

CANOLA

VARIETY TRIALS

Minnesota Agricultural Experiment Station — University of Minnesota
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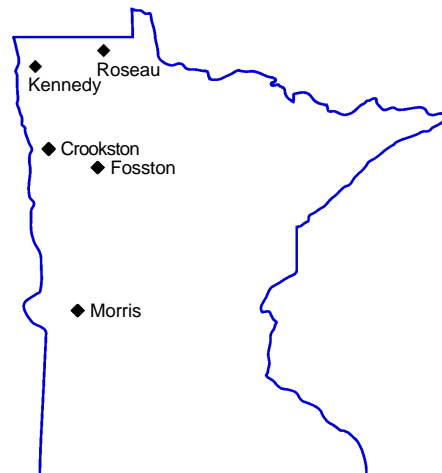
This document reports the results of annual variety tests, on publicly and privately developed canola varieties, conducted by the Minnesota Agricultural Experiment Station. The report has been prepared by extension agronomist Ervin A. Oelke (612-625-1211; <oelke002@tc.umn.edu>), David G. LeGare (218-281-4487; <legar001@tc.umn.edu>) and Karen B. Andol (218-463-1052; andol002@tc.umn.edu), Department of Agronomy and Plant Genetics, University of Minnesota, St. Paul, MN 55108.

Canola is a crop developed from oilseed rape by Canadian plant breeders. The first canola variety was licensed in 1974.

Considerable acreage of spring canola is grown in Canada, and interest in spring canola has increased recently in Minnesota. The acreage grown here has increased from about 8,000 in 1990 to more than 200,000 acres in 1998.

Canola is used for edible oil extraction and protein feed meal. The oil is considered one of the highest quality edible oils available.

The oil in canola seed contains less than 2 percent erucic acid. This compares with the 20 to 40 percent level of erucic acid found in oilseed rape. The meal remaining after oil extraction contains less than 0.1 percent of glucosinolate (sulfur-containing compounds) compared with about 1 percent in rapeseed meal. High levels of erucic acid in food oils are hazardous to health, and high levels of glucosinolates are detrimental in livestock feeds. Consequently, canola is also referred to as “double low” or “00” rapeseed.



Locations where canola trials were conducted for this report.

Spring versus Winter Canola Types

The canola varieties described here are all spring-sown types. Winter canola varieties were previously evaluated by University of Minnesota researchers at locations throughout the state. In trials over 15 year/locations, fewer than 30 percent of the trials successfully overwintered.

Crop Management Resources

Production information is provided in the canola chapter of the *Alternative Field Crops Manual*, which is available for \$45 from county extension educators or from the Center for Alternative Plant & Animal Products, 352 Alderman Hall, University of Minnesota, St. Paul, MN 55108. Either source can provide more information about this publication.

A more comprehensive *Canola Growers Manual* on canola production is available from the Canola Council of Canada (400-167 Lombard Ave, Winnipeg, Manitoba R3B 0T6; 204-982-2100). It contains detailed information on canola production practices and costs \$68 (U.S.). The Canola Council also provides free annual updates to keep the information in the manual current. Please keep in mind if using this manual that not all pesticides used in Canada are legal in the United States. Always confirm the clearance of a pesticide with your local dealer or county extension educator.

The Minnesota Canola Council (1306 West County Road F #109, St. Paul MN 55112; 651-638-9883) is another source for information on canola.

Seed Certification

Seed of some tested canola varieties may be eligible for certification. The use of certified seed is suggested, however, certification does not imply recommendation. Table 6 lists possible canola seed sources for some varieties included in the *Minnesota Registered and Certified Seed Directory for 1999 Planting* (available without charge from the Minnesota Crop Improvement Association, 1900 Hendon Avenue, St. Paul, MN 55108; 612-625-7766 or 800-510-6242).

Canola Variety Name Changes

During the past year, several canola varieties have had their names changed by their developers or marketers.

Previous designation:	Proseed Exp2, Hy2	Current designation:	.Blue Ribbon
	Exp 95-09		1079
	SW02766		Senator
	ZSNA00		Z005
	9422685NDA		Q2

Using the Tables

The LSD (Least Significant Difference) values associated with the data in this report's tables are measures of variability within the trials. If a yield difference between two varieties within a single column exceeds that column's LSD value, you can assume that the higher yielding variety was truly better yielding. A 5 percent level of significance is used in all these tables. This means that yield differences exceeding the stated LSD value are real 95 percent of the time.

Acknowledgements, Permissions and Caveats

The Crookston testing site was on the Monte Casavan farm. At Fosston the testing site was on the Ron Landsverk farm. The Kennedy testing site was on the Rob and Tim Ryanning farm, and at Roseau the testing site was on the Steve Dahl farm.

General assistance for field work was provided by county extension educators Vincent W. Crary, Nathan L. Johnson, Herman J. Kandel, Curtis W. Nyegaard and Russell K. Severson, and Agronomy and Plant Genetics scientist Eric Levenson.

Publication project chair is Leland L. Hardman, professor, Agronomy and Plant Genetics. Web product manager for extension communications is Larry A. Etkin, senior editor.

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Produced in the Communication and Educational Technology Services unit of the University of Minnesota Extension Service.

Table 1 — Seed yield of canola varieties, pounds per acre at 8 percent moisture, at Roseau, Crookston, Fosston, Kennedy and Morris, 1998.

Variety information includes source codes (D = developer; M = marketer) keyed to listing on table 6. Also includes supplemental codes (99 = New in 1999, A = Apetalous, Exp = Experimental, Hy = Hybrid, Imi = Imidazolinone Tolerant, L = Laurate, SP = Specialty Oil, Syn = Synthetic).

Long term averages of Global and Hyola 401 (1991-93,95-98) are 1,759 and 2,014 lb/acre respectively.

Variety	Source Codes & Variety Information	Roseau	Crookston	Fosston	Roseau Crookston Fosston Average	Kennedy	Morris	1997-98 Average Roseau Crookston
1709	D12,M13	2,474	—	—	—	—	—	—
179165	D8,M2	1,783	2,325	—	—	—	—	—
179166	D8,M2	2,365	2,636	—	—	—	—	—
1-9118	D8,M16	1,610	2,027	—	—	—	—	—
1-9173	D8,M2	2,253	2,628	—	—	—	—	—
21/95	D7,M7,Exp	2,276	2,339	2,083	2,233	2,234	1,382	—
44A89	D16,M17	1,616	2,007	2,140	1,921	2,025	1,629	1,549
45A01	D16,M17	2,209	2,142	1,657	2,003	1,844	1,596	—
45A02	D16,M17	1,830	2,323	2,318	2,157	2,294	1,554	—
45A71	D16,M17,Imi	1,715	2,338	2,203	2,085	1,984	1,478	1,802
46A65	D16,M17	2,152	2,439	2,209	2,267	2,407	1,868	1,932
46A74	D16,M17,Imi	2,239	2,312	2,331	2,294	2,030	1,319	1,746
91-15026NA	D19,M14,Exp	2,670	2,813	—	—	—	1,072	2,080
93KN	D10,M14	1,872	2,176	—	—	—	—	1,684
A97-14N	D19,M14,Exp	2,450	2,274	—	—	—	1,440	—
A97-16N	D19,M14,Exp	1,960	2,661	—	—	—	1,480	—
Advantage	D9,M9	2,366	—	1,971	—	—	—	—
Battleford	D8,M9	2,352	—	1,955	—	—	—	—
BC801	D3,M14,Exp	2,214	—	—	—	—	—	—
BC97-101	D3,M14,Exp	2,003	—	—	—	—	—	—
Beacon	D18,M18	2,018	2,247	—	—	2,133	—	—
Blue Ribbon	D9,M18,Hy	2,543	2,451	—	—	2,249	—	—
Cavalier	D6,M6	1,713	1,976	2,061	1,917	2,131	—	1,582
CL 2070	D7,M7,Hy	2,517	2,786	2,371	2,558	2,552	—	2,133
CL 2078	D7,M7,Syn	2,605	2,614	2,401	2,540	2,346	—	—
CL EX57	D7,M7,Exp	2,250	2,345	1,963	2,186	2,105	—	—
Coronet	D18,M20	2,149	—	—	—	—	—	—
Cracker Jack	D18,M9	2,761	—	2,384	—	—	—	—
Crown	D7,M7	2,312	2,492	2,237	2,347	2,192	1,679	—
Crusher	D18,M10	2,494	2,378	2,225	2,366	2,242	—	2,024
Dakini	D8,M16	2,146	2,323	—	—	—	—	1,875
DMS-100	D12,M14,Exp	2,116	—	—	—	—	—	—
Dynamite	D15,M10	2,027	2,388	2,293	2,236	2,258	—	—
Eagle	D18,M9	2,129	—	2,164	—	—	—	—
Ebony	D11,M12	2,686	2,633	2,359	2,559	—	—	2,101
Global	D18,M14	2,653	2,432	2,225	2,437	2,484	—	2,072
Golden Boy	D18,M19	2,284	—	2,433	—	2,250	1,625	—
Goldpro 701	D18,M20,'99	2,163	—	2,520	—	2,323	1,447	—
HCN 35	D1,M14	—	—	2,301	—	—	—	—
HCN 41	D1,M14	—	—	2,240	—	—	—	—
Hudson	D7,M7	1,747	2,184	2,027	1,986	2,273	—	1,686
HyC606	D6,M6,Hy	2,594	3,034	2,573	2,734	2,454	—	2,205
Hyola 308	D20,M10,Hy	—	1,879	—	—	1,876	—	—
Hyola 330	D20,M10,Hy	2,110	2,722	2,393	2,408	2,257	—	1,998
Hyola 401	D20,M10,Hy	2,303	2,510	2,019	2,277	2,217	1,782	1,978

Table 1 (continued) — Seed yield of canola varieties, pounds per acre at 8 percent moisture, at Roseau, Crookston, Fosston, Kennedy and Morris, 1998.

Variety	Source Codes & Variety Information	Roseau	Crookston	Fosston	Roseau Crookston Fosston Average	Kennedy	Morris	1997-98 Average Roseau Crookston
Hyola 420	D20,M10,Hy	2,074	2,519	2,500	2,364	2,291	1,606	1,974
IMC 130	D10,M14	2,015	2,184	—	—	—	—	1,753
IMC 140	D10,M14	1,700	2,103	—	—	—	—	1,656
KC-701	D13,M11,Hy	2,775	—	—	—	—	—	—
LA 161	D5,M5,L	2,296	2,424	2,010	2,243	2,094	—	—
LA 269	D5,M5,L	1,765	1,881	1,704	1,783	1,950	—	—
LG 3222	D11,M12	2,100	2,324	2,266	2,230	—	—	—
LG 3260	D11,M12	1,493	2,007	2,202	1,901	—	—	1,605
LG 3333	D11,M12	2,106	2,433	2,257	2,265	—	1,984	—
LG 3360	D11,M12	2,340	2,717	2,686	2,581	—	—	—
LG 3369	D11,M12	—	—	—	—	—	1,546	—
LG 3388	D11,M12	2,347	2,540	2,544	2,477	—	—	—
LG 3430	D11,M12	2,310	2,448	2,387	2,382	—	—	—
LG 3930	D11,M12,SP	2,112	2,097	2,056	2,088	—	—	—
OAC Summit	D15,M3	2,398	2,785	2,315	2,499	—	1,945	—
Oscar	D7,M7	2,385	2,476	1,856	2,239	2,053	—	1,958
PF 7528/95	D14,M2,Hy	2,473	2,709	—	—	—	—	—
Promark 220	D18,M18,Syn	2,500	2,455	2,634	2,530	2,577	1,431	—
Q2	D19,M10,'99	2,081	2,498	—	—	—	1,301	—
Quantum	D19,M10	2,026	2,328	2,269	2,208	2,332	1,619	1,893
Roseau	D6,M6	2,381	2,716	2,163	2,420	2,629	—	—
SchP015	D13,M6,Hy	1,903	—	1,942	—	—	—	—
Senator	D18,M14	2,770	—	—	—	—	—	—
Sponsor	D16,M2	2,454	—	—	—	—	—	—
SR 96278	D4,M4,Exp	2,169	2,420	2,167	2,252	2,061	1,858	—
SVO95-08	D12,M14,Exp	2,532	—	—	—	—	—	—
SW 02582	D18,M14,Exp	2,343	—	—	—	—	—	—
SW 02765	D18,M14,Exp	2,121	—	—	—	—	—	—
SW 02771	D18,M14,Exp	1,927	—	—	—	—	—	—
SW 9621477	D18,M14,Exp	2,130	—	—	—	—	—	—
SW A2636	D18,M14,Exp	2,423	—	—	—	—	—	—
SW A2655	D18,M14,Exp	2,194	—	—	—	—	—	—
SWLM 98011	D18,M14,Exp	2,419	—	—	—	—	—	—
Topscore	D9,M18	2,045	2,323	—	—	2,084	—	1,883
Trail Blazer	D11,M15	2,180	—	—	—	—	—	—
X5.189	D6,M6,Exp	—	2,783	—	—	2,051	—	—
X9801	D10,M14	2,141	2,430	—	—	—	—	—
X9804	D10,M14	2,046	2,459	—	—	—	—	—
X9806	D10,M14	2,253	2,390	—	—	—	—	—
Z005	D20,M10,A,'99	1,719	—	1,621	—	—	—	—
Average		2,202	2,408	2,209	2,277	2,214	1,574	1,909
LSD 5%		308	302	279	192	315	0508	—

Table 2 — Bloom and maturity characteristics, expressed as days after planting of canola variety, 1998.

Variety	At Beginning (10%) Bloom					At Physiological Maturity				
	Roseau	Crookston	Fosston	Kennedy	Morris	Roseau	Crookston	Fosston	Kennedy	Morris
1709	54	—	—	—	—	102	—	—	—	—
179165	50	55	—	—	—	97	95	—	—	—
179166	52	56	—	—	—	101	98	—	—	—
1-9118	52	57	—	—	—	98	97	—	—	—
1-9173	52	55	—	—	—	97	97	—	—	—
21/95	50	57	50	53	49	100	98	96	101	90
44A89	51	56	50	53	49	92	94	91	93	87
45A01	50	56	49	54	48	97	94	92	97	87
45A02	50	57	49	54	48	94	97	92	96	88
45A71	52	57	51	55	49	99	97	95	99	90
46A65	50	57	48	53	47	100	99	95	102	91
46A74	55	57	53	56	51	102	100	96	102	94
91-15026NA	57	56	—	—	52	104	102	—	—	93
93KN	53	57	—	—	—	100	97	—	—	—
A97-14N	56	58	—	—	50	101	98	—	—	89
A97-16N	54	56	—	—	49	101	100	—	—	93
Advantage	54	—	51	—	—	103	—	96	—	—
Battleford	51	—	49	—	—	103	—	94	—	—
BC801	50	—	—	—	—	98	—	—	—	—
BC97-101	53	—	—	—	—	97	—	—	—	—
Beacon	50	57	—	53	—	98	97	—	98	—
Blue Ribbon	56	58	—	58	—	105	105	—	104	—
Cavalier	51	54	49	53	—	94	93	93	96	—
CL 2070	54	56	53	58	—	102	103	95	104	—
CL 2078	55	57	53	57	—	103	103	96	103	—
CL EX57	56	56	56	58	—	103	99	97	104	—
Coronet	52	—	—	—	—	102	—	—	—	—
Cracker Jack	52	—	52	—	—	103	—	96	—	—
Crown	51	55	49	53	47	101	100	96	101	90
Crusher	57	57	54	59	—	103	101	96	104	—
Dakini	58	58	—	—	—	106	105	—	—	—
DMS-100	55	—	—	—	—	104	—	—	—	—
Dynamite	52	58	51	55	—	102	97	95	101	—
Eagle	52	—	50	—	—	96	—	93	—	—
Ebony	55	56	53	—	—	104	103	96	—	—
Global	57	57	55	60	—	105	107	97	107	—
Golden Boy	54	—	52	54	50	101	—	95	99	94
Goldpro 701	50	—	49	52	48	100	—	95	100	92
HCN 35	—	—	51	—	—	—	—	94	—	—
HCN 41	—	—	54	—	—	—	—	96	—	—
Hudson	50	54	47	52	—	97	94	89	95	—
HyC606	51	57	50	53	—	102	103	95	98	—
Hyola 308	—	54	—	48	—	—	90	—	87	—
Hyola 330	48	55	46	51	—	94	96	91	93	—
Hyola 401	50	57	48	51	45	99	98	93	95	88
Hyola 420	50	57	48	52	47	97	100	94	97	87
IMC 130	56	56	—	—	—	99	99	—	—	—
IMC 140	53	57	—	—	—	101	102	—	—	—
KC-701	53	—	—	—	—	102	—	—	—	—
LA 161	58	57	55	59	—	104	105	97	105	—
LA 269	57	58	57	60	—	103	100	98	105	—
LG 3222	52	56	49	—	—	101	99	95	—	—
LG 3260	50	55	48	—	—	93	92	93	—	—
LG 3333	49	56	45	—	46	98	97	94	—	91
LG 3360	51	54	48	—	—	100	100	95	—	—

Table 2 — Bloom and maturity characteristics, expressed as days after planting of canola variety, 1998.

Variety	At Beginning (10%) Bloom					At Physiological Maturity				
	Roseau	Crookston	Fosston	Kennedy	Morris	Roseau	Crookston	Fosston	Kennedy	Morris
LG 3369	—	—	—	—	48	—	—	—	—	92
LG 3388	52	56	50	—	—	101	98	95	—	—
LG 3430	53	56	51	—	—	104	102	96	—	—
LG 3930	53	57	52	—	—	103	101	96	—	—
OAC Summit	54	55	53	—	51	103	100	94	—	93
Oscar	55	58	55	56	—	102	103	96	103	—
PF 7528/95	50	55	—	—	—	101	99	—	—	—
Promark 220	53	58	51	55	52	101	99	96	99	94
Q2	54	56	—	—	50	99	98	—	—	91
Quantum	52	56	53	54	49	99	97	95	98	93
Roseau	57	57	53	60	—	104	103	97	105	—
SchP015	54	—	53	—	—	101	—	97	—	—
Senator	54	—	—	—	—	103	—	—	—	—
Sponsor	54	—	—	—	—	102	—	—	—	—
SR 96278	53	56	51	56	50	101	97	95	100	96
SVO95-08	57	—	—	—	—	107	—	—	—	—
SW 02582	51	—	—	—	—	102	—	—	—	—
SW 02765	54	—	—	—	—	103	—	—	—	—
SW 02771	56	—	—	—	—	102	—	—	—	—
SW 9621477	57	—	—	—	—	104	—	—	—	—
SW A2636	50	—	—	—	—	100	—	—	—	—
SW A2655	50	—	—	—	—	100	—	—	—	—
SWLM 98011	51	—	—	—	—	100	—	—	—	—
Topscore	53	58	—	55	—	100	100	—	100	—
Trail Blazer	52	—	—	—	—	102	—	—	—	—
X5.189	—	56	—	56	—	—	103	—	101	—
X9801	53	56	—	—	—	101	98	—	—	—
X9804	52	57	—	—	—	101	104	—	—	—
X9806	51	56	—	—	—	100	99	—	—	—
Z005	51	—	52	—	—	96	—	91	—	—
MEANS	53	56	51	55	49	101	99	95	100	91
LSD 5%	1.2	2.5	1.5	1.5	1.2	2.4	3.4	1.6	3.4	3.4

Table 3 — Disease, canopy closure, and test weight information for canola varieties, 1998.

Blackleg resistance rating provided by the seed companies: R = Resistant; MR = Moderately Resistant; MS = Moderately Susceptible; S = Susceptible.

White Mold (Sclerotinia) infection ratings based on a visual estimate of percent of plants infected. Ratings taken shortly before swathing.

Canopy = Days after planting to 95% canopy closure in the plot.

Variety	Blackleg resistance	White Mold				Canopy Closure	
		Roseau	Crookston	Fosston	Kennedy	Roseau	Fosston
1709	R	12	—	—	—	43	—
179165	MR	23	13	—	—	44	—
179166	MR	13	8	—	—	43	—
1-9118	MR	16	9	—	—	45	—
1-9173	MR	25	9	—	—	44	—
21/95	MR	13	10	3	12	44	41
44A89	R	44	16	9	17	44	39
45A01	R	17	13	4	11	44	41
45A02	R	30	10	4	11	43	37
45A71	R	11	11	3	10	46	41
46A65	R	13	11	6	11	46	40
46A74	MR	7	8	3	8	44	39
91-15026NA	R	5	7	—	—	43	—
93KN	MS	12	12	—	—	44	—
A97-14N	R	16	9	—	—	43	—
A97-16N	R	19	10	—	—	42	—
Advantage	MR+	8	—	4	—	45	38
Battleford	MR+	25	—	5	—	43	40
BC801	—	13	—	—	—	42	—
BC97-101	—	26	—	—	—	44	—
Beacon	MR	17	12	—	12	44	—
Blue Ribbon	MR	12	14	—	11	42	—
Cavalier	MR	21	16	7	15	44	39
CL 2070	MR	13	8	3	9	44	37
CL 2078	MR	5	8	2	9	44	40
CL EX57	MR	7	7	3	9	46	41
Coronet	MR	20	—	—	—	44	—
Cracker Jack	MR	10	—	4	—	42	40
Crown	MR	12	10	2	11	46	41
Crusher	MS	12	12	4	10	44	40
Dakini	MS	21	8	—	—	45	—
DMS-100	MR	12	—	—	—	45	—
Dynamite	MR	18	14	3	13	42	40
Eagle	MR	20	—	6	—	45	39
Ebony	MR	11	6	4	—	43	40
Global	na	8	7	2	9	44	40
Golden Boy	MR	14	—	3	10	44	38
Goldpro 701	MR	17	—	5	10	43	37
HCN 35	MR	—	—	4	—	—	39
HCN 41	MR	—	—	5	—	—	39
Hudson	MS	18	14	8	14	45	38
HyC606	MR	13	8	6	11	39	36
Hyola 308	MS	—	14	—	15	—	—
Hyola 330	MS	19	10	5	14	42	34
Hyola 401	S	16	10	4	10	41	37
Hyola 420	MR	18	9	4	13	42	36
IMC 130	MS	12	15	—	—	46	—
IMC 140	MS	15	10	—	—	45	—
KC-701	MR	11	—	—	—	42	—
LA 161	MR	13	13	3	10	44	41

Table 3 (continued) — Disease, canopy closure, and test weight information for canola varieties, 1998.

Variety	Blackleg resistance	White Mold				Canopy Closure	
		Roseau	Crookston	Fosston	Kennedy	Roseau	Fosston
LA 269	MS	13	12	2	11	46	44
LG 3222	MR	17	10	8	—	43	36
LG 3260	MS	43	19	8	—	43	39
LG 3333	MR	30	11	10	—	43	38
LG 3360	MR	13	10	3	—	43	37
LG 3369	MR	—	—	—	—	—	—
LG 3388	MR	20	11	5	—	43	37
LG 3430	R	8	9	3	—	43	40
LG 3930	MR	10	9	3	—	46	41
OAC Summit	MS	26	9	4	—	43	39
Oscar	MR	11	8	3	10	44	40
PF 7528/95	MR	17	8	—	—	42	—
Promark 220	MR	13	13	3	11	43	39
Q2	R	11	7	—	—	44	—
Quantum	R	13	11	4	13	46	40
Roseau	MR	16	10	4	9	43	38
SchP015	—	18	—	4	—	37	33
Senator	MR	11	—	—	—	43	—
Sponsor	na	19	—	—	—	43	—
SR 96278	MR	23	16	6	12	43	39
SVO95-08	MR	10	—	—	—	44	—
SW 02582	MR	13	—	—	—	43	—
SW 02765	MR	11	—	—	—	44	—
SW 02771	MR	18	—	—	—	43	—
SW 9621477	MR	11	—	—	—	45	—
SW A2636	MR	11	—	—	—	43	—
SW A2655	MR	18	—	—	—	40	—
SWLM 98011	MR	16	—	—	—	44	—
Topscore	MR	17	10	—	11	45	—
Trail Blazer	MR	19	—	—	—	42	—
X5.189	MR	—	10	—	10	—	—
X9801	MS	23	11	—	—	45	—
X9804	MS	17	10	—	—	46	—
X9806	MS	16	13	—	—	45	—
Z005	MS	16	—	4	—	46	40
Average		16	11	4	11	44	39
LSD 5%		8.9	4.1	3.5	2.6	1.9	2.6

Table 4 — Canola seed oil content and test weight, 1998.

Variety	Oil Content (% of seed weight, 8% moisture)					—Test Weight (lb/bu at 8% moisture)—				
	Roseau	Crookston	Fosston	Kennedy	Morris	Roseau	Crookston	Fosston	Kennedy	Morris
1709	43.0	—	—	—	—	49.8	—	—	—	—
179165	44.6	43.2	—	—	—	51.1	51.9	—	—	—
179166	44.9	44.9	—	—	—	51.2	51.4	—	—	—
1-9118	47.8	46.9	—	—	—	50.6	51.3	—	—	—
1-9173	46.2	45.2	—	—	—	51.5	52.0	—	—	—
21/95	41.8	40.5	42.0	41.7	38.1	50.7	51.6	51.0	50.8	51.5
44A89	41.2	40.1	42.6	42.4	38.6	51.7	51.9	51.4	50.9	51.9
45A01	43.1	41.2	42.1	42.3	38.6	51.5	52.1	51.8	51.6	52.8
45A02	40.6	41.9	42.7	42.3	38.8	52.1	52.2	52.0	51.8	52.9
45A71	41.2	39.9	41.9	42.0	36.8	50.6	52.0	51.2	51.0	51.9
46A65	43.8	42.8	43.8	42.7	40.4	50.3	51.2	50.6	50.4	52.0
46A74	42.6	41.4	42.3	43.3	38.8	49.6	51.2	50.8	50.7	51.8
91-15026NA	40.9	38.9	—	—	37.0	51.5	52.5	—	—	52.9
93KN	42.6	42.0	—	—	—	50.8	52.0	—	—	—
A97-14N	43.7	42.2	—	—	39.4	51.4	52.1	—	—	52.5
A97-16N	41.3	41.0	—	—	39.0	51.6	52.3	—	—	53.0
Advantage	41.3	—	41.8	—	—	50.3	—	51.2	—	—
Battleford	41.8	—	44.1	—	—	51.8	—	51.7	—	—
BC801	40.8	—	—	—	—	50.0	—	—	—	—
BC97-101	42.5	—	—	—	—	51.9	—	—	—	—
Beacon	42.1	41.4	—	40.9	—	50.2	51.3	—	51.0	—
Blue Ribbon	41.4	39.6	—	41.2	—	50.1	51.4	—	51.1	—
Cavalier	43.4	41.4	44.2	43.0	—	51.9	52.2	52.0	51.7	—
CL 2070	41.4	39.4	41.6	41.3	—	49.8	51.1	50.6	50.0	—
CL 2078	41.2	40.4	41.2	42.0	—	49.7	50.9	51.0	50.8	—
CL EX57	39.6	37.1	37.4	39.7	—	52.0	53.2	52.6	52.2	—
Coronet	40.8	—	—	—	—	52.0	—	—	—	—
Cracker Jack	42.7	—	42.6	—	—	49.9	—	50.7	—	—
Crown	47.1	44.3	45.2	46.8	43.0	51.0	51.4	51.1	50.1	51.8
Crusher	43.1	41.7	41.7	43.6	—	51.5	52.3	52.0	51.8	—
Dakini	44.0	43.0	—	—	—	50.4	51.5	—	—	—
DMS-100	41.4	—	—	—	—	51.3	—	—	—	—
Dynamite	40.7	42.1	43.8	41.6	—	50.0	51.6	50.7	51.1	—
Eagle	41.5	—	42.3	—	—	51.6	—	51.6	—	—
Ebony	44.7	43.2	43.9	—	—	50.4	50.9	51.1	—	—
Global	40.7	40.0	40.6	42.6	—	50.7	51.4	51.7	51.4	—
Golden Boy	42.3	—	43.7	42.9	32.7	50.3	—	50.3	50.9	52.6
Goldpro 701	41.9	—	43.6	44.1	39.6	49.7	—	49.4	49.8	51.3
HCN 35	—	—	45.7	—	—	—	—	50.8	—	—
HCN 41	—	—	42.0	—	—	—	—	51.5	—	—
Hudson	40.8	39.4	42.3	40.8	—	50.5	51.8	51.5	51.2	—
HYC606	40.7	39.4	42.3	40.8	—	51.0	51.5	51.7	51.5	—
Hyola 308	—	37.8	—	38.5	—	—	52.4	—	50.4	—
Hyola 330	40.8	41.0	42.2	42.4	—	51.5	51.7	51.8	51.0	—
Hyola 401	40.3	41.1	42.9	41.2	38.9	51.7	52.0	51.2	51.3	52.2
Hyola 420	41.0	41.9	43.1	41.6	40.0	51.3	51.2	50.2	51.0	51.2
IMC 130	40.9	39.8	—	—	—	51.8	52.4	—	—	—
IMC 140	41.5	42.3	—	—	—	51.4	51.4	—	—	—
KC-701	42.5	—	—	—	—	49.5	—	—	—	—
LA 161	40.6	37.8	40.9	39.0	—	51.9	52.4	52.5	52.8	—
LA 269	40.4	37.4	38.5	39.7	—	51.9	52.6	51.8	52.1	—
LG 3222	44.8	43.6	45.0	—	—	51.4	51.8	55.5	—	—
LG3260	41.9	40.8	43.9	—	—	51.2	51.9	51.7	—	—
LG 3333	41.3	42.1	42.5	—	39.2	51.4	51.8	51.0	—	51.9
LG 3360	42.5	41.7	42.9	—	—	51.0	51.5	51.0	—	—

Table 4 (continued) — Canola seed oil content and test weight, 1998.

Variety	Oil Content (% of seed weight, 8% moisture)					—Test Weight (lb/bu at 8% moisture)—				
	Roseau	Crookston	Fosston	Kennedy	Morris	Roseau	Crookston	Fosston	Kennedy	Morris
LG 3369	—	—	—	—	40.6	—	—	—	—	52.2
LG3388	42.4	42.4	44.2	—	—	50.5	51.3	50.4	—	—
LG 3430	41.3	42.7	42.9	—	—	50.4	51.0	50.7	—	—
LG3930	44.6	44.2	44.4	—	—	50.8	51.0	50.7	—	—
OAC Summit	41.7	40.1	44.3	—	38.3	51.4	52.3	51.7	—	53.3
Oscar	38.6	36.7	38.2	40.0	—	52.3	53.0	52.7	52.5	—
PF7528/95	42.3	41.7	—	—	—	49.6	50.7	—	—	—
Promark 220	41.9	41.4	42.3	42.7	38.7	51.0	56.1	51.2	51.0	51.8
Q2	42.5	42.6	—	—	37.6	52.0	52.7	—	c	53.9
Quantum	41.3	39.5	40.4	40.1	37.0	52.4	53.1	52.5	52.8	53.9
Roseau	43.2	40.7	42.3	41.9	—	48.6	50.2	50.4	50.2	—
SchP015	42.5	—	43.0	—	—	52.2	—	52.0	—	—
Senator	42.5	—	—	—	—	50.0	—	—	—	—
Sponsor	41.4	—	—	—	—	52.6	—	—	—	—
SRE 906278	40.9	40.2	44.1	42.3	37.9	51.4	52.3	51.2	51.6	52.6
SV095-08	41.8	—	—	—	—	50.1	—	—	—	—
SW 02582	42.0	—	—	—	—	51.5	—	—	—	—
SW 02765	38.8	—	—	—	—	50.8	—	—	—	—
SW 02771	38.3	—	—	—	—	50.9	—	—	—	—
SW9621477	38.8	—	—	—	—	50.3	—	—	—	—
SW A2636	41.0	—	—	—	—	51.6	—	—	—	—
SW A2655	41.3	—	—	—	—	51.3	—	—	—	—
SWLM 98011	42.6	—	—	—	—	49.7	—	—	—	—
Topscore	42.2	40.9	—	43.0	—	51.4	52.2	—	51.6	—
Trail Blazer	41.7	—	—	—	—	50.7	—	—	—	—
X5.189	—	40.3	—	42.4	—	—	51.7	—	51.3	—
X9801	40.2	40.6	—	—	—	51.3	51.6	—	—	—
X9804	41.7	39.4	—	—	—	51.9	52.1	—	—	—
X9806	43.7	42.5	—	—	—	51.3	52.0	—	—	—
Z005	40.5	—	42.2	—	—	50.0	—	50.4	—	—
Average	42.0	41.1	42.5	41.9	39.5	51.0	51.9	51.4	51.2	52.4
LSD 5%	1.5	1.2	1.6	2.2	1.5	0.5	1.6	1.8	0.8	0.7

Table 5 — Canola plant height and lodging, based on notes taken shortly before swathing, 1998.

Lodging Score: 1 = Erect; 9 = Flat.

Variety	Height (inches)					Lodging Score			
	Roseau	Crookston	Fosston	Kennedy	Morris	Roseau	Crookston	Fosston	Kennedy
1709	44.8	—	—	—	—	4.0	—	—	—
179165	40.5	42.8	—	—	—	4.0	2.5	—	—
179166	45.3	49.3	—	—	—	4.8	2.5	—	—
1-9118	43.3	43.0	—	—	—	5.0	2.8	—	—
1-9173	44.8	49.8	—	—	—	5.0	3.5	—	—
21/95	48.5	51.3	52.8	44.8	53.0	4.3	2.3	3.0	2.8
44A89	42.3	46.0	50.8	43.3	53.0	4.0	1.5	1.8	1.8
45A01	45.8	48.0	44.0	44.5	56.0	4.8	2.0	3.3	3.8
45A02	41.8	49.5	47.5	45.8	54.0	4.3	2.3	2.8	2.8
45A71	46.0	49.3	51.3	45.3	59.0	4.8	2.5	3.3	3.0
46A65	38.3	45.8	47.8	43.8	55.0	5.3	2.5	2.8	3.3
46A74	49.0	48.5	53.8	47.5	54.0	4.3	2.0	2.5	2.8
91-15026NA	50.3	50.3	—	—	53.0	3.0	1.5	—	—
93KN	41.5	46.5	—	—	—	5.0	2.8	—	—
A97-14N	48.3	51.5	—	—	54.0	3.3	2.3	—	—
A97-16N	49.0	49.0	—	—	54.0	4.5	2.5	—	—
Advantage	49.8	—	54.0	—	—	3.5	—	2.5	—
Battleford	49.0	—	51.5	—	—	5.0	—	2.0	—
BC801	46.3	—	—	—	—	3.0	—	—	—
BC97-101	45.3	—	—	—	—	4.0	—	—	—
Beacon	43.0	48.3	—	46.3	—	4.8	2.3	—	3.0
Blue Ribbon	50.8	55.5	—	51.8	—	3.5	2.0	—	2.3
Cavalier	39.5	44.3	49.0	43.3	—	4.5	2.8	3.3	3.3
CL 2070	46.8	47.8	50.5	45.3	—	3.8	2.3	2.0	2.3
CL 2078	48.3	50.3	53.0	47.8	—	3.5	1.5	2.3	2.0
CL EX57	44.5	49.5	52.8	45.3	—	4.8	2.5	3.3	3.8
Coronet	51.3	—	—	—	—	5.5	—	—	—
Cracker Jack	46.0	—	52.0	—	—	3.5	—	2.0	—
Crown	40.5	48.5	48.8	43.3	54.0	4.5	2.3	3.0	3.0
Crusher	47.8	51.8	55.0	49.8	—	3.3	1.0	2.0	1.8
Dakini	51.0	49.5	—	—	—	6.3	3.3	—	—
DMS-100	48.5	—	—	—	—	5.0	—	—	—
Dynamite	48.3	48.3	50.3	46.3	—	4.8	1.5	2.0	2.5
Eagle	41.8	—	49.3	—	—	4.5	—	2.5	—
Ebony	45.3	49.8	53.0	—	—	3.5	1.8	2.0	—
Global	50.0	53.8	58.8	50.0	—	4.3	2.0	2.3	2.8
Golden Boy	47.0	—	49.8	49.8	58.0	3.5	—	1.8	2.0
Goldpro 701	46.0	—	50.5	48.0	55.8	3.3	—	1.5	2.0
HCN 35	—	—	50.3	—	—	—	—	2.3	—
HCN 41	—	—	54.0	—	—	—	—	2.5	—
Hudson	41.5	44.3	45.5	42.8	—	4.0	2.0	2.0	3.0
HyC606	48.8	49.8	52.0	47.5	—	4.0	2.8	2.8	3.0
Hyola 308	—	42.5	—	41.5	—	—	2.0	—	2.3
Hyola 330	36.8	41.3	43.5	39.0	—	4.3	2.0	2.8	2.8
Hyola 401	39.8	41.8	45.8	38.8	49.0	4.8	2.0	2.0	2.8
Hyola 420	44.0	46.5	46.5	42.8	52.0	4.3	2.5	2.5	3.0
IMC 130	45.5	49.8	—	—	—	5.0	3.0	—	—
IMC 140	44.0	47.0	—	—	—	4.8	3.3	—	—
KC-701	49.3	—	—	—	—	3.5	—	—	—
LA 161	48.5	53.3	52.8	49.8	—	4.3	4.0	3.0	3.8
LA 269	49.0	50.0	52.5	49.0	—	4.8	3.3	5.0	4.3
LG 3222	45.5	47.5	47.3	—	—	3.5	2.0	2.3	—
LG 3260	40.3	43.8	45.0	—	—	3.8	2.3	2.5	—
LG 3333	41.8	45.8	47.5	—	51.0	4.8	2.3	3.0	—
LG 3360	46.5	48.0	50.5	—	—	4.8	2.3	3.0	—

Table 5 (continued) — Canola plant height and lodging, based on notes taken shortly before swathing, 1998.

Lodging Score: 1 = Erect; 9 = Flat.

Variety	Height (inches)					Lodging Score			
	Roseau	Crookston	Fosston	Kennedy	Morris	Roseau	Crookston	Fosston	Kennedy
LG 3369	—	—	—	—	53.0	—	—	—	—
LG 3388	47.3	49.3	50.8	—	—	4.5	2.0	2.8	—
LG 3430	49.0	49.8	53.3	—	—	3.5	1.8	2.0	—
LG 3930	48.5	48.8	49.5	—	—	4.5	3.3	2.8	—
OAC Summit	50.0	51.5	52.3	—	57.0	5.5	2.5	2.3	—
Oscar	46.8	47.3	47.0	44.0	—	3.8	1.8	2.8	3.3
PF 7528/95	47.8	50.5	—	—	—	3.5	1.5	—	—
Promark 220	48.5	50.5	54.5	50.8	56.0	3.3	1.0	1.8	1.5
Q2	46.8	49.3	—	—	53.0	3.5	1.8	—	—
Quantum	44.8	49.8	53.3	50.0	55.0	4.0	2.0	2.5	2.5
Roseau	49.3	53.8	56.5	51.5	—	3.8	2.0	2.0	2.5
SchP015	49.8	—	51.5	—	—	5.8	—	3.3	—
Senator	49.3	—	—	—	—	4.0	—	—	—
Sponsor	46.5	—	—	—	—	3.0	—	—	—
SR 96278	50.3	50.3	52.5	45.3	58.0	5.0	2.5	2.3	2.5
SVO95-08	49.0	—	—	—	—	3.3	—	—	—
SW 02582	47.5	—	—	—	—	4.3	—	—	—
SW 02765	48.3	—	—	—	—	4.3	—	—	—
SW 02771	46.5	—	—	—	—	3.5	—	—	—
SW 9621477	47.0	—	—	—	—	3.0	—	—	—
SW A2636	47.8	—	—	—	—	3.3	—	—	—
SW A2655	48.8	—	—	—	—	4.3	—	—	—
SWLM 98011	44.8	—	—	—	—	3.0	—	—	—
Topscore	45.5	47.3	—	49.0	—	4.0	2.0	—	3.0
Trail Blazer	50.5	—	—	—	—	4.8	—	—	—
X5.189	—	49.0	—	49.5	—	—	2.5	—	3.3
X9801	48.0	51.3	—	—	—	5.5	4.0	—	—
X9804	41.0	49.8	—	—	—	5.8	2.8	—	—
X9806	46.8	49.8	—	—	—	4.3	2.0	—	—
Z005	39.5	—	47.8	—	—	4.8	—	2.3	—
MEANS	46.1	48.4	50.6	46.2	54.4	4.2	2.3	2.5	2.8
LSD 5%	5.7	3.5	3.4	3.5	5.5	0.9	0.9	0.7	0.9

Table 6 — Canola seed sources for 1999 planting, keyed to Source Codes column in Table 1.

The listing of registered / certified sources is not to be construed as an offer for sale by grower, nor is it to be considered as public advertising or as a posting of public notice in any manner. Fields of registered / certified growers have, however, been sampled, tested and inspected by the MCIA. Contact the MCIA for further information, caveats, and considerations.

Registered / certified seed (R = Registered; C = Certified)

Golden Boy	Wilkin	Seeds 2000	Breckenridge	218-643-2410	C
Quantum	Meeker	Interstate Payco	Dassel	320-286-5511	C

Canola seed sources (D = Developers; M = Marketers)

D1	AgrEvo #104-111 Research Drive Saskatoon, Saskatchewan Canada S7N 3R2 306-477-9409	D16	Pioneer Hi-Bred International 720 South 48th Street Grand Forks, ND 58201
D2	Alberta Pool Box 2700, Calgary Alberta, Canada T2P ZP5	D17	Proseed 110 East 7th, Box 69 Harvey, ND 58341
D3	Bonis & Company PO Box 217, Lindsay Ontario, Canada K9V 5Z4	D18	Svalof Weibull Seed PO Box 217 Lindsay, Ontario, Canada K9V 5Z4
D4	Brett Young Box 99, St. Norbert P.S. Winnipeg, Manitoba, Canada	D19	University of Alberta Department of Agronomy Edmonton, Alberta, Canada
D5	Calgene Box M, 705 Park Street Park River, ND 58270	D20	Zeneca Winnipeg, Manitoba, Canada
D6	Cargill Hybrid Seeds PO Box 5645 Minneapolis, MN 55440	M1	AgrEvo #104-111 Research Drive Saskatoon, Saskatchewan Canada S7N 3R2 306-477-9409
D7	Croplan Genetics PO Box 1291 Minot ND 58702	M2	Agriprogress PO Box 2499 Morden, Manitoba, Canada R6M 1C2 204-822-4956
D8	Danisco Seed Mariba Seeds Copenhagen, Denmark	M3	Agri-Tel Grain LTD. Box 808 Beausejour, Manitoba, Canada R0E 0C0 204-268-1415
D9	DLF Trifolium, Germany	M4	Brett Young Seed LTD. Box 99 St. Norbert P.S. Winnipeg, Manitoba, Canada 204-261-7932
D10	InterMountain Canola (Now Cargill Hybrid Seeds)	M5	Calgene Box M, 705 Park Street Park River, ND 58270
D11	Limagrain PO Box 250, Listowel Ontario, Canada N4W 3H2	M6	Cargill Hybrid Seeds PO Box 5645 Minneapolis, MN 55440 612-742-6731
D12	Mycogen 1340 Corporate Center Curve Eagan, MN 55121	M7	Croplan Genetics PO Box 1291, Minot ND 58702 701-852-3556
D13	(No information available)		
D14	NPZ Lembke Hohenlieta 24363 Holtsee, Germany		
D15	University of Guelph Guelph, Ontario, Canada		

Table 6 — Canola seed sources for 1999 planting, keyed to Source Codes column in Table 1.

M8	InterMountain Canola (Now Cargill Hybrid Seeds)	M15	North Star Seeds Box 2220 Neepawa, MB, Canada R0H 1J0 204-476-5241
M9	Integra Seed PO Box 40 Bozeman, MT 59771-0040 406-582-8375	M16	Performance Seeds Box 35028 Regina, Saskatchewan, Canada S4X 4C6 306-791-0550
M10	Interstate Seed Company 1215 Prairie Parkway West Fargo, ND 58078 800-437-4120	M17	Pioneer Hi-Bred International 720 South 48th Street Grand Forks, ND 58201 701-775-2546
M11	Kaystar Seed PO Box 947, Huron, SD 57350 605-352-8791	M18	Proseed 110 East 7th, Box 69 Harvey, ND 58341 701-324-4177
M12	Limagrain PO Box 250, Listowel Ontario, Canada N4W 3H2 306-249-4220	M19	Seeds 2000 PO Box 101 Breckenridge, MN 56520 218-643-1208
M13	Mycogen 1340 Corporate Center Curve Eagan, MN 55121 651-405-5800	M20	Wheat City Seeds 389 Park Avenue East Brandon, MB, Canada R7A 7A5
M14	(No information available)		

Canola Planting Rate and Date

Rate is based on normal seedbeds and on normal size, good quality seed. Rate used can vary greatly depending on seed cost, desired stand, expected mortality, emerging ability, seed weight, seed germination, seedbed condition, depth of planting and planting equipment.

Crop Use	Bushel Weight (pounds)	Seeds/pound (number)	Rate/acre (pounds)	Rate (seeds)	Planting Date
<i>B. napus</i>	50	75,000-150,000	4-8	12/square foot	May