

FORAGE SEED PRODUCTION: OPPORTUNITIES FOR THE PEACE

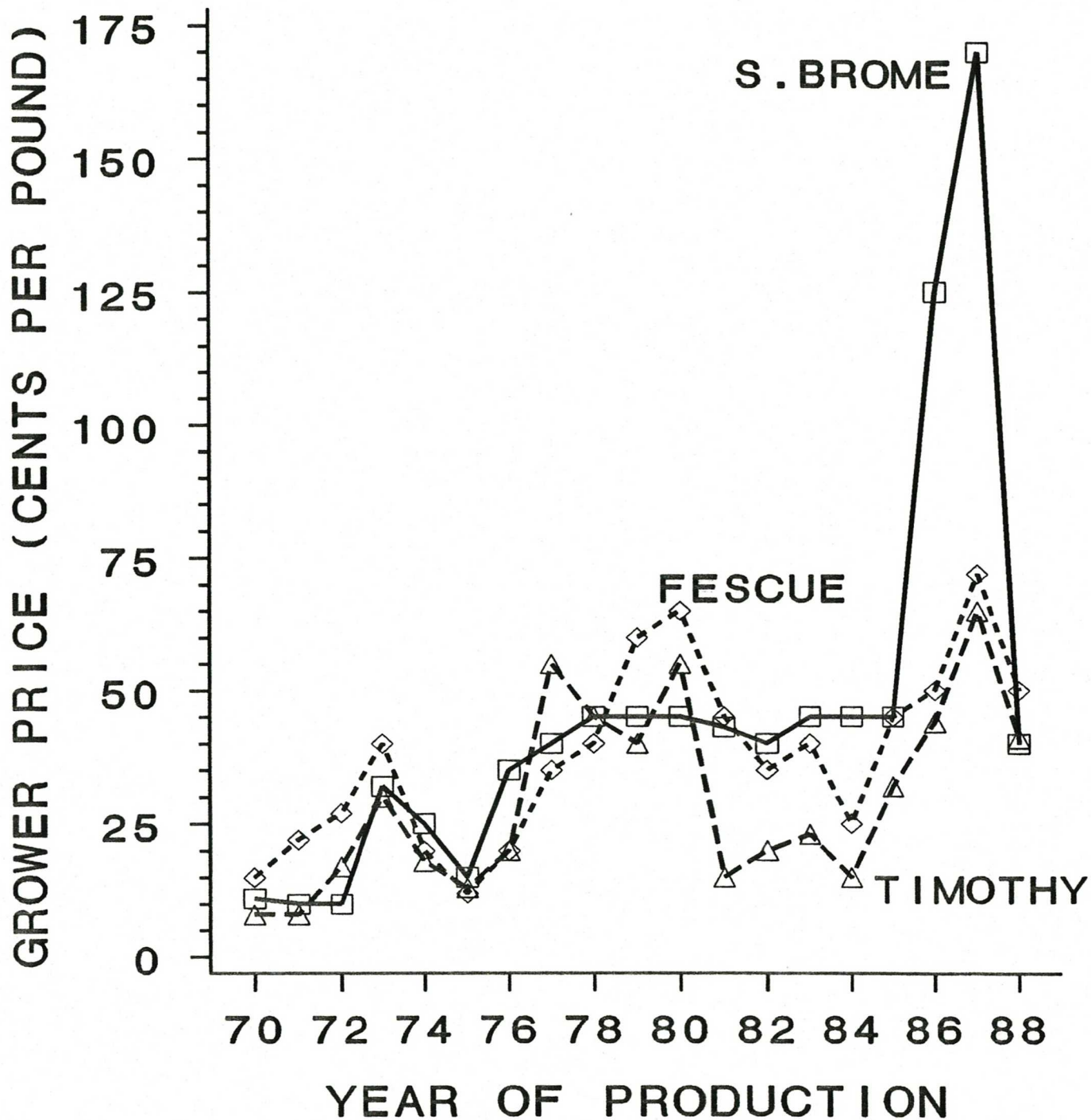
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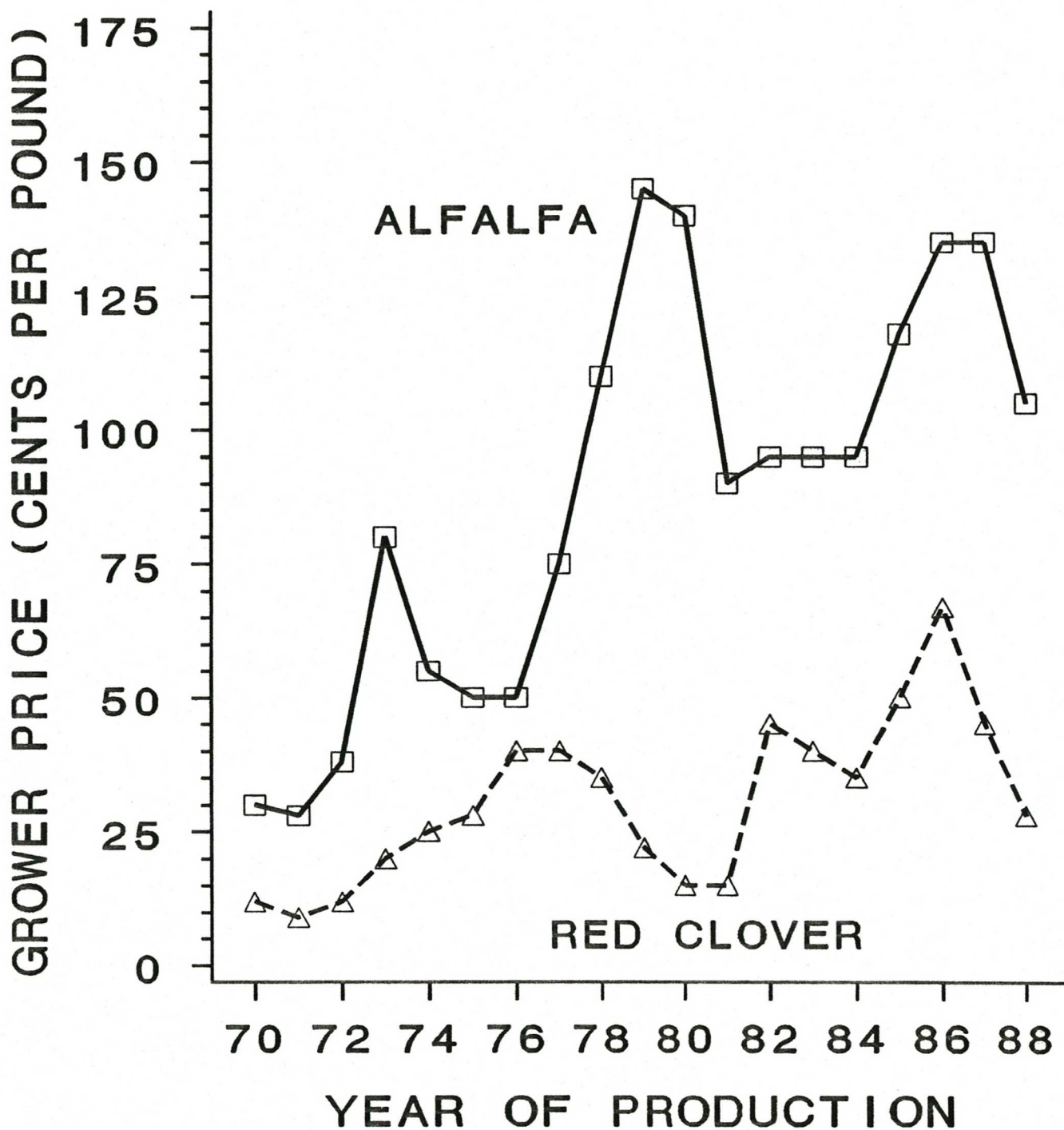
BEAVERLODGE, ALBERTA, T0H 0C0

NOVEMBER, 1989

AVERAGE PRICE RECEIVED BY ALBERTA GROWERS FOR GRASS SEEDS, 1970 TO 1988



AVERAGE PRICE RECEIVED BY ALBERTA GROWERS FOR LEGUME SEEDS, 1970 TO 1988



ALBERTA FORAGE SEEDS: GROWER AND RETAIL PRICES, 1983-87

(BASED ON INFORMATION SUPPLIED BY ALBERTA AGRICULTURE
AND THE ALBERTA FORAGE SEED COUNCIL)

FORAGE	GROWER PRICE (C/LB)		RETAIL PRICE (C/LB)	GROWER/RETAIL PRICE
	5-YEAR MEAN (RANGE)		5-YEAR MEAN	5-YEAR MEAN %
ALFALFA	116	(93-135)	171	68
CLOVER, ALSIKE	32	(18-55)	73	44
CLOVER, RED	47	(35-67)	99	47
CLOVER, SWEET	22	(14-28)	68	32
BROME, SMOOTH	86	(45-170)	134	64
FESCUE, C.R.	46	(25-72)	90	51
TIMOTHY	36	(15-65)	75	48
				MEAN = 51 %

NOTES OF EXPLANATION FOR USE WITH THE FOLLOWING TABLES, THE BASIC CULTIVAR PERFORMANCE INFORMATION BEING TAKEN FROM PUBLICATION NRG 87-09:

- 1) COLUMN HEADED "LB/AC" IS EXPECTED SEED YIELD FOR A GROWER. IT IS 75% OF THE SEED YIELD FROM THE PLOTS, CONVERTED TO POUNDS PER ACRE.
- 2) COLUMN HEADED "C/LB" IS AN ESTIMATE OF THE PRICE RECEIVED BY A GROWER FOR FORAGE SEED, EXPRESSED IN CENTS PER POUND. FOR THE MAJOR FORAGE SEED CROPS GROWN IN ALBERTA(I.E. ALFALFA, ALSIKE, RED AND SWEET CLOVER, SMOOTH BROME, CREEPING RED FESCUE AND TIMOTHY), THE VALUES USED ARE THOSE PROVIDED BY AL DOOLEY, ALBERTA AGRICULTURE. FOR THE LESS COMMON SPECIES, THE GROWER PRICE IS 50% OF THE RETAIL PRICE OF UGG AS OF FEBRUARY, 1988; THE 50% ESTIMATE IS BASED ON THE MEAN RATIO OF GROWER:RETAIL PRICE IN ALBERTA FOR THE MORE COMMON SPECIES NAMED ABOVE, USING 1983-87 PRICES FROM ALBERTA FORAGE SEED COUNCIL/ALBERTA AGRICULTURE.
- 3) COLUMN HEADED "\$/AC" IS THE ESTIMATED GROSS RETURN, IN DOLLARS PER ACRE, RECEIVED BY THE GROWER. THE GROSS MARGIN PER ACRE IS PROBABLY \$100-150 LESS THAN THIS TO ACCOMMODATE THE VARIABLE COSTS OF PRODUCTION.
- 4) COLUMN HEADED "YR" IS THE NUMBER OF DATA YEARS OF SEED YIELD INFORMATION FROM EXPERIMENTAL PLOTS AT BEAVERLODGE RESEARCH STATION. VALUES OF LESS THAN 3-5 MAY NOT PROVIDE VERY RELIABLE INFORMATION.

ORIGIN	SPECIES	VARIETY	LB/AC	C/LB	\$/AC	YR
CANADA	WHEAT, SL	REVENUE *	494	300	1484	18
UNITED STATES	WHEAT, INT	AMUR	408	289	1178	12
UNITED STATES	WHEAT, SL	PRIMAR	336	300	1009	6
CANADA	WHEAT, PUB	GREENLEAF *	294	329	967	17
UNITED STATES	WHEAT, PUB	TOPAR	277	329	912	12
CANADA	WHEAT, INT	CHIEF *	279	289	805	24
CANADA	WHEAT, CRES	PARKWAY	494	135	668	9
SWEDEN	RYE, PER	APUS	765	87	666	1
NETHERLANDS	BLUE, KENT	BARON	399	159	634	3

ORIGIN	SPECIES	VARIETY	LB/AC	C/LB	\$/AC	YR
CANADA	BLUE, CAN	CANON *	248	238	592	12
UNITED STATES	WHEAT, INT	GREENAR	201	289	580	12
CANADA	RYE, PER	NORLEA *	648	87	565	1
SWEDEN	RYE, PER	PAVO	623	87	542	1
UNITED STATES	RYE, PER	REPELL	601	87	523	1
SWEDEN	BLUE, KENT	GOLF (CHERI)	325	159	517	3

ORIGIN	SPECIES	VARIETY	LB/AC	C/LB	\$/AC	YR
CANADA	TREFOIL, BF	LEO *	254	188	478	23
SWEDEN	BLUE, KENT	SVING	292	159	464	6
WEST GERMANY	BLUE, KENT	OLYMPRISP	289	159	459	3
NETHERLANDS	BLUE, KENT	DELFT	288	159	457	3
CANADA	WHEAT, CRES	FAIRWAY *	338	135	456	15
CANADA	TREFOIL, BF	MAITLAND	238	188	447	12
WEST GERMANY	TREFOIL, BF	ODENWALDER	224	188	421	9
CANADA	WHEAT, TALL	ORBIT *	241	173	418	15
WEST GERMANY	REDTOP	N.F.G. *	159	261	416	15
DENMARK	BLUE, ROUGH	DASAS *	246	168	412	9
SWEDEN	BLUE, KENT	SOBRA	257	159	408	3

ORIGIN	SPECIES	VARIETY	LB/AC	C/LB	\$/AC	YR
WEST GERMANY	BLUE, KENT	UNION	246	159	391	3
BELGIUM	BLUE, KENT	MERVEL R.V.P.	246	159	390	3
UNITED STATES	WHEAT, CRES	NORDAN *	285	135	385	12
SWEDEN	BLUE, KENT	SYDSPORT	238	159	377	3
UNITED STATES	BLUE, KENT	VICTA	220	159	350	3
CANADA	REDTOP	RETON	132	261	344	16
NETHERLANDS	BLUE, KENT	ENPRIMA	216	159	343	3
UNITED STATES	WHEAT, STRBK	SODAR *	82	414	338	14
UNITED STATES	FES, TALL	KENTUCKY 31	344	98	336	9
UNITED STATES	BROME, S	LINCOLN	388	86	335	9
CANADA	BROME, S	CARLTON *	384	86	331	24
UNITED STATES	BROME, S	LANCASTER	375	86	323	9
SWEDEN	BLUE, KENT	PRIMO	200	159	318	3
AUSTRALIA	FES, TALL	DEMETER	322	98	314	9
YUGOSLAVIA	FES, MEAD	B-14	480	65	311	9
UNITED STATES	BLUE, KENT	KENBLUE	194	159	308	12
UNITED STATES	CANARY, REED	RISE	149	204	303	6

ORIGIN	SPECIES	VARIETY	LB/AC	C/LB	\$/AC	YR
NETHERLANDS	BLUE, KENT	ENSEMA	188	159	299	6
DENMARK	FES, MEAD	SENU PAJBJERG	459	65	298	9
DENMARK	BLUE, KENT	ARINA DASAS	179	159	285	6
NETHERLANDS	FES, MEAD	COMTESSA	440	65	285	9
UNITED KINGDOM	FES, MEAD	ABERYSTWYTH S.215	439	65	285	9
JAPAN	FES, TALL	HOKURYO	291	98	283	6
UNITED STATES	BLUE, KENT	NEWPORT	178	159	283	3
NETHERLANDS	BLUE, KENT	MONOPOLY	171	159	272	9
UNITED STATES	FES, TALL	KENMONT	278	98	271	9
WEST GERMANY	FES, MEAD	FIOLA	409	65	265	9
UNITED STATES	WILDRYE, RUS	VINALL	135	193	261	9
CANADA	WILDRYE, RUS	MAYAK *	135	193	261	8
NETHERLANDS	FES, MEAD	BUNDY	401	65	260	9
FINLAND	FES, MEAD	TAMMISTO	396	65	257	9
ITALY	ALFALFA	MEGA	220	116	256	12
CANADA	ALFALFA	DRYLANDER	217	116	252	12
CANADA	FES, MEAD	ENSIGN	385	65	250	6
NETHERLANDS	BLUE, KENT	GERONIMO	155	159	247	3
UNITED STATES	ALFALFA	TITAN	207	116	240	12
SWEDEN	FES, MEAD	MIMER *	364	65	236	24
UNITED STATES	FES, TALL	KENWELL	239	98	233	9
WEST GERMANY	ALFALFA	FRANCKS LANGMEILE	196	116	227	12
WEST GERMANY	ALFALFA	LUNA	195	116	226	12
POLAND	FOX, MEAD	DAN *	167	135	225	9
WEST GERMANY	ALFALFA	FELU	192	116	222	12
BELGIUM	FES, MEAD	MERBEEM R.V.P.	341	65	221	6
SWEDEN	FES, MEAD	BORIS	340	65	220	9
NETHERLANDS	BLUE, KENT	PRATO	135	159	215	2
SWEDEN	FES, MEAD	SVALOFS SENA	329	65	213	11
CANADA	CANARY, REED	CASTOR *	104	204	212	12
SWEDEN	ALFALFA	ALFA II	178	116	207	9
NETHERLANDS	FES, MEAD	BELIMO	314	65	204	12
FRANCE	ALFALFA	GLACIER	174	116	202	12
UNITED STATES	BLUE, KENT	TROY	127	159	201	12

ORIGIN	SPECIES	VARIETY	LB/AC	C/LB	\$/AC	YR
NETHERLANDS	FES, MEAD	BARBAROSSA	308	65	200	6
WEST GERMANY	FES, MEAD	WEHRDAER KUNGIA	307	65	199	11
UNITED STATES	ALFALFA	GRIMM	171	116	198	9
UNITED STATES	ALFALFA	ANCHOR	169	116	196	12
NETHERLANDS	FES, TALL	ARONDE	198	98	193	3
NETHERLANDS	FES, MEAD	BARKAS	292	65	189	12
SWEDEN	BENT, COL	BORAL	121	155	188	9
UNITED STATES	BENT, CREEP	PENNCROSS *	29	635	187	14
UNITED KINGDOM	ALFALFA	MARIS PHOENIX	161	116	187	12
UNITED STATES	CANARY, REED	IOREED	91	204	186	6
DENMARK	FES, MEAD	MANA	285	65	185	6
UNITED STATES	BROME, S	MANCHAR	211	86	182	6
UNITED STATES	BLUE, KENT	PARK *	113	159	180	15
DENMARK	FES, MEAD	JOMA DAEHNFELDT	276	65	179	6
FRANCE	ALFALFA	ELGA	152	116	177	12
CANADA	CANARY, REED	GROVE	86	204	175	6
UNITED STATES	BLUE, KENT	NUGGET	109	159	173	2
NETHERLANDS	BLUE, KENT	AQUILA	108	159	172	6
POLAND	BLUE, KENT	SK-46 (ESKA)	108	159	172	3
CANADA	ALFALFA	ALGONQUIN	148	116	172	9
WEST GERMANY	FES, MEAD	COSMOS II	263	65	171	11
SWEDEN	ALFALFA	VERTUS	147	116	170	12
WEST GERMANY	FOX, MEAD	WEHRDAER RHONA	125	135	169	9
UNITED STATES	FES, TALL	ALTA *	173	98	168	24
FRANCE	ALFALFA	CARDINAL	143	116	166	12
CANADA	ALFALFA	BEAVER *	138	116	160	24
NORWAY	FES, MEAD	LOKEN	246	65	159	11
UNITED STATES	BLUE, KENT	MERION	99	159	157	5
FRANCE	ALFALFA	HYBRIDE MILFEUIL	135	116	157	12
UNITED KINGDOM	FES, TALL	ABERYSTWYTH S.170	160	98	156	9
FRANCE	FES, TALL	CLARINE	159	98	155	9
FRANCE	ALFALFA	WAROTTE	133	116	154	11
UNITED STATES	CANARY, REED	VANTAGE	75	204	153	3
JAPAN	FES, TALL	YAMANAMI	155	98	152	6
CZECHOSLOVAKIA	FES, MEAD	LEVOCSKA	233	65	151	6
HUNGARY	ALFALFA	TAPIOSZELEI 1	130	116	151	12

ORIGIN	SPECIES	VARIETY	LB/AC	C/LB	\$/AC	YR
NORWAY	FES, MEAD	SALTEN	228	65	148	3
CANADA	ALFALFA	ROAMER	127	116	147	14
CANADA	ALFALFA	RAMBLER	126	116	146	9
CANADA	ALFALFA	ANGUS	125	116	145	9
FRANCE	ALFALFA	ORCA	123	116	142	12
UNITED STATES	BLUE, KENT	BRISTOL	89	159	141	3
NETHERLANDS	BLUE, KENT	ENMUNDI	88	159	140	3
CANADA	ORCHARD	MAJESTIC	185	75	138	6
NETHERLANDS	BLUE, KENT	PARADE	86	159	137	6
CANADA	ORCHARD	KAY	182	75	136	6
POLAND	FES, MEAD	SK-6 (CYKADA)	207	65	134	6
FRANCE	ALFALFA	GEMINI	114	116	132	11
NETHERLANDS	BLUE, KENT	ENOBLE	82	159	130	3
CANADA	FES, RED	BOREAL *	283	46	129	24
CZECHOSLOVAKIA	FES, MEAD	ROZNOVSKA	199	65	129	6
NETHERLANDS	BLUE, KENT	MOSA	80	159	128	3
NETHERLANDS	BLUE, KENT	KIMONO	80	159	128	3
NETHERLANDS	FES, MEAD	WENDELMOED	195	65	126	14
SWEDEN	CLOV, RED	RESISTENTA	261	47	123	2
CANADA	FES, RED	DURLAWN	267	46	122	9
SWEDEN	BLUE, KENT	BIRKA	76	159	121	6
FRANCE	FES, MEAD	SEQUANA	182	65	118	3
UNITED STATES	ALFALFA	DAWSON	100	116	117	12
UNITED STATES	ORCHARD	LATAR	157	75	117	6
WEST GERMANY	FES, RED	LIEBENZIGER	252	46	116	12
POLAND	FES, MEAD	MEWA	173	65	112	6
UNITED STATES	ALFALFA	WL 215	94	116	110	9
UNITED KINGDOM	TIMOTHY,	POLKA	304	36	109	9
CANADA	FES, MEAD	TRADER	167	65	109	6
UNITED STATES	BENT, COL	ASTORIA	70	155	109	3
POLAND	FES, RED	RUNO	236	46	108	9
SWEDEN	CLOV, RED	HERMES II	228	47	108	11
UNITED KINGDOM	BENT, COL	SABOVAL	69	155	107	7
UNITED KINGDOM	TIMOTHY,	SCOTS	297	36	106	12
NORWAY	CLOV, RED	MOLSTAD	223	47	105	2
DENMARK	FES, RED	ECHO DAEHNFELDT	228	46	105	11
UNITED STATES	FES, TALL	GOAR	104	98	101	9
UNITED STATES	FES, TALL	FAWN	103	98	101	6
NETHERLANDS	CLOV, WHITE	ARIA	113	89	101	4
CANADA	CLOV, RED	ALTASWEDE *	213	47	100	23

ORIGIN	SPECIES	VARIETY	LB/AC	C/LB	\$/AC	YR
BELGIUM	FES, RED	RUDAX	216	46	99	12
NETHERLANDS	FES, RED	AGIO	213	46	98	9
NETHERLANDS	CLOV, WHITE	PERTINA	108	89	97	12
SWEDEN	CLOV, RED	BRITTA	204	47	96	11
POLAND	FES, RED	KOS	208	46	95	9
NETHERLANDS	BLUE, KENT	ORNA	59	159	94	3
UNITED STATES	BROME, S	SAC	109	86	94	3
SWEDEN	CLOV, RED	BOMBI	194	47	92	11
NETHERLANDS	TIMOTHY,	MIRAGE	257	36	92	12
JAPAN	TIMOTHY,	SENPOKU	257	36	92	9
WEST GERMANY	TIMOTHY,	HEILBRINK	253	36	91	9
NETHERLANDS	CLOV, WHITE	RETOR	100	89	90	9
WEST GERMANY	FES, RED	N.F.G. T ROEMER	196	46	90	14
CANADA	CLOV, RED	NORLAC	190	47	90	6
UNITED STATES	ALFALFA	LADAK	76	116	89	5
YUGOSLAVIA	TIMOTHY,	B-10	248	36	89	9
CANADA	TIMOTHY,	CLIMAX *	247	36	89	24
UNITED STATES	BENT, COL	EXETER *	56	155	87	16
POLAND	TIMOTHY,	SK-45 (EMMA)	240	36	86	9
DENMARK	CLOV, WHITE	MILKA PAJBJERG	95	89	85	12
SWEDEN	FES, RED	RUBIN	184	46	84	11
POLAND	CLOV, RED	VIOLA	177	47	84	12
SWEDEN	CLOV, RED	BJURSELE	176	47	83	5
CZECHOSLOVAKIA	CLOV, RED	CHLUMECKY	177	47	83	8
SWEDEN	FES, RED	POLAR	180	46	83	8
UNITED KINGDOM	CLOV, WHITE	KENT WILD WHITE	91	89	81	9
JAPAN	TIMOTHY,	HOKUO	226	36	81	5
FRANCE	ALFALFA	MAGALI	69	116	80	8

ORIGIN	SPECIES	VARIETY	LB/AC	C/LB	\$/AC	YR
SWEDEN	BENT, COL	EKO	51	155	79	3
DENMARK	ALFALFA	RESIS	68	116	79	3
POLAND	ORCHARD	FALA	103	75	77	12
WEST GERMANY	CLOV, RED	LUCRUM	163	47	77	11
BELGIUM	CLOV, RED	VIOLETTA R.V.P.	163	47	77	11
NETHERLANDS	CLOV, WHITE	CULTURA	86	89	77	15
UNITED STATES	ALFALFA	CITATION	66	116	76	3
NETHERLANDS	FES, RED	NOVORUBRA	166	46	76	14
SWEDEN	CLOV, RED	REKO	161	47	76	11
NETHERLANDS	CLOV, WHITE	WILKLA	84	89	75	9
UNITED STATES	BLUE, KENT	ADELPHI	48	159	75	6
UNITED KINGDOM	TIMOTHY,	ABERYSTWYTH S.352	206	36	74	9
ITALY	ALFALFA	GARISENDA	64	116	74	8
SWEDEN	CLOV, RED	ESSI II	157	47	74	10
UNITED STATES	FES, RED	WINTERGREEN	160	46	73	9
UNITED STATES	CLOV, RED	LAKELAND	155	47	73	10
WEST GERMANY	CLOV, WHITE	N.F.G. GIGANT	82	89	73	15
FINLAND	CLOV, RED	JOKIOINEN	153	47	72	9
UNITED KINGDOM	CLOV, RED	SABTORON	153	47	72	10
WEST GERMANY	TIMOTHY,	LANDSBERGER	198	36	71	11
SWEDEN	CLOV, WHITE	LENA	79	89	71	9
UNITED STATES	FES, RED	JAMESTOWN	154	46	71	9
NETHERLANDS	CLOV, WHITE	BARBIAN	78	89	69	9
POLAND	FES, RED	LEO	150	46	69	9
POLAND	TIMOTHY,	FOKA	192	36	69	6
NETHERLANDS	TIMOTHY,	ESKIMO	190	36	68	6
FRANCE	ALFALFA	POLDER	58	116	67	5
UNITED KINGDOM	FES, RED	BLERE	147	46	67	12
CANADA	ORCHARD	CHINOOK *	86	75	65	18
DENMARK	CLOV, WHITE	MILKANOVA PAJBJERG	73	89	65	9
NETHERLANDS	CLOV, RED	GRONINGER	136	47	64	11
AUSTRIA	CLOV, RED	REICHERSBERGER	132	47	62	11
CZECHOSLOVAKIA	TIMOTHY,	VETROVSKY	173	36	62	6
CZECHOSLOVAKIA	TIMOTHY,	LEVOCISKY	171	36	61	6
SWEDEN	ALFALFA	SVERRE	53	116	61	3
WEST GERMANY	CLOV, RED	ODENWALDER	129	47	61	8

ORIGIN	SPECIES	VARIETY	LB/AC	C/LB	\$/AC	YR
IRELAND	TIMOTHY,	GLASNEVIN GEM	169	36	60	11
SWEDEN	TIM, TURF	EVERGREEN	165	36	59	12
SWEDEN	CLOV, WHITE	NORA *	66	89	59	22
NETHERLANDS	FES, RED	BARFALLA	128	46	59	8
CZECHOSLOVAKIA	CLOV, RED	JICINSKY	126	47	59	9
FRANCE	CLOV, RED	TRIEL	123	47	58	11
NETHERLANDS	FES, RED	BARGENA	125	46	57	11
FINLAND	ORCHARD	TAMMISTO	75	75	56	6
FRANCE	CLOV, WHITE	CRAU	63	89	56	9
SWEDEN	TIMOTHY,	VANADIS	155	36	55	3
UNITED STATES	CLOV, RED	CHESAPEAKE	117	47	55	11
SWITZERLAND	CLOV, RED	CHANGINS	117	47	55	13
CANADA	CLOV, ALS	DAWN	171	32	55	11
NETHERLANDS	BLUE, KENT	PION	34	159	54	3
WEST GERMANY	ORCHARD	HOLSTENKAMP	72	75	54	9
ITALY	CLOV, RED	L. 69 VALENTE	113	47	53	9
UNITED KINGDOM	CLOV, WHITE	ABERYSTWYTH S.184	60	89	53	9
SWEDEN	CLOV, WHITE	SONJA	59	89	53	10
BELGIUM	CLOV, WHITE	BLANCA R.V.P.	59	89	53	12
CANADA	CLOV, RED	OTTAWA	113	47	53	15
WEST GERMANY	CLOV, WHITE	STEINACHER	60	89	53	7
WEST GERMANY	CLOV, RED	N.F.G. MEKRA	111	47	52	10
SWEDEN	FES, RED	WILTON	114	46	52	9
NETHERLANDS	FES, RED	DAWSON	114	46	52	8
SWITZERLAND	CLOV, RED	LEISI	111	47	52	11
NEW ZEALAND	TIMOTHY,	GRASSLANDS KAHU	146	36	52	11
AUSTRALIA	CLOV, WHITE	HAIFA	58	89	52	1
SWEDEN	BLUE, KENT	FYLKING	32	159	51	2
WEST GERMANY	CLOV, RED	LERO	106	47	50	11
ROMANIA	ALFALFA	LUXIN	43	116	50	3
NETHERLANDS	BLUE, KENT	ENTENSA	31	159	50	6
SWEDEN	ORCHARD	TARDUS II	67	75	50	12
JAPAN	CLOV, RED	HAMIDORI	105	47	50	8
CANADA	CLOV, RED	DOLLARD	103	47	49	12
ITALY	CLOV, RED	ISELLA	101	47	48	7
CANADA	CLOV, ALS	AURORA	147	32	47	22
ISRAEL	CLOV, WHITE	TAMAR	52	89	46	7
NETHERLANDS	TIMOTHY,	HEIDEMIJ	128	36	46	3
FRANCE	FES, TALL	MANADE	47	98	46	6
UNITED STATES	CLOV, RED	ORBIT	94	47	45	13
FRANCE	TIMOTHY,	PECORA	123	36	44	3
JAPAN	ORCHARD	FRONTIER	58	75	44	3
UNITED KINGDOM	FES, RED	AMBOISE	97	46	44	12
SWEDEN	CLOV, ALS	TETRA	136	32	44	13
NETHERLANDS	TIMOTHY,	OLYMPIA	121	36	43	9
UNITED STATES	CLOV, RED	ARLINGTON	90	47	43	6
DENMARK	CLOV, ALS	ERMO OTOFTE	133	32	43	11
FRANCE	ALFALFA	EUROPE	36	116	42	3
CANADA	TIMOTHY,	DRUMMOND	114	36	41	3
NETHERLANDS	CLOV, WHITE	FRIES-GRONINGER	46	89	41	6
UNITED STATES	ALFALFA	TALENT	34	116	40	12
DENMARK	ORCHARD	LUNA ROSKILDE	53	75	40	6

ORIGIN	SPECIES	VARIETY	LB/AC	C/LB	\$/AC	YR
NETHERLANDS	TIM, TURF	PICCOLO	108	36	39	3
UNITED KINGDOM	TIM, TURF	DEPLOY	109	36	39	3
ITALY	TIMOTHY,	TORO	108	36	39	3
BELGIUM	CLOV, RED	ROTRA RVP 4n	80	47	38	8
NEW ZEALAND	CLOV, WHITE	GRASSLANDS HUIA	42	89	38	9
ITALY	CLOV, WHITE	L. 107/66 ESPANSO	42	89	38	11
HUNGARY	CLOV, WHITE	SZARVASI 4	41	89	37	9
POLAND	CLOV, WHITE	PODKOWA	42	89	37	6
DENMARK	TIM, TURF	NOBIS	102	36	36	3
UNITED STATES	CLOV, WHITE	MERIT	40	89	36	9
SWEDEN	TIMOTHY,	KAMPE II	99	36	36	3
UNITED KINGDOM	TIMOTHY,	ABERYSTWYTH S.51	99	36	36	3
JAPAN	ORCHARD	KITAMIDORI	46	75	35	6
WEST GERMANY	ORCHARD	OBERWEIHST	47	75	35	6
NETHERLANDS	CLOV, RED	TETRI 4n	72	47	34	11
HUNGARY	CLOV, RED	HUNGAROPOLY 4n	72	47	34	3
NETHERLANDS	CLOV, RED	BARIFIOLA 4n	70	47	33	11
UNITED KINGDOM	TIMOTHY,	ABERYSTWYTH S.48	92	36	33	3
UNITED STATES	ORCHARD	STERLING	44	75	33	6
ITALY	CLOV, RED	L. 148/30 LONGEVO	68	47	32	7
NETHERLANDS	FES, RED	OASIS	67	46	31	21
DENMARK	TIM, TURF	TENO	82	36	30	3
SWEDEN	ORCHARD	FRODE	40	75	30	6
UNITED KINGDOM	TIM, TURF	ABERYSTWYTH S.50 *	84	36	30	15
WEST GERMANY	TIMOTHY,	ODENWALDER	82	36	29	3
FRANCE	TIM, TURF	SPORT	79	36	28	6
WEST GERMANY	FES, RED	GOLFROOD	60	46	28	3
DENMARK	ORCHARD	RANO TRIFOLIUM	35	75	26	6
NETHERLANDS	TIMOTHY,	INTENSO	70	36	25	3
NETHERLANDS	FES, RED	RUBY	53	46	24	3
WEST GERMANY	ORCHARD	IRIS	31	75	24	6
UNITED STATES	CLOV, WHITE	LOUISIANA S1	27	89	24	6
UNITED STATES	ORCHARD	BOONE	31	75	24	6
NETHERLANDS	ORCHARD	DORISE	32	75	24	6
NORWAY	CLOV, ALS	ALPO	74	32	24	2
SWEDEN	REDTOP	EMERALD *	8	261	21	5
SWEDEN	CLOV, WHITE	UNDROM	23	89	21	1
UNITED STATES	BENT, COL	HIGHLAND	13	155	21	3
NETHERLANDS	ORCHARD	DOLCEA	26	75	20	5
NETHERLANDS	FES, RED	MONICA	43	46	20	3

ORIGIN	SPECIES	VARIETY	LB/AC	C/LB	\$/AC	YR
ITALY	CLOV, WHITE	L.G. LODIGIANO	21	89	19	10
UNITED KINGDOM	FES, RED	ABERYSTWYTH S.59	34	46	16	3
UNITED STATES	CLOV, WHITE	REGAL	17	89	16	9
NEW ZEALAND	CLOV, WHITE	GRASSLANDS PITAU	16	89	14	1
NETHERLANDS	ORCHARD	LOTTO	19	75	14	4
UNITED KINGDOM	CLOV, WHITE	OLWEN	15	89	14	1
NETHERLANDS	ORCHARD	BARAULA	16	75	12	6
UNITED KINGDOM	ORCHARD	ABERYSTWYTH S.37	15	75	11	5
NETHERLANDS	ORCHARD	MODAC	13	75	10	3
DENMARK	ORCHARD	MULLUS PAJBJERG	9	75	7	5
FRANCE	ORCHARD	FLOREAL	8	75	6	6
FRANCE	ORCHARD	PRAIRIAL	7	75	5	4
UNITED KINGDOM	ORCHARD	ABERYSTWYTH S.26	5	75	4	5
IRELAND	ORCHARD	FERDIA	5	75	4	5
UNITED KINGDOM	ORCHARD	ABERYSTWYTH S.143	3	75	3	5
SPAIN	ALFALFA	ARAGON	0	116	0	2
WEST GERMANY	TREFOIL, BF	HOKI	0	188	0	2
UNITED KINGDOM	BENT, COL	GOGINAN	0	155	0	1
FRANCE	ORCHARD	LUCIFER	0	75	0	4
WEST GERMANY	BENT, COL	LIGRETTE	0	155	0	1
UNITED KINGDOM	BENT, COL	PARYS MOUNTAIN	0	155	0	1
UNITED KINGDOM	ALFALFA	SABILT	0	116	0	2
FRANCE	ALFALFA	MIREILLE	0	116	0	2
NEW ZEALAND	ORCHARD	GRASSLANDS APANUI	0	75	0	4
UNITED KINGDOM	ALFALFA	MARIS KABUL	0	116	0	2
JAPAN	CLOV, RED	SAPPORO	0	47	0	1
UNITED KINGDOM	FES, TALL	JEBEL	0	98	0	1
UNITED KINGDOM	FES, TALL	KASBA	0	98	0	1
FRANCE	CLOV, RED	LEVEZOU	0	47	0	2
AUSTRALIA	ORCHARD	CURRIE	0	75	0	2