

Cultivar	Origin	Hardi- ness	Height (cm)	Date Ripe			Seed Yield						Herbage Yield					
				1980	1981	1982	Kg/ha			% of Climax			(DM) t/ha			% of Climax		
							1980	1981	1982	1980	1981	1982	1980	1981	1982	1980	1981	1982
Alpage	France	9	73	Aug 05	Aug 13	Aug 09	358	239	264	105	84	114	4.22	4.35	4.22	98	93	93
Asterix	Netherlands	9	62	Aug 25	Aug 17	Sep 07	114	63	56	34	22	24	4.11	3.66	5.32	95	78	117
Bartlimi	Netherlands	9	70	Aug 11	Aug 13	Aug 09	406	386	215	119	136	93	4.29	5.60	4.45	99	119	98
Basho	Canada	9	70	Aug 05	Aug 10	Jul 30	352	148	215	104	52	93	3.68	3.37	4.38	85	72	96
Bilbo	Denmark	9	74	Aug 05	Aug 04	Aug 09	433	255	313	127	90	135	4.49	4.50	4.80	104	96	106
Bottnia II	Sweden	9	75	Jul 30	Aug 07	Aug 09	498	311	390	146	110	169	5.54	5.20	4.75	129	111	105
Bounty	Canada	9	75	Aug 11	Aug 11	Aug 16	291	176	137	86	62	59	4.27	4.08	4.31	99	87	95
Champ	Canada	9	71	Jul 30	Aug 06	Jul 30	304	159	214	89	56	93	4.01	4.17	4.90	93	89	108
Climax*	Canada	9	76	Aug 05	Aug 13	Aug 09	340	283	231	100	100	100	4.31	4.70	4.54	100	100	100
Engmo	Norway	9	76	Aug 05	Aug 07	Aug 09	639	213	350	188	75	152	5.28	4.31	4.43	123	92	98
Erecta	Belgium	9	70	Aug 05	Aug 13	Aug 09	369	260	319	109	92	138	4.30	4.40	4.50	100	94	99
Goliath	Netherlands	9	72	Aug 05	Aug 04	Aug 09	354	268	281	104	95	122	4.77	4.89	4.82	111	104	106
Hokushu	Japan	9	69	Aug 11	Aug 14	Aug 18	219	307	176	64	108	76	5.22	5.09	5.32	121	108	117
Itasca	Sweden	9	74	Jul 30	Aug 04	Aug 09	295	159	190	87	56	82	4.44	4.90	4.62	103	104	102
Korpa	Iceland	9	72	Jul 30	Aug 04	Aug 09	274	289	476	81	102	206	5.70	4.86	5.40	132	103	119
Ludor	France	8	67	Aug 11	Aug 13	Aug 21	181	162	85	53	57	37	3.70	3.12	3.43	86	66	76
Melora	Netherlands	9	68	Aug 11	Aug 13	Aug 20	269	274	145	79	97	63	4.78	4.21	4.65	111	90	102
Mino	Denmark	9	72	Aug 11	Aug 13	Aug 18	306	286	182	90	101	79	4.63	4.48	4.61	107	95	102
Nosappu	Japan	9	74	Jul 30	Aug 04	Aug 09	506	247	327	149	87	142	5.06	4.61	4.98	117	98	110
Otto	Finland	9	72	Jul 30	Aug 04	Aug 09	501	252	356	147	89	154	4.53	4.73	4.05	105	101	89
Polka	United Kingdom	9	77	Aug 05	Aug 13	Aug 09	384	217	264	113	77	114	4.06	4.04	4.55	94	86	100
Pota	Denmark	9	74	Aug 05	Aug 09	Aug 09	436	284	256	128	101	111	4.80	5.17	4.78	111	110	105
Pronto	United States	9	75	Aug 05	Aug 04	Aug 09	389	223	259	114	79	112	4.79	4.51	5.10	111	96	112
Purlieu	United Kingdom	9	73	Aug 11	Aug 13	Aug 21	334	301	186	98	106	81	5.22	4.56	4.69	121	97	103
Ramona	Netherlands	7	39	Aug 11	Aug 16	Aug 15	205	132	63	60	47	27	2.36	1.98	3.08	55	42	68
Rasant	West Germany	9	71	Jul 30	Aug 04	Jul 30	558	289	433	164	102	187	4.85	4.88	4.20	113	104	93
Richmond	Canada	9	67	Jul 30	Aug 04	Aug 02	422	182	295	124	64	128	4.42	3.85	4.42	103	82	97
RVP 251F	Belgium	9	70	Aug 11	Aug 13	Aug 09	180	153	142	53	54	61	3.97	4.07	4.53	92	87	100
Salvo	Canada	8	65	Jul 30	Aug 04	Jul 30	275	80	225	81	28	97	3.54	2.47	4.34	82	53	96
Sigma	Netherlands	9	60	Aug 25	Aug 16	Sep 02	332	268	116	98	95	50	3.63	4.40	5.32	84	94	117
Tiiti	Finland	9	72	Jul 30	Aug 13	Aug 09	437	337	317	129	119	137	5.64	5.05	4.98	131	107	110
Tilda	Denmark	9	73	Aug 05	Aug 04	Aug 09	517	235	337	152	83	146	5.14	4.96	4.51	119	105	99
Topas Otofte	Denmark	9	74	Aug 05	Aug 08	Aug 09	486	248	287	143	88	124	4.98	4.71	4.61	116	100	102
Verdant	United States	9	81	Aug 05	Aug 13	Aug 09	358	301	232	105	106	100	5.11	5.04	4.80	119	93	106
Mean							371	235	245				4.53	4.38	4.60			
L.S.D. (P = .05)							85	66	77				0.85	0.56	0.78			

Cultivar	Origin	Hardi- ness	Height (cm)	Date Ripe			Seed Yield						Herbage Yield					
				1980	1981	1982	Kg/ha			% of Climax			(DM) t/ha			% of Climax		
				1980	1981	1982	1980	1981	1982	1980	1981	1982	1980	1981	1982	1980	1981	1982
Alpage	France	9	51	Aug 06	Aug 06	Aug 09	148	212	26	116	150	217	1.82	3.33	(1)	92	108	(1)
Asterix	Netherlands	7	35	Aug 20	Aug 14	Aug 09	28	109	0	46	77	0	0.69	2.93		35	95	
Bartimi	Netherlands	9	49	Aug 06	Aug 11	Aug 09	186	257	15	145	182	125	1.83	3.59		92	116	
Basho	Canada	8	45	Aug 06	Jul 31	Aug 09	79	49	3	62	35	25	1.44	2.10		73	68	
Bilbo	Denmark	9	54	Jul 29	Aug 14	Aug 09	176	164	26	138	116	217	1.94	3.04		98	98	
Bottnia 11	Sweden	9	56	Jul 29	Jul 31	Aug 09	206	344	37	161	244	308	2.34	4.22		118	137	
Bounty	Canada	9	54	Aug 06	Aug 14	Aug 09	104	91	8	81	65	67	1.43	2.31		72	75	
Champ	Canada	9	45	Aug 06	Aug 14	Aug 09	107	93	11	84	66	92	1.50	2.47		76	80	
Climax*	Canada	9	52	Aug 06	Aug 11	Aug 09	128	141	12	100	100	100	1.98	3.09		100	100	
Engmo	Norway	9	54	Aug 06	Jul 31	Aug 09	222	372	28	173	264	233	2.07	3.92		105	127	
Erecta	Belgium	9	55	Jul 29	Jul 31	Aug 09	120	241	24	94	171	200	1.86	3.39		94	110	
Goliath	Netherlands	8	51	Jul 29	Aug 08	Aug 09	150	268	15	117	190	125	1.96	3.29		99	106	
Hokushu	Japan	9	54	Aug 08	Aug 12	Aug 09	164	353	16	128	250	133	2.07	3.86		105	125	
Itasca	Sweden	9	51	Jul 29	Aug 11	Aug 09	108	120	7	84	85	58	1.91	3.10		96	100	
Korpa	Iceland	9	55	Jul 29	Jul 31	Jul 29	245	290	54	191	207	450	2.02	3.73		102	121	
Ludor	France	9	51	Aug 06	Aug 14	Aug 09	62	91	11	48	65	92	1.55	2.71		78	88	
Melora	Netherlands	9	47	Aug 08	Aug 14	Aug 09	81	200	13	63	142	108	1.87	3.21		94	104	
Mino	Denmark	8	49	Aug 08	Aug 14	Aug 09	153	169	21	120	120	175	1.93	2.45		97	79	
Nosappu	Japan	9	53	Aug 06	Jul 31	Aug 09	165	142	38	129	101	317	2.01	3.30		102	107	
Otto	Finland	9	57	Jul 29	Jul 31	Aug 09	265	304	56	207	216	467	2.32	3.91		117	127	
Polka	United Kingdom	9	53	Aug 06	Aug 06	Aug 09	172	135	34	134	96	283	1.92	2.97		97	96	
Pota	Denmark	9	55	Jul 29	Aug 06	Aug 09	133	159	19	104	113	158	2.20	3.65		111	118	
Pronto	United States	9	49	Aug 06	Aug 14	Aug 09	155	157	23	121	111	192	1.85	3.14		95	102	
Purlieu	United Kingdom	8	51	Aug 12	Aug 14	Aug 09	135	193	15	105	137	125	1.44	2.89		73	94	
Rasant	West Germany	9	58	Jul 29	Aug 11	Jul 29	323	421	112	252	299	933	2.27	4.23		115	137	
Richmond	Canada	9	52	Jul 29	Jul 31	Aug 09	139	200	26	109	142	217	1.85	2.75		93	89	
RVP 251F	Belgium	9	51	Aug 08	Aug 14	Aug 09	70	154	15	55	109	125	1.75	3.00		88	97	
Salvo	Canada	9	42	Jul 29	Jul 31	Jul 29	56	92	10	44	65	83	1.42	1.88		72	61	
Sigma	Netherlands	8	39	Aug 12	Aug 11	Aug 09	189	339	11	148	240	92	1.70	3.24		86	105	
Tiiti	Finland	9	59	Jul 29	Aug 06	Jul 29	272	373	50	213	265	417	2.45	4.09		124	132	
Tilda	Denmark	9	55	Jul 29	Aug 06	Aug 09	196	180	32	153	128	267	2.00	3.47		101	112	
Topas Otofte	Denmark	9	55	Aug 06	Jul 31	Aug 09	174	156	34	136	111	283	2.06	3.18		104	103	
Verdant	United States	9	53	Aug 06	Aug 14	Aug 09	139	181	32	109	128	267	1.97	3.68		99	119	
Mean							149	205	25				1.82	3.14				
L.S.D. (P = .05)							62	72	18				0.41	0.64				

(1) Herbage Not Measured

Cultivar	Origin	Hardi- ness	Height (cm)	Date Ripe			Seed Yield						Herbage Yield					
				1980	1981	1982	Kg/ha			% of Climax			(DM) t/ha			% of Climax		
							1980	1981	1982	1980	1981	1982	1980	1981	1982	1980	1981	1982
Alpage	France	9	65	Jul 30	Aug 10	Aug 04	239	243	73	89	155	90	8.04	3.61	1.91	80	107	97
Asterix	Netherlands	9	41	Aug 19	Aug 10	Aug 04	133	118	14	49	75	17	6.91	2.68	1.19	69	79	61
Bartini	Netherlands	9	68	Jul 30	Aug 10	Aug 04	346	335	105	128	213	130	10.13	4.70	1.71	101	139	87
Basho	Canada	9	66	Jul 30	Aug 10	Aug 04	95	92	48	35	59	59	6.91	3.30	1.99	69	98	102
Bilbo	Denmark	9	70	Jul 30	Aug 10	Aug 04	292	233	91	108	148	112	9.50	4.26	2.12	94	126	108
Bottnia II	Sweden	9	73	Jul 30	Jul 29	Aug 04	960	547	87	356	348	107	17.53	7.23	2.10	174	214	107
Bounty	Canada	9	70	Jul 30	Aug 10	Aug 04	325	187	83	120	119	102	9.02	2.83	1.76	90	84	90
Champ	Canada	9	69	Jul 30	Aug 10	Aug 04	240	116	70	89	74	86	11.19	4.29	1.78	111	127	91
Climax*	Canada	9	69	Jul 30	Aug 10	Aug 04	270	157	81	100	100	100	10.06	3.38	1.96	100	100	100
Engmo	Norway	9	73	Jul 30	Jul 29	Aug 04	955	570	98	354	363	121	16.05	6.39	1.83	160	189	93
Erecta	Belgium	9	64	Jul 30	Aug 10	Aug 04	307	174	79	114	111	98	7.72	3.34	1.84	77	99	94
Goliath	Netherlands	9	70	Jul 30	Aug 10	Aug 04	393	278	126	146	177	155	12.42	4.01	1.96	123	119	100
Hokushu	Japan	9	67	Jul 30	Aug 10	Aug 04	215	298	62	80	190	77	9.79	4.77	1.91	97	141	97
Itasca	Sweden	9	72	Jul 30	Aug 10	Aug 04	276	159	73	102	101	90	11.48	4.57	2.05	114	135	105
Korpa	Iceland	9	72	Jul 30	Jul 29	Aug 04	949	451	131	351	287	162	14.54	5.66	1.93	145	167	98
Ludor	France	9	66	Jul 30	Aug 10	Aug 04	174	100	50	64	64	62	10.42	3.47	1.46	104	103	74
Melora	Netherlands	9	60	Jul 30	Aug 10	Aug 04	158	208	28	59	132	35	8.53	4.16	1.89	85	123	96
Mino	Denmark	9	69	Jul 30	Aug 10	Aug 04	153	214	77	57	136	95	6.94	3.70	2.01	69	109	103
Nosappu	Japan	9	74	Jul 30	Aug 10	Aug 04	312	270	124	116	172	153	12.50	5.43	2.34	124	161	119
Otto	Finland	9	76	Jul 30	Aug 01	Aug 04	737	369	153	273	235	189	13.71	4.61	2.33	136	136	119
Polka	United Kingdom	9	72	Jul 30	Aug 10	Aug 04	282	263	107	104	168	132	9.72	4.53	2.37	97	134	121
Pota	Denmark	9	73	Jul 30	Aug 10	Aug 04	315	235	76	117	150	94	12.51	4.84	2.05	124	143	105
Pronto	United States	9	65	Jul 30	Aug 10	Aug 04	284	207	77	105	132	95	10.17	4.25	2.17	101	126	111
Purlieu	United Kingdom	9	62	Jul 30	Aug 10	Aug 04	122	274	47	45	175	58	7.70	4.63	1.68	77	137	86
Rasant	West Germany	9	71	Jul 30	Jul 29	Aug 04	421	394	204	156	251	252	9.78	3.87	2.17	97	114	111
Richmond	Canada	9	74	Jul 30	Aug 01	Aug 04	208	247	137	77	157	169	9.11	4.19	2.36	91	124	120
RVP 25IF	Belgium	9	63	Jul 30	Aug 10	Aug 04	177	207	36	66	132	44	11.17	4.15	1.99	111	123	102
Salvo	Canada	9	60	Aug 09	Jul 29	Aug 04	166	110	58	62	70	72	7.96	3.94	2.09	79	117	107
Sigma	Netherlands	9	50	Sep 01	Aug 10	Aug 04	509	399	32	189	254	40	9.39	3.90	1.28	93	115	65
Tiiti	Finland	9	67	Jul 30	Aug 10	Aug 04	725	500	124	269	318	153	14.40	5.88	2.32	143	174	113
Tilda	Denmark	9	72	Jul 30	Aug 10	Aug 04	461	296	99	171	189	122	11.86	4.73	1.79	118	140	91
Topas Otofte	Denmark	9	71	Jul 30	Aug 10	Aug 04	365	334	120	135	213	148	12.29	4.90	2.16	122	145	110
Verdant	United States	9	77	Jul 30	Aug 10	Aug 04	332	270	104	123	172	128	11.80	5.46	2.63	117	162	134
Mean							350	268	87				10.64	4.41	1.97			
L.S.D. (P = .05)							124	109	47				2.72	1.31	0.44			