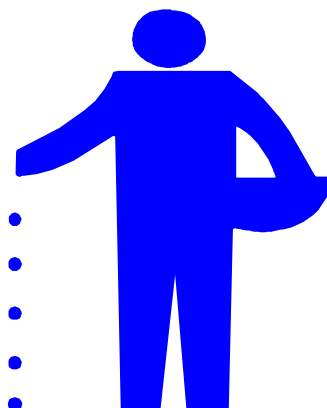


CANADIAN REGULATIONS AND PROCEDURES FOR PRODUCTION OF BREEDER SEED CROPS

CSGA



ACPS

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(disponible aussi en français)

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1.0 INTRODUCTION

The Canadian Seed Growers' Association (CSGA) is the official pedigreering agency for seed crops in Canada except potatoes. Therefore, the CSGA officially recognizes all Plant Breeders and issues Breeder status seed crop certificates for those crops that meet CSGA requirements.

Breeder status plots, the highest class of seed crops pedigreed by the CSGA, produce the original parent seed for all other pedigreed classes. It is most important, therefore, that this material is as free as practically possible from varietal impurities, contaminating weed seeds and other foreign material.

Since the Plant Breeder controls production of Breeder seed, it is the Plant Breeder's responsibility to ensure it is grown and processed to the highest standards.

These Breeder Seed Crop Regulations should be used in conjunction with the CSGA Regulations and Procedures for Pedigreed Seed Crop Production (Circular 6) which outline the regulations and procedures for production of Select, Foundation, Registered and Certified seed crops.

The purpose of this publication is to provide direction to Plant Breeders responsible for the production of Breeder seed crops that are pedigreed by the CSGA. This publication is also available from CSGA's website at: www.seedgrowers.ca.

2.0 BREEDER SEED CROPS

Definition: Breeder seed crops are those crops recognized by the CSGA as being produced by a recognized Plant Breeder under conditions, such as audited Quality Management Systems, which have ensured that the specific traits of the variety have been maintained. It is the original source for all increases of seed for the pedigreed classes.

In order for the CSGA to ensure varietal purity through ensuing generations, Breeder Seed must be developed and produced by Plant Breeders who meet the qualifications established by the CSGA.

3.0 QUALIFICATIONS FOR PLANT BREEDER RECOGNITION

According to CSGA regulations, a Plant Breeder, Associate Plant Breeder and Variety Maintainer are defined as follows:

3.1 Plant Breeder

For Pedigreed seed production, a Plant Breeder is any person recognized as such by the Plant Breeders' Committee of the CSGA and who is knowledgeable in the principles and practices of plant breeding and related disciplines, is actively engaged in the selection and synthesis of varieties, and produces and maintains varieties true to identity and purity.

By granting Plant Breeder status the CSGA recognizes the Plant Breeder's ability to maintain or supervise the maintenance of Breeder seed plots and grants him/her the privilege to do so. Since Breeder status seed is the basis of all seed crop varieties, it is of utmost importance that great care and attention be given to this basic step in the development of the variety.

To be granted recognition as a fully qualified Plant Breeder an individual must meet the following criteria:

1. Ph.D. in plant breeding plus 1 year independent plant breeding experience in a country participating in the OECD Seed Schemes;
-or-
2. M.Sc. in plant breeding plus 3 years independent plant breeding experience in a country participating in the OECD Seed Schemes;
-or-
3. B.Sc.A. plus 10 years on-the-job training (5 years in a country participating in the OECD Seed Schemes) plus release of a recognized variety.
-or-
4. Ph.D or M.Sc. in a closely related field/discipline plus seven years on-the-job training, including at least one year training in a country participating in the OECD Seed Schemes. The number of years of training may be reduced depending on the amount and relevancy of formal training in plant breeding.
-or-
5. Ph.D, M.Sc., or B.Sc. in an unrelated field/discipline plus qualification as an Associate Plant Breeder plus successful completion of graduate level course work or equivalent in plant breeding.

3.2 Associate Plant Breeder

An Associate Plant Breeder is allowed to produce Breeder seed crops, or inbreds for hybrid seed production, under the supervision of a fully qualified Plant Breeder recognized by the CSGA.

To be granted Associate Plant Breeder status an individual must meet the following criteria:

1. M.Sc. in plant breeding plus 1 year on-the-job training in a country participating in the OECD Seed Schemes under the direction of a recognized Plant Breeder;

-or-

2. B.Sc.A. plus 7 years on-the-job training, one of which must be in a country participating in the OECD Seed Schemes, under the direction of a recognized Plant Breeder;

-or-

3. Ph.D., or M.Sc. in a closely related field/discipline plus 5 years on-the-job training under supervision of a recognized Plant Breeder plus successful completion of an appropriate short course in seed production. The number of years of training may be reduced depending on the amount and relevancy of formal training in plant breeding and/or closely related field(s)/discipline(s);

-or-

4. Bachelor degree in an unrelated field plus 10 years on-the-job training under the supervision of a Plant Breeder, including at least one year training in a country participating in the OECD Seed Schemes. Successful completion of a university course in seed production or demonstration of competence as a Select Grower is also required.

NOTE: All new candidates recognized as a Plant Breeder or Associate Plant Breeder are encouraged to attend Select/Foundation Plot Production Course(s).

3.3 Variety Maintainer

A Variety Maintainer is a special status elite parent or Select/Foundation Plot grower who is allowed to produce Breeder seed crops, or inbreds for hybrid seed production, under the supervision of a Plant Breeder recognized by the CSGA.

To be granted Variety Maintainer status, an individual must have 15 years successful elite parent or Select/Foundation Plot production including 5 years experience in growing Breeder seed plots for others.

3.4 Application For Plant Breeder, Associate Plant Breeder or Variety Maintainer

An "Application for Plant Breeder Recognition" for an individual (Appendix C, Form 43A) must be completed and submitted to the CSGA for consideration by the Plant Breeder's Committee. The names and addresses of at least three persons familiar with the applicant's experience must be provided for reference purposes to assist the committee in evaluating the application. Not more than one of the three references should be from the

applicant's employer. A recommendation from the Plant Breeder's Committee is then made to the CSGA Board of Directors for approval.

3.5 Review of Status

If individuals recognized by the CSGA as Plant Breeder, Associate Plant Breeder or Variety Maintainer bring pedigreed seeds into disrepute their status will be reviewed by the Association and appropriate measures taken.

4.0 IMPORTATION AND SEED INCREASES OF UNREGISTERED VARIETIES

Plant Breeder status has an important bearing on dealings with federal agencies. The Canadian Seeds Regulations (Canada Seeds Act), administered by the Canadian Food Inspection Agency (CFIA), permits the importation of unregistered varieties of spring wheat, winter wheat, durum wheat, and spring barley into the Canadian Wheat Board area for research or plant breeding purposes only. Although importation of seed of unregistered varieties of other crop kinds is somewhat less restrictive, the import process is facilitated where a recognized Plant Breeder indicates the material is required for research purposes. Having imported such seed, it is the responsibility of the Plant Breeder to ensure that the unregistered variety does not escape into commerce or become a source of potentially destructive weeds, diseases or insects.

When unregistered varieties are imported for seed increase in anticipation of registration and/or export as pedigreed seed, a variety description must be provided to the Canadian Food Inspection Agency and the CSGA.

Plant Breeders recognized by the CSGA are also recognized by the Plant Protection Division of the Canadian Food Inspection Agency to import seed for breeding purposes. Similar recognition for industrial hemp Plant Breeders is provided by Health Canada.

5.0 VARIETY REGISTRATION

The variety registration process is described in "Procedures for the Registration of Crop Varieties in Canada" by the Canadian Food Inspection Agency available on their website at www.inspection.gc.ca.

For varieties developed or maintained in Canada, the applicant for registration must indicate the name of the recognized Plant Breeder who will maintain the variety.

It is the responsibility of the Plant Breeder not only to ensure that Breeder seed will be maintained in a pure and useful form, but that variety characterizations,

descriptions, and certification and registration applications are accurate and truthfully represent performance and adaptation of the candidate variety.

6.0 BREEDER SEED PRODUCED OUTSIDE OF CANADA

Importing Breeder seed usually involves having the crop and seed inspected and tagged as Breeder Seed (or Pre-Basic) by a recognized seed certification agency (a member of the OECD Seed Schemes or of the Association of Official Seed Certifying Agencies, AOSCA). If the seed has not been tagged as Breeder or Pre-Basic status, then for Breeder Seed produced for importation into Canada, the CSGA-recognized Plant Breeder can apply to the CSGA for a Breeder seed crop certificate using CSGA's Form 43, "Application to Obtain a Breeder Seed Crop Certificate". Imported seed must be labelled as required by federal Seeds Regulations. This usually involves a tag carrying the following information: name of the variety, cultivar or strain, crop kind name, Breeder Seed Crop Certificate number (issued by the CSGA) or certification reference number from an official agency in another country, lot number assigned by the Breeder or seed processor, as well as the signature, name and address of the Plant Breeder responsible for maintaining Breeder status seed.

The Plant Breeder or agent should consult with the Plant Products Division of the Canadian Food Inspection Agency as to any import and production conditions required by the Canada Seeds Act and Regulations.

If seed is brought into Canada covered by a label or tag purporting it to be Breeder seed, the CSGA must first verify that the seed would be recognized as equivalent to Breeder seed by the official certification agency in the state or country of origin. If equivalence is not recognized, this process could cause a financial loss to the importer because the seed stock has been improperly documented or tagged and could not be recognized by CSGA as Breeder seed.

7.0 BREEDER SEED AND GERMLASM PRESERVATION

In order to prevent loss of valuable germplasm and to ensure preservation of Canadian varieties, a representative sample of Breeder Seed of each crop variety developed in Canada (past and present), with the exception of hybrid varieties, should be deposited in the central repository in Saskatoon, as part of the permanent national germplasm collection. A copy of the variety description and a representative sample of the variety (minimum 12,000 seeds) should be sent at the time of applying for registration to:

Plant Gene Resources of Canada
Agriculture and Agri-Food Canada
Saskatoon Research Centre
107 Science Place
Saskatoon SK S7N 0X2
Telephone: 306-956-7641
Fax: 306-956-7246
E-mail: richardsk@agr.gc.ca

8.0 SOURCE OF SEED

Breeder Seed is normally produced from Breeder Seed, parental clones or from Plant Breeder lines or their equivalent.

It is not permissible to elevate Select, Foundation, Registered or Certified seed to a higher pedigreed class without prior approval of recognized Plant Breeder seed maintainer and the CSGA.

9.0 LAND USE AND ISOLATION REQUIREMENTS

Normally the minimum requirements for land use and isolation for the production of Breeder Seed are the same as those stated for the highest class of pedigreed seed production of that crop kind in the CSGA "Regulations and Procedures for Pedigreed Seed Crop Production: - Circular 6.

9.1 Previous Land Use

The minimum standards required in Circular 6, for the highest pedigreed class applicable to the specific crop kind involved (e.g. Select for wheat, Foundation for alfalfa, canola, etc.) will normally be considered the minimum standards for previous land use in Breeder seed crop production of that crop kind.

Breeder seed plots should not be grown on land where volunteer growth from a previous crop may cause contamination. Refer to the appropriate crop kind section in CSGA's Circular 6 for the minimum previous land use requirements.

9.2 Isolation

A Breeder seed crop should be planted in areas that will provide maximum protection from outside sources of contamination. The minimum isolation distance permitted in Circular 6, for the highest pedigreed class applicable to the crop kind involved, will normally be considered the minimum isolation distance required for Breeder seed crop production of that crop kind.

9.3 Planting Pattern

A Breeder seed crop should be planted in such a manner as to facilitate inspection and the effective removal of off-type plants, other varieties or kinds, and objectionable weeds.

9.4 Area: Size of Breeder Seed Plots

The acreage of individual Breeder Seed plots should not exceed one hectare (2.5 acres) in order to meet the varietal purity requirements of Breeder Seed and to permit adequate inspection intensity. There is no limit on the “total” acreage or number of Breeder Seed plots applied for inspection.

10.0 CROP INSPECTION

10.1 Varietal and Mechanical Purity

The Plant Breeder should take all possible precautions with parent material to ensure the continued varietal and mechanical purity of the variety.

It is the responsibility of the Plant Breeder or breeding organization to apply to the CSGA for crop inspection. All certification of Breeder seed crops is subject to crop inspections that verify compliance with the CSGA’s standards and application is the responsibility of the Plant Breeder.

An “Application for Crop Inspection” should be completed and submitted to the CSGA, in the name of the Plant Breeder, prior to the deadline dates published by the CSGA.

Seed crop ownership concerns can be addressed on the “Application for Crop Inspection” form by assigning crop certificate(s) to variety owner(s) or distributor(s).

These crop inspections of Breeder Plots should be conducted by qualified inspectors accredited by the CSGA such as inspectors of the Canadian Food Inspection Agency (CFIA).

“Application for Crop Inspection” forms are available from the CSGA or from CFIA offices. Completed crop inspection reports are submitted to the CSGA office.

After crop inspections, a completed “Application for Breeder Seed Crop Certificate” (Appendix A) is required for each Breeder seed crop to be certified by the CSGA.

10.2 Diseases

Plant Breeders must take all necessary precautions to ensure Breeder seed is not a source of disease. Each Breeder seed plot is inspected prior to harvest to determine the presence and severity of diseases that may be transmitted with the seed.

The inspection(s) should be done by a plant pathologist who is familiar with the crop kind, however, the inspection may also be done by the Plant Breeder. For example, in field beans, at least two field inspections should be made while the plants are still green to determine the presence of Bacterial Blight and Anthracnose.

“Field Disease Inspection Report” forms (Appendix B) are available from the CSGA head office. Completed

copies should be provided as required to the distributor or recipient of the seed and to the CSGA office when applying for a Breeder Seed Crop Certificate.

Plant Breeders should also be familiar with current quarantine regulations concerning the movement of seed within Canada as well as phytosanitary requirements for importing and exporting seed as prescribed by the Canadian Food Inspection Agency. Federal Seeds Regulations also specify, for certain crops and diseases, the maximum allowable disease levels in seedlots.

For the following crop kinds, a “Report on Health Condition of the Seed Sample”, relative to the seedborne diseases indicated, should be obtained by submitting a representative sample of the Breeder seedlot to:

Ottawa Laboratory (Carling) - Seeds
 Building 22, CEF
 960 Carling Avenue
 Ottawa ON K1A 0C6

| Crop | Disease | Test Sample Size |
|---------------------|--|------------------|
| BARLEY | True loose smut <i>Ustilago nuda</i> | 250 grams |
| CANOLA/ RAPESEED | Blackleg <i>Leptosphaeria maculans</i> | 100 grams |
| CHICKPEAS | <i>Ascochyta rabiei</i> | 400 grams |
| FIELD BEANS | Bacterial blight Anthracnose | 30,000 seeds |
| FIELD PEAS | <i>Ascochyta pisi</i> <i>Ascochyta pinodella</i> , <i>Mycosphaerelia</i> | 400 grams |
| WHEAT | True loose smut, <i>Ustilago tritici</i> | 200 grams |
| WINTER WHEAT | Dwarf bunt, <i>Tilletia controversa</i> | 200 grams |

NOTE: Testing may be required for other crop diseases when deemed necessary.

In crops for which there are treatments to control seedborne diseases, all Breeder seed suspected of carrying such diseases should be treated prior to being distributed to growers. If treatment by the Plant Breeder is not possible then requirements for seed treatment should be clearly marked on the container label. If the incidence of disease is considered serious by the Plant Breeder then the distributor or recipient of Breeder seed should be advised.

11.0 HARVESTING AND PROCESSING

Harvesting and seed processing operations are to be carried out in such a manner as to ensure the maintenance of varietal and mechanical purity.

12.0 SEED ANALYSIS (MECHANICAL PURITY AND GERMINATION)

A representative sample of the processed seed (either domestically produced or imported) is to be submitted to an accredited seed analysis laboratory for a "Seed Testing Certificate" indicating germination and mechanical purity. The seed should have a minimum purity and germination at least equal to that for Foundation No. 1 seed. If the seed is not equivalent to the Foundation No. 1 grade standards, then the distributor or recipient of Breeder seed must be advised.

SAMPLE SIZES FOR SEED PURITY AND GERMINATION TESTS:

| | |
|--------------------|-----------|
| Alfalfa | 125 grams |
| Alsike Clover | 60 grams |
| Barley | 1 kg |
| Beans | 1 kg |
| Bentgrasses | 30 grams |
| Birdsfoot Trefoil | 60 grams |
| Bluegrasses | 60 grams |
| Bromegrass | 125 grams |
| Buckwheat | 1 kg |
| Canaryseed | 125 grams |
| Corn | 1 kg |
| Crested Wheatgrass | 60 grams |
| Fescues | 60 grams |
| Flax | 500 grams |
| Lentils | 500 grams |
| Meadow Fescue | 125 grams |
| Mustard | 250 grams |
| Oats | 1 kg |
| Orchard grass | 60 grams |
| Peas | 1 kg |
| Radish | 250 grams |
| Canola/Rapeseed | 250 grams |
| Red Clover | 125 grams |
| Redtop | 30 grams |
| Reed Canary Grass | 60 grams |
| Rye | 1 kg |
| Ryegrasses | 125 grams |
| Sainfoin | 500 grams |
| Soybeans | 1 kg |
| Sunflower | 1 kg |
| Sweet clover | 125 grams |
| Timothy | 60 grams |
| Tobacco | 8 grams |
| Triticale | 1 kg |
| Wheat | 1 kg |
| Wheat grasses | 125 grams |
| White clover | 60 grams |

For other crop kinds, contact the Canadian Food Inspection Agency or an accredited seed lab.

13.0 APPLICATION FOR BREEDER SEED CROP CERTIFICATE

For CSGA certification of Breeder seed crops, whether produced in Canada or in another country, a completed "Application for Breeder Seed Crop Certificate" (Appendix A, Form 43) must be submitted to the CSGA office. The application should be accompanied by all required documentation such as seed analysis certificates and Appendix B for disease when required. This includes documentation required in Appendix A, Section 12. that verifies production within an audited Quality Management System.

The information required in Sections 9. and 10. of the "Application for Breeder Seed Crop Certificate", on other crop kinds, off-types and variants, should be supplied to the distributor or recipient of Breeder Seed as it is often essential for growers to meet pedigreed seed production requirements.

14.0 BREEDER SEED TAGS

Breeder seed tags may be obtained from the CSGA. Breeder seed must be tagged and the tag must bear the Crop Certificate number issued for that seedlot and must be signed by the Plant Breeder or his representative. While it is not mandatory to use the Breeder Seed tags provided by the CSGA, it is encouraged. Breeders may wish to enclose a request for CSGA Breeder Seed tags along with their "Application for Breeder Seed Crop Certificate" indicating the number of tags required. For Breeders using other tags, they should provide the same information that appears on CSGA Breeder Seed tags.

15.0 OTHER INFORMATION

Related information is available from CSGA's website at: www.seedgrowers.ca ; Canadian Seed Institute at: www.csi-ics.ca; and and from CFIA at: www.inspection.gc.ca .

The following publications are available from:

CANADIAN SEED GROWERS' ASSOCIATION

- Circular 6: Regulations & Procedures for Pedigreed Seed Crop Production
- Rogues and Roguing
- Pedigreed Forage Seed Production

CANADIAN FOOD INSPECTION AGENCY

- Seeds Act and Regulations
- Plant Protection Act and Regulations
- Procedures for the Registration of Crop Varieties
- Regulatory Directives on Plants with Novel Traits

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 P.O. Box 8455, OTTAWA, ONTARIO K1G 3T1, (613) 236-0497 Fax: (613) 563-7855
 E-mail: seeds@seedgrowers.ca, Web site: www.seedgrowers.ca

APPLICATION for a BREEDER SEED CROP CERTIFICATE and CERTIFICATION ELIGIBILITY

| | | |
|---|--------------------------------------|---------------------------------------|
| 1. NAME of VARIETY (as it will appear on Certificates) | | |
| 2. (a) OTHER Names: | | (b) Crop Kind (species): |
| 3. (a) LOCATION of Plot: | | (b) Field No. (#) : |
| 4. (a) SIZE of Plot: _____ ac. OR m ² | (b) YEAR of Production: _____ | (c) QUANTITY of Seed: _____ kg |
| 5. (a) NAME & Address of PLANT BREEDER (responsible for production of this crop) | | |
| Last Name: | | First Name(s): |
| Mailing Address: | | |
| City: | Province: | Postal Code: |
| (b) NAME & Address of Crop Certificate ASSIGNEE - if other than 5.(a) above | | |
| Last (or Company) Name: | | First Name(s): |
| Mailing Address: | | |
| City: | Province: | Postal Code: |
| (c) NAME & Address of Breeder Seed MAINTAINER - if other than 5.(a) or 5.(b) above | | |
| Last Name: | | First Name(s): |
| Mailing Address: | | |
| City: | Province: | Postal Code: |
| (d) NAME & Address of *ORIGINATING Plant Breeder - if other than 5.(a) or 5.(b) or 5.(c) above | | |
| Last Name: | | First Name(s): |
| Mailing Address: | | |
| City: | Province: | Postal Code: |
| * INITIAL certification by CSGA requires authorization from *ORIGINATING Plant Breeder. | | |
| 6. (a) PARENT IDENTITY: Breeder's identification number or Crop Certificate number of seed planted: _____ - Seed Conditioner Name and Address: | | |
| (b) For Perennial Crops, indicate year the Breeder plot was planted : _____ AND, if previously pedigreed, provide the Crop Certificate number last issued for this plot: _____ | | |
| 7. ATTACH a "Report of Crop Inspection"*, completed by an inspector recognized by the CSGA or the Plant Breeder, which verifies compliance with CSGA's requirements for pedigreed Plot production. If a "Report of Crop Inspection" is NOT attached*, did the production of this crop comply with CSGA's requirements for pedigreed Plot production? (e.g.'s: maximum Plot size, previous land use, isolation distance, maximum impurity levels) Yes <input type="checkbox"/> No <input type="checkbox"/> *If the attached "Report of Crop Inspection" is NOT completed by a recognized inspector, CSGA may assess an additional \$30.00 administration fee, require submission of the Breeder QMS audit verification and consider this crop ineligible for production or demotion to a lower pedigreed class. | | |
| 8. VARIETY DESCRIPTION: A description of this variety's "distinguishing characteristics" is required before Breeder or Select status crop certificates are issued. A complete Variety Description is required before Foundation, Registered or Certified status crop certificates are issued. Variety Description or characterization is: Attached <input type="checkbox"/> OR Previously Submitted <input type="checkbox"/> | | |

CSGA OFFICE USE:

| | | | | | |
|------------|----------------------|------------|--|--------------|--|
| GROWER # | | ASSIGNEE # | | VARIETY CODE | |
| SEQUENCE # | CERTIFICATE # ISSUED | | | | |

9. OTHER CROP KINDS: NAME "other crop kinds" which this Breeder Seed may contain and their expected frequency (/100 m² or /20,000 plants).

10. OFF-TYPES or VARIANTS: DESCRIBE the "off types or variants" which this Breeder Seed may contain and their expected frequency (/100 m² or /20,000 plants). NOTE: Requests to change variant levels in Variety Descriptions can not be made during the crop inspection season.

11. SEED TESTING CERTIFICATE: ATTACH a "Certificate of Analysis", from an officially accredited seed lab, indicating the Mechanical Purity and Germination of the seed. Mechanical Purity of Breeder Seed should meet or exceed Canada Foundation No.1 seed grade standards.

12. (a) QUALITY MANAGEMENT SYSTEM (QMS): Was this Breeder Seed produced within a third-party audited QMS? Yes No

(b) WHEN was the last audit completed? _____

(c) WHO conducted the last audit? _____

13. For varieties or crop kinds with "Additional" seed certification standards, ATTACH test results that verify compliance from a lab recognized by CSGA to issue certificates of analysis for the "Additional" standard (e.g.'s: erucic acid for canola and allyl glucosinolate for canola-quality B. juncea).

14. (a) DISEASE: If required in Appendix B for this crop kind, attach a completed "Field Disease Inspection Report" (Appendix B).

(b) If required in Appendix B for this crop kind, a "Report of the Health Condition of the Seed Sample" must also be completed and attached.

(c) Has treatment been used to control seedborne disease on the seed? Yes No

Specify treatment details: _____

**** Certification ELIGIBILITY of Variety (15. - 18.)**

15. (a) REGISTRATION: Is this crop kind subject to Variety Registration by the Canadian Food Inspection Agency (CFIA)? Yes No

(b) If Yes, is this variety registered? Yes No

16. (a) OTHER CERTIFICATION: Has this variety been certified by another official seed certifying agency? Yes No

If Yes, Name the Agency : _____

(b) Has this variety been certified under a "different" Variety Name? Yes No

If Yes, provide the variety Name: _____

**** Note: If Yes to 15. (a) and No to 15. (b) & 16. (a) above, then seed of this variety is NOT eligible for "official" status certification and sale by variety name in Canada until CSGA receives a completed Variety Certification Eligibility Application (CSGA Form 300).**

17. ORIGIN: If this variety has NOT previously been officially certified, describe its varietal origin or genetic background.

18. NOVEL TRAITS: Does this variety contain traits that are novel to its species as defined by CFIA? Yes No

If Yes, specify trait(s): _____

AND has testing confirmed that traits are expressed as prescribed by the Variety Description? Yes No

If Yes, have all OTHER regulatory requirements been met? Yes No

19. PBR: Has protection under the Plant Breeders' Rights (PBR) Act been: a) Applied For b) Granted c) NOT Applied For

20. I declare that, to the best of my knowledge:

- all information provided with and in this Application is correct and true;
- if this variety is not yet registered, seed of this variety will not be sold labeled with official CFIA pedigreed tags (e.g. Foundation, Registered and Certified) until such time as the variety has been registered by CFIA or by the CSGA's Certification Eligibility Application (Form 300);
- this Variety Name is NOT being used to certify any other variety of the same crop kind; and
- an accurately identified, representative Reference Seed Sample of Breeder status seed of this variety has been sealed and properly labeled for post-control certification audits.

_____ **NAME** (Printed) and **SIGNATURE** of Plant Breeder recognized by the CSGA _____ **Date** _____

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CANADIAN SEED GROWERS' ASSOCIATION

P.O. Box 8455, OTTAWA, ONTARIO K1G 3T1, (613) 236-0497 Fax: (613) 563-7855

E-mail: seeds@seedgrowers.ca, Web site: www.seedgrowers.ca

FIELD DISEASE INSPECTION REPORT

of *Crop Kinds listed below for diseases that may be transmitted with the seed

| | |
|-----------------------------------|------------|
| GROWER: | LOCATION: |
| VARIETY: | CROP KIND: |
| PREVIOUS LAND USE (5 crop years): | |
| | |
| | |

| DISEASE CONDITION | | |
|--|--------------------|---|
| NAME of Disease(s) Present | % of Crop Infected | SEVERITY of Disease (Trace, Slight, Moderate, Severe) |
| | | |
| | | |
| | | |
| | | |
| STAGE of Crop Development When Inspected: | | |
| RECOMMENDATIONS: | | |
| NAME (Printed) and SIGNATURE of Pathologist or PLANT BREEDER | | |

*** Crop Kind Requirements for Diseases that may be transmitted with seed:**

- (a) Each Breeder Seed Plot should be inspected prior to harvest to determine the disease incidence and severity by the Plant Breeder or a plant pathologist familiar with the crop kind.
- (b) For *Crop Kinds listed below, a "Report on Health Condition of the Seed Sample", relative to the seedborne diseases indicated, must be submitted to CSGA. A representative sample of the Breeder seed should be submitted for this testing at the laboratories cited below:

| | |
|---|--|
| <p><u>For BARLEY & WHEAT:</u> Seed Science and Technology Section Saskatoon Laboratory 301- 421 Downey Road Saskatoon, SK S7N 4L8</p> | <p><u>For ALL OTHER CROP KINDS:</u> Quarantine Plant Pathology Laboratory ADRI-CPQP Floor 2, 3851 Fallowfield Road P.O. Box 11300 Ottawa, ON K2H 8P9</p> |
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| *Crop Kind | Disease | Test Sample Size |
|-------------------|--|------------------|
| BARLEY | True loose smut, <i>Ustilago nuda</i> | 250 grams |
| CANOLA / RAPESEED | Blackleg, <i>Leptosphaeria maculans</i> | 100 grams |
| CHICKPEAS | <i>Ascochyta rabiei</i> | 400 grams |
| FIELD BEANS | Bacterial blight, Anthracnose | 30,000 seeds |
| FIELD PEAS | <i>Ascochyta pisi</i> , <i>Ascochyta pinodella</i> , <i>Mycosphaerelia</i> | 400 grams |
| WHEAT | True loose smut, <i>Ustilago tritici</i> | 200 grams |
| WINTER WHEAT | Dwarf bunt, <i>Tilletia controversa</i> | 200 grams |

NOTE: Testing may be required for OTHER diseases as required by official certification agencies.

- (c) In crop kinds for which there are treatments to control seedborne diseases, all Breeder Seed suspected of being contaminated should be treated. If treatment by the Plant Breeder is not possible then requirements for seed treatment should be clearly marked on the Breeder Seed container. If disease incidence is widespread or severe, recipient(s) of Breeder Seed should be advised.

CSGA



ACPS

CANADIAN SEED GROWERS' ASSOCIATION
 P.O. Box 8455, OTTAWA, ONTARIO K1G 3T1, (613) 236-0497 Fax: (613) 563-7855
 E-mail: seeds@seedgrowers.ca, Web site: www.seedgrowers.ca

APPLICATION FOR PLANT BREEDER RECOGNITION

| | | | |
|--|----------------------------|---|-----------------------|
| *STATUS TO BE APPLIED FOR (see page 2) | | | |
| Plant Breeder <input type="checkbox"/> | | Associate Plant Breeder <input type="checkbox"/> | |
| Variety Maintainer <input type="checkbox"/> | | | |
| APPLICANT INFORMATION | | | |
| Surname: | | Given Name(s): | |
| Mailing Address: | | | |
| Town/City: | | Province: | Postal Code: |
| Home Telephone # | | Fax #: | |
| Email: | | | |
| EMPLOYER INFORMATION | | | |
| Employer: | | | |
| Applicant's Position: | | | |
| Employer's Mailing Address: | | | |
| Town/City: | | Province: | Postal Code: |
| Telephone #: | | Fax #: | |
| Degree | College, University | Year Completed | Specialization |
| | | | |
| | | | |
| | | | |

Signature of Applicant

Date

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| EXPERIENCE AS A PLANT BREEDER |
| Outline in detail, on a separate attachment if required, indicating length of time, crops worked with, previous varieties developed or maintained, and other pertinent information, including the names, addresses and contact numbers of three individuals familiar with your research experience. Not more than one of the references should be from Applicant's employer. |
| OTHER RELATED WORK EXPERIENCE |
| |

*** STATUS**

Plant Breeder

To be granted recognition as a fully qualified Plant Breeder an individual must meet the following criteria:

1. Ph.D. in plant breeding plus 1 year independent plant breeding experience in a country participating in the OECD Seed Schemes;
- or -
2. M.Sc. in plant breeding plus 3 years independent plant breeding experience in a country participating in the OECD Seed Schemes;
- or -
3. B.Sc. in Agriculture plus 10 years on-the-job training (five years in a country participating in the OECD Seed Schemes) plus release of a recognized variety;
- or -
4. Ph.D. or M.Sc. in a closely related field/discipline plus seven years on-the-job training, including at least one year's training in a country participating in the OECD Seed Schemes. The number of years of training may be reduced depending on the amount and relevancy of formal training in plant breeding and/or closely related field(s)/ discipline(s);
- or -
5. Ph.D., M.Sc., or B.Sc. in an unrelated field/discipline plus qualification as an Associate Plant Breeder plus successful completion of graduate level course work or equivalent in plant breeding.

Associate Plant Breeder

An Associate Plant Breeder is allowed to reproduce Breeder seed, or inbreds for hybrid seed production, under the supervision of a fully qualified Plant Breeder recognized by the CSGA.

To be granted Associate Plant Breeder status an individual must meet the following criteria:

1. M.Sc. in plant breeding plus 1 year on-the-job training in a country participating in the OECD Seed Schemes under the direction of a recognized Plant Breeder;
- or -
2. B.Sc. in Agriculture plus 7 years on -the-job training, one of which must be in a country participating in the OECD Seed Schemes, under the direction of a recognized Plant Breeder;
- or -
3. Ph.D., or M.Sc. in a closely related field/discipline plus 5 years on-the-job training under supervision of a recognized Plant Breeder plus successful completion of an appropriate short course in seed production. The number of years of training may be reduced depending on the amount and relevancy of formal training in plant breeding and/or closely related field(s)/discipline(s);
- or -
4. Bachelor degree in an unrelated field plus 10 years on-the-job training under the supervision of a Plant Breeder, including at least one year training in a country participating in the OECD Seed Schemes. Successful completion of a university course in seed production or demonstration of competence as a Select / Foundation Plot Grower is also required.

Variety Maintainer

A Variety Maintainer is a special status elite parent or Select/Foundation Plot grower who is allowed to reproduce Breeder seed, or inbreds for hybrid seed production, under the supervision of a Plant Breeder recognized by the CSGA.

To be granted Variety Maintainer status, an individual must have 15 years of successful elite parent or Select/Foundation Plot production experience including 5 years experience in growing Breeder seed plots for others.

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| --- I am of legal age and declare that all information provided with and in this Application is correct and true: | |
| _____ | _____ |
| Signature of Applicant | Date |