

Forage Introductions

Northern Research Group
Canada Agriculture Research Branch
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In cooperation with



C.R. Elliott & G.M Howe

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Foreward

This report is the first for a special series of field trials conducted by the Canada Agriculture Research Station in cooperation with Alberta Agriculture.

The objective is to provide relative information on seed production capability and general adaptability of licenced foreign cultivars, and thus guide the Canadian forage seed industry in the development of production contracts and seed export markets. Emphasis is on crops economically suitable for the region and currently form part of Canada's forage seed export industry.

The following tables present only first-year data collected in 1978 from grass and legume introductions seeded in 1977 at the Beaverlodge Research Station. Plots comprised two rows, 30.5 cm (1 foot) apart, 6.1 metres (20 feet) long, and replicated 6 times. Weeds are controlled by both mechanical and chemical means. Plots are fertilized annually. Irrigation is employed only in the year of seeding if required to ensure complete stands.

Seed and herbage (dry matter) yields are expressed both as actual production per hectare and as a percent of a designated (*) standard. Statistical differences are indicated by the multiple range test where yields followed by the same letter are not considered significantly different (5%). Winter survival is shown as a Hardiness Scale of 1 (poor) to 9 (best).

This publication will supplement "Forage Introductions - Publication No. 77-16, 1977" which reports on all forages introduced since 1956.

BROMEGRASS (BROMUS INERMIS)
 SEEDING YEAR 1977
 DATA YEAR 1978

BEAVERLODGE
 RESEARCH STATION

CULTIVAR	ORIGIN	HARDINESS **	SEED YIELD K/ha.	% of CARLTON	HERBAGE (DM) YIELD t/ha.	% of CARLTON
BARTON	U.S.A.	9	161 cd	34	1.46 e	48
BEACON	U.S.A.	9	187 cd	39	2.76 ab	91
CARLTON *	CANADA	9	477 b	100	3.02 a	100
JO 0266	FINLAND	9	286 c	60	2.69 a-c	89
LYON	U.S.A.	9	95 d	20	2.28 a-d	75
MANDAN 404	U.S.A.	9	125 d	26	1.75 de	58
ORFEU	RUMANIA	9	195 cd	41	2.62 a-c	87
S- 1733	CANADA	9	293 c	61	2.06 b-e	68
S- 8800	CANADA	9	731 a	153	3.09 a	102
TEMPO	CANADA	9	171 cd	36	1.90 c-e	63
MEAN			272		2.37	

* The standard against which introductions are evaluated.

** Hardiness Scale- 1 (poor) to 9 (best).

CHEWINGS FESCUE (FESTUCA RUBRA L. var. FALLAX)
 SEEDING YEAR 1977 BEAVERLODGE
 DATA YEAR 1978 RESEARCH STATION

CULTIVAR	ORIGIN	HARDINESS **	SEED YIELD K/ha	% of OASIS	HERBAGE (DM) YIELD T/ha	% of OASIS
AGRAM	NETHERLANDS	9	12 a-c	75	0.96 a	63
ATLANTA	NETHERLANDS	9	20 a-c	125	1.05 a	69
BANNER	U.S.A.	9	30 a	188	1.39 a	91
BELMONTE	NETHERLANDS	9	25 ab	156	1.41 a	93
DIAMOND	NETHERLANDS	9	10 bc	63	1.05 a	69
FARAMIR	DENMARK	9	4c	25	1.34 a	88
HALIFAX	NETHERLANDS	9	3c	19	0.78 a	51
OASIS *	NETHERLANDS	9	16 a-c	100	1.52 a	100
SCARLET	NETHERLANDS	9	27 ab	169	1.19 a	78
MEAN			17		1.19	

* The standard against which introductions are evaluated.

** Hardiness Scale- 1 (poor) to 9 (best).

CREEPING RED FESCUE (FESTUCA RUBRA L.)

CULTIVAR	ORIGIN	HARDINESS **	SEEDING YEAR	BEAVERLODGE				
			DATA YEAR	1977	1978	RESEARCH STATION	% of Boreal	Herbage (DM) YIELD t/ha
#60	NETHERLANDS	9	40	1-o	9	0.78	1m	30
BARBARA	NETHERLANDS	9	3.36	o	1	0.83	k-m	32
BASTIDE	FRANCE	9	6.72	o	1	0.74	m	29
BARANTE	NETHERLANDS	9	4.48	o	1	1.16	g-m	45
BERGOND	DENMARK	9	112	h-o	24	1.75	c-k	68
BOREAL *	CANADA	9	461	a	100	2.58	a-d	100
BRASOV	RUMANIA	9	76	j-o	16	1.86	b-j	72
CARLAWN	CANADA	9	338	bc	73	2.28	a-e	88
CHECKER	U.S.A.	9	45	k-o	10	0.94	j-m	36
ENGINA	NETHERLANDS	9	195	e-1	42	1.50	d-m	58
ENSYLVA	NETHERLANDS	9	148	f-m	32	1.01	i-m	39
ENVIRA	NETHERLANDS	9	311	b-d	67	2.42	a-d	94
ENZET	NETHERLANDS	9	368	ab	80	2.84	a	110
FORTRESS	U.S.A.	9	125	g-n	27	1.86	b-j	72
FRIDA	NETHERLANDS	9	45	k-o	10	0.74	m	29
GRAMPIAN	UNITED KINGDOM	9	49	k-o	11	1.41	e-m	55
GRELO	DENMARK	9	63	k-o	14	1.41	e-m	55
JADE	NETHERLANDS	9	38	k-o	8	0.96	j-m	37
LAVENDURE	FRANCE	9	58	k-o	13	1.68	j-m	65
LOKEN	NORWAY	9	283	b-e	61	2.40	a-d	93

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CREEPING RED FESCUE (continued)

SEEDING YEAR 1977
DATA YEAR 1978BEAVERLODGE
RESEARCH STATION

CULTIVAR	ORIGIN	HARDINESS **	SEED YIELD K/ha	% of BOREAL	HERBAGE (DM) YIELD t/ha	% of BOREAL
MANICOR	FRANCE	9	17 no	4	0.94 j-m	36
MARIET	NETHERLANDS	9	34 m-o	7	0.72 m	28
MARGA	NETHERLANDS	9	20 no	4	1.12 g-m	43
MERLIN	UNITED KINGDOM	9	25 no	5	1.52 d-m	59
MONCORDE	NETHERLANDS	9	248 c-f	54	1.97 a-h	76
MONICA	NETHERLANDS	9	83 i-o	18	2.24 a-e	87
NORO	GERMANY	9	40 l-o	9	1.28 f-m	50
PATIO	NETHERLANDS	9	184 e-j	40	2.20 a-f	85
PUMA	DENMARK	9	28 no	6	1.05 h-m	41
Pp15E	U.S.A.	9	52 k-o	11	1.30 f-m	50
REPTANS	SWEDEN	9	320 b-d	69	2.58 a-c	100
ROLAND 21	GERMANY	9	188 e-j	41	2.73 ab	106
RUBINA ROSKILDE	DENMARK	9	220 d-h	48	1.90 b-i	74
RS 512	SWEDEN	9	150 f-l	33	2.02 a-g	78
SKOT	DENMARK	9	34 m-o	7	1.97 a-h	76
SONNET	NETHERLANDS	9	30 no	7	1.64 d-m	64
SVALBARD	NORWAY	9	87 i-o	19	1.52 d-m	59
TACA	DENMARK	9	234 c-g	51	2.58 a-c	100
TURF	SWEDEN	9	157 f-k	34	2.02 a-g	78
VENI	DENMARK	9	54 k-o	12	1.72 c-k	67
MEAN			124		1.66	

* The standard against which introductions are evaluated.

** Hardiness Scale - 1(poor) to 9(best).

TURF TIMOTHY (PHLEUM BERTOLONII)

SEEDING YEAR 1977
DATA YEAR 1978BEAVERLODGE
RESEARCH STATION

CULTIVAR	ORIGIN	HARDINESS **	SEED YIELD K/ha	% of S.50	HERBAGE (DM) YIELD t/ha	% of S.50
BARBINO	NETHERLANDS	9	190 d	108	0.94 ef	79
BARET	NETHERLANDS	9	325 a-c	185	1.19 c-e	100
BAROSA	NETHERLANDS	9	233 cd	132	1.0 d-f	84
EVERGREEN	SWEDEN	9	365 ab	207	2.1 ab	176
HOLEA	GERMANY	9	150 de	85	1.3 c-e	109
MARIS PAVIOUR	UNITED KINGDOM	9	87 e	49	0.45 f	38
MORTEL	NETHERLANDS	9	414 a	235	1.95 a-c	164
NOBIS	DENMARK	9	192 d	109	1.64 a-e	138
NODORA	GERMANY	9	304 bc	173	2.2 a	185
PICCOLO	NETHERLANDS	9	231 cd	131	1.39 b-e	117
RALI	GERMANY	9	325 a-c	185	1.72 a-d	145
S-50 *	UNITED KINGDOM	9	176 de	100	1.19 c-e	100
TENO	DENMARK	9	244 cd	139	1.64 a-e	138
MEAN			249		1.43	

* The standard against which introductions are evaluated.

** Hardiness Scale - 1(poor) to 9(best).

TIMOTHY (PHLEUM PRATENSE L.)

SEEDING YEAR 1977

BEAVERLODGE
RESEARCH STATION

DATA YEAR 1978

CULTIVAR	ORIGIN	HARDINESS **	SEED YIELD K/ha	% of CLIMAX	HERBAGE (DM) YIELD t/ha	% of CLIMAX
BARMIDI	NETHERLANDS	9	290 e-o	87	2.28 f-m	88
BARVANTI	NETHERLANDS	9	280 e-o	84	2.58 c-k	100
BASHO	CANADA	9	140 no	42	0.90 i-m	35
BILBO	DENMARK	9	539 b	162	3.14 a-f	122
BOTTNIA 2	SWEDEN	9	520 bc	157	2.69 b-1	104
CASTELLA	NETHERLANDS	9	368 b-k	111	1.57 l-n	61
CHAMPLAIN	CANADA	9	291 e-n	88	2.42 e-1	94
CLAIR	U.S.A.	9	227 h-o	68	1.68 k-m	65
CLIMAX *	CANADA	9	332 d-1	100	2.58 c-k	100
DEPLOY	UNITED KINGDOM	9	149 m-o	45	0.83 no	32
DOLEMA	GERMANY	9	175 l-o	53	3.20 a-e	124
ENGMO	NORWAY	9	736 a	222	3.70 a	143
FLEMAR	NETHERLANDS	9	384 b-1	116	2.24 f-m	87
GOLIATH	NETHERLANDS	9	449 b-e	135	3.36 a-d	130
GUSTO	NETHERLANDS	9	178 l-o	54	3.14 a-f	122
HERMA	NETHERLANDS	9	353 c-k	106	1.97 h-m	76
HOKUA	JAPAN	9	289 e-o	87	2.51 d-k	97
MARCIA	NETHERLANDS	9	291 e-n	88	1.50 mn	58
POLKA	UNITED KINGDOM	9	376 b-j	113	2.76 b-h	107

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TIMOTHY (PHLEUM PRATENSE L.) continued

SEEDING YEAR 1977
DATA YEAR 1978

BEAVERLODGE
RESEARCH STATION

CULTIVAR	ORIGIN	HARDINESS **	SEED YIELD K/ha	% of CLIMAX	HERBAGE (DM) YIELD t/ha	% of CLIMAX
PURLIEU	UNITED KINGDOM	9	383 b-i	115	2.91 a-g	113
MEGAS	NETHERLANDS	9	263 f-o	79	2.91 a-g	113
MESON	NETHERLANDS	9	205 j-o	68	1.72 j-m	67
MINO	DENMARK	9	330 d-1	99	2.91 a-g	113
MOTIM	NETHERLANDS	9	308 e-n	93	2.06 g-m	80
MOTTERWITZER	NETHERLANDS	9	402 b-g	121	2.17 g-m	84
PAJBJERG.75	DENMARK	9	306 e-n	95	2.96 a-g	115
PALERMO	NETHERLANDS	9	115 o	35	0.67 o	26
PEDION	NETHERLANDS	9	309 e-n	93	2.31 e-m	90
PET	GERMANY	9	354 c-k	107	2.31 e-m	90
POTA	DENMARK	9	316 e-m	95	2.51 d-k	97
PRONTO	U.S.A.	9	329 d-1	99	2.96 a-g	115
RASANT	GERMANY	9	491 b-d	148	2.84 a-h	110
REF Bd.3062		9	395 b-h	119	2.73 b-h	106
RVPF 735.1	BELGIUM	9	216 f-o	65	2.42 e-1	94
RVPF 735.2	BELGIUM	9	365 b-k	110	2.69 b-1	104
RVPF 735.3	BELGIUM	9	261 f-o	79	3.47 a-c	134
RVPF 735.4	BELGIUM	9	265 f-o	80	2.62 c-j	102
RVPF 735.5	BELGIUM	9	258 f-o	78	2.35 e-m	91

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TIMOTHY (PHLEUM PRATENSE L.) continued

SEEDING YEAR

1977

BEAVERLODGE

DATA YEAR

1978

RESEARCH STATION

CULTIVAR	ORIGIN	HARDINESS **	SEED YIELD K/ha	% of CLIMAX	HERBAGE (DM) YIELD t/ha	% of CLIMAX
SABRE	UNITED KINGDOM	9	360 c-k	108	2.24 f-m	87
SUCEAVA	RUMANIA	9	365 b-k	110	2.96 a-g	115
SURPRISE	NETHERLANDS	9	304 e-n	92	3.20 a-e	124
SYNIA	UNITED KINGDOM	9	196 k-o	59	1.97 h-m	76
SYNIB	UNITED KINGDOM	9	228 g-o	69	2.46 d-l	95
SYNIC	UNITED KINGDOM	9	224 h-o	67	2.17 g-m	84
SYN 2	UNITED KINGDOM	9	282 e-o	85	2.73 b-h	106
SYN 3 A	UNITED KINGDOM	9	314 e-n	95	2.76 b-h	107
TIMFOR	U.S.A.	9	269 f-o	81	2.08 g-m	81
TOPASOTOFTE	DENMARK	9	422 b-j	127	2.69 b-i	104
Tt3-70	NETHERLANDS	9	231 f-o	70	1.97 h-m	76
Tw4-70	NETHERLANDS	9	404 b-f	122	2.24 f-m	87
VERDANT	U.S.A.	9	328 d-l	99	3.58 ab	139
WINDA	NETHERLANDS	9	149 m-o	45	2.84 a-h	110
MEAN			312		2.49	

* The standard against which introductions are evaluated.

** Hardiness Scale - 1(poor) to 9(best).

ALSIKE CLOVER (TRIFOLIUM HYBRIDUM)

SEEDING YEAR 1977

DATA YEAR 1978

BEAVERLODGE
RESEARCH STATION

CULTIVAR	ORIGIN	HARDINESS **	SEED YIELD K/ha	% of AURORA	HERBAGE (DM) YIELD t/ha	% of AURORA
ALDANTRIFOLIUM	DENMARK	9	659 a	88	2.24 bc	100
AURORA *	CANADA	9	753 a	100	2.24 bc	100
DAWN	CANADA	9	635 a	84	2.24 bc	100
HOGSTA	SWEDEN	9	377 b	50	2.02 c	90
ALPO	NORWAY	9	659 a	88	2.69 a-c	120
ISO TETRA	FINLAND	9	796 a	106	2.91 ab	130
META OTOFTE	DENMARK	9	761 a	101	2.91 ab	130
STENA 4N	SWEDEN	9	603 a	80	2.91 ab	130
TETRA	SWEDEN	9	753 a	100	3.36 a	150
MEAN			664		2.69	

* The standard against which introductions are evaluated.

** Hardiness Scale - 1(poor) to 9(best).