8293	4827	8248
RC3 SP3	5850	10472					6427	9653	4850	8554	5709	9560
RC3 Syn 3							6145	9380	4703	8100	5424	8740
LSD 5%	700	821	467	876	605	711	331	465	452	755		
Mean	5562	10218	3121	6742	3848	5716	6174	9552	4884	8505	4777	8207
C.V. (%)	8.7	5.6	8.8	7.6	9.2	7.3	4.5	4.1	6.5	6.2		

Expt. 2547. Trefoil variety trial. Elora. Seeded 1979.

A: TELOR 79.81

Variety	Seeding yr. yield	1980 yield		% Flower	1981 yield		
		Cut 1	Total		Cut 1	Cut 2	Total
RC4 Syn 2	6757	6572	9927	5	4858	3577	7031 8435
Kent. Ecotype	6351	5870	8988	6	5115	3628	7028 8743
Dawn	7008	6655	10170	4	4402	3493	7008 7895
KO-4	6429	5546	8799	47	4703	3256	7026 7959
Maitland	6800	5985	9136	11	5353	4193	7010 9546
NC-83	6730	6425	9999	8	4936	3915	7029 8851
Leo	6743	6191	9820	13	4899	3624	7001 8523
Mirabel	6554	5859	9440	5	4599	3211	7007 7810
Empire	7227	6527	9649	15	4808	3582	7003 8390
Viking	7064	5712	9106	6	5494	3976	7004 9470
Carroll	7313	6538	10114	9	4778	3515	7021 8293
RC3 SP3	7092	6427	9653	76	4850	3704	7030 8554
RC3 Syn 3	7482	6145	9380	81	4703	3396	omit 8100
LSD 5%	537	331	465		452	575	755
Mean	6888	6174	9552		4884	3621	8505
C.V. (%)	5.4	4.5	4.1		6.5	11.1	6.2

Location - Elora Research Station
 Design - Randomized complete block
 Seeding method - S row plot seeder
 Herbicide - Etam
 Plot size - 1.5 m by 6.2 m
 Soil type - Silt loam
 Cuttings - C1, June 16; C2, August 4
 Fertilizer - 168 lb/acre 0-20-20, June 1981

Expt. 6511. Trefoil variety trial. Kapuskasing. Seeded 1979.

A=TK79.81

Variety	Seeding yr. yield	Yield (kg/ha)					
		1980 yield			1981 yield		
		Cut 1	Cut 2	Total	Cut 1	Cut 2	Total
RC4-Syn 2	3421	3495	3702	7197	3810	1503	7031
Kent. Ecotype	3387	2604	3072	5676	3568	2314	7082
Dawn	3509	3330	3743	7073	4185	1522	7007
KO-4	2901	3110	3036	6146	3912	1915	7027
Maitland	3147	2826	3224	6050	3738	2484	7010
NC-83	3384	3282	3686	6968	3877	1839	7029
Leo	3751	3529	3675	7204	3799	1398	7001
Mirabel	2911	3429	4320	7749	4011	1617	7027
Empire	3328	2217	4043	6260	3840	2183	7003
Viking	2990	2987	3543	6530	3834	2278	7004
Carroll	3800	3521	3786	7307	3754	1494	7021
LSD .05		467	579	876	605	354	711
Mean	3321	3121	3621	6742	3848	1868	5716
C.V. (%)		8.8	9.4	7.6	9.2	11.1	7.3

Location - Kapuskasing Experimental Farm

Design - Randomized complete block

Seeding method - 7" rows - 8 row seeder

Herbicide - none

Plot size - 1.5 m x 6.2 m

Soil type - heavy clay

Cuttings - C1, July 6; C2, Sept. 15

Fertilizer - Fall 275 kg/ha 0-30-45

Planting date - May 18, 1979

Exp. 4005. Trefoil variety trial. Ottawa. Seeded 1980.

A=7080.81

Variety	1981 yields (kg/ha)		Total
	Cut 1	Cut 2	
RC4 Syn 2	5797	3750	7031 9547
Maitland	7202	4431	7010 11633
PS 79055	6002	3929	7032 9931
MLM 01004	6848	3373	7033 10221
Empire	7210	3459	7003 10669
Ky. Ecotype	7098	4061	7028 11159
Viking	7367	3709	7004 11076
NC-83	5882	4443	7029 10325
Leo	6026	3491	7001 9517
LSD 5%	1700	976	2157
Mean	6603	3850	10453
C.V. (%)	17.6	17.4	14.1

Location - Ottwa Research Station
 Design - Randomized complete block
 Seeding method - 8 row plot seeder
 Herbicide - Treflan
 Plot size - 1.5 m x 6.2 m
 Soil type - North Gower clay loam
 Cuttings - C1, June 30; C2, Sept. 17
 Fertilizer - Sept. 448 kg/ha 8-16-16
 Seeded May 14, 1980

Trefoil variety trial. Seeded 1981. Seeding year data.

Variety	Yield (kg/ha)		Mean
	Elora	Kemptville	
PS 79055	5710	3912	4811
MLM 01004	5203	3252	4228
RC3	5349	3173	4261
RC4 Syn 2	5488	3583	4536
Viking	5099	3438	4269
Maitland	5458	3214	4336
Leo	5581	3373	4477
Empire	5345	2295	3820
NC-83	5561	3085	4323
Kentucky Eco.	5429	3104	4267
LSD 5%	524	529	
Mean	5422	3243	4333
C.V. (%)	8.0	11.2	

Trefoil variety trials.

Correlation between seeding year and 2nd year data.

Exp. 2532. Seeded 1978

Variety	Mean yields (kg/ha)	
	1978	1979
Leo	9188	10037
RC-3-M	9750	10213
RC-3-SV-S3	13281	9722
RC4-SV-S2	9865	10547
Carroll	12917	10433
Montana	10578	9797
Mirabel	9348	9819
Empire	10076	9603
Dawn	10459	8546
Viking	10250	9518
Maitland	10187	9167

Correlation 0.08

Exp. 2570. Seeded 1980

Variety	Mean yields (kg/ha)	
	1980	1981
Leo	3066	11527
MLM 01004	3227	11161
RC4 Syn 2	3150	10991
NC-83	3136	11490
PS 79055	3098	10909
Empire	2985	10031
Kent. Ecotype	2957	10855
Viking	2839	10614
Maitland	2810	10567

Correlation 0.59

1979 Seeded trials.

Varieties	Mean yields (kg/ha)			
	Kapuskasing		Elora	
	1979	1980	1979	1980
RC4 Syn 2	3421	7197	6757	9927
Kentucky Ecotype	3387	5676	6351	8988
Dawn	3509	7073	7008	10170
KO4	2901	6146	6429	8799
Maitland	3147	6050	6800	9136
NC-83	3384	6968	6730	9999
Leo	3751	7204	6743	9820
Mirabel	2911	7749	6554	9440
Empire	3328	6260	7227	9649
Viking	2990	6530	7064	9106
Carroll	3800	7307	7313	10114
RC3 SP3			7092	9653
RC3 Syn 3			7482	9380

Correlation

0.27

0.46

Red Clover Varieties

CURRENT STATUS OF VARIETIES - Jan. 15, 1982

<u>Variety</u>	<u>Entered by</u>	<u>Official Status</u>	<u>Station Years of Data</u>
Arlington	O.F.C.C.	Recommended, Pub. 296	-
Florex	O.F.C.C.	" "	-
Lakeland	O.F.C.C.	" "	-
Ottawa	O.F.C.C.	" "	-
Prosper I	O.F.C.C.	" "	-
Bytown	O.R.S.	Licensed, deferred	-
Tristan	OSEC O	Not supported 1981, re-examine 1982	6
Redland II	NAPB	Not supported 1981, re-examine 1982	6
Ruby	MIM		3
7801	Landis		3
Pacific	Richardson		3

1981 RED CLOVER SUMMARY

Total Yields kg/ha

Code	Cultivar Name	Ridgetown # 1062 '79 Seeded '80 Harvested	Kapuskasing # 6559 '79 Seeded '80 Harvested	Kemptville # 3035 '79 Seeded '81 Harvested	Kemptville #3041 '80 Seeded '81 Harvested	Elora # 2569 '80 Seeded '81 Harvested	Thunder Bay # 7139 '80 Seeded '81 Harvested	Mean Yield
4002	Lakeland	11451.73	5180.60	9292.68	9969.20	9535.17	5103.73	8422.18
4003	Ottawa	12127.89	4327.17	7606.05	9169.71	8341.39	5182.89	7792.52
4017	Florex	11075.25	5895.20	9921.84	10317.45	9597.67	5183.21	8665.10
4023	Arlington	10999.11	5271.74	9047.66	9986.96	9461.14	5018.25	8297.48
4027	Prosper I	11075.12	5588.11	9152.09	10024.25	9845.59	5178.37	8477.26
4029	Tristan	11513.72	5169.84	8675.74	10504.15	9130.05	5338.41	8388.65
4030	Redland II	11842.55	4760.17	8938.53	9477.66	8636.75	4988.12	8107.30
4031	7801	---	---	---	10011.50	9694.07	4646.92	(8117.50) *
4032	Ruby	---	---	---	9946.44	9114.25	5306.79	(8122.49) *
4033	Pacific	---	---	---	8719.73	7102.75	4843.52	(6888.67) *

* Comparisons of mean yield valid only between cultivars tested at identical locations.

THUNDER BAY EXPT 7139 '80 SEEDED RED CLOVER VARIETY TEST 1981

Code	Name	Cut 1	Cut 2	Total kg/ha
4029	Tristan	3563.18	1775.23	5338.41
4032	Ruby	3482.59	1824.20	5306.79
4017	K8-115 (Florex)	3589.64	1593.57	5183.21
4003	Ottawa	3008.40	2174.49	5182.89
4027	Prosper I	3371.41	1806.96	5178.37
4002	Lakeland	3254.13	1849.60	5103.73
4023	Arlington	3239.65	1778.60	5018.25
4030	Redland II	3100.73	1887.39	4988.12
4033	Pacific	3086.01	1757.50	4843.52
4031	7801	3019.04	1627.88	4646.92
	LSD 5% (kg/ha):	501.54	234.50	530.47
	TOTAL MEAN (kg/ha):	3271.46	1805.54	5079.00
	CV =	10.57	8.94	7.20

Soil Type	- Sandy loam
Experimental Design	- Randomized block - 4 reps.
Plot size	- 1.5m x 6.0m in length
Size sample harvested	- .61m x 5.0m
Variety	- 10 varieties
Fertilizers	1980 - 35 kg/ha N - 80 kg/ha P(2 ⁰ 5) - 80 kg/ha K(2 ⁰) - applied spring and fall
	1981 - 80 kg/ha P(2 ⁰ 5) - 80 kg/ha K(2 ⁰) - applied spring and fall
Herbicides	1980 - applied Paraquat in spring prior to seeding 1981 - no herbicides applied
Seeding date	- May 16, 1980
Harvest date	- Cut 1 - July 3 Cut 2 - August 11
Previous Crop	- Plough down cereal crop for green manure
Seeding method	- Broadcast - by hand
Harvest method	- Plot - forage harvester

A-RC KEMP 79.81

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EXPT. 3035

'79 SEEDED RED CLOVER KEMPTVILLE

1981 HARVEST

CODE	NAME	CUT 1	CUT 2	CUT 3	TOTAL kg/ha
4017	K8-115 (Florex)	4984.28	4937.57	0.0	9921.84
4002	Lakeland	4522.61	4770.07	0.0	9292.68
4027	Prosper I	4642.29	4509.80	0.0	9152.09
4023	Arlington	4567.24	4480.41	0.0	9047.66
4030	Redland II	4175.21	4763.32	0.0	8938.53
4029	Tristan	4799.18	3876.55	0.0	8675.74
4003	Ottawa	3411.78	4194.27	0.0	7606.05
LSD 5% (kg/ha):		485.57	854.49	0.0	860.09
TOTAL MEAN (kg/ha):		4443.21	4504.55	0.0	8947.77
CV =		7.36	12.77	0.0	6.47

Soil Type - Osgoode Loam
 Previous Crop - Forages
 Location - Range 9 Kemptville
 Test Size - 50' x 80'
 Variety - N/A
 Seeding Rate - 10 lbs/ac
 Herbicide - N/A
 Fertilizer - Fall '80 - 300 lbs. 0-25-25
 - Fall '81 - Plowed
 Planting Date - May 8/79
 Harvest Date - Cut 1 - June 25
 - Cut 2 - August 18

A=RCKEMPTD-81

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KEMPTVILLE EXPT 3041 '80 SEEDED RED CLOVER, HARVESTED 1981

Code	Name	Cut 1	Cut 2	Total kg/ha
4029	Tristan	4844.77	5659.38	10504.15
4017	K8-115 (Florex)	5270.55	5046.89	10317.45
4027	Prosper I	4561.88	5462.37	10024.25
4031	7801	4609.91	5401.59	10011.50
4023	Arlington	4800.22	5186.74	9986.96
4002	Lakeland	5059.68	4909.52	9969.20
4032	Ruby	4713.26	5233.18	9946.44
4030	Redland II	4739.77	4737.89	9477.66
4003	Ottawa	4231.21	4938.50	9169.71
4033	Pacific	4197.30	4522.43	8719.73
	LSD 5% (kg/ha):	696.43	676.24	732.65
	TOTAL MEAN (kg/ha):	4702.84	5109.83	9812.68
	CV =	10.21	9.12	5.15

Soil Type - North Gower Clay Loam
 Previous Crop - Forages
 Location - Range 8 Kemptville
 Test Size - 60' x 80'
 Variety - N/A
 Seeding Rate - 10 lbs/ac
 Herbicide - N/A
 Fertilizer Fall 1980 - 0-25-25 @ 300 lbs/ac
 Fall 1981 - 0-25-25 @ 300 lbs/ac
 Planting Date - May 8, 1980
 Harvest Date - Cut 1 - June 25, 1981
 - Cut 2 - August 18, 1981

A-KELOR 80.81

ELORA EXPT 2569 '80 SEEDED RED CLOVER VARIETY TRIAL, HARVESTED 1981

Code	Name	Cut 1	Cut 2	Total kg/ha
4027	Prosper I	6814.00	3031.60	9845.59
4031	7801	7056.70	2637.37	9694.07
4017	K8-115 (Florex)	7271.92	2325.75	9597.67
4002	Lakeland	6583.64	2951.52	9535.17
4023	Arlington	6626.80	2834.35	9461.14
4029	Tristan	6116.15	3013.90	9130.05
4032	Ruby	6207.25	2907.00	9114.25
4030	Redland II	5726.77	2909.97	8636.75
4003	Ottawa	5384.82	2956.57	8341.39
4033	Pacific	4915.42	2187.32	7102.75
	LSD 5% (kg/ha):	798.08	344.10	856.84
	TOTAL MEAN (kg/ha):	6270.32	2775.52	9045.86
	CV =	8.77	8.54	6.53

Design	- Randomized Complete Block
Seeding Method	- 5 Row Plot Seeder
Herbicide	- Eptam
Plot Size	- 1.5 m by 6.0 m
Soil Type	- Silt Loam
Replications	- 4
Cuttings	- Cut 1 - June 9
	- Cut 2 - July 8
	- Cut 3 - August 4
	- Cut 4 - August 31
Fertilizer	- 168 kg/ha 0-20-20 June, 1981

White Clover Varieties

CURRENT STATUS OF VARIETIES - Jan. 15, 1982

<u>Variety</u>	<u>Entered by</u>	<u>Official Status</u>	<u>Station Years of Data</u>
Merit	O.F.C.C.	Drop from 296, no seed available	-
Pilgrim	O.F.C.C.	Licensed, not supported, testing completed	9
Ladino	O.F.C.C.	Licensed, not supported, testing completed	9
Sacramento	T. Szego	Support for licence, deferred (1)	9
Szarvasi	Pickseed	Support for licence, deferred (1)	9

WHITE CLOVER SUMMARY 1981

			CULTIVAR & CODE					
			8004 MERIT	8005 SACRAMENTO	8001 PILGRIM	8002 LADINO	8006 SZARVASI	8003 COMMON
Elora	Seeded '79	Harvested '81	8411.87	8335.57	7922.50	7867.97	7750.97	7164.02
Ottawa	Seeded '79	Harvested '81	4875.03	4571.25	4095.67	4692.88	4323.01	4218.69
Elora	Seeded '79	Harvested '80	8598	8215	8442	7992	8594	6977
Kemptville	Seeded '79	Harvested '80	7660	6501	7112	7847	7285	4681
Ottawa	Seeded '79	Harvested '80	5589	4623	4680	4449	4668	3330
Ridgetown	Seeded '78	Harvested '79	6507	6642	6504	6818	7260	5836
Thunder Bay	Seeded '78	Harvested '79	2701	2464	2894	2632	2636	2833
Thunder Bay	Seeded '78	Harvested '80	1838	1598	1555	1882	1962	1226
Elora	Seeded '77	Harvested '78	4781	4324	4389	4541	4044	3285
Mean			5662.3	5252.6	5288.2	5413.5	5391.4	4394.5

ELORA EXPT 2558 '79 SEEDED WHITE CLOVER VARIETY TRIAL, HARVESTED 1981

Code	Name	Cut 1	Cut 2	Cut 3	Total kg/ha
8004	Merit	2704.77	2678.42	3028.67	8411.87
8005	Sacramento	2850.35	2949.67	2535.55	8335.57
8001	Pilgrim	2848.47	2628.47	2445.55	7922.50
8002	Ladino	2752.22	2660.70	2455.05	7867.97
8006	Szarvasi	2389.02	2653.62	2708.32	7750.97
8003	Common	2687.20	2055.62	2421.20	7164.02
LSD 5% (kg/ha):		377.31	560.89	730.65	1547.05
TOTAL MEAN (kg/ha):		2705.34	2604.42	2599.06	7908.80
CV =		9.26	14.30	18.67	12.99

Design	- Randomized Complete Block
Seeding Method	- 5 Row Plot Seeder
Herbicide	- Treflan
Plot Size	- 1.5 m x 6.0 m
Soil Type	- Silt Loam
Replications	- 4
Cuttings	- Cut 1 June 19
	- Cut 2 July 23
Seeded	- May 7, 1980

OTTAWA EXPT 4032 '79 SEEDED WHITE CLOVER VARIETY TRIAL, HARVESTED 1981.

Code	Name	Cut 1	Cut 2	Cut 3	Total kg/ha
8004	Merit	3254.20	1620.83	0.0	4875.03
8002	Ladino	3129.78	1563.10	0.0	4692.88
8005	Sacramento	2983.67	1587.59	0.0	4571.25
8006	Szarvasi	2852.08	1470.93	0.0	4323.01
8003	Common	2556.66	1662.04	0.0	4218.69
8001	Pilgrim	2618.77	1476.90	0.0	4095.67
LSD 5% (kg/ha):		454.67	465.97	0.0	761.51
TOTAL MEAN (kg/ha):		2899.19	1563.56	0.0	4462.75
CV =		8.61	16.37	0.0	9.37

Seeding Method - 4 Row Funnel Seeder
 Seeding Date - June 1, 1979
 Plot Size - 6 m x 1.2 m
 Soil Type - Grenville Loam
 Cutting Dates - Cut 1 - June 24, 1981
 - Cut 2 - July 23, 1981
 - Cut 3 - August 21, 1981
 Fertilizer - 448 kg/ha 8-16-16 on Sept. 19, 1980
 Replications - 4 and 4 discards

Bromegrass and Reed Canarygrass

Bromegrass yield results in 1981 are reported from three locations from 1979 seedings. For several unlicensed varieties six station years data are now available but no requests for licensing support are expected. No new strains were submitted for testing in either 1980 or 81. A performance test of recommended varieties will be seeded at Ottawa in 1982.

Reed canarygrass yield data include two harvest years at each of three locations for the 1979 seeding of five entries. There is also first harvest year results from a similar test seeded in 1980 at Ottawa. Only the Vantage variety yielded more than the check, Frontier, as a mean of these seven test years and by only 16 kg/ha average. This variety will be added to the recommended list for 1982. No new tests were seeded in 1981.

F. S. Warren
Co-ordinator

Brome Grass Varieties

CURRENT STATUS OF VARIETIES - Jan. 15, 1982

<u>Variety</u>	<u>Entered by</u>	<u>Official Status</u>	<u>Station Years of Data</u>
Baylor	O.F.C.C.	Recommended, Pub. 296	-
Beacon	"	" "	-
Blair	"	" "	-
Saratoga	"	" "	-
Tempo	"	" "	-
Bromex	"	" "	-
Jubilee (13009)	MIM	O.F.C.C. support withdrawn 5th year deferral	-
13011	MIM	Supported for lic., Deferred (2)	-
13010	MIM	Not supported 1981, testing completed	12
S 7855	O.F.C.C.	Not supported 1981, testing completed	12
S 8590	O.F.C.C.	Not supported 1981, testing completed	12
S 8800	O.F.C.C.		6*

*Not eligible for consideration 1981, only one seeding year

Ontario Bromegrass Tests
1980 and 1981 hay yields (DM kg/ha) from 1979 seeding

Variety	1980-----			1981-----			Mean
	Elora	Kemptville	Ottawa	Elora	Kemptville	Ottawa	
Barton	13722	10408	8551	11904	10386	12947	11320
Baylor	13987	11648	7672	11958	10651	13154	11512
Beacon	13881	11504	8474	12227	10939	10989	11336
Blair	13957	10777	7722	12025	11363	11222	11178
Jubilee	13044	10804	7888	11533	9516	10312	10516
MLM 13010	12210	11712	7443	11473	10360	12644	10974
MLM 13011	13756	12181	7722	13001	9476	12621	11459
Saratoga	12920	11188	8139	11627	10414	11502	10965
S 7855	13580	11235	8218	11602	11420	10532	11098
S 8590	13129	10699	8075	11211	10524	9825	10577
S 8800	14082	10675	7579	12058	9648	9967	10668
Tempo	15145	11236	7519	11657	9591	10393	10923
Mean	13618	11172	7917	11856	10357	11139	11010
LSD (5%)	1421	1376	615	1485	1599	1727	
C.V. (%)	7.2	8.5	6.5	8.7	9.1	10.8	

Ontario Bromegrass Tests
1981 hay yields from 1979 seeding

Experiment 2803

Elora

Variety or strain	yield (DM kg/ha)		Total
	Cut 1	Cut 2	
MLM 13011	10004	2997	13001
Beacon	9695	2532	12227
S8800	9947	2110	12058
Blair	9785	2239	12025
Baylor	9973	1984	11958
Barton	9427	2477	11904
Tempo	8879	2778	11657
Saratoga	8755	2872	11627
S7855	9122	2480	11602
Jubilee	8953	2580	11533
MLM 13010	8970	2503	11473
S8590	8788	2423	11211
Mean	9358	2498	11856
LSD (5%)	1413	287	1485
C.V. (%)	10.5	8.0	8.7

LOCATION: Elora

PLOT SIZE: 5' x 20'

DESIGN: Rand. Comp. Block

SOIL TYPE: Silt Loam

SEEDING METHOD: Cone Seeder

REPLICATIONS: 4

SEEDING DATE: May 22/79

CUTTING DATES:
1. June 24, 1981
2. Aug. 5, 1981

HERBICIDE: None

FERTILIZER:
35-0-0, 75 lb/ac
in spring and after each cut.
5-20-20, 50 lb/ac
each fall

ONTARIO BROMEGRASS TEST

1981 hay yields from 1979 seeding

Expt 3031

Kemptville

Variety or Strain	Yield (D.M. kg/ha)		Total
	Cut 1	Cut 2	
S7855	7616	3804	11420
Blair	7401	3962	11363
Beacon	7301	3638	10939
Baylor	7098	3553	10651
58590	7356	3168	10524
Saratoga	6807	3607	10414
Barton	6660	3726	10386
MLM13010	6826	3534	10360
58800	6734	2914	9648
Tempo	6480	3112	9591
Jubilee	6476	3040	9516
MLM13011	6026	3450	9476
Mean	6898	3459	10357
L.S.D. (5%)	1420	507	1599
C.V. (%)	12.2	8.6	9.1

LOCATION: Kemptville

DESIGN: Randomized Block

SEEDING METHOD: 8 row seeder

SEEDING DATE: June 4, 1979

HERBICIDE: None

PLOT SIZE: 1.5m x 6m

SOIL TYPE: Sandy Loam

REPLICATION: 4

CUTTINGS: 1981-June 5, Aug. 19

FERTILIZER: 1980-0-25-25
at 280 kg/ha
1981-56 kg/ha nitrogen
after each cut.

ONTARIO BROMEGRASS TEST

1981 hay yield from 1979 seeding

Expt 4792

Ottawa

Variety or Strain	Yield (D.M. kg/ha)		Total
	Cut 1	Cut 2	
Baylor	10850	2305	13154
Barton	10683	2265	12947
MLM13010	10050	2594	12644
MLM13011	10536	2085	12621
Saratoga	8965	2537	11502
Blair	9527	1695	11222
Beacon	9167	1823	10989
S7855	8603	1929	10532
Tempo	8344	2049	10393
Jubilee	8151	2161	10312
S8800	8504	1463	9967
S8590	7796	2029	9825
Deborah	6708	1991	8699
Mean	9068	2071	11139
L.S.D. (5%)	1724	602	1727
C.V. (%)	13.2	20.3	10.8

LOCATION: Ottawa

PLOT SIZE: 1.5m x 6m

DESIGN: Randomized Block

SOIL TYPE: Clay Loam

SEEDING METHOD: 8 row plot
seeder

REPLICATIONS: 4

SEEDING DATE: June 6, 1979

CUTTINGS: 1980-June 10, Sept. 8
1981-June 23, Sept. 14

HERBICIDE: 2,4-D

FERTILIZER: Applied 135 kg/ha
nitrogen
May 5, 1980, 56 kg/ha
nitrogen after first
cut and 336 kg/ha
of 8-16-16 after
second cut.
90 kg/ha nitrogen
applied May 1981.

Reed Canary Grass

CURRENT STATUS OF VARIETIES - Jan. 15, 1982

<u>Variety</u>	<u>Entered by</u>	<u>Official Status</u>	<u>Station Years of Data</u>
Rise	O.F.C.C.	Recommended, Pub. 296	-
Frontier	O.F.C.C.	Recommended, Pub. 296	-
Grove	O.F.C.C.	Not supported 1981, re-examine 1982	5
Vantage	WAPB	Recommended in Pub. 296	7
Castor	O.F.C.C.	Not supported 1981, re-examine 1982	7

Ontario Reed Canarygrass Tests

Hay yields (DM kg/ha) 1980, 1981 from 1979 seeding

Variety	1980-----				1981-----			Mean
	Ridgetown	Kemptville	Ottawa	Kapuskasing	Kemptville	Ottawa	Kapuskasing	
Castor	11690	10376	8831	7575	8990	9550	4139	8736
Frontier	12791	12169	9117	9025	9938	10315	5940	9899
Grove	11921	9094	9426	7173	8198	11469	4825	8872
Rise	12817	11546	8700	8287	9578	10206	5562	9528
Vantage	13389	11949	9275	8430	10286	10246	5535	9873
Mean	12522	11027	9070	8098	9398	10357	5200	9382
LSD (5%)	996	954	N.S.	1305	1906	1432	642	
C.V. (%)	5.2	5.6	6.1	8.6	10.8	9.0	6.6	

Ontario Reed Canarygrass Tests
1981 hay yields from 1979 seeding

Variety	yield (DM kg/ha)		
	Cut 1	Cut 2	Total
<u>Experiment 3038 Kemptville</u>			
Vantage	6812	3474	10286
Frontier	6771	3167	9938
Rise	6579	3000	9578
Castor	6654	2336	8990
Grove	5915	2283	8198
Mean	6546	2852	9398
LSD (5%)	1535	464	1906
C.V. (%)	12.4	8.6	10.8
<u>Experiment 4795 Ottawa</u>			
Grove	7743	3726	11469
Frontier	6310	4004	10315
Vantage	6580	3666	10246
Rise	6857	3349	10206
Castor	6233	3317	9550
Mean	6745	3612	10357
LSD (5%)	1285	373	1432
C.V. (%)	12.4	6.7	9.0

<u>LOCATION</u>	<u>KEMPTVILLE</u>	<u>OTTAWA</u>
Plot Size:	1.5m x 6m	1.5m x 6m
Design:	Randomized Block	Randomized Block
Soil Type:	Sandy Loam	Clay Loam
Seeding Method:	8 row seeder	8 row plot seeder
Replication:	4	4
Seeding Date:	June 4, 1979	June 7, 1979
Cuttings:	1981-June 12, Aug. 19	1980-June 11, Sept. 9 1981-July 2, Sept. 14
Herbicide:	None	2,4-D
Fertilizer:	1980-0-25-25 at 336 kg/ha 1981-56 kg/ha nitrogen after each cut	Same as expt. 4792

Ontario Reed Canarygrass Test
1981 hay yields from 1979 seeding

Expt. 6058

Kapuskasing

Variety	Yield (DM kg/ha)		Total
	Cut 1	Cut 2	
Frontier	3994	1945	5940
Rise	3765	1797	5562
Vantage	3967	1568	5535
Grove	3741	1083	4825
Castor	3264	875	4139
Mean	3746	1454	5200
LSD (5%)	439	524	642
C.V. (%)	6.2	19.1	6.6

LOCATION: Kapuskasing
Experimental Farm

PLOT SIZE: 1.4m x 6m

DESIGN: Randomized Block

SOIL TYPE: Clay Loam

SEEDING METHOD: 8 row
plot seeder

REPLICATIONS: 3

SEEDING DATE: May 18, 1979

CUTTINGS: 1980 -
1981 - June 29,
Sept. 17

HERBICIDE: None

FERTILIZER: 275 kg/ha of
0-30-15
every fall.
85 kg/ha nitrogen
after each cut.

Ontario Reed Canarygrass Test
1981 hay yields from 1980 seeding

Experiment 4805

Ottawa

Variety	yield (DM kg/ha)		Total
	Cut 1	Cut 2	
Vantage	9020	3804	12824
Frontier	8481	4044	12524
Rise	8468	3952	12420
Castor	8411	3860	12271
Grove	7806	3773	11579
Mean	8437	3887	12324
LSD (5%)	1393	571	1330
C.V. (%)	10.7	9.5	7.0

LOCATION: Ottawa

PLOT SIZE: 1.5m x 6m

DESIGN: Randomized Block

SOIL TYPE: Clay Loam

SEEDING METHOD: 8 row
plot seeder

REPLICATIONS: 4

SEEDING DATE: May 12, 1980

CUTTINGS: 1981-
June 25, Sept. 14

HERBICIDE: 2,4-D

FERTILIZER: 90 kg/ha
nitrogen applied
May 1981

Orchard Grass Varieties

CURRENT STATUS OF VARIETIES - Jan. 15, 1982

<u>Variety</u>	<u>Entered by</u>	<u>Official Status</u>	<u>Station Years of Data</u>
Hallmark	O.F.C.C.	Recommended, Pub. 296	-
Juno	"	" "	-
Ina	"	" "	-
Napier	"	" "	-
Sumas	"	" "	-
Kay	"	" "	-
Orion (K3-9)	N.K.	Recommended, Pub. 296	-
K2-8	N.K.	Supported for lic., Deferred (4)	-
WWH 92	OSEC O	Not supported 1981, testing completed	16
OK-SF19	O.R.S.	Not supported 1981, testing completed	10
Hawk	NAPB		5
Crown	NAPB		5
14012	MIM		5
OK-WH-19	O.R.S.		5
OR-WH	O.R.S.		5
K8-122	King		0

Ontario Orchardgrass Test
1981 yield from 1979 seeding

Experiment 4179 Ottawa

Variety	Cut 1	Cut 2	Total
KAY	9185 AB	3610	12795
OK-SF-19	9268 AB	3451	12719
K3-9	8476 ABD	3987	12463
OK-WH-19	9431 A	2663	12094
SUMAS	8256 ABDG	3756	12012
HAWK	7732 ABDG	4067	11799
NAPIER	7172 DG	4351	11523
JUNO	7504 BDG	3887	11391
K2-8	8377 ABD	2977	11354
OR-WH	7744 ABDG	3472	11216
MLM-14012	7159 DG	4029	11188
HALLMARK	6934 DG	4080	11014
CROWN	7588 ABDG	3295	10883
INA	7572 ABDG	3191	10763
WWH-92	6116 G	3533	9649
LSD 5% (Kg/Ha):	1628	1070	1971
TOTAL MEAN (Kg/Ha)	7901	3623	11524
C.V. :	14.43	20.67	11.98

LOCATION: Ottawa Research
Station

PLOT SIZE: 1.5m x 6.0m

DESIGN: Randomized block

SOIL TYPE: Grenville Loam

SEEDING METHOD: Eight row
plot seeder

REPLICATIONS: 4 Reps.

SEEDING DATE: June 6, 1979

CUTTINGS: cut 1 June 19, 1981
Cut 2 Sept. 14, 1981

HERBICIDE: Spring 1981
2-4-D

FERTILIZER:
1980 Fall 300 lbs. 8, 16, 16
1981 Spring 90 lbs. N.

Ontario Orchardgrass Test
1981 yield from 1980 seeding

Experiment 4180 Ottawa

Variety	Cut 1	Cut 2	Total
OK-WH-19	8841 A	4513	13354 A
KAY	7986 AB	5005	12991 AB
OR-WH	7760 ABC	4880	12640 AB
SUMAS	7586 ABCD	5043	12629 AB
HALLMARK	6308 CDE	5220	11528 BE
HAWK	6699 BCDE	4779	11478 BE
NAPIER	6531 BCDE	4846	11377 BE
JUNO	6504 BCDE	4855	11359 BE
MLM 04012	6059 DE	4689	10748 E
CROWN	5903 E	4844	10747 E
INA	6044 DE	4672	10716 E
LSD 5% (Kg/Ha) :	1355	625	1511
TOTAL MEAN (Kg/Ha)	6929	4850	11779
C.V. :	13.55	8.92	8.88

LOCATION: Ottawa Research Station

PLOT SIZE: 1.5m x 6.0m

DESIGN: Randomized block

SOIL TYPE: Grenville Loam

SEEDING METHOD: Eight row
plot seeder

REPLICATIONS: 4 Reps.

SEEDING DATE: May 12, 1980

CUTTINGS: Cut 1 June 18, 1981
Cut 2 Sept. 16, 1981

HERBICIDE: Spring 1981
2-4-D

FERTILIZER:
Fall 1980 300 lbs. 8-16-16
Spring 1981 90 lbs. N.

Ontario Orchardgrass Test
1981 yield from 1980 seeding

Experiment 3044 Kemptville

Variety	Cut 1	Cut 2	Total
SUMAS	4988	3430 ABD	8418
HALLMARK	4611	3796 A	8407
HAWK	5150	3098 ABDG	8248
INA	4572	3609 AB	8181
NAPIER	5041	3100 ABDG	8141
MLM 04012	4950	3184 ABD	8134
CROWN	4418	3628 AB	8046
OR-WH	4512	3325 ABD	7837
JUNO	5068	2748 DG	7816
OK-WH-19	5273	2378 G	7651
KAY	4383	2905	7288
LSD 5% (Kg/Ha) :	889	656	1150
TOTAL MEAN (Kg/Ha)	4815	3200	8015
C.V. :	12.78	14.20	9.94

LOCATION: Kemptville
Agricultural College

PLOT SIZE: 1.5 x 6.0 m

DESIGN: Randomized block

SOIL TYPE: Osgoode Loam

SEEDING METHOD:

REPLICATIONS: 4 Reps.

SEEDING DATE: May 13, 1980

CUTTINGS: Cut 1 June 5/81
Cut 2 Aug. 19/81

HERBICIDE: N/A

FERTILIZER:
Fall 1980 0-25-25,300 lbs/acre
June 1981 & Sept. 4/81
50 lbs./Acre
After Cut 1 & 2

Ontario Orchardgrass Test
1981 yield from 1980 seeding

Experiment 2815 Guelph

Variety	Cut1	Cut2	Total
HALLMARK	7936 AB	3866	11802
OR-WH	6769 D	4263	11032
NAPIER	7963 A	3012	10975
JUNO	7826 AB	2853	10679
HAWK	7252 ABD	3293	10545
INA	7057 BD	3250	10307
CROWN	7153 ABD	2954	10107
MLM 04012	6790 D	2975	9765
SUMAS	6540 D	3044	9584
KAY	6587 D	2944	9531
OK-WH-19	6497 D	2801	9298
LSD 5% (Kg/Ha) :	795	1590	1983
TOTAL MEAN (Kg/Ha)	7124	3205	10329
C.V. :	7.73	34.37	13.29

LOCATION: Elora Research
Station

PLOT SIZE: 1.5 x 6.0

DESIGN: Randomized block

SOIL TYPE: Connestoga
Silk Loam

SEEDING METHOD: Plot seeder
10 rows

REPLICATIONS: 4

SEEDING DATE: May 11, 1980

CUTTINGS: Cut 1 8 June
Cut 2 17 July

HERBICIDE: Nil

FERTILIZER: 50 lbs. N
each cut

Timothy Varieties - October 1981

- (1) This Fall, the check cultivars for timothy entries are: Climax
Timfor
- (2) Three entries have been supported previously for recommendation in Ontario; namely
 - (a) Goliath - licence denied by Agriculture Canada; recommendation has been deferred 3 years.
 - (b) Odenwalder - licence denied by Agriculture Canada; recommendation has been deferred 3 years.
 - (c) Salvo - licenced; recommendation deferred pending seed availability.
- (3) Three entries were not supported for licencing and recommendation in 1980, but more data now available. These entries are:

LFS 23
LFY 10
LSS 9

None of these entries are superior to the checks in yield. Hence, we should not support these for recommendation, and discontinue testing.

- (4) Seven strains are eligible for consideration; but all yield less than the checks. Since more data will be available by Fall, 1982, we should re-examine these strains at that time.
- (5) Pub. 296 - Unless there is sufficient seed to warrant the inclusion of Salvo, there will be no change in timothy recommendations for 1982.
- (6) In 1981, yield data were obtained from the following tests:
 - (a) Seeded 1980 - Performance Trials at 2 locations (Ottawa & Kapuskasing). These trials include the recommended varieties;
 - (b) Seeded 1979 - Licencing Trials at 3 locations (Elora, Ottawa, Kapuskasing);
 - (c) Seeded 1980 - Licencing Trials at 2 locations (Ottawa and Thunder Bay).

B. R. Christie,
Co-ordinator.

Timothy Varieties

CURRENT STATUS OF VARIETIES - Jan. 15, 1982

<u>Variety</u>	<u>Entered by</u>	<u>Official Status</u>	<u>Station Years of Data</u>
Toro	O.F.C.C.	Recommended, Pub. 296	-
Basho	"	" "	-
Champ	"	" "	-
Itasca	"	" "	-
Timfor	"	" "	-
Climax	"	" "	-
Pronto	"	" "	-
Richmond	"	" "	-
Salvo	"	" "	-
IFS 23	O.R.S.	Not supported 1981, testing completed	11
IFY 10	O.R.S.	Not supported 1981, testing completed	11
ISS 9	O.R.S.	Not supported 1981, testing completed	11
Mohawk	U.C.O.	Not supported 1981, re-examine 1982	9
Alpage	OSEC O	Not supported 1981, re-examine 1982	9
Phlewiola	OSEC O	Not supported 1981, re-examine 1982	9
Rasant	OSEC O	Not supported 1981, re-examine 1982	9
ICM 8	O.R.S.	Not supported 1981, re-examine 1982	9
OG-HD-7	O.R.S.	Not supported 1981, re-examine 1982	9
OC-HD-10	O.R.S.	Not supported 1981, re-examine 1982	9
PS 79057	Pickseed		2
K 215	N.K.		2
Tiiti	Labonte		2
K 216	King Grain		2
WWT 95	OSEC O		0
Bilbo	OSEC O		0
Pota	OSEC O		0
MIM 17018	MIM		0
Hokuo	Bonis		0

Yields of Timothy Strains - Seeded 1978 and 1979

<u>Entry</u>	<u>Mean Yield (kg/ha)¹⁾</u>		
	<u>Cut 1</u>	<u>Cut 2</u>	<u>Total</u>
Salvo	6140	3280	9420
LFS-23	6560	2750	9310
LFY-10	6490	2690	9180
LSS-9	6300	2750	9050
Checks: Timfor	6580	3100	9680
Climax	6630	2420	9050
Mean	6600	2760	9360

- 1) Seeded 1978 at Ridgetown and Ottawa.
Seeded 1979 at Elora, Kemptville, Ottawa and Kapuskasing.

Yields of Timothy Strains - Seeded 1979 and 1980

<u>Entry</u>	<u>Mean Yield (kg/ha)¹⁾</u>		
	<u>Cut 1</u>	<u>Cut 2</u>	<u>Total</u>
OC-HD-10	5960	3230	9190
Mohawk	6000	3170	9170
Rasant	6010	2820	8830
LCM-8	6050	2720	8770
Alpage	6070	2680	8750
Phlewiola	5810	2940	8750
OG-HD-7	5640	2840	8480
Checks: Timfor	6310	3050	9360
Climax	6460	2760	9220
Mean	6380	2900	9290

- 1) Seeded 1979 at Elora, Kemptville, Ottawa and Kapuskasing.
Seeded 1980 at Ottawa and Thunder Bay.

Yield (kg/ha) of Recommended Varieties

Variety	1978-79 ¹⁾		Mean 1978, '79, '80 ³⁾		1981		Mean - all years		
	Cut 1	Total	Cut 1	Total	Cut ⁴⁾	Total ⁵⁾	Cut 1	Aftermath	Total
Timfor	6400	9020	6510	9560	5040	5440	6350	2950	9300
Itasca	6380	8720	6610	9410	4920	5940	6420	2770	9190
Basho	6050	8670	6280	9360	4580	5570	6090	3030	9120
Tcro	6320	8690	6420	9340	4410	5460	6200	2900	9100
Climax	6220	8570	6460	9210	5300	5210	6330	2630	8960
Champ	6180	8360	6320	9160	5240	6110	6200	2770	8970
Pronto	6100	8190	6320	8980	5430	5870	6220	2570	8790
Richmond					4260	5880	-		-
Check Mean ⁶⁾	6310	8800	6480	9380	5170	5320	6340	2790	9130
Timfor	6580	9580 ²⁾							
Climax	6460	9190 ²⁾							
Richmond	6210	9160 ²⁾							
Champ	6280	8810 ²⁾							

- 1) Mean of 10 station-years for Cut 1 and 9 for Total.
- 2) Mean of 8 station-years for Cut 1 and 7 for Total.
- 3) Mean of 16 station-years for Cut 1 and 15 for Total.

- 4) Mean of 2 locations - Ottawa & Kapuskasing.
- 5) Data for Kapuskasing, only.
- 6) Checks: Timfor and Climax.

Timothy Strains - Seeded 1979

Entry	Yields (kg/ha)								
	1980 ¹⁾			1981 ²⁾			1980-'81		
	Cut 1	Cut 2	Total	Cut 1	Cut 2	Total	Cut 1	Cut 2	Total
Tinfor	6500	3850	10,350	6690	2680	9370	6580	3350	9930
Climax	6800	3440	10,240	5340	2290	9130	6820	2940	9760
Champ	6400	4010	10,410	6240	2640	8880	6330	3420	9750
Basho	6610	3880	10,490	5960	2780	8740	6330	3410	9740
OC-HD-10	6400	4040	10,440	6020	2670	8690	6240	3450	9690
Mojawk	6370	3910	10,280	6140	2740	8880	6270	3410	9680
Itasca	6680	3470	10,150	6290	2570	8860	6510	3090	9600
Pronto	6630	3760	10,390	6140	2290	8430	6420	3130	9550
LF3-23	6780	3550	10,330	6370	2030	8400	6600	2900	9500
Toro	6340	3870	10,210	5770	2760	8530	6100	3390	9490
Salvo	6340	3790	10,130	5430	2850	8280	5950	3390	9340
LCM-3	6300	3470	9770	6270	2420	8690	6290	3020	9310
Alpage	6500	3440	9940	6260	2190	8450	6340	2960	9300
Rasant	6670	3440	10,110	5740	2440	8180	6270	3010	9280
LFY-10	6370	3370	9740	6490	2090	8580	6420	2820	9240
LSS-9	6530	3380	9910	6060	2270	8330	6330	2900	9230
Phlewiola	6390	3420	9810	5880	2530	8410	6170	3040	9210
OG-HD-7	6110	3540	9650	5720	2410	8130	5940	3060	9000
Check Mean	6650	3650	10,300	6760	2480	9250	6700	3140	9840

1) Mean of 4 stations - Elora, Kemptville, Ottawa, Kapuskasing.

2) Mean of 3 stations - Elora, Ottawa, Kapuskasing.

Timothy Variety Trial - Seeded 1980

<u>Mean Yield - 1981</u>		
<u>Entry</u>	<u>Cut 1¹⁾</u> <u>(kg/ha)</u>	<u>Total</u>
K 216	5480	5820
Timfor	5370	5370
K 215	5330	5120
LCM-8	5210	4970
Climax	5180	5460
Alpage	5140	4890
Rasant	5080	5680
Mohawk	5060	5630
OG-HD-10	5000	5720
Tiiti	4890	4240
79-057	4620	4940
OG-HD-7	4590	4840
Phlewiola	4560	5520
Checks	5280	5410
Mean	5040	5240

1) Mean of 2 locations - Ottawa and Thunder Bay.

2) Cut 2 yields taken at Thunder Bay, only, so total refers only to Thunder Bay.

Expt. 4380

Timothy Performance Trial. Seeded '80. Ottawa

Yield - 1981

<u>Code</u>	<u>Entry</u>	<u>Cut 1</u> (kg/ha)
6002	Climax	6030
6037	Pronto	6000
6040	Timfor	5490
6005	Champ	5450
6026	Itasca	4960
6009	Basho	4770
6030	Toro	4720
6050	Richmond	4100

Checks	5760
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LSD 5% (Kg/ha)	N.S.
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Mean (Kg/ha)	5190
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CV	20.26
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J-8

Expt. 6044

Timothy Performance Trial. Seeded 1980. Kapuskasing

Yields - 1981

<u>Code</u>	<u>Name</u>	<u>Cut 1</u> (Kg/ha)	<u>Cut 2</u> (Kg/ha)	<u>Total</u> (Kg/ha)
6005	Champ	5030	1080	6110
6026	Itasca	4880	1060	5940
6050	Richmond	4410	1470	5880
6037	Pronto	4860	1010	5870
6009	Basho	4400	1170	5570
6030	Toro	4100	1360	5460
6040	Timfor	4590	850	5440
6002	Climax	4560	650	5210

Checks	4580	750	5330
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LSD 5% (Kg/ha)	N.S.	350	N.S.
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Mean (Kg/ha)	4600	1080	5680
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CV	11.41	18.44	9.99
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Expt. 2800

Timothy Variety Trial. Seeded 1979.

Elora

<u>Code</u>	<u>Entry</u>	<u>Yield - 1981</u>			<u>Mean Yield (1980-'81)</u>	
		<u>Cut 1</u> (Kg/ha)	<u>Cut 2</u> (Kg/ha)	<u>Total</u> (Kg/ha)	<u>Cut 1</u> (Kg/ha)	<u>Total</u> (Kg/ha)
6040	Timfor	8820	1660	10,480	8760	11,940
6005	Champ	8680	1670	10,350	8820	12,270
6002	Climax	9110	1170	10,280	9500	12,140
6067	Alpage	8230	1730	10,010	8720	11,800
6064	LFY-10	8820	1010	9,830	9040	11,410
6065	Mohawk	8110	1650	9,760	8560	11,820
6009	Basho	7970	1740	9,710	8340	11,680
6026	Itasca	8130	1520	9,650	8640	11,520
6068	Phlewiola	7690	1790	9,480	8300	11,250
6070	OG-HD-10	7800	1520	9,320	8120	11,380
6030	Toro	7280	1940	9,220	8100	11,480
6037	Pronto	7890	1250	9,140	8410	11,370
6063	LFS-23	8050	1050	9,100	9140	11,880
6072	LCM-8	7740	1270	9,010	8260	11,020
6065	LSS-9	7730	1040	8,770	8450	10,980
6069	Rasant	6940	1830	8,770	8460	11,460
6073	OG-HD-7	7250	1490	8,740	7830	10,720
6062	Salvo	6630	1890	8,520	7740	11,310
Check Mean		8960	1420	10,380	9130	12,040
LSD 5% (Kg/ha)		N.S.	250	N.S.		
Mean (Kg/ha)		7940	1510	9,450	8510	11,520
CV		14.94	11.45	12.61		

APC ✓

Expt. 4279

Timothy Variety Trial. Seeded 1979. Ottawa

Code	Entry	Yield - 1981			Yield (1980-81)	
		Cut 1 (Kg/ha)	Cut 2 (Kg/ha)	Total (Kg/ha)	Cut 1 (Kg/ha)	Total (Kg/ha)
6040	Timfor	6440	5800	12,240	5820	10,320
6002	Climax	6510	5200	11,710	6060	10,160
6072	LCM-8	6110	5550	11,660	5690	10,040
6066	Mohawk	5570	5900	11,470	5350	9,920
6026	Itasca	5800	5580	11,380	5300	9,560
6064	LFY-10	6230	4900	11,130	5660	9,810
6065	LSS-9	5620	5340	10,960	5750	9,960
6009	Basho	5060	5870	10,930	5330	9,750
6005	Champ	5410	5510	10,920	5120	9,270
6063	LFS-23	6260	4630	10,890	5840	9,690
6037	Pronto	5740	5040	10,780	5700	9,600
6070	OG-HD-10	5210	5570	10,780	5270	9,700
6068	Phlewiola	5440	5050	10,490	5560	9,540
6073	OG-HD-7	5150	5270	10,420	4980	9,100
6030	Toro	5180	5210	10,390	5090	9,030
6069	Rasant	5460	4730	10,190	5740	9,620
6062	Salvo	4770	5390	10,160	5040	9,190
6067	Alpage	5200	4260	9,460	5380	8,950
Check Mean		6480	5500	11,980	5940	10,240
LSD 5% (Kg/ha)		N.S.	700	N.S.		
Mean (Kg/ha)		5620	5270	10,890		
CV		16.03	9.33	10.57		

APC

Expt. 6043

Timothy Variety Trial. Seeded 1979. Kapuskasing

<u>Code</u>	<u>Entry</u>	<u>Yield - 1981</u>			<u>Yield (1980-81)</u>	
		<u>Cut 1</u> (Kg/ha)	<u>Cut 2</u> (Kg/ha)	<u>Total</u> (Kg/ha)	<u>Cut 1</u> (Kg/ha)	<u>Total</u> (Kg/ha)
6062	Salvo	4880	1280	6160	5100	7190
6030	Toro	4840	1140	5980	4920	6820
6070	OC-HD-10	5060	920	5980	5200	7300
6067	Alpage	5310	580	5890	5430	7160
6009	Basho	4860	730	5590	5230	7080
6069	Rasant	4810	760	5570	5420	7300
6026	Itasca	4930	610	5540	4870	6640
6066	Mohawk	4730	680	5410	4930	6880
6002	Climax	4890	520	5410	5260	7010
6040	Timfor	4820	580	5400	5020	6900
6072	LCM-8	4960	430	5390	5120	6910
6037	Pronto	4790	590	5380	5220	6900
6005	Champ	4640	720	5360	4740	6490
6065	LSS-9	4830	440	5270	5360	7120
6068	Phlewiola	4510	760	5270	5100	6920
6073	OG-HD-7	4750	470	5220	4780	6500
6063	LFS-23	4790	430	5220	5100	6860
6064	LFY-10	4410	370	4780	4750	6640
Check Mean		4860	550	5410	5140	6960
LSD 5% (Kg/ha)		N.S.	300	N.S.		
Mean (Kg/ha)		4820	670	5490		
CV		9.33	27.41	8.67		

APC

Expt. 4280

Timothy Variety Trial. Seeded 1980. Ottawa

APC ✓

<u>Code</u>	<u>Entry</u>	<u>Yield - Cut 1</u> (Kg/ha)
6040	Timfor	6290
6078	Tiiti	6190
6067	Alpage	6080
6072	LCM-8	6040
6074	K 215	6030
6075	K 216	5920
6069	Rasant	5720
6070	OC-HD-10	5530
6066	Mohawk	5510
6002	Climax	5380
6073	OG-HD-7	5220
6076	79-057	5090
6068	Phlewiola	4870

Check Mean	5840
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LSD 5% (Kg/ha)	N.S.
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Mean (Kg/ha)	5680
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CV	16.39
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Expt. 7138

Prov. Timothy Variety Test. Seeded 1980. Thunder Bay

<u>Code</u>	<u>Entry</u>	<u>Yield - 1981</u>		
		<u>Cut 1</u> (Kg/ha)	<u>Cut 2</u> (Kg/ha)	<u>Total</u> (Kg/ha)
6075	K 216	5040	780	5820
6070	OC-HD-10	4460	1260	5720
6069	Rasant	4440	1240	5680
6066	Mohawk	4600	1030	5630
6068	Phlewiola	4240	1280	5520
6002	Climax	4980	480	5460
6040	Timfor	4450	920	5370
6074	K 215	4620	500	5120
6072	LCM-8	4380	590	4970
6076	79-057	4150	790	4940
6067	Alpage	4210	680	4890
6073	OG-HD-7	3950	390	4840
6078	Tiiti	3600	640	4240
Check Mean		4710	700	5410
LSD 5% (Kg/ha)		N.S.	480	N.S.
Mean (Kg/ha)		4390	850	5240
CV		13.75	39.24	14.42

APC ✓

ONTARIO FORAGE SEED SURVEY 1981 REPORT

Alfalfa	lb. Shipped - July 1/81 to June 30/81	Shippings as a % of 1976				
		1977	1978	1979	1980	1981
Iroquois	431,500	170	93	161	247	236
Saranac	565,500	67	78	90	97	102
Vernal	434,900	73	57	59	44	32
Other public varieties	165,800	180	197	908	3185	1974
Total Public Varieties	1,597,700	82	69	80	88	75
All Proprietary Varieties	1,345,200	108	122	177	172	198
Total Pedigreed (Public + Proprietary)	2,942,900	88	82	104	108	104
All Commercial Seed	418,900	96	103	95	80	64
Total, All Alfalfa Seed	3,361,800	90	86	102	104	98
Red Clover						
Lakeland	14,500	88	123	44	40	70
Ottawa	15,800	56	44	39	25	58
All other public + proprietary varieties	102,800	N.A.	N.A.	107*	92*	229*
Total, Pedigreed (Public + proprietary)	133,100	70	173	143	119	280
Commercial double cut	814,700	119	121	105	98	110
Commercial single cut	886,200	93	119	138	174	330
Total, Commercial Seed	1,700,900	112	120	114	118	168
Total, All Red Clover Seed	1,834,000	110	123	115	118	173
* Shippings as % of 1978						
** Shippings as % of 1979						

<u>Bird's-foot Trefoil</u>	lb. Shipped - July 1/80 to June 30/81	Shippings as a % of 1976				
		1977	1978	1979	1980	1981
Empire	37,500	50	31	41	23	20
Leo	115,000	60	67	67	66	81
All other public & proprietary varieties	<u>12,000</u>	56	82	33	42	67
Total Pedigreed (Public + Proprietary)	164,500	54	48	51	41	46
All Commercial Seed	<u>143,600</u>	94	109	132	77	68
Total, All Trefoil Seed	308,100	69	71	81	55	55
<u>White Clover</u>						
Ladino	119,000	91	N.A.	93	82	99
Total Pedigreed (Public + Proprietary)	119,000	N.A.	N.A.	118*	95*	114*
All Commercial Seed	<u>69,000</u>	N.A.	N.A.	94*	73*	74*
Total, All White Clover Seed	188,000	83	89	95	75	95
<u>Alsike Clover</u>						
Total, All Alsike Clover	302,600	90	96	76	68	68
<u>Sweet Clover</u>						
Total, All Sweet Clover	145,000	106	79	94	74	61

* Shippings as % of 1978

Timothy	lb. Shipped - July 1/80 to June 30/81	1977	Shippings as a % of 1976			
			1978	1979	1980	1981
Climax	496,500	79	69	66	60	48
Champ	295,400	98	73	52	51	69
Basho	191,200	N.A.	N.A.	N.A.	244**	345**
Other public varieties	<u>20,000</u>	N.A.	N.A.	N.A.	N.A.	1000*
Total Public Varieties	1,003,100	83	N.A.	64	65	67
All Proprietary Varieties	<u>178,600</u>	50	N.A.	152	133	163
Total Pedigreed (Public + Proprietary)	1,181,700	80	70	70	70	74
All Commercial Seed	572,300	114	115	88	74	64
Total, All Timothy Seed	1,754,000	92	86	76	71	70

<u>Bromegrass</u>						
Saratoga	55,700	60	64	77	62	54
All other public & proprietary varieties	<u>155,100</u>	64	36	40	51	56
Total Pedigreed (Public + Proprietary)	210,800	63	44	50	54	56
All Commercial Seed	<u>323,800</u>	73	91	105	62	52
Total, All Brome Seed	534,600	69	73	84	59	54

<u>Orchard Grass</u>						
All Public Varieties	9,400	44	25	30	50	27
All Proprietary Varieties	<u>56,500</u>	81	107	77	65	85
Total Pedigreed (Public + Proprietary)	65,900	68	79	61	60	66
All Commercial Seed	<u>40,100</u>	76	93	71	56	40
Total, All Orchard Seed	106,000	72	86	66	58	53

* Shipping as % of 1980

** Shippings as % of 1979

<u>Reed Canary Grass</u>	lb. Shipped - July 1/80 to June 30/81	Shippings as a % of 1976				
		1977	1978	1979	1980	1981
Total Pedigreed (Public + Proprietary)	0	0	N.A.	64	14	0
All Commercial Seed	<u>13,000</u>	48	N.A.	46	72	49
Total, All Reed Canary	13,000	44	19	48	68	46
<u>Meadow Fescue</u>						
Total, All Meadow Fescue	31,400	74	48	23	29	24
<u>Tall Fescue</u>						
Total, All Tall Fescue	75,800	58	72	90	62	58
Total Seed Sales (all species)	8,644,992	8,654,300	88.5	87.2	90.5	86.8
Total Seed Sales - Big 7	8,025,500	8,086,500	88.8	87.9	92.2	89.3
(alfalfa, red clover, trefoil, white clover, timothy, orchard and brome grass)						

N.A. Comparable figures not available each year, because of grouping of figures required by Statistics Canada regulations to preserve confidentiality.

This survey is a co-operative project between Statistics Canada,
Ontario members of the Canadian Seed Trade Association, and the Ontario Forage
Crops Committee.

REPORT FROM C.S.G.A.

by Don Rickard

Total inspected acres as of October 1, 1981 - including licenced, privately licenced and unlicenced varieties, to nearest '000.

1978 - 76,000 acres	1980 - 120,000 acres
1979 - 115,000 "	1981 - 134,000 "

<u>Acreage, Major species</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>
Timothy	66200	59700	63800	43200
Alfalfa	24100	15200	10400	7300
Red Fescue	17900	17300	15800	7600
Bromegrass	6500	5000	3900	2800
Red Clover	4300	3900	4300	3100
Bird's-foot Trefoil	4700	4500	4400	3700

<u>Provinces</u>	<u>Species</u>	<u>Acres each species</u>	<u>Total for Province</u>
P. E. I.	Timothy	5	5 Acres
Nova Scotia	Timothy	34	49 "
	Alfalfa	15 }	
New Brunswick	Timothy	25	25 "
Quebec	Timothy	590	633 "
	B. Trefoil	43 }	
Ontario	Timothy	555	
	Red Clover	235 }	2215 "
	B. Trefoil	1423 }	
	Sainfoin	2 }	
Manitoba	Timothy	41590	50940 "
Saskatchewan	Alfalfa	7200	18523 "
	Timothy	6200 }	
Alberta	Alfalfa	11750	
	Timothy	16000 }	43190 "
	Red Fescue	8600 }	
B.C.	Red Fescue	6250 }	10014 "
	Timothy	2600 }	

FARM CONCERNS

G. Bowman

Forage Seed Production continues to be a problem.

- Some areas which need to be looked at-seedlings establishment, pollination, disease, weed control in established stands, as well as when establishing a new crop, as well as harvesting and obtaining optimum seed production.
- There are still problems with Red Clover in all of these ways.
- There is good interest in plowdown and this should be promoted for both energy conservation and soil conservation.

Weed Control in established stands particularly where seed is to be taken from a field.

There needs to be more inspection and control of imparted seed, to give more control of disease and weeds.

Tillage Practices for the best use of energy and soil conservation, needs continuous study and research. I feel these are areas where things need to be looked at e.g. equipment, crops which make best plowdown and nitrogen fixation. Also when clover is plowed down, does more nitrogen need to be added when the break down is slower in some areas, are other nutrients tied up as well.

Waste Management

Waste management in connection with forages, what are the problems of manure on alfalfa in areas where there are no other choices.

Are there problems when liquid manure is spread on forages, and are there differences in nitrogen and phosphorous needed.

More work needs doing on ditch banks and grass water ways to give erosion control.

Hay Production is still a cash crop in many areas, but a quick system of grading and analysis are needed at the market place, so that a value can be established.

Weed Sprays

They are very useful as a tool in agriculture production and the loss of some chemicals creates problems which are not cheaply or easily solved.

Forage needs a system approach so that plants, animals and equipment can be co-ordinated for the best use.

Pasture Management and research needs more work because they are becoming more valuable through the province.

Insect Monitoring has a good start now and should be continued for forages and all agricultural crops.

Forages need a value placed on them, so they will get the place they deserve and care for better production.

Verticillium wilt of alfalfa

L.V. Busch Environmental Biology

The disease was discovered this summer in several locations in Ontario. In most cases the fields were 4 to 5 years old which would suggest that Verticillium wilt has been with us for at least this length of time. The number of diseased plants in several fields were 10% or greater and the plant stand, had declined below an economic level.

Synthetics produced from resistant plants of Ontario cultivars which survived inoculation and reinoculation have been inoculated for second generation selections. This process will continue until a sufficiently resistant variety is developed suitable for Ontario.

It is important to know what other cultivated plants and weeds could serve as hosts for Verticillium albo-atrum (alfalfa strain). The following table lists the plants tested and their reaction to Verticillium.

Hosts of V. albo-atrum (alfalfa strain)

<u>Plant Tested</u>		<u>Reaction</u>
Soybean	Glycine max	a ¹
Kidney beans	Phaseolus vulgaris	c
White Clover	Trifolium repens	c
Alsike Clover	Trifolium hybridum	b
Peanut	Arachis hypogaea	a
Ladino	Trifolium repens var giganteum	C
Red Clover	Trifolium pratense	C
Sweet Clover	Melilotos alba	C
Pea	Pisum Sativum	C
Crown Vetch	Coronilla varia	C
Egg plant	Solanum melongena	a
Tomato	Lycopersicon esculentum	C
Rape	Brassica campestris	C
Round Leaf Mallow	Malva rotundifolia	C
Lambs Quarters	Chenopodium album	a- stunting
Red Root Pigweed	Amaranthus retroflexus	C- stunting
Penny Cress	Thlaspi arvensis	C
Groundsel	Senecio vulgaris	C

Reaction - a severe symptoms - chlorosis - necrosis plant death

b chlorosis some necrosis of leaves - plants survive

c slight chlorosis to no symptoms

Table I. Susceptibility of recommended Ontario alfalfa cultivars to an isolate¹ of Verticillium albo-atrum (alfalfa strain).

Variety	Total # plants tested	Mean disease reading ²	% plants resistant ³
Algonquin	39	3.9	7.1
Angus	36	4.4	5.5
Anchor	38	3.5	13.8
Apollo	99	3.9	13.9
Banner	71	3.8	20.9
Ceres	48	3.7	17.1
Citation	44	3.3	11.5
Iroquois	55	3.7	18.8
Pacer	47	3.0	31.0
Pickstar	45	4.0	0.0
Saranac	26	2.3	42.3
Thor	37	3.5	13.5
Titan	59	4.0	4.4
Vernal	61	3.6	20.9
Vista	60	4.1	7.1
Weeulckek	51	3.2	31.5
WL215	43	3.6	5.0
524	43	3.0	11.5

¹ Culture of Verticillium albo-atrum used, obtained from J.W. Sheppard, Ottawa, isolated from infested Vernal alfalfa seed grown in Washington State, U.S.A.

² Disease rating is from 0 (no disease) to 5 (plant dead).

³ Rating of 0 or 1 considered resistant.