

**GUIDELINES FOR SUPPORT FOR REGISTRATION
OF SPRING CANOLA CULTIVARS
FOR 2008**

ONTARIO OIL AND PROTEIN SEED CROP COMMITTEE

CANOLA CO-ORDINATOR:
Dr. Hugh Earl
Department of Plant Agriculture,
Crop Science Building
University of Guelph
GUELPH, ONTARIO
N1G 2W1
(519) 824-4120 ext. 58568
FAX: (519) 763-8933
E-MAIL: hjearl@uoguelph.ca

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1. Introduction

The Ontario Spring Canola Tests are conducted by research institutions or private companies in Ontario through the Ontario Oil and Protein Seed Crop Committee. The primary purpose of these tests is to obtain agronomic, disease, and quality information for use in supporting the registration of new canola varieties and in preparing lists of recommended varieties.

To be eligible for support for registration and recommendation, an entry must be tested for at least two years, except in the case of cultivars under 'Special Consideration'. Decisions on registration will be based on the performance of entries averaged over all valid test locations. OOPSCC conducts performance testing after an entry is supported for registration by OOPSCC. For these subsequent years of performance testing, there is no additional charge.

After 3 years of test results are gathered by OOPSCC, the performance of registered varieties is published by OMAFRA.

Tests are restricted to *Brassica napus* lines or hybrids, which will be tested at several locations across Ontario.

2. Membership

The Ontario Oil and Protein Seed Crop Committee (OOPSCC) is made up of individuals from the following public and private groups:

- OMAFRA
- Ontario Agricultural College (OAC)
- Ridgetown College (RC)
- Kemptville College (KC)
- New Liskeard Research Station
- Eastern Cereal & Oilseeds Research Centre - (Ottawa - AAFC) (ECORC)
- Harrow Research Station - Agriculture and Agri-Food Canada (HRS)
- Ontario Oilseed Crushers' Association
- Ontario Soybean Growers' (OSG)
- Ontario Seed Growers Association (OSGA)
- Ontario Ag. Ec. Research Council
- Canadian Seed Trade Association (CSTA)
- Variety Registration Office (CFIA) (ex officio)
- Commercial Plant Breeders Group (CPB of CSTA)
- Ontario Soil and Crop Improvement Association (OSCIA)
- Ontario Canola Growers Association (OCGA)
- Canadian Grain Commission (CGC)

OOPSCC embodies two sub-committees

- i) Planning and Assessment Sub-Committee
- ii) Variety Sub-Committee

3. Meetings

Annual meetings of the Variety Subcommittee and full OOPSCC are held in January to discuss trial results, to make decisions regarding support of eligible varieties for registration, and to discuss changes or modifications to the testing program. Individuals who are not members of OOPSCC but who are interested in the proceedings of these meetings may attend with the permission of the Chairman, Dr. Istvan Rajcan, or the Secretary, Dr. Hugh Earl. Other meetings may be convened as the need arises. A quorum is defined as 50% of the membership of OOPSCC and its subcommittee. Voting will be by show of hands. All members will vote on all motions unless a conflict of interest is declared.

4. Trials and Trial Management

Companies may accumulate all the necessary data for support for registration in their own private trials. There is also a system of public trials in which entries may be made. Companies can also combine a year of private data with a year of public trial data. First, these are the guidelines for public trials.

Public Trials

4.1 Test Sites

In 2008, public trials are planned at Shelburne, Listowel, Elora, Dundalk, New Liskeard, and a site in the Ottawa Valley. Specific locations may change without notice. Seed will also be distributed to cooperators in Atlantic Canada for yield testing at up to three sites in that region.

4.2 Criteria for Acceptance of Entries for Testing.

i) Canadian Sponsors

Except in the case of public institutions or universities in Canada, entries may only be entered in the Ontario Canola Tests through a Canadian sponsor. A Canadian sponsor will be an individual or organization involved in an agricultural endeavour in Canada.

ii) Seed Requirement

For every line entered in the Ontario Spring Canola Tests, 400 grams of seed are required. Seed should be submitted untreated. OOPSCC will treat all seed with Helix Xtra¹ for flea beetle and seedling disease control. A portion of the seed will be stored for possible testing of genetic identity.

Seed from outside Canada should be accompanied by the proper documentation. Please check with the Canada Border Services Agency and the Canadian Food Inspection Agency for importation details to avoid delays.

In 2008, up to five (5) first year entries will be accepted from any one sponsoring company.

iii) Germination

Sponsors of entries are encouraged to submit seed of good quality. A germination of at least 85% will be assumed.

iv) Varietal Description

Information must be submitted with the seed to indicate erucic acid and glucosinolate content levels for the entry, whether it is hybrid seed and whether it has any special traits (i.e. herbicide resistance) and whether it is transgenic. Entries without this information will not be accepted. Transgenic cultivars must contain only transgenes which have been approved for unconfined release.

In order to be supported for registration, an entry should have less than 0.3% erucic acid in the oil and less than 12 micromoles total glucosinolates per gram of seed at 8.5 % moisture. This requirement makes it necessary that companies or institutions making entries have already determined that their entries are low in these quality parameters. Otherwise, outcrossing may result in high values for other entries in the tests.

Testing for erucic acid content may be performed prior to planting, at the discretion of OOPSCC. Samples above the acceptable erucic acid level will not be tested in the trials. Glucosinolate contents will be measured on the harvested seed of varieties to be supported for registration.

v) Deadline for entries

Entry forms and seed must be received on or before April 15, 2008 (absolute deadline) to:

Dr. Hugh Earl
Crop Science Bldg.
University of Guelph
Guelph, Ontario N1G 2W1
(519) 763-8933 FAX

¹ Registered Trademark Syngenta Crop Protection

hjearl@uoguelph.ca

Seed must be received by this date to allow for germination testing, treatment, packaging, and distribution prior to planting time.

Sponsors will be invoiced for entry fees after trials have been established. Fees will be payable 30 d after the date of invoice.

4.3 Security of Entries

If an entry is made under a name or number different from that used previously, both names or numbers must be listed at the time that the entry application is made. If an entry is a backcross-derived strain of a variety recommended in Ontario, please indicate.

Seed of entries that are strains or varieties not registered in Canada will be used only for the indicated test purposes. Seed and/or pollen will not be used for breeding purposes by the test co-operators, nor will it be given out to unauthorized individuals, except under conditions specified by the sponsoring company, institution, or individual. Companies or institutions wishing to place further restrictions on their entries are asked to list those restrictions on the entry form. Each co-operator will be required to sign a statement indicating that (s)he agrees with the above conditions.

4.4 Trial Management

(i) Co-operators

The Ontario Spring Canola Tests are conducted across Ontario by co-operators at various research facilities, and farm locations. Trials are managed using accepted agronomic practices and the utmost care is taken to ensure successful tests. However, OOPSCC does not guarantee that any test will be considered acceptable for registration purposes, since factors out of the control of OOPSCC such as weather extremes, acts of God, etc. may influence the outcome of tests.

Fees for invalid tests deemed to be the result of mismanagement will be returned. Fees for invalid tests which, in the opinion of OOPSCC, were caused by events beyond the control of the officiating station personnel, will not be returned.

(ii) Data Collection, Analysis, and Distribution

Agronomic data will be collected as appropriate and will include flowering date, plant height, maturity, lodging, disease and insect problems, and yield. Quality determinations will include 1000-seed weight, green and brown seed percent, oil content and protein content of the seed, and free fatty acid content of the oil. These measurements will be made by the Department of Plant Agriculture, University of Guelph, on samples composited over replications within each test. Glucosinolate contents will be determined only on varieties to be supported for registration, again using samples derived by combining samples across replications.

Results will be sent to all Canadian individuals or Canadian organizations who have sponsored

entries in the Ontario Canola Tests and to other interested parties upon request.

Yield tests will be conducted in 6 or 8-row plots with approximately 25 or 18 cm, respectively, between rows. Lengths of plots and harvesting methods will be left to the personnel conducting the tests. However, a minimum of 2 border rows should be left on each side of the test area. The preferred method of harvesting will be to swath at the appropriate time and leave in a windrow until harvesting, ideally with a plot combine, to avoid shattering loss. Tests will have a minimum of four replications.

Maturity will be defined as "25% of seeds non-green". Swathing and harvest dates will be recorded at each site.

iii) Evaluation of Special Attributes

At the time of entry submission, special attributes should be noted to OOPSCC. Characteristics such as herbicide-resistance should be acknowledged to avoid complications in normal plot maintenance procedures. Also, special quality factors such as superior oil or protein profiles should be made known so complete testing is possible.

iv) Inspection of Trials

Trials will be inspected by a representative of OOPSCC to ensure that they are in order. An inspection visit will be made by a representative of an institution other than that conducting the trial. Problems with individual tests should be reported in writing to the Co-ordinator.

v) Valid Tests

Trials must attain a yield CV of $\leq 20\%$ to be considered valid. Replications of tests not representative of the trial may be eliminated at the discretion of OOPSCC.

4.5 Check Varieties

Entries will be compared with varieties of *B. napus* registered in Canada. The check variety for 2008 will be 45H21.

Candidate lines considered after 2 years of testing must be 25 kg/ha higher in yield than the appropriate check. Candidate lines considered after 3 years of testing must be at least equal in yield to the appropriate check. Candidate lines may be considered after 1 year of testing as outlined under Special Considerations (4.6 iii).

Note: OOPSCC reserves the right to determine the appropriate check(s) to be used in making comparisons.

4.6 Support for Registration

i) Number of Trials Required

An entry must be tested for at least two years, with a minimum of 4 valid tests during that period with at least 2 valid tests in each year, to be eligible for support for registration by the Committee. The only exceptions are shown under Special Considerations (4.6 iii).

ii) Yield and Quality Standards

In order to be supported for registration an entry must:

- exceed the yield of the check(s) by 25 kg / ha (2 years' data), or equal the yield of the check (3 years' data)
- have oil content on a whole seed basis no less than 2.0% below the check
- have oil plus protein content no less than 2.5% below the check, where protein content is expressed as a percent of oil free meal
- have free fatty acid (FFA) content, expressed as a percent of total oil, no higher than 150% of the check. (**Note: This was increased from the past standard of 125% at the January 2008 meeting of OOPSCC, and applied retroactively to 2007 trial results).**

All comparisons are made based on the mean of all valid location-years, except for FFAs. For FFA content, the comparison is made weighting each year equally, regardless of the number of locations per year.

Entries which are too late to mature at three eighths of the official locations in two years will not be supported for registration. In cases where maturity is late, every effort will be made to swath or harvest the entry later than the remainder of the test. In cases where maturity is questionable, it will be assessed by determining if the entry met Canada No. 1 grade for green seeds (less than 2% averaged over the two years).

iii) Special Considerations

OOPSCC will support canola lines after 1 year of PUBLIC testing if their yield is at least 108% of the check yield mean, after rounding.

All lines under special consideration must also meet the quality standards for support.

iv) Registration Options

Once an entry is supported by OOPSCC for registration, the sponsoring individual or organization is free to seek registration from the Variety Registration Office of the Canadian Food Inspection Agency in Ottawa. A sponsor may delay application for registration because of

a lack of seed supplies.

Registration may be deferred for up to two (2) years from the time support for registration is granted by OOPSCC. If a line/variety is not registered within these two years, support will be withdrawn and the line/variety will be removed from further testing.

Any entry that has received support for registration, has 3 years of performance results, and which is registered by November 30 will be included on the Variety Performance list for the following year.

4.7 Private Tests

Companies have the option of using the public, 2-year system outlined above, or a private system described in this section or a combination of one year of private testing and one year of public testing.

Companies may conduct both the first and/or second years of testing for registration purposes in their own private trials, providing the following criteria are met:

- 1) Companies will test at a maximum of four locations in Ontario in each year, with a minimum of two valid tests required in order that the data set represents one complete year of testing. If only one valid test is obtained the data may be carried forward but two other years of testing will be required. The minimum data set required for consideration of support is four trials over two years.
- 2) The number of private entries that may be included in these trials is limited to 15 first-year entries plus 5 second-year entries per company, plus checks. Companies may collaborate in conducting private trials.
- 3) Companies are responsible for collecting all of the appropriate field data (see Section 4.4 (ii)), and analyzing and submitting the results to the coordinator by November 30, 2008. Results received after this date will not be considered.
- 4) Quality analyses will be conducted, as described previously, at the Department of Plant Agriculture, University of Guelph, on lines to continue into a second year of testing, and on lines to be considered for support for registration. Costs for laboratory analyses will be \$60 per sample. Seed for each entry in each trial will be bulked over replications and 100-gram samples will be sent to the coordinator by Nov. 15, 2008.

- 5) In cases where entries tested in private trials in the first year are entered into the public trials for the second year, a maximum of five entries may be carried forward into the second year of testing (since any one company or institution is allowed a maximum of five entries in public trials in any one year – Section 4.2 ii). For consideration for support for registration, the one year of private data will be combined with one subsequent year of public data and averaged over the total number of location-years. A fee of fifty dollars (\$50.00) per entry will be payable, to OOPSCC, for each entry to continue into the second year of testing to cover the cost of maintaining the expanded data base and the cost of incorporating the private data with the public data. This fee will be in addition to existing fees for public testing in the second year.
- 6) All OOPSCC checks for 2008 must be included in the private trials.
- 7) Other OOPSCC guidelines for public trials will apply.
- 8) The private trials will be inspected prior to maturity by a representative of OOPSCC, who will decide under what conditions they will be valid. The inspector will bill the company, whose trials were inspected, \$50.00 per inspected site, plus GST; instruct the company to pay the billed amount to the Ontario Oil and Protein Seed Crop Committee: Canola; and remit to Dr. Hugh Earl, along with a clear indication of the site, the inspection date and the inspector. Additional arrangements for expenses incurred in inspecting distant sites will be between the inspector and the company.
- 9) After harvest, companies or institutions are to submit 100-g samples of each potential variety plus checks for quality testing. The deadline for submitting samples is Nov. 15, 2008. Decisions on which varieties will be carried forward can be made after the quality data are received. Seed of all entries in private trials should be saved so erucic acid contents can be determined on the planted seed, if necessary.
- 10) Data from all valid, inspected trials must be used in making comparisons for the purpose of supporting an entry for registration.

4.8 Laboratory Testing

Composite samples from both public and private trials will be analyzed by the Dept. of Plant Agriculture, University of Guelph, for oil and protein content, green and brown seed percent, free fatty acid levels and glucosinolate levels as required. Erucic acid content of the seed submitted for planting may also be determined.

4.9 Deletions Procedure

In the past, registered cultivars that showed declining performance relative to other recommended cultivars over years of testing were subject to deletion from the recommended list. When the performance of a variety fell below 95% of the yield of other currently recommended varieties, based on the previous 3 years' data, it was deleted from the recommended list.

At its January 2008 meeting, OOPSCC passed a motion to discontinue the practice of deleting canola varieties from the recommended lists based on yield.

4.10 Appeals Procedure

Should a dispute arise regarding the interpretation of the data by OOPSCC, the registration support decisions may be challenged by the sponsor. An Appeal Committee will be formed within 10 days of notification to the Canola Coordinator of the Appeal. Notice of Appeal must be received within 10 days of receipt of the decisions. The Appeal Committee will consist of:

- one individual appointed by OOPSCC
- one individual appointed by the plaintiff
- one individual acceptable to both parties.

The written decision of the Appeal Committee will be final. The losing party in the Appeal will pay the expenses of the 3rd individual (i.e. the individual acceptable to OOPSCC and the plaintiff).

4.11 Fees

The fee for the Ontario Spring Canola Tests is established at \$1180 plus GST for each entry. This includes all field testing and laboratory analyses in public trials.

The fee for laboratory analyses conducted on samples from private trials will be \$60 per sample plus GST. One sample will be submitted for the check and each candidate line to be considered by OOPSCC, from each location-year of private testing. For example, the fees for two candidate lines plus one check at four location-years would be:

3 lines x 4 locations x \$60 = \$720 plus GST.

Fees are payable to the Ontario Oil and Protein Seed Crop Committee: Canola in Canadian funds, at Guelph, Ontario. The Goods and Services Tax (GST) is applicable to OOPSCC testing fees. Sponsors will be invoiced for entry fees after trials have been established. Fees will be payable 30 d after the date of invoice.

Please note that any sponsor that is in arrears at the time of the January 2009 OOPSCC Variety Subcommittee meeting will not have their entry(ies) considered for support for registration. If a sponsor is still in arrears at planting time, their entry(ies) will not be included in OOPSCC trials. Interest on late payments will be charged at a rate of 2% per month from the date payable on the invoice.

SPRING CANOLA ENTRY FORM
(Use for both public and private trials)

Due: April 15, 2008

CANADIAN SPONSOR:

NAME (Contact Person and Company):

ADDRESS:

POSTAL CODE:

PHONE #:

FAX #:

NAME AND LOCATION OF BREEDING COMPANY:

Entry Name	Previous Names(s)	Erucic Acid (% of oil)	Glucosinolates $\mu\text{M/g}$	Hybrid? (Y/N)	Herbicide Resistant? (Y/N)
1.					
2.					
3.					
4.					
5.					

Note: **You must** indicate erucic acid and glucosinolate levels for entries submitted.

Return one copy with seed to:

Dr. Hugh Earl
Crop Science Bldg.
University of Guelph
Guelph, Ontario N1G 2W1

by April 15, 2008 **GST Number: R127779965**

_____ entries in public trials @ \$1180.00 per entry
G.S.T. (5%):

TOTAL

LOCATIONS OF PRIVATE TRIALS:

Fees will be \$50 per entry for entries in private trials for handling data, plus \$60 per sample submitted for quality analyses. These fees are payable by **Nov. 15** of the year in which the private trial is harvested. This is also the deadline for submitting samples for quality analyses.