

Canola

Paul Porter and Derek Crompton



Canola (*Brassica napus* and *B. rapa*) is a crop developed from oilseed rape by Canadian plant breeders; the first canola variety was licensed in 1974. Canola is used for edible oil extraction and protein feed meal. Canola oil is considered one of the highest quality edible oils available. Considerable acreage of spring canola is grown in Canada. Minnesota acreage increased from about 8,000 acres in 1990 to more than 200,000 acres in 1998. Acreage in recent years has declined to less than 60,000 acres.

The oil in canola seed contains less than 2% erucic acid, compared with 20% to 40% found in oilseed rape.

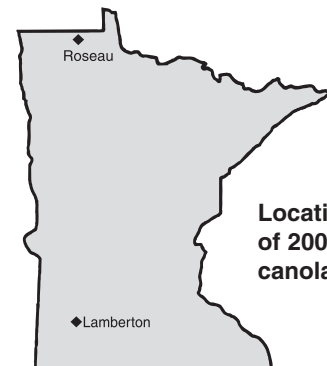
The canola meal remaining after oil extraction contains less than 0.1% glucosinolates (sulfur-containing compounds) compared with about 1% in rapeseed meal. Consequently, canola is also referred to as “double low” or “00” rapeseed. High levels of erucic acid in oilseed rape are hazardous to human health, and high levels of glucosinolates are detrimental in livestock feeds.

Canola (*Brassica napus*) varieties are either spring types or fall-planted winter types. Historically, most all canola grown in Minnesota has been spring types. Fall-planted winter-type canola varieties were evaluated by University of Minnesota researchers more than 15 years ago with limited success due to winter/spring mortality. Since 2002 research on fall-planted winter-type canola varieties has been conducted in Minnesota, again with limited success. Advances in variety development and agronomic production practices provide encouragement that fall-planted winter-type canola varieties can be grown successfully in Minnesota.

Information Sources

The Minnesota Canola Council is a good source for information on canola. The council can be contacted by mail, 4630 Churchill St., Suite 1, St. Paul, MN 55126. Phone 651-638-9883, fax 651-638-0756; email, mncanola@comcast.net.

A complete and revised *Canola Growers Manual* on canola production is available from the Canola Council of Canada, 400-167 Lombard Ave, Winnipeg, Manitoba, Canada, R3B 0T6. Phone 204-982-2100, internet, www.canola-council.org. The manual contains detailed information on canola production practices.



Locations of 2007 canola trials.

Seed yield, growth characteristics, oil content and yield (lb/acre at 8% moisture) of non-Roundup Ready canola (*brassica napus*) varieties at Roseau in 2007.

Blackleg Brand	Bloom Cultivar	Plant Resistance*	Plant Date	Lodging**	Grain Height, cm	Oil Content, %	Yield, Lb/Acre
Croplan Genetics	Freedom 84S01 LL	MR	22 June	0	125	48.4	2,442
Croplan Genetics	Python CL	R	25 June	0	130	46.2	2,206
Mycogen Seeds	CNX15	MR	22 June	3	145	48.1	2,180
Interstate Seed	Hyola 357 Magnum***	MR	19 June	0	115	46.2	2,090
Mycogen Seeds	CNX06	MR	22 June	3	140	47.6	2,012
Mycogen Seeds	Nexera 830 CL	R	23 June	0	135	44.1	1,749
Mycogen Seeds	CNX11	MR	25 June	3	104	47.0	1,723
Mycogen Seeds	Nexera 828 CL	R	24 June	0	140	41.2	1,563
Mean						46.1	1,996
LSD 0.05						1.4	500
CV (%)						2.0	17

* Blackleg resistance rating provided by seed companies: R = Resistant, MR = Moderately Resistant, MS = Moderately Susceptible.

** Plant lodging score: 0 = no lodging, 9 = plants lying flat.

*** Hyola 357 Magnum was used as a check between the non-Roundup Ready trial and the Roundup Ready trial.

Note that the *Canola Growers Manual* is also available online at www.canola-council.org. Please keep in mind when 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.

Test Sites

Winter-type variety trials were planted in August 2006 near Roseau and

Lamberton. Poor winter survival resulted in highly variable yields.

Plots harvested in July 2007 averaged approximately 1,500 to 2,00 lb/acre, but yield data between individual varieties are not reported due to the the high variability and non-significant results.

Non-Roundup Ready and Roundup Ready® spring-type variety trials were seeded on 4 May 2007 at the Kelman Kvien farm east of Roseau,

which also was the site of the 2007 Canola Production Center.

The growing season was generally favorable, and plots were swathed on 4 August 2007.

Test Plot Research

Test plot establishment and management were supervised by Paul Porter and Derek Crompton.

Seed yield, growth characteristics, oil content and yield (lb/acre at 8% moisture) of Roundup Ready canola (*brassica napus*) varieties at Roseau in 2007.

Brand	Cultivar	Blackleg Resistance*	Bloom Date	Plant Lodging**	Plant Height, cm	Oil Content, %	Grain Yield, Lb/Acre
Interstate Seed	IS 7145RR	MR	23 June	0	110	47.6	2,386
Pioneer	Pioneer RR45H21	R	25 June	0	115	47.8	2,246
Monsanto	MB52140	R	23 June	0	105	46.9	2,190
Dekalb	DKL 38-25	MR	25 June	0	100	45.9	2,180
Interstate Seed	IS 3057RR	R	22 June	0	110	48.2	2,144
Pioneer	Pioneer RR45H26	R	25 June	0	110	46.2	2,094
Croplan Genetics	HyCLASS 924	R	23 June	0	110	47.4	1,982
Monsanto	MB52142	R	24 June	0	115	48.1	1,967
Monsanto	MB52155	R	24 June	0	105	45.7	1,942
Dekalb	DKL 52-41	R	25 June	0	100	45.8	1,891
Interstate Seed	Hyola 357 Magnum	MR	19 June	0	100	44.0	1,837
Proseed, Inc.	RR 30 Caliber	R	29 June	0	110	45.4	1,835
Croplan Genetics	HyCLASS 906	R	27 June	0	130	44.2	1,827
Croplan Genetics	HyCLASS 410	R	29 June	0	115	44.2	1,813
Monsanto	Z5395	R	24 June	0	110	46.6	1,811
Croplan Genetics	HyCLASS 712	MR	29 June	0	100	44.4	1,801
Meridan	Meridian RR	M	26 June	0	100	43.6	1,765
Proseed, Inc.	RR50 Caliber	R	26 June	0	100	45.9	1,717
Dekalb	DKL 52-10	R	25 June	0	100	44.2	1,573
Proseed, Inc.	Proseed RR 2066	MR	24 June	0	100	43.6	1,533
Mean						45.8	1,927
LSD 0.05						2.6	467
CV (%)						4.0	17.1

* Blackleg resistance rating provided by seed companies: R = Resistant, MR = Moderately Resistant, MS = Moderately Susceptible.

** Plant lodging score: 0 = no lodging, 9 = plants lying flat.