

GRASS SEED YIELD DATA 1969^(a) - 1977

C. R. Elliott and M. Howe
 Northern Research Group
 Agriculture Canada, Research Station
 Beaverlodge, Alberta

<u>Dates of Seeding Experiments</u>	<u>Page</u>
Bromegrass, Northern - Carlton	1
Bromegrass, Southern - Red Patch	2
Fescue, Chewings - Oasis	3
Fescue, Creeping Red - Boreal	4
Fescue, Meadow - Mimer	5
Reed Canarygrass - Frontier	6
Russian Wildrye - Sawki	7
Timothy, Hexaploid - Climax	8
Timothy, Nodosum - S.50	9
Wheatgrass, Crested - Fairway	10
Wheatgrass, Intermediate - Chief	11
 <u>Companion Crop Experiments</u>	
Bromegrass - Carlton	12
Fescue, Creeping Red - Boreal	13
Fescue, Meadow - Mimer	14
Reed Canarygrass - Frontier	15
Russian Wildrye - Sawki	16
Timothy, Hexaploid - Climax	17
Wheatgrass, Crested - Fairway	18
Wheatgrass, Intermediate - Chief	19
 <u>Row Spacing Experiments</u>	
Bromegrass, Northern - Carlton	20
Bromegrass, Southern - Red Patch	20
Fescue, Chewings - Oasis	20
Fescue, Creeping Red - Boreal	21
Fescue, Meadow - Mimer	21
Foxtail, Meadow - Oregon	21
Reed Canarygrass - Frontier	22
Russian Wildrye - Sawki	22
Timothy, Hexaploid - Climax	22
Timothy, Nodosum - S.50	23
Wheatgrass, Crested - Fairway	23
Wheatgrass, Intermediate - Chief	23

(a) 1969 seeding on Black soil; others on Grey soil

Seed yields (lbs/acre) from Northern Brome grass - Carlton seeded at different dates

Dates of Seeding	1969 Seeding					1970 Seeding					1971 Seeding				1972 Seeding					15-Harvest Average
	1st 1970	2nd 1971	3rd 1972	4th 1973	TOTAL	1st 1971	2nd 1972	3rd 1973	4th 1974	TOTAL	1st 1972	2nd 1973	3rd 1974	TOTAL	1st 1973	2nd 1974	3rd 1975	4th 1976	TOTAL	
Before May 15	398	563	490	199	1650	500	1039	612	575	2726	613	788	309	1710	996	697	520	390	2603	579
May 16-31	271	581	550	264	1666	449	1104	612	537	2702	655	868	222	1745	1142	647	420	378	2587	580
June 1-15	307	486	546	253	1592	357	1197	700	478	2732	742	818	405	1965	1280	633	423	384	2720	601
June 16-30	302	430	444	214	1390	262	1034	738	464	2498	753	837	445	2035	1417	618	425	391	2851	585
July 1-15	253	355	412	312	1332	236	1182	831	454	2703	508	856	484	1848	688	688	542	482	2400	552
July 16-31	302	292	417	315	1326	158	1026	788	584	2556	685	949	510	2144	226	1057	522	563	2368	560
Aug. 1-15	240	427	350	363	1380	69	971	902	548	2490	292	1079	571	1942	21	1053	530	630	2234	536
Aug. 16-31	81	892	386	477	1836	14	949	902	420	2285	3	802	564	1369	4	965	542	654	2165	510
Sept. 1-15	27	707	532	462	1728	11	974	920	404	2309	1	912	618	1531	2	823	601	674	2100	511
Sept. 16-30	19	827	706	492	2044	7	999	937	387	2330	0	451	534	985	0	680	659	693	2032	493
After Oct. 1	0	1185	642	658	2485	0	729	673	386	1788	0	374	702	1076	-	-	-	-	-	486*

* 11-harvest ave. - not seeded in 1972

Seed yields (lbs/acre) from Southern Bromegrass - Red Patch seeded at different dates

Dates of Seeding	1969 Seeding					TOTAL	1970 Seeding					TOTAL	1971 Seeding				TOTAL	1972 Seeding				TOTAL	7-Harvest Average
	1st 1970	2nd 1971	3rd 1972	4th 1973	1st 1972		2nd 1972	3rd 1973	4th 1974	1st 1972	2nd 1973		3rd 1974	1st 1973	2nd 1974	3rd 1975		4th 1976					
Before May 15												203	352	66	621	351	249	216	305	1121	249		
May 16-31												270	370	90	730	381	241	231	265	1118	264		
June 1-15												311	374	147	832	455	300	242	253	1250	297		
June 16-30												334	420	163	917	528	358	253	241	1380	328		
July 1-15												151	343	156	650	340	436	237	342	1355	286		
July 16-31																							
												218	339	157	714	91	500	288	319	1198	273		
Aug. 1-15												62	362	200	624	15	469	336	332	1152	254		
Aug. 16-31												2	274	341	617	6	458	348	359	1171	255		
Sept. 1-15												1	290	294	585	3	392	366	354	1115	243		
Sept. 16-30												0	104	246	350	0	326	383	348	1057	201		
After Oct. 1												0	198	423	621	-	-	-	-	-	207*		

* 3-harvest average - trt not seeded in 1972

Seed yields (lbs/acre) from Chewings Fescue - Oasis

Dates of Seeding	1969 Seeding					1970 Seeding					1971 Seeding				1972 Seeding					7-Harvest Average
	1st 1970	2nc 1971	3rd 1972	4th 1973	TOTAL	1st 1971	2nd 1972	3rd 1973	4th 1974	TOTAL	1st 1972	2nd 1973	3rd 1974	TOTAL	1st 1973	2nd 1974	3rd 1975	4th 1976	TOTAL	
Before May 15											176	211	34	421	85	78	21	38	222	92
May 16-31											230	432	51	713	80	109	21	35	245	137
June 1-15											89	391	80	560	51	78	20	27	176	105
June 16-30											13	400	113	526	21	47	19	18	105	90
July 1-15											1	364	113	478	14	63	43	24	144	89
July 16-31		NOT TESTED					NOT TESTED				3	404	126	533	2	80	72	25	179	102
Aug. 1-15											0	372	139	511	0	68	106	34	208	103
Aug. 15-31											0	337	161	498	0	57	115	36	208	101
Sept. 1-15														Very poor plant establishment plots discarded Summer 1972	0	35	77	18	130	33
Sept. 16-30															0	12	38	0	50	13
After Oct. 1															-	-	-	-	-	-

Seed yields (lbs/acre) from Creeping Red Fescue - Boreal seeded at different dates

Dates of Seeding	1969 Seeding					1970 Seeding					1971 Seeding				1972 Seeding					15-Harvest Average
	1st 1970	2nd 1971	3rd 1972	4th 1973	TOTAL	1st 1971	2nd 1972	3rd 1973	4th 1974	TOTAL	1st 1972	2nd 1973	3rd 1974	TOTAL	1st 1973	2nd 1974	3rd 1975	4th 1976	TOTAL	
Before May 15	458	271	24	35	788	285	370	371	81	1107	683	794	190	1667	1272	353	82	41	1748	354
May 16-31	637	149	24	37	847	303	305	294	56	958	833	699	211	1743	1273	403	75	27	1778	355
June 1-15	581	129	24	36	770	136	438	380	97	1051	575	1087	325	1987	1188	464	88	32	1772	372
June 16-30	583	298	24	35	940	111	602	422	133	1268	352	1341	389	2082	1092	525	100	36	1753	403
July 1-15	503	285	24	63	875	24	733	414	159	1330	326	1549	485	2360	286	476	100	40	902	364
July 16-31	464	234	24	56	778	12	817	517	163	1509	175	1313	483	1971	195	630	183	146	1154	361
Aug. 1-15	177	307	24	58	566	1	740	819	127	1687	36	1267	666	1969	52	577	274	146	1049	351
Aug. 16-31	3	479	47	92	621	0	892	495	165	1552	0	1058	588	1646	0	456	365	112	933	317
Sept. 1-15	0	410	153	172	735	0	926	642	150	1718	0	1179	784	1963	0	344	354	150	848	351
Sept. 16-30	0	339	337	206	882	0	960	788	134	1882	0	60	242	302	0	231	343	187	761	255
After Oct. 1	0	402	304	208	914	0	585	993	155	1733	0	562	590	1152	-	-	-	-	-	345*

*11-harvest average - trt not seeded in 1972

Seed Yields (lbs/acre) from Meadow Fescue - Mimer seeded at different dates

Dates of Seeding	1969 Seeding					1970 Seeding					1971 Seeding				1972 Seeding					15-Harvest Average
	1st 1970	2nd 1971	3rd 1972	4th 1973	TOTAL	1st 1971	2nd 1972	3rd 1973	4th 1974	TOTAL	1st 1972	2nd 1973	3rd 1974	TOTAL	1st 1973	2nd 1974	3rd 1975	4th 1976	TOTAL	
Before May 15	590	859	200	37	1686	1197	726	411	521	2855	715	1250	635	2600	1297	899	216	159	2571	647
May 16-31	608	827	236	64	1735	984	747	545	570	2846	890	1315	668	2873	1328	909	241	157	2635	673
June 1-15	670	830	208	103	1811	716	705	401	497	2319	796	1121	664	2581	1380	990	243	171	2784	633
June 16-30	525	875	282	98	1780	586	763	354	542	2245	489	1189	677	2355	1431	1071	244	184	2930	621
July 1-15	629	755	325	127	1836	99	593	441	472	1605	155	1038	837	2030	1023	1094	242	152	2511	532
July 16-31	613	650	289	109	1661	16	584	463	434	1497	105	919	802	1826	574	1387	324	282	2567	503
Aug. 1-15	385	778	316	157	1636	2	410	522	388	1322	32	997	850	1879	162	1469	339	336	2306	476
Aug. 16-31	69	679	345	145	1238	2	808	600	483	1893	0	506	807	1313	8	1399	366	374	2147	439
Sept. 1-15	26	874	394	157	1451	1	809	630	455	1895	0	253	400	653	4	1281	422	340	2047	403
Sept. 16-30	6	658	370	127	1161	1	810	659	427	1897	0	225	350	575	0	1163	478	306	1947	372
After Oct. 1	36	1265	541	174	2016	0	482	578	361	1421	0	150	300	450	-	-	-	-	-	353*

* 11-harvest average - trt not seeded in 1972

Seed yields (lbs/acre) from Reed Canarygrass - Frontier seeded at different dates

Dates of Seeding	1969 Seeding					1970 Seeding					1971 Seeding				1972 Seeding					15-Hargest AVERAGE
	1st 1970	2nd 1971	3rd 1972	4th 1973	TOTAL	1st 1971	2nd 1972	3rd 1973	4th 1974	TOTAL	1st 1972	2nd 1973	3rd 1974	TOTAL	1st 1973	2nd 1974	3rd 1975	4th 1976	TOTAL	
Before May 15	25	73	33	8	139	192	141	68	121	522	95	128	148	371	254	176	43	39	512	103
May 16-31	25	71	31	9	136	175	160	82	124	541	84	119	71	274	163	264	49	34	510	97
June 1-15	31	56	23	6	116	85	176	103	120	484	39	168	198	405	177	268	61	44	550	104
June 16-30	27	49	25	9	110	39	201	137	114	491	30	239	351	620	190	272	72	54	588	121
July 1-15	21	65	27	8	121	10	301	141	88	540	14	246	87	347	46	182	66	44	338	90
July 16-31	17	75	30	9	131	0	146	153	93	392	4	248	198	450	9	286	78	89	462	96
Aug. 1-15	8	55	31	13	107	0	132	152	81	365	0	213	247	460	1	209	70	76	356	86
Aug. 16-31	0	101	61	12	174	0	104	166	81	351	0	169	186	355	0	168	66	62	296	78
Sept. 1-15	0	149	89	27	265	0	102	180	89	371	0	85	201	286	0	94	51	63	208	75
Sept. 16-30	0	190	108	34	332	0	99	194	97	390	0	50	222	272	0	20	36	63	119	74
After Oct. 1	0	137	97	24	258	0	49	170	66	285	0	50	186	236	-	-	-	-	-	71*

* 11-harvest average - trt not seeded 1972

Seed Yields (lbs/acre) from Russian wild-rye - Sawki seeded at different dates

Dates of Seeding	1969 Seeding					1970 Seeding					1971 Seeding				1972 Seeding					15-Harvest Average
	1st 1970	2nd 1971	3rd 1972	4th 1973	TOTAL	1st 1971	2nd 1972	3rd 1973	4th 1974	TOTAL	1st 1972	2nd 1973	3rd 1974	TOTAL	1st 1973	2nd 1974	3rd 1975	4th 1976	TOTAL	
Before May 15	295	441	187	53	977	62	692	584	158	1496	347	674	317	1338	193	233	109	46	581	293
May 16-31	212	442	184	57	895	68	743	450	127	1388	123	604	310	1097	53	238	102	48	441	255
June 1-15	80	317	139	48	584	29	895	479	169	1572	68	897	523	1488	32	209	159	58	458	273
June 16-30	22	451	247	108	828	7	760	556	176	1499	14	925	488	1427	10	179	215	67	471	282
July 1-15	2	806	352	178	1338	0	639	598	241	1478	3	602	333	938	0	144	165	33	342	273
July 16-31	1	523	277	144	945	0	585	707	343	1635	1	587	498	1086	0	226	253	201	680	290
Aug. 1-15	0	483	301	227	1011	0	289	742	174	1205	0	504	607	1111	0	128	265	301	694	268
Aug. 16-31	0	315	287	232	834	0	232	684	166	1082	0	236	617	853	0	50	238	183	471	216
Sept. 1-15	0	406	638	402	1446	0	207	695	191	1093	0	160	552	712	0	27	133	105	265	234
Sept. 16-30	0	276	529	202	1007	0	181	706	216	1103	0	21	292	313	0	4	29	27	60	166
After Oct. 1	0	510	724	441	1675	0	72	665	130	867	0	23	314	337	-	-	-	-	-	262*

* 11-harvest average - trt not seeded in 1972

Seed yield (lbs/acre) from Hexaploid Timothy - Climax seeded at different dates

Dates of Seeding	1969 Seeding					1970 Seeding					1971 Seeding				1972 Seeding					15-Harvest Average
	1st 1970	2nd 1971	3rd 1972	4th 1973	TOTAL	1st 1971	2nd 1972	3rd 1973	4th 1974	TOTAL	1st 1972	2nd 1973	3rd 1974	TOTAL	1st 1973	2nd 1974	3rd 1975	4th 1976	TOTAL	
Before May 15	104	582	145	134	965	485	422	370	238	1515	118	305	252	675	562	497	221	341	1621	318
May 16-31	126	806	189	147	1268	504	423	352	228	1507	160	356	257	773	612	537	258	325	1732	352
June 1-15	125	649	205	144	1123	382	449	352	252	1435	228	364	242	834	694	583	280	325	1882	352
June 16-30	96	476	202	161	935	304	398	343	192	1237	275	427	247	949	776	629	302	324	2031	343
July 1-15	115	577	225	166	1083	111	385	407	239	1142	191	451	218	860	405	537	279	338	1559	310
July 16-31	113	679	243	160	1195	75	424	390	286	1175	140	451	245	836	308	584	316	367	1575	319
Aug. 1-15	111	642	250	164	1167	38	453	421	183	1095	61	536	241	838	203	580	331	406	1520	308
Aug. 15-31	141	797	310	181	1429	23	392	352	103	870	1	443	303	747	113	595	352	443	1503	303
Sept. 1-15	125	598	291	244	1258	18	397	333	93	841	1	469	252	722	57	570	362	438	1427	283
Sept. 16-30	101	733	361	253	1448	14	401	314	83	812	0	331	282	613	0	544	372	433	1349	281
After Oct. 1	21	647	402	200	1270	2	351	333	117	803	0	352	288	640	-	-	-	-	-	247*

* 11-harvest average - trt not seeded 1972

Seed Yields (lbs/acre) from Nodosum Timothy - S.50 seeded at different dates

Dates of Seeding	1969 Seeding					TOTAL	1970 Seeding					TOTAL	1971 Seeding				TOTAL	1972 Seeding				TOTAL	7-Harvest Average
	1st 1970	2nd 1971	3rd 1972	4th 1973	1st 1971		2nd 1972	3rd 1973	4th 1974	1st 1972	2nd 1973		3rd 1974	1st 1973	2nd 1974	3rd 1975		4th 1976					
Before May 15											68	181	170	419	281	272	34	25	612	147			
May 16-31											156	238	171	565	328	252	42	39	661	175			
June 1-15											117	305	191	613	309	254	51	41	655	181			
June 16-30											103	329	219	651	290	256	59	43	648	186			
July 1-15											83	329	300	712	90	138	67	45	340	150			
July 16-31		NOT TESTED						NOT TESTED					32	309	228	569	41	167	115	72	395	138	
Aug. 1-15											10	293	201	504	22	208	138	73	441	135			
Aug. 16-31											0	265	189	454	13	228	156	66	463	131			
Sept. 1-15											Poor plant establishment			6	165	126	45	342	86*				
Sept. 16-30											Plots discarded			0	102	96	24	222	56*				
After Oct. 1											Plots discarded summer 1972			-	-	-	-	-	-				

* 4-harvest average

Seed Yields (lbs/acre) from Wheatgrass, Intermediate - Chief seeded at different dates

Dates of Seeding	1969 Seeding				TOTAL	1970 Seeding				TOTAL	1971 Seeding				TOTAL	1972 Seeding				TOTAL	15-Harvest Average
	1st 1970	2nd 1971	3rd 1972	4th 1973		1st 1971	2nd 1972	3rd 1973	4th 1974		1st 1972	2nd 1973	3rd 1974	4th 1974		1st 1973	2nd 1974	3rd 1975	4th 1976		
Before May 15	388	461	9	6	864	464	287	90	189	1030	575	428	345	1348	637	673	165	105	1580	321	
May 16-31	441	561	9	6	1017	572	306	123	210	1211	703	549	353	1645	884	774	172	148	1978	390	
June 1-15	425	632	6	6	1069	555	283	114	181	1133	515	569	460	1544	859	816	179	155	2009	384	
June 16-30	351	604	5	8	968	519	279	142	261	1201	352	560	416	1328	834	858	185	162	2039	369	
July 1-15	445	664	9	8	1126	416	350	166	235	1167	172	450	466	1088	415	833	233	229	1710	339	
July 16-31	336	728	13	11	1138	271	381	245	280	1177	198	584	430	1212	249	1020	325	220	1814	356	
Aug. 1-15	177	691	17	16	901	127	358	259	324	1068	84	586	524	1194	107	917	378	264	1666	322	
Aug. 16-31	59	762	28	18	867	85	361	222	224	892	0	398	716	1114	50	824	417	251	1542	294	
Sept. 1-15	53	872	97	23	1045	52	395	270	258	975	0	516	784	1300	31	770	449	331	1581	327	
Sept. 16-30	0	980	123	23	1126	18	429	317	293	1057	0	132	329	461	12	716	481	411	1620	284	
After Oct. 1	0	835	173	26	1034	4	301	308	352	965	0	295	728	1023	-	-	-	-	-	275*	

* 11-harvest average - first not seeded in 1972

WHEATGRASS, INTERMEDIATE - CHIEF

Seed Yields (lbs/acre) from Carlton bromegrass seeded with different companion crops

COMPANION CROP	Bu/A 1969	1969 Seeding				TOTAL	Bu/A 1970	1970 Seeding				TOTAL	Bu/A 1971	1971 Seeding			TOTAL	Bu/A 3 Yr. Ave.	Grass Seed 1- Harvest Average
		1st 1970	2nd 1971	3rd 1972	4th 1973			1st 1971	2nd 1972	3rd 1973	4th 1974			1st 1972	2nd 1973	3rd 1974			
Control	-	98	863	390	199	1550	-	715	1165	527	705	3112	-	831	783	405	2019	-	607
Wheat	55	118	887	384	275	1664	16	151	1171	636	559	2517	46	262	639	384	1285	39	497
Flax	27	135	776	364	181	1456	11	185	1395	539	690	2809	21	248	878	404	1530	20	527
Oats	137	91	719	304	203	1317	34	181	1210	636	676	2703	114	223	791	440	1454	95	498
Late barley	110	81	968	359	220	1628	27	148	1447	462	609	2666	94	183	689	352	1224	77	502
Early barley	85	98	834	299	248	1479	20	177	1334	565	641	2717	80	331	767	365	1463	62	514
Rape	43	137	800	410	303	1650	26	140	1271	583	723	2717	41	262	777	374	1413	37	525

BROMEGRASS--- CARLTON