
CANADIAN REGULATIONS AND PROCEDURES FOR PEDIGREED SEED CROP PRODUCTION



Canadian Seed Growers' Association **Circular 6** © 2005

Revision 1.6-2011

February 1, 2011

This revised version 1.6-2011 of the *Canadian Regulations and Procedures for Pedigreed Seed Crop Production — Circular 6* supersedes all previous versions.

Active seed growers and crop certificate assignees will be advised of changes in these regulations.

The official version of *Canadian Regulations and Procedures for Pedigreed Seed Crop Production — Circular 6* is maintained at the CSGA's website: www.seedgrowers.ca. This version is published for convenient reference.

QUICK REFERENCE SUMMARY
**MAJOR SEED CROPS AND SPECIFIC SECTION REQUIREMENTS
IN CIRCULAR 6**

CROP	SECTION	PEDIGREED CLASS
Bean	03 12	except Select plots Select plots
Canola, Rapeseed, Mustard		
Hybrid	05	except Foundation plots
Other	04	except Foundation plots
All	13	Foundation plots
Cereals (e.g. Barley, Oats, Wheat)	02 12	except Select Plots Select plots
Corn		
Hybrid	08	
Open-pollinated	09	
Flax	02 12	except Select plots Select plots
Forage Grasses	06	
Forage Legumes	07	
Industrial Hemp	10 11	except Foundation plots Foundation plots
Other Crops	14	
Pea	03 12	except Select plots Select plots
Pulse Crops (e.g. Lentils)	03 12	except Select plots Select plots
Soybean	03 12	except Select plots Select plots
Sunflower	16 13	except Foundation plots Foundation plots

TABLE OF CONTENTS BY SECTION

SECTION	CONTENT DESCRIPTION
0	Introduction: Foreword; Objectives; Information and Contacts; First Steps to Producing Pedigreed Seed Crops; Procedures for the Production of Pedigreed Seed Crops
1	Regulations for All Pedigreed Seed Crops
2	Foundation, Registered and Certified Production of Barley, Buckwheat, Canaryseed, Durum, Flax, Oat, Rye, Triticale, and Wheat
3	Foundation, Registered and Certified Production of Bean, Fababean, Lentil, Lupin, Pea, and Soybean
4	Certified Production of Canola, Mustard, Oilseed Radish, and Rapeseed (including spring and winter varieties)
5	Certified Production of Hybrid Canola and Rapeseed
6	Foundation, Registered and Certified Production of Grasses
7	Foundation, Registered and Certified Production of Alfalfa, Birdsfoot Trefoil, Clover, Crown Vetch, Milkvetch, and Sainfoin
8	Foundation and Certified Production of Hybrid Field Corn
9	Foundation, Registered and Certified Production of Open Pollinated Corn
10	Registered and Certified Production of Industrial Hemp
11	Probation and Foundation Plot Production of Industrial Hemp
12	Probation and Select Plot Production of Barley, Bean, Buckwheat, Canaryseed, Durum, Fababean, Flax, Lentil, Lupin, Oat, Pea, Rye, Soybean, Triticale, and Wheat
13	Probation and Foundation Plot Production of Canola, Mustard, Oilseed Radish, Rapeseed, Safflower, and Sunflower
14	Foundation, Registered and Certified Production of Other Crops
15	Certified Production of Safflower
16	Crops of Open-Pollinated and Hybrid Sunflower
17	Crops of Carrot, Mangel, Sugar Beet, and Rutabaga (Turnip)
18	Crops of Tobacco
19	Crops of Vegetables

Appendix A*Sample Documents and CSGA Forms:*

1. Application for Crop Inspection and Membership (**Form 100**)
2. Report of Seed Crop Inspection
3. Report of Plot Production (**Form 50**)
4. Authorization to Assign a Crop Certificate (**Form 179** and **Form 179A**)
5. Crop Certificate
6. Application to Commence Probation Plot Production (**Form 154**)
7. Official Seed Sealing Tags
8. Application for Appeal (**Form 200**)
9. Land Use Verification – Prior to Planting (**Form 101**)
10. Declaration of Percent Hybrid Seed (**Form 180**)
11. Demotion of Breeder Seed Application (**Form 45**)
12. Application for Breeder Seed Crop Certificate and Certification Eligibility (**Form 43**)
13. Variety Certification Eligibility Application (**Form 300**)
14. Refuge Declaration (**Form 182**)
15. Authorization to Release Personal Information on CSGA Website (**Form 111**)

Appendix B

- The Organisation for Economic Cooperation and Development (OECD) Seed Certification Schemes
- The Association of Official Seed Certifying Agencies (AOSCA)
- Plant Breeders' Rights (PBR)

Appendix C

- Glossary

Appendix D

- Seed Crops and Scientific Names

Related CSGA Regulations and Programs (available from CSGA)

- Canadian Regulations and Procedures for Production of Breeder Seed Crops
- Native Plant Certification Program
- Identity Preserved Program
- CSGA By-laws

CANADIAN SEED GROWERS' ASSOCIATION



CANADIAN REGULATIONS AND PROCEDURES FOR PEDIGREED SEED CROP PRODUCTION – CIRCULAR 6

RECORD OF AMENDMENTS

Amendments to the *Canadian Regulations and Procedures for Pedigreed Seed Crop Production* will be issued as required. Amendments will be numbered and dated. Please ensure the amendments outlined below have been inserted. If any amended pages are missing, contact the CSGA or download pages from the CSGA website (www.seedgrowers.ca). Remove obsolete pages.

Amendment Number & Date	Description of Amendment (Section/Sub-section Number(s), page number(s), etc.)	Entered by:
01-20050509	Sections 4.4.2, 6.4.6, 12.4.3.	
01.1-20060201	Sections: 0-1, 0-3, 0-11, 1.7.1, 1.7.4, 1.7.7, 2 (In this Sec.), 2.2.2a), 2.2.5, 2.4.4, 3.3.7, 4.3.3, 5.5.5f), 9.1.2, 9.2.1, 9.2.2, 11.6.1b), 12 (In this Sec.), 12.4.2, 12.4.3, Appendix A.5.	
01.2-20070201	Sections: 0-1, 2 (In this Sec.), 2.2.2a), 2.2.5, 4.4.1b), 4.4.4, 4.5.4, 5.5.1b), 5.5.5, 5.6.2, 8.5.1a), 13.6.1b), 13.6.4, 13.8.3.	
01.3-20080201	Sections: 0-1, 0-3, 0-4, 0-5, 0-11, 0-12, 1.9.1, 1.17.7, 1.21.3, 2 (In this Sec.), 2.2.5, 2.5.1, 3.2.5, 3.2.6, 3.4.2, 6.5.5, 10.4.4, 11.2.8, 11.2.9, 11.3.4, 11.3.5, 11.6.2, 11.6.4, 12(In this Sec.), 12.2.10, 12.2.11, 12.3.9, 12.3.10, 12.4.3, 13.2.10, 13.2.11, 13.3.5, 13.3.6, Sec. 14, Sec. 17, Sec. 19, Appendix A, A-1, A-15, Appendix C, C-10.	
01.4-20090201	Sections: 0-1, 0-4, 0-5, 0-10, 0-11, 0-12, 1.12.3, 2.2.5, 2.4.2, 4.4.2, 5.5.2, 12.4.3, 12.6.2, 12.6.4, 13.6.1, 13.6.4, Sec. 14, Appendix A: A.14 on A-1 and A-15.	
01.5-20100201	Sections: 0-1, 0-2, 0-3, 0-4, 0-5, 0-11, 0-12, 1.5.1, 1.12.3, 1.16.3, 1.17.4, 1.17.6, 1.21.3, 2.2.5, 3.1.4, 3.2.2, 3.3.5, 4.4.1, 4.4.4, 4.5.4, 5.5.1, 5.5.5, 5.6.2, 6.2.2, 6.4.6, 7 (In this Sec.), 7.2.2, 7.4.5, 7.5.3, 10.4.4, 11.6.4, 12 (In this Sec.), 12.3, 12.4.3, 12.5.7, 13.6.1, 13.6.4, 13.8.3, Sec. 14, Sec. 16, Appendix A: A.11 A.14 on A-1 and A-15, Appendix C: C-5, C-6, C-12.	

01.6-20110201	Sections: 0-1, 0-2, 0-4, 0-6, 0-7, 0-8, 0-9, 0-10, 0-11, 0-12, 0-13, 0-14, 0-15, 0-16, 0-17, 0-18, 0-19, 0-20, 3.1.4, 6.1.1, 6.1.2, 7.1.1, 7.1.2, 7.4.4, 8.5.1, 12.4.3, 12.6.1, 12.6.2, Sec. 14 on 14-1, 14.4.5.1, 14.5.4.3, Section 14.11, Section 14.12, Appendix A: A.15 on A-1 and A-15, Appendix C: C-5, C-6.	
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SEED CROP CERTIFICATION

Seed crop certification is a program of planned production, record keeping, unbiased inspections, and rigid standards to ensure the production of high quality, variety specific seed. Whether by traditional means or with the use of biotechnology, plant breeders continue to produce superior varieties of field crops. By overseeing production of seed crops, CSGA provides the vital link between plant breeders and farmers who benefit from these advances. Certified seed is derived from a seed crop that has been issued a CSGA crop certificate, is labelled with an official blue Certified tag (or bulk pedigreed certificate) and graded with a Canada pedigreed grade name when sold in Canada. The blue Certified tag is a symbol of the high quality standards of certification assuring dependable performance.

Certification is a limited generation concept whereby variety specific characteristics are maintained. New varieties developed by plant breeders are increased to supply farmers with seed of superior performance.

BREEDER SEED PLOTS → FOUNDATION SEED → CERTIFIED SEED → GRAIN

Breeder Seed is developed and maintained by the CSGA-recognized plant breeders of public research institutions and private companies.

Foundation Seed is the first generation for most open-pollinated crops, and second generation for most self-pollinated crops, produced from Breeder seed and rogued for off-types to meet variety descriptions and strict Foundation purity standards.

Certified Seed is the first generation for most open-pollinated crops, and second generation for most self-pollinated crops, produced from Foundation seed by CSGA seed growers for sale to farmers to use in planting their commercial grain acreage.

For most self-pollinated crops, Select plots are the first generation from Breeder seed and Registered crops are the first generation from Foundation seed. Most open-pollinated crops are produced in Foundation plots.

Seed crop certification is performed for CSGA seed growers and processors dedicated to taking the extra steps necessary in planting, harvesting, handling, storage, and conditioning to produce Certified seed.

FOREWORD

The Canadian Seed Growers' Association (CSGA) is recognized by the federal *Seeds Act and Regulations* as the official Canadian pedigreering agency responsible for prescribing varietal purity standards and certifying seed crops of all agricultural crops, with the exception of potatoes. The Association came into being in 1904, when both President and Secretary were officials from the federal Department of Agriculture. It was not until 1923 that the first non-government employee took over as Secretary, and not until 1925 was the office of President filled by other than a federal government officer. In 1926, the Association elected its first grower President.

The *Canadian Regulations and Procedures for Pedigreed Seed Crop Production*, as prepared by the CSGA, represent the collective experience of federal, university and provincial research and regulatory specialists and representatives of the seed trade assisted by the practical experience of seed growers.

Changes in methods and operations have taken place over the years, but the aims and objectives of the CSGA – to improve pedigreed seed production and usage – have not changed. The co-regulatory relationship with the inspection branch of the Department of Agriculture, now the Canadian Food Inspection Agency (CFIA), has continued over the years on a partnership basis. The CSGA also works closely with the Research Branch of Agriculture and Agri-Food Canada, the agricultural faculties of universities throughout the country, provincial ministries of agriculture, the Canadian Seed Institute (CSI), the Canadian Seed Trade Association (CSTA), the Commercial Seed Analysts Association of Canada (CSAAC), the Association of Official Seed Certifying Agencies (AOSCA), the Organisation for Economic Cooperation and Development (OECD) Seed Schemes, and many other related organizations.

The CSGA's affairs are conducted by a President and a 24-member Board of Directors. Fourteen directors are active growers elected by the general membership, and nine are appointed by Provincial Ministers of Agriculture. The CSGA is located in Ottawa under the supervision of the Executive Director, who is also a director of the Association.

Provision is made for the formation of provincial or regional organizations affiliated with the CSGA. These provincial organizations are not authorized to issue crop certificates or to act in any way as pedigreering agencies. They act as a liaison between seed growers and the national Association, and conduct promotional and extension programs on a provincial basis.

The CSGA assures Breeder seed quality through its *Canadian Regulations and Procedures for the Production of Breeder Seed Crops*, which include requirements for professional recognition of Breeders, audited Quality Management Systems, and seedlot testing for compliance with federal seed grade standards.

Most self-pollinated crops are pedigreed through five classes: Breeder, Select, Foundation, Registered and Certified. Most open-pollinated crops are pedigreed through three classes: Breeder, Foundation and Certified.

Varietal purity is maintained by limits on generations or multiplications as well as pedigreed classes, parent seed pedigree verification, restrictions on previous land use, isolation distance, impurities, seed crop inspections and other regulations established by the CSGA. Perennial crops are also subject to limits on the age of stand or number of crops eligible for pedigreed status.

Breeder, Select, Foundation and Registered seed are principally multiplication classes. Certified seed – the terminal pedigreed class – is the seed recommended for commercial crop production.

The pedigreing of seed and seed crops ensures varietal purity. This is especially important to maintain yield, quality, disease resistance and the other distinguishing characteristics of a variety.

From its office in Ottawa and through Certified seed growers, government representatives, and the seed trade across the country, the CSGA has worked since 1904 to ensure the supply of high quality seed for crop production.

OBJECTIVES

The objectives of the Canadian Seed Growers' Association are:

- To ensure, and certify to, the varietal purity of seed crops produced by its members and to maintain the pedigree thereof.
- To identify, and certify to, for purposes other than further pedigreeing, the varietal purity of seed crops produced from superior propagating material.
- To encourage the development and introduction of superior varieties and strains of plants.
- To develop programs which expand the use of pedigreed seed.
- Generally to contribute to the establishment and maintenance of high standards in yield and quality of agricultural crops.
- To co-operate with other agencies which have an interest in seed production, promotion and distribution in Canada and abroad.
- To coordinate the endeavors of pedigreed seed growers with those of plant breeders and commercial crop producers.

INFORMATION AND CONTACTS

Canadian Seed Growers' Association

For more information on CSGA requirements, contact:

Mailing Address:

Canadian Seed Growers' Association
P.O. Box 8455
Ottawa, Ontario
Canada K1G 3T1

Telephone: (613) 236-0497

Fax: (613) 563-7855

Courier Address:

Canadian Seed Growers' Association
202-240 Catherine Street
Ottawa, Ontario
Canada K2P 2G8

Website: www.seedgrowers.ca

A complete list of CSGA office staff is available from the CSGA's website at:

www.seedgrowers.ca/contactus/staff.asp

Canadian Food Inspection Agency

Enquiries relating to enforcement of the federal seeds regulations should be directed to seed inspection staff at the Canadian Food Inspection Agency (CFIA). A complete list of CFIA office contact information is available at: www.inspection.gc.ca



Canadian Food
Inspection Agency

Agence canadienne
d'inspection des aliments

CANADIAN FOOD INSPECTION AGENCY (CFIA) Central Offices for Seed Inspection		
District	Address	Phone/Fax
British Columbia	1853 Bredin Road Kelowna, BC V1Y 7S9	Tel: (250) 470-5176 Fax: (250) 470-4899
Alberta North	Room 205 7000 113 th Street Edmonton, AB T6H 5T6	Tel: (780) 495-3333 Fax: (780) 495-3359
Alberta South	Floor 1, Room 102 110 Country Hills Landing NW Calgary, AB T3K 5P3	Tel: (403) 299-7669 Fax: (403) 221-3296
Saskatchewan	Room 201 421 Downey Rd. Saskatoon, SK S7N 4L8	Tel: (306) 975-4240 Fax: (306) 975-4339
Manitoba	613-269 Main Street Winnipeg, MB R3C 1B2	Tel: (204) 983-2200 Fax: (204) 984-6008
Ontario	259 Woodland Road Suite A Guelph, ON N1H 8J1	Tel: (519) 837-9400 Fax: (519) 837-9774
Quebec	2954 boul. Laurier, Suite 100 Quebec, QC G1V 5C7	Tel: (418) 648-7373 Ext. 139 Fax: (418) 648-4792
Atlantic	Box 6088, 5th Floor, 1081 Main St. Moncton, NB E1C 8R2	Tel: (506) 851-7671 Fax: (506) 851-2689
CFIA Headquarters		
Ottawa	Seed Section Canadian Food Inspection Agency 59 Camelot Drive Ottawa, ON K1A 0Y9	Tel: (613) 225-2342 Fax: (613) 228-6629

SECRETARIES OF CSGA PROVINCIAL AND REGIONAL BRANCHES AND ASSOCIATIONS		
Name	Address	Phone/Fax
BRITISH COLUMBIA Janet Banman	R.R.1, S16 C90 Fort St. John, BC V1J 4M6	Tel: (250) 785-5774 Fax: (250) 785-5713 Email: djbanman@telus.net
ALBERTA Lorena Pahl	Seed Industry Partnership 5030 - 50 St. Lacombe, AB T4L 1W8	Tel: (403) 782-8022 Fax: (403) 782-5514 Email: lorena.pahl@seed.ab.ca
SASKATCHEWAN Dave Akister	10 - 41 West Broadway Yorkton, SK S3N 0L6	Tel: (306) 786-6266 Fax: (306) 783-2211 Email: saskseed@sasktel.net
MANITOBA Jennifer Stow	R.R.#3, Box 121 Carmen, MB R0G 0J0	Tel: (204) 745-6274 Fax: (204) 745-6282 Email: jennifer.stow@seedmanitoba.ca
ONTARIO Harold Rudy	1 Stone Rd. West Guelph, ON N1G 4Y2	Tel: (519)826-4214/800-265-9751 Fax: (519) 826-4224 Email: harold.rudy@ontariosoilcrop.org
QUEBEC Geneviève Blain	3800 boul. Casavant Ouest St. Hyacinthe, PQ J2S 8E3	Tel: (450) 774-9154 Fax: (450) 778-3797 Email: genevieve.blain@upa.qc.ca
MARITIMES Daniel Savoie	Regional Crop Development Officer Agriculture & Aquaculture P.O. Box 5001 Grand-Falls, N.B. E3Z 1G1	Tel: (506)-473-7755 Fax: (506)-473-6641 Email: daniel.savoie@gnb.ca

FIRST STEPS TO PRODUCING A PEDIGREED SEED CROP

1. Obtain a copy of the documents you require, such as:
 - *Canadian Regulations and Procedures for the Production of Pedigreed Seed Crops – Circular 6.*
 - *Application for Crop Inspection and Membership* in the CSGA (Form 100).
 - Fee schedule for current crop year.
 - Locations of local seed crop inspection offices.
 - The CSGA calendar of application deadline dates and events.
 - Variety descriptions of the varieties you intend to produce.
 - *Rogues and Roguing* manual.
 - *Forage Production* manual (if producing forage crops for seed).
 - *Assignment of Crop Certificate* (Form 179) for perennial crops with crop certificates assigned to another party, or the *Annual Authorization to Assign Crop Certificates* (Form 179A).

Samples and explanations of documents are provided in Appendix A.

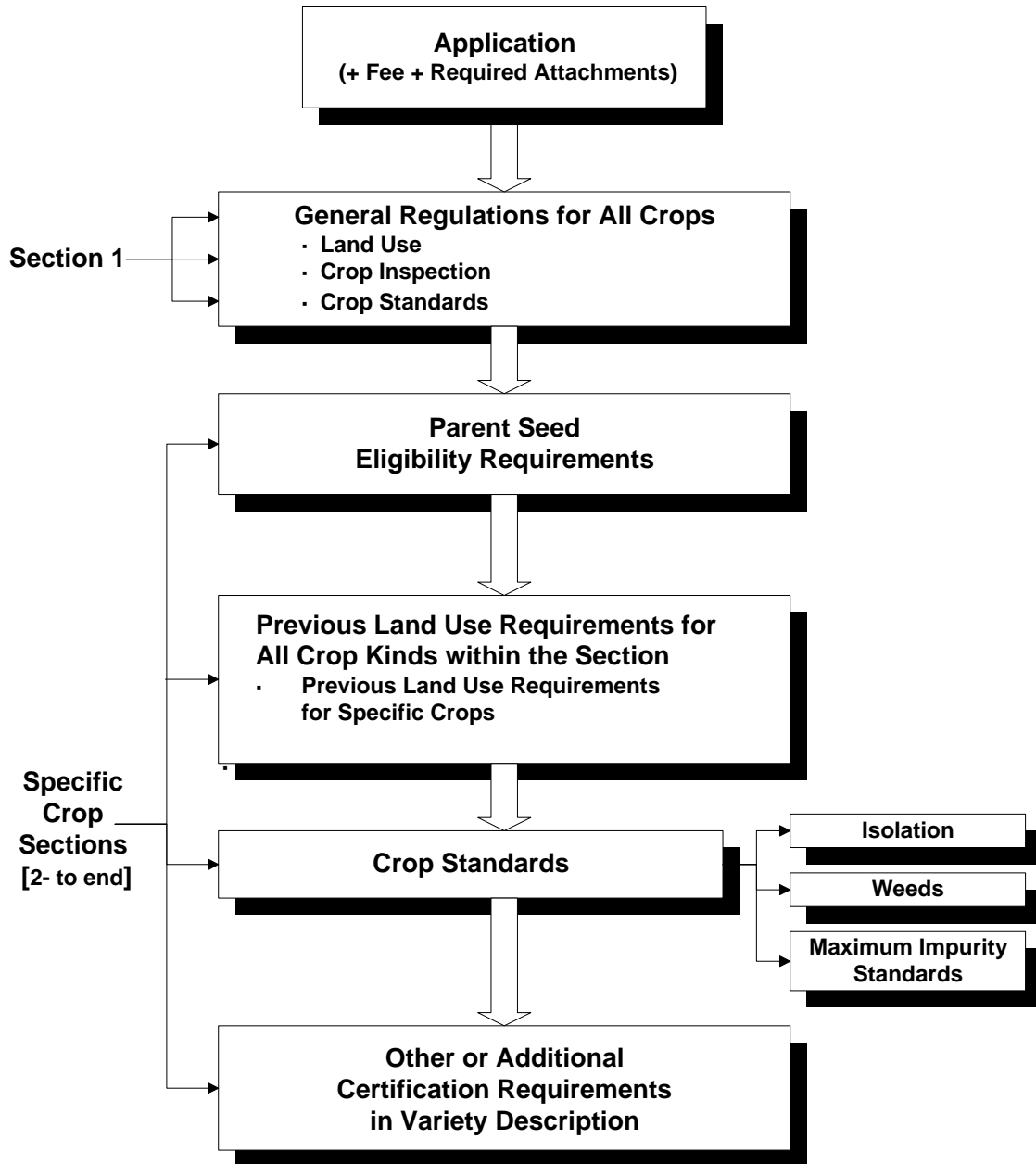
2. Purchase pedigreed seed of Foundation or Registered class.

This seed may be purchased in bags or in bulk. The bagged seed must be tagged with official tags. Pedigreed seed purchased in bulk must be accompanied by official pedigree documentation supplied by the seller. The tags and/or documentation must be kept to present to the authorized seed crop inspector and the CSGA on request. This is proof of the pedigree of the seed you sow. A copy of the mechanical purity and germination analysis certificate should also be available to you for this seed.

3. Make sure that the seed is sown on land meeting the requirements of the regulations. Isolate the crop according to requirements.
4. The *Application for Crop Inspection and Membership* (Form 100) must be completed (including maps) and received by the CSGA before the prescribed deadline dates on the CSGA calendar. Fees must accompany the application.
5. The crop must be rogued throughout the growing season to remove plants of other varieties, off-types, difficult-to-separate other crop kinds, as well as objectionable weeds.
6. **Do not harvest the crop until you are positive that the crop has been inspected by an inspector authorized by the CSGA, such as the CFIA.**

The inspector must provide you with a copy of the report of crop inspection. The original of this report is used by the CSGA to appraise the crop and determine its eligibility for certification.

Summary of CSGA Requirements for Seed Crop Certification Circular 6



PROCEDURES FOR THE PRODUCTION OF PEDIGREED SEED CROPS

This portion of the manual explains the general procedures for the production and certification of a pedigreed seed crop.

There are three stages in the production and identification of pedigreed seed. The first is the production of a pedigreed seed crop. If all the requirements for this are met, the CSGA issues a crop certificate. This certifies that the crop meets the requirements for varietal purity and crop standards and shows the pedigreed status (Breeder, Select, Foundation, Registered, Certified) for which the seed is eligible. The second stage is the careful harvesting, handling, conditioning and storage of the seed to preserve purity and quality. The third stage is inspection of the seed to determine its eligibility for a grade under the federal *Seeds Act and Regulations*. Factors in this are germination, freedom from weed seeds and other crop kinds and general quality. If, from this inspection, the seed qualifies for an official grade, the grader, accredited by the CFIA, authorizes printing of official labels confirming the class of seed and the grade. For pedigreed seed handled in bulk, Bulk Storage Facilities, registered by the CFIA, may also issue a certificate which guarantees that the seed meets grading requirements.

Regulations

Growers should study the CSGA regulations in this manual and plan their operations to comply with them. The official current version of the *Canadian Regulations and Procedures for Pedigreed Seed Crop Production* is maintained at: www.seedgrowers.ca. If there are questions as to correct procedures, the grower should contact the CSGA for clarification.

Land Requirements

To produce pedigreed seed crops, land is chosen which meets requirements with respect to previous crops and isolation, as outlined in the regulations for each crop kind. Certain crops grown in previous years may render the land unacceptable for pedigreed seed production of some crops in following years. It is necessary to plan ahead and to keep accurate records of crops grown on land in previous years.

Seed Requirements

The seed used must be of a class eligible to produce an additional class of pedigreed seed (e.g., Certified seed cannot normally be used for pedigreed seed production). These classes are specified in the regulations. In cereals, for example, while a grower wishing to produce Certified seed may normally sow Registered, Certified seed may also be produced from Select or Foundation.

The grower must retain documents to prove the class of seed planted. This document is the *Crop Certificate* if the grower produced the seed. If purchased seed was sown, the documents are the official seed labels which were attached to the bags and/or bulk seed certification documents. The crop certificate and/or all labels are to be retained and available to the inspector when the crop is inspected. The CSGA may also require the grower to forward one or more of the labels to the CSGA.

Application for Crop Inspection and Membership

When the grower has decided on the land and seed to use and has seeded the crop, the grower then completes an *Application for Crop Inspection and Membership* (Form 100), and includes directions to the farm and fields. (Refer to Appendix A.1.) The first two copies of the form are to be mailed to the CSGA in Ottawa with the appropriate national and Branch fees as detailed in the fee schedule accompanying the application form. Cheques or money orders are to be made payable to the Canadian Seed Growers' Association. The grower retains the third copy of the *Application for Crop Inspection and Membership*. The CSGA forwards a copy of the application to authorized inspectors, usually the local office of the CFIA, who contact the grower and conduct inspection of the crop.

In the case of a partnership or corporation, the application form must be signed by a designated signing officer. The CSGA record is kept in the name of the designated person. See glossary for definition of "Partnerships."

The *Application for Crop Inspection and Membership* is available from the CSGA, from CSGA's website at www.seedgrowers.ca, most offices of CFIA, or from the secretary of the provincial and regional branches and associations. Crops for which applications for crop inspection are received by the CSGA after the deadline date may be inspected, but only when inspection resources are available.

Isolation, Roguing and Management

Isolation of seed crop fields, as required by the regulations, should be completed before crop inspection. Roguing must be done when impurities and off-types can be readily identified and before crop inspection. Failure to remove impurities and off-types could result in decline of the crop's pedigree certification. Weed control should be done using recommended control measures.

Crop Inspection and Crop Certificate

It is the grower's responsibility to:

- advise the local authorized inspectors, usually at the local office of the CFIA, prior to crop inspection if the crop is not to be inspected;
- ensure that the crop has been inspected prior to cutting the crop.

A crop certificate will not be issued if a grower harvests or swaths the crop before inspection. The crop should be inspected at a stage of growth when varietal purity is best determined.

The grower should have available for the inspector all the necessary documents and should provide on the application complete directions to field location(s).

After the crop has been inspected, the inspector will complete a *Report of Seed Crop Inspection*, the original of which is forwarded to the CSGA and a copy given to the grower. If the CSGA determines, from its appraisal of this report, that the crop conforms to the required standards, a crop certificate may then be issued.

Assigning a Crop Certificate (Form 179/179A)

The grower of a pedigreed seed crop may assign the crop certificate to an assignee (usually the vendor of the parent seeds or vendor's designate). Assignment of a crop certificate to an assignee means that the grower has directed the CSGA to issue that crop certificate in the names of both the grower and the assignee, to send that crop certificate to the assignee and a notification of issuance to the grower and also to permit the assignee to access all CSGA certification records for that crop.

Except for perennial crops, growers assign crop certificates to an assignee on the *Application for Crop Inspection and Membership* and/or the *Annual Authorization to Assign a Crop Certificate* (CSGA Form 179A). For perennial crops, assignment of crop certificates requires submission to the CSGA of a completed *Authorization to Assign a Crop Certificate* (Form 179), attached to the *Application for Crop Inspection and Membership*, to confirm the term of the assignment. The *Application for Crop Inspection* should be submitted to CSGA in the name of the grower.

Seed harvested from an assigned crop must be processed, graded and labeled according to the federal *Seeds Act and Regulations* before it can be sown for further pedigreed seed crop production by anyone other than the grower of the seed crop. (Refer to Section 1.19.)

Grower's Records

Records should be kept of all pedigreed seed planted and should include quantity of seed and acres planted as well as field identification. Parent seed records should include crop certificate and CSGA sequence numbers from the *Report of Seed Crop Inspection* for a grower's own seed and, for purchased seed, crop certificate and seed certificate numbers from bag labels or bulk seed certification documents.

A grower should keep a complete file of the following documents:

- *Application for Crop Inspection and Membership* (Form 100);
- crop inspection reports;
- crop certificates issued, unless the certificate was assigned to another party;
- seed analysis certificates (purity and germination);
- pedigreed labels (tags) of parent seed planted;
- quantity of seed planted;
- year-to-year records of the grower's farm(s) showing:
 - all fields, with identification numbers;
 - the area of each field;
 - the kind and, if known, the variety of crop grown in each field or land use in that year;
 - on fields used for pedigreed seed production, the crop certificate number of the seed planted and the crop certificate number issued for each pedigreed seed crop produced.

Seed Equipment

All equipment used in the production, handling and processing of pedigreed seed, including seed planters and drills, combines, trucks and seed cleaning or processing equipment, must be cleaned thoroughly before use, particularly if it has been used previously for a different variety or kind of seed or grain. This is essential to prevent contamination.

Seed Storage

Seed from each field should be stored separately from all other fields in cleaned storage facilities. If a grower has more than one field of the same variety, and one field is rejected, all seed of that variety may be rejected for certification if the seed from other fields is stored with it. Seed of different kinds, varieties, or classes must be stored separately.

Grading and Labeling of Seed

Harvested seed for which a crop certificate has been issued is not considered as pedigreed seed eligible for sale with a variety name, unless it is processed, inspected, graded and labeled according to the federal *Seeds Act and Regulations*.

Maintaining the reliable reputation of pedigreed seed requires processing to very high quality standards. Processing to a lower standard involves potential purity risks and could damage the reputation for quality of pedigreed seed. Tags should remain on bags of pedigreed seed until seeding time.

Reasons Why Crops are Declined Pedigreed Status

CSGA records indicate that less than 2 percent of the crops that are inspected each year are declined pedigreed status for one or more of the following reasons:

- ***Other Crop Kinds in excess of the CSGA standards for difficult-to-separate crop kinds*** (e.g., barley plants in a wheat crop). This type of problem is usually the result of volunteer growth from a previous crop grown on the land or the improper cleaning of seeding equipment prior to sowing the field. All crops for pedigree should be intensively rogued throughout the growing season and prior to inspection. Official variety descriptions define the characteristics of a variety.
- ***Off-types or Other Varieties in excess of the maximum impurity standard for the variety*** (e.g., bearded types in a non-bearded variety). This may result from seed contamination, previous crops volunteering, poorly cleaned equipment or mixing of seed lots at seed processing or seeding. All crops for pedigree should be intensively rogued throughout the growing season and prior to inspection.
- ***Previous Land Use not conforming to the regulations*** (e.g., growing a seed crop on land which produced a commercial crop of the same crop kind the previous year). Some crop kinds, especially for plot production, require careful selection of land because of previous land use conditions, which may extend up to 5 prior years. Accurate land history records are essential.
- ***Very Weedy crops*** are declined because the excessive presence of weeds does not allow adequate inspection of the crop for varietal impurities and other crop kinds. Very weedy crops can also damage the quality reputation of pedigreed seed. For some crop kinds, there are specific weeds that must not be present, e.g., Cleavers Bedstraw or Wild Mustard in Canola/Rapeseed/Mustard crops and prohibited noxious weeds in all pedigreed seed crops.
- ***Insufficient Isolation*** of the crop. CSGA regulations require that crops for pedigree be isolated from other crops which might offer a source of varietal or mechanical contamination through cross-pollination or harvesting mistakes.
- ***Seed Planted not Eligible*** results from Certified seed being sown; seed of foreign origin for which pedigree cannot be established or seed not tagged or properly documented according to the federal *Seeds Act and Regulations*.
- ***Crop Cut before Inspection*** results in an automatic decline of pedigree to the crop. Standing crops must be inspected to determine varietal purity by an authorized inspector recognized by the CSGA.
- ***Age of Stand*** may be reason for demotion or decline of pedigree for perennial crops. Tables 6.4.6 and 7.4.5 prescribe the age of stand for grass and legume seed crops.

Demotion to a Lower Pedigree Class

Crops may also be demoted to a lower pedigree class if the problem is not sufficiently severe to cause a decline of pedigree. Before declining or demoting a crop, the CSGA carefully considers all information available. An appeal process for declines and demotions is available to provide new information to the CSGA (Refer to Section 1.9 and Appendix A.8.)

SECTION 3

FOUNDATION, REGISTERED AND CERTIFIED PRODUCTION OF BEAN, FABABEAN, LENTIL, LUPIN, PEA, AND SOYBEAN

In this Section:

- **Bean** includes field, garden, white, coloured, navy or dry edible type Bean.
- **Pea** includes Chickpea.

Section 1, *Regulations for All Pedigreed Seed Crops*, together with the following, constitute the production regulations.

3.1 SEED CLASSES AND GENERATIONS

- 3.1.1 The number of official pedigreed classes is determined by the Breeder of the variety. Normally these are Foundation, Registered and Certified, unless otherwise specified by the Breeder.
- a) Breeder: controlled by the Plant Breeder. No generation limit.
 - b) Select: normally 5 generations. Grown by accredited plot growers.
 - c) Foundation: one generation.
 - d) Registered: one generation.
 - e) Certified: one generation.
- 3.1.2 For Select and Probation plot production, refer to Section 12.
- 3.1.3 For those growers who are not accredited by the CSGA to grow Probation, Select or Foundation plots, and who plant crops with Breeder or Select seed, the CSGA reserves the right to determine the status of the crop and may issue a Registered or Certified crop certificate.
- 3.1.4 A Foundation Soybean crop may be produced by a grower not accredited by the CSGA as a Plot Grower subject to the following requirements:
- a) Parent seed planted to produce the Foundation Soybean seed crop must be Breeder or Select status;
 - b) In three of the past five years, the grower must have produced pedigreed Soybean seed crops;
 - c) The Foundation Soybean seed crop must be produced under a contract and assigned to a Registered Seed Establishment (RSE) within an officially recognized Quality Management System subject to audit by the Canadian Seed Institute; and
 - d) Seedlot(s) from the Foundation Soybean seed crop will be tested, by the grower or the RSE, for variety verification and test results will be available for CSGA audit.

3.2 LAND REQUIREMENTS

- 3.2.1 Crops should not be planted on land where volunteer growth from a previous crop may cause contamination.

3.2.2 Status granted to crops determined by previous crop

- a) Land requirements prevent production of a higher pedigreed status crop, of the same variety, than the pedigreed status of the crop produced on that land the previous year.
- b) Breeder or Select seed of the same variety may be sown in two consecutive years on the same land and the crop will be eligible for Foundation status. The third and fourth consecutive crops of the same variety on the same land, if planted with Breeder, Select or Foundation seed, will be eligible for Registered status.
- c) Foundation seed of the same variety may be sown in two consecutive years on the same land and the crop will be eligible for Registered status. The third and fourth consecutive crops of the same variety on the same land, if planted with Breeder, Select, Foundation or Registered seed, will be eligible for Certified status.
- d) Breeder, Select, Foundation or Registered seed of the same variety may be sown to produce a Certified seed crop on the same land for unlimited consecutive years.

3.2.3 “Land Use” Inspection

Non-pedigreed crops may be inspected to determine the eligibility of the land for pedigreed crop production the following year. Authorized seed crop inspectors conduct these inspections on request at the grower's expense. Refer to Section 1.17.

3.2.4 “Land Use” Verification

If uncertain of the eligibility of land for pedigreed crop production, growers may submit to the CSGA a request for “Land Use Verification Prior to Planting.” (Section 1.17 and Appendix A.9.)

3.2.5 Specific Crop Land Requirements

The basic standards for all crops are set out in Section 1.17. In addition, the following apply to crops in this section:

Table 3.2.5: Specific Crop Land Requirements

Inspected Crop	Must NOT be grown on land which in the previous year produced:
Bean	A non-pedigreed crop of Bean or a different variety of Bean.
Fababean	A non-pedigreed crop of Fababean or a different variety of Fababean.
Lentil	A non-pedigreed crop of Lentil or a different variety of Lentil.
Lupin	A non-pedigreed crop of Lupin or a different variety of Lupin.
Pea	A non-pedigreed crop of Pea or a different variety of Pea.
Soybean	A non-pedigreed crop of Soybean or a different variety of Soybean except as in Section 3.2.6.

3.2.6 Land Requirements for Certified Crops of Herbicide Tolerant Soybean Varieties

The following applies only when a *herbicide tolerant soybean variety* is to be grown for Certified crop status following a soybean crop of a different variety. (*Herbicide tolerant soybean variety* is defined for the purpose of pedigreed seed production as a variety of soybean in which plants of different soybean varieties can be eradicated in the crop by a herbicide.) A *herbicide tolerant soybean variety* for Certified status may be produced on land, which in the previous year produced a soybean crop of a different variety only if the following conditions are met:

- (i) The crop to be Certified is a herbicide tolerant soybean variety.
- (ii) The herbicide applied to the soybean crop for Certified status is a different herbicide than that which was applied to the previous soybean crop.
- (iii) The previous soybean crop was sown with pedigreed seed of a variety not tolerant to the herbicide being applied to the crop for Certified status.

SECTION 6

FOUNDATION, REGISTERED AND CERTIFIED PRODUCTION OF GRASSES

Section 1, *Regulations for All Pedigreed Seed Crops*, together with the following, constitute the production regulations.

6.1 SEED CLASSES AND GENERATIONS

- 6.1.1 Varieties will normally be multiplied through Breeder, Foundation and Certified classes with one generation in each class unless otherwise specified by the Breeder and the official seed certification authority in the state or country of origin.
- 6.1.2 A Foundation seed crop is normally grown from planting Breeder seed.
- 6.1.3 A Registered seed crop is grown from planting Breeder or Foundation seed.
- 6.1.4 A Certified seed crop is grown from planting Breeder, Foundation or Registered seed.
- 6.1.5 Tags from seed planted must be retained for the life of the stand and made available to the crop inspector and/or the CSGA on request.

6.2 LAND REQUIREMENTS

- 6.2.1 Crops should not be planted on land where volunteer growth from a previous crop may cause contamination.
- 6.2.2 **Specific Crop Land Requirements**
The following applies except where chemical control measures acceptable to the CSGA have been taken to eradicate growth from a previous crop of the same crop kind.

Table 6.2.2: Specific Crop Land Requirements

Inspected Crop	Must NOT be grown on land which:
Foundation	In the 5 years prior to seeding produced a non-pedigreed crop of the same crop kind or a crop of a different variety of the same crop kind.
	In the 3 years prior to seeding produced a pedigreed crop of the same variety.
Registered	In the 3 years prior to seeding produced a crop of the same crop kind.
Certified	In the 2 years prior to seeding produced a crop of the same crop kind.
Inspected Crop	May be grown on land which:
Annual Ryegrass – Certified	In the 2 years prior to seeding produced a pedigreed crop of the same variety

6.2.3 No manure or other potential sources of contamination should be applied to the land prior to seeding or during the productive life of the stand.

6.2.4 The land should be free of plants of the same crop kind prior to seeding.

6.3 CROP INSPECTION

The basic standards for all crops are set out in Section 1.7. In addition, the following apply to crops in this section:

6.3.1 It is the grower's responsibility to ensure that crops are inspected by an authorized inspector prior to swathing or harvesting.

6.3.2 A crop that is cut, swathed or harvested prior to crop inspection is not eligible for pedigree.

6.3.3 The crop must be inspected at a stage of growth when varietal purity is best determined. Crops not inspected at the proper stage for best determining varietal purity may be cause for declining pedigreed status.

6.3.4 Crop inspection by an authorized inspector is required each year that a pedigreed seed crop is to be harvested.

6.3.5 Crop inspection shall be made when the crop is headed and before harvest.

6.4 AGE OF STAND

6.4.1 The pedigreed class of the seed crop will vary by crop species, the number of classes designated by the Breeder or the authorized agent of the Breeder and the Age of Stand. (Refer to Table 6.4.6.)

6.4.2 Additional limitations on Age of Stand through which a variety may be multiplied outside the region of adaptation may be specified by the Breeder or the authorized agent of the Breeder.

6.4.3 If rejuvenation is used as a management practice, it will count as a year of production in calculating the Age of Stand.

6.4.4 For most perennial crops there is a specified maximum number of years during which pedigreed seed may be harvested from one planting.

6.4.5 Calculating Age of Stand

- a) For calculating Age of Stand, the first seed crop is the first year in which a seed crop could normally be harvested, irrespective of time or method of planting.
- b) Each calendar year thereafter will be considered a seed crop year. For example: Timothy sown without a companion crop in the fall is normally considered capable of producing seed the following year. Timothy seeded with pedigreed seed of Winter Wheat as a companion crop in the fall will be considered for the first year of seed production in the second year after planting.

SECTION 7

FOUNDATION, REGISTERED AND CERTIFIED PRODUCTION OF ALFALFA, BIRDSFOOT TREFOIL, CLOVER, CROWN VETCH, MILKVETCH, PHACELIA AND SAINFOIN

In this Section:

- **Alfalfa** crops of hybrid alfalfa varieties have additional requirements (refer to Section 14).
- **Clover** includes all types of clover, such as Alsike, Persian, Red (single cut and double cut), Sweet and White types.
- **Phacelia** includes crops of *Phacelia tanacetifolia*.

Section 1, *Regulations for All Pedigreed Seed Crops*, together with the following, constitute the production regulations.

7.1 SEED CLASSES AND GENERATIONS

- 7.1.1 Varieties will normally be multiplied only through Breeder, Foundation and Certified classes with one generation in each class unless otherwise specified by the Breeder and the official seed certification authority in the state or country of origin.
- 7.1.2 A Foundation seed crop is normally grown from planting Breeder seed.
- 7.1.3 A Registered seed crop is grown from planting Breeder or Foundation seed.
- 7.1.4 A Certified seed crop is grown from planting Breeder, Foundation or Registered seed.
- 7.1.5 Tags from the seed planted must be retained for the life of the stand and made available to the authorized seed crop inspector and/or the CSGA on request.

7.2 LAND REQUIREMENTS

- 7.2.1 Crops should not be planted on land where volunteer growth from a previous crop may cause contamination.
- 7.2.2 **Specific Crop Land Requirements**
The following applies except where chemical control measures acceptable to the CSGA have been taken to eradicate growth from a previous crop of the same crop kind.

Table 7.2.2: Specific Crop Land Requirements

Inspected Crop	Must NOT be grown on land which:
Foundation	In the 5 years prior to seeding produced a non-pedigreed crop of the same crop kind or a crop of a different variety of the same crop kind.
	In the 3 years prior to seeding produced a pedigreed crop of the same variety.
Registered	In the 3 years prior to seeding produced a crop of the same crop kind.
Certified	In the 2 years prior to seeding produced a crop of the same crop kind.

7.2.3 No manure or other potential sources of contamination should be applied to the land prior to seeding or during the productive life of the stand.

7.2.4 The land should be free of plants of the same crop kind prior to seeding.

7.3 CROP INSPECTION

The basic standards for all crops are set out in Section 1.7. In addition, the following apply to crops in this section:

7.3.1 It is the grower's responsibility to ensure that crops are inspected by an authorized crop inspector prior to swathing or harvesting.

7.3.2 A crop that is cut, swathed or harvested prior to crop inspection is not eligible for pedigree.

7.3.3 The crop must be inspected at a stage of growth when varietal purity is best determined. Crops not inspected at the proper stage for best determining varietal purity may be cause for declining pedigreed status.

7.3.4 Crop inspection by an authorized crop inspector is required each year that a pedigreed seed crop is to be harvested.

7.3.5 Crop inspection shall be made when the crop is in bloom and before harvest.

7.4 AGE OF STAND

7.4.1 The pedigreed class of the seed crop will vary by crop species, the number of classes designated by the Breeder or the authorized agent of the Breeder and the Age of Stand. (Refer to Table 7.4.5.)

7.4.2 Additional limitations on Age of Stand through which a variety may be multiplied outside the region of adaptation may be specified by the Breeder or the authorized agent of the Breeder.

7.4.3 For most perennial crops there is a specified number of years during which pedigreed seed may be harvested from one planting.

7.4.4 Calculating Age of Stand

- a) If rejuvenation is used as a management practice, it will count as a year of production in calculating the Age of Stand.
- b) For calculating Age of Stand, the first seed crop is the first year in which a seed crop could normally be harvested, irrespective of time or method of planting.
- c) Each calendar year thereafter will be considered a seed crop year. For example: Alfalfa sown without a companion crop in the fall is normally considered capable of seed production the following year. Alfalfa seeded with pedigreed seed of Winter Wheat as a companion crop in the fall will be considered for the first year of seed production in the second year after planting.

Table 8.5.1: Minimum Isolation Distances Required for Pedigreed Hybrid Corn

Distance separating seed crop (female) parent row from contaminating corn	Number of pollen (male parent) Border Rows to be provided is:	
	Total acres of field unit for seed crop inspection	
	Less than 20 acres	20 acres or more
Less than 90 ft (27.5 m)	24 ¹	16 ²
³ ≥ 90 ft (27.5 m)	18	14
≥ 150 ft (45.7 m)	16	12
≥ 210 ft (64.0 m)	14	10
≥ 270 ft (82.3 m)	12	8
≥ 330 ft (100.6 m)	10	6
≥ 410 ft (125.0 m)	8	4
≥ 490 ft (149.4 m)	6	2
≥ 570 ft (173.7 m)	4	1
≥ 660 ft (201.2 m)	0	0
¹ Minimum of 60 ft (18.3 m) including border rows.		
² Minimum of 40 ft (12.2 m) including border rows.		
³ ≥ means greater than or equal to		

- b) The concept of adjacent fields is considered to be more satisfactory than small separated fields, even with full isolation. Adjacent seed fields using the same pollen (male) parent may be considered as one crop for isolation purposes and the combined area of adjacent seed fields may be used to determine the required border rows.
- c) A farm lane, or similar gap, must exceed 10 meters (33 feet) to be considered as dividing a field for isolation purposes.
- d) To accommodate a public road, railroad, etc., a vacant strip not more than 20 meters (66 feet) wide is acceptable between the required border rows, provided there are at least 4 border rows within the seed field and the remaining border rows are outside the vacant strip.
- e) A vacant turning strip not more than 10 meters (33 feet) wide across the end of the rows between the seed (female) parent and the required border rows in the same field is acceptable.
- f) Different pollination dates are permitted for modifying isolation distances provided there are no receptive silks in the seed (female) parent at the same time pollen is being shed by the contaminating corn.
- g) In the production of Foundation Inbred Lines or Foundation Single-Crosses, an isolation of 200 meters (656 feet) is required from other contaminating corn that is shedding pollen at the same time as the inspected pedigreed seed crop.

8.5.2 Border Rows

- a) Border rows must be planted with the same seed as the pollen (male) parent rows.
- b) Border rows must be planted on land managed by the producer.
- c) Border rows must shed pollen simultaneously with the pollen (male) parent and silk emergence of the seed (female) parent.
- d) Spacing between border rows shall not be less than 40 cm (15 inches) in width.
- e) Plant density of border rows on a per acre basis shall not be less than 80% of that of the pollen (male) parent in the seed field.
- f) Border rows are not required when the seed (female) parent is more than 200 meters (656 feet) from the contaminating corn.

8.5.3 Maximum Impurity Standards

- a) Volunteer plants must not exceed 1 plant in 2,000 plants in the seed crop immediately prior to detasselling or the commencement of the pollination period.
- b) A crop may not be eligible for pedigreed status if more than 1 plant in 1,000 (0.1%) obvious off-type plants in the pollen (male) parent have shed pollen. Variants may be specified by the responsible Breeder and are not considered impurities unless reported in excess of the acceptable level specified.
- c) A crop may not be eligible for pedigreed status if more than 1 plant in 1,000 (0.1%) obvious off-type plants are found in the seed (female) parent at the time of last inspection. Variants may be specified by the responsible Breeder and are not considered impurities unless reported in excess of the acceptable level specified.

8.5.4 Detasselling

- a) When 5% or more seed (female) parent plants have receptive silks, a crop may not be eligible for pedigreed status if on any one inspection more than 1% of the seed (female) parent plants possess tassels which have shed or are shedding pollen, or if the total for three inspections on different dates exceeds 2%.
- b) When 5% or more seed (female) parent plants have receptive silks, sucker tassels and/or portions of tassels on the main plants will be counted as shedding pollen when 5 cm (2 inches) or more of the central stem and/or the side branches have their anthers extended from their glumes and are shedding pollen.

8.5.5 Male Sterile (Female) Parent

- a) A male sterile seed (female) parent can be used to produce Certified hybrid corn seed by either of two methods:
 - (i) by blending seed produced by the sterile seed (female) parent with seed produced by the fertile seed (female) parent, where the ratio of male sterile (female) parent seed shall not exceed 2 to 1; or
 - (ii) by using a pollen (male) parent which contains a specific restorer line or lines so that not fewer than one-third of the plants grown from the resulting hybrid will produce pollen which appears normal in all respects.

12.4.3 Previous Land Use

- a) The basic standards for all crops are set out in Section 1.17. Note that land use inspections are not used for subsequent production of Select, Probation or Foundation Plots because the land use inspections are considered non-pedigreed crops. In addition to the basic standards, the following apply to crops in this section:

Table 12.4.3: Specific Crop Land Requirements

Select Plot Crop	Land Requirements
Barley (Spring and Winter)	Must NOT be grown on land which:
	<ul style="list-style-type: none"> • In the previous year produced: <ul style="list-style-type: none"> - a Foundation, Registered or Certified crop of Barley; • In either of the preceding 2 years produced: <ul style="list-style-type: none"> - a non-pedigreed crop of Barley, Buckwheat, Durum, Oat, Rye, Triticale, or Wheat; - a crop of a different variety of Barley; - a Certified crop of Barley.
Bean	Must NOT be grown on land which:
	<ul style="list-style-type: none"> • In the previous year produced: <ul style="list-style-type: none"> - a non-pedigreed Bean crop; - a crop of a different variety of Bean; - a Foundation, Registered or Certified crop of Beans.
Buckwheat	Must NOT be grown on land which:
	<ul style="list-style-type: none"> • In the previous year produced: <ul style="list-style-type: none"> - a Foundation, Registered or Certified crop of Buckwheat; • In either of the preceding 2 years produced: <ul style="list-style-type: none"> - a non-pedigreed crop of Buckwheat; - a crop of a different variety of Buckwheat; - a Certified crop of Buckwheat.
Canaryseed	Must NOT be grown on land which:
	<ul style="list-style-type: none"> • In the previous year produced: <ul style="list-style-type: none"> - a Foundation, Registered or Certified crop of Canaryseed; • In either of the preceding 2 years produced: <ul style="list-style-type: none"> - a non-pedigreed crop of Canaryseed or Flax; - a Certified crop of Canaryseed.
Durum	Must NOT be grown on land which:
	<ul style="list-style-type: none"> • In the previous year produced: <ul style="list-style-type: none"> - a Foundation, Registered or Certified crop of Durum. • In either of the 2 preceding years produced: <ul style="list-style-type: none"> - a crop of Wheat; - a non-pedigreed crop of Barley, Buckwheat, Durum, Oat, Rye, or Triticale; - a crop of a different variety of Durum; - a Certified crop of Durum.

Table 12.4.3 (continued): Specific Crop Land Requirements

Select Plot Crop	Land Requirements
Fababean	Must NOT be grown on land which:
	<ul style="list-style-type: none"> • In the previous year produced: <ul style="list-style-type: none"> - a non-pedigreed Fababean crop; - a crop of a different variety of Fababean; - a Foundation, Registered or Certified crop of Fababeans.
Flax	Must NOT be grown on land which:
	<ul style="list-style-type: none"> • In the previous year produced: <ul style="list-style-type: none"> - a Foundation, Registered or Certified crop of Flax; • In either of the preceding 2 years produced: <ul style="list-style-type: none"> - a non-pedigreed crop of Canaryseed or Flax; - a crop of a different variety of Flax; - a Certified crop of Flax.
Lentil	Must NOT be grown on land which:
	<ul style="list-style-type: none"> • In the previous year produced a Lentil crop.
Lupin	Must NOT be grown on land which:
	<ul style="list-style-type: none"> • In the previous year produced a Lupin crop.
Oat	Must NOT be grown on land which:
	<ul style="list-style-type: none"> • In the previous year produced: <ul style="list-style-type: none"> - a Foundation, Registered or Certified crop of Oat; • In either of the preceding 2 years produced: <ul style="list-style-type: none"> - a non-pedigreed crop of Barley, Buckwheat, Durum, Oat, Rye, Triticale or Wheat; - a crop of a different variety of Oat; - a Certified crop of Oat.
Pea	Must NOT be grown on land which:
	<ul style="list-style-type: none"> • In the previous year produced a Pea crop.
Rye (Spring and Winter)	Must NOT be grown on land which:
	<ul style="list-style-type: none"> • In the previous year produced: <ul style="list-style-type: none"> - a Foundation, Registered or Certified crop of Rye; • In either of the preceding 2 years produced: <ul style="list-style-type: none"> - a non-pedigreed crop of Barley, Buckwheat, Durum, Oat, Triticale, or Wheat; • In any of the preceding 3 years produced: <ul style="list-style-type: none"> - a non-pedigreed crop of Rye or a different variety of Rye; - a Certified crop of Rye.
Soybean	Must NOT be grown on land which:
	<ul style="list-style-type: none"> • In the previous year produced: <ul style="list-style-type: none"> - a non-pedigreed Soybean crop; - a crop of a different variety of Soybean; - a Foundation, Registered or Certified crop of Soybeans.

Table 12.4.3 (continued): Specific Crop Land Requirements

Select Plot Crop	Land Requirements
Triticale (Spring and Winter)	Must NOT be grown on land which:
	<ul style="list-style-type: none"> • In the previous year produced: <ul style="list-style-type: none"> - a Foundation, Registered or Certified crop of Triticale; • In either of the preceding 2 years produced: <ul style="list-style-type: none"> - a non-pedigreed crop of Barley, Buckwheat, Durum, Oat, Rye or Wheat; • In any of the preceding 3 years produced: <ul style="list-style-type: none"> - a non-pedigreed crop of Triticale or a different variety of Triticale; - a Certified crop of Triticale.
Wheat (Winter)	Must NOT be grown on land which:
	<ul style="list-style-type: none"> • In either of the preceding 2 years produced: <ul style="list-style-type: none"> - a non-pedigreed crop of Barley, Buckwheat, Durum, Oat, Rye, Triticale or Wheat; - a crop of a different* variety of Wheat; - a Certified crop of Wheat.
Wheat (Spring)	Must NOT be grown on land which:
	<ul style="list-style-type: none"> • In the previous year produced: <ul style="list-style-type: none"> - a Foundation, Registered or Certified crop of Wheat; • In either of the preceding 2 years produced: <ul style="list-style-type: none"> - a crop of Durum; - a non-pedigreed crop of Barley, Buckwheat, Oat, Rye, or Triticale; • In any of the preceding 3 years produced: <ul style="list-style-type: none"> - a non-pedigreed crop of Wheat or a different* variety of Wheat; - a Certified crop of Wheat.

* In crops of pest tolerant varietal blends, “different” variety means a variety other than the varieties prescribed in the description of the pest tolerant variety.

12.5 CROP INSPECTION

The basic standards for all crops are set out in Section 1.7. In addition, the following apply to crops in this section:

12.5.1 It is the grower’s responsibility to ensure that plots are inspected by an authorized inspector prior to swathing or harvesting.

12.5.2 A plot that is cut, swathed or harvested prior to crop inspection is not eligible for pedigree.

12.5.3 The plot must be inspected at a stage of growth when varietal purity is best determined. Crops not inspected at the proper stage for best determining varietal purity may be cause for declining pedigreed status.

12.5.4 All plots must be inspected by an authorized inspector at least once before harvest.

12.5.5 **Cereal** plots must be headed.

12.5.6 **Soybean** plots must be inspected at maturity.

12.5.7 **Fababean** plots must be inspected either at flowering or at maturity depending on the type.

12.5.8 **Bean** plots must be inspected twice before harvest by an authorized inspector. The first inspection must be made between 10 and 20 days after full bloom; the second inspection must be made at maturity.

12.5.9 All other plots must be in bloom.

12.6 CROP STANDARDS

12.6.1 Isolation

- a) Except for Bean plots for which this is not permitted, a 1 meter (3 feet) isolation strip is required between plots of the same variety and between plots and crops eligible for Foundation status providing that Foundation status crops were planted:
 - (i) with seed of equivalent pedigreed status to that of the plot; and
 - (ii) on land that meets equivalent land use requirements of that plot.
- b) The isolation strip must not be a source of contamination.
- c) Plots of Barley, Buckwheat, Canaryseed, Durum, Flax, Oat, Rye, Triticale and Wheat need not be isolated from crops of Bean, Fababean, Lentil, Lupin, Pea and Soybean.
- d) Staking of a plot perimeter is permitted, except for Bean plots, in lieu of the 1 meter (3 feet) isolation strip required in 12.6.1 a), if it meets CSGA requirements for plot staking, which include the following:
 - (i) Stake locations must be clearly identified on the *Application for Crop Inspection* map(s) that are submitted to CSGA by the deadline date for that crop kind.
 - (ii) Staking must include at least 8 stakes that are clearly visible and clearly define the perimeter of the plot at the time of inspection.
 - (iii) Impurities reported within a plot's isolation distance required in Table 12.6.2 are considered within the plot for CSGA appraisal purposes.

Table 12.6.2: Minimum Isolation Distances Required Between Select Plots and Other Crops

Note: A “Pedigreed crop of the same variety” is a crop that is inspected and eligible for pedigreed status. It does not mean a crop planted with pedigreed seed for commercial production.

Select Plot Crop	Other Crop	Isolation Distance Required
Barley, Canaryseed, Chickpea, Durum, Fababean, Flax, Lentil, Lupin, Pea, Soybean, Wheat	- Pedigreed crop of the same variety or strain.	3 meters (10 feet)
	- Crop of a different kind, the seeds of which are difficult to separate from the plot seed	
	- Crop of a different* variety, strain, species or type of the same crop kind - Non-pedigreed crop of the same kind - Crop of the same variety but contaminated with other varieties or types of the same kind as the inspected plot	10 meters (33 feet)
Oat	- Pedigreed crop of the same variety or strain.	3 meters (10 feet)
	- Crop of a different kind, the seeds of which are difficult to separate from the plot seed	
	- Crop of a different variety, strain, species or type of the same crop kind - Non-pedigreed crop of the same kind - Crop of the same variety but contaminated with other varieties or types of the same kind as the inspected plot	10 meters (33 feet)
Hulless or Naked Oat	- Any crop contaminated with Wild Oat	20 meters (66 feet)
Bean	- Crop of a different kind, the seeds of which are difficult to separate from the plot seed	3 meters (10 feet)
	- Pedigreed crop of the same variety or strain - Crop of a different variety, strain, species or type of the same crop kind - Non-pedigreed crop of the same kind - Crop of the same variety but contaminated with other varieties or types of the same kind as the inspected plot	30 meters (100 feet)

Table 12.6.2 (continued): Minimum Isolation Distances Required Between Select Plots and Other Crops

Select Plot Crop	Other Crop	Isolation Distance Required
Buckwheat Rye	- Pedigreed crop of the same variety or strain. - Crop of a different kind, the seeds of which are difficult to separate from the plot seed	3 meters (10 feet)
	- An adjacent crop that has more than 0.5% plants of the same kind as the inspected plot	150 meters (492 feet)
	- Crop of a different variety, strain, species or type of the same crop kind - Non-pedigreed crop of the same kind - Crop of the same variety but contaminated with other varieties or types of the same kind as the inspected plot	400 meters (1,320 feet)
Triticale	- Pedigreed crop of the same variety or strain. - Crop of a different kind, the seeds of which are difficult to separate from the plot seed	3 meters (10 feet)
	- Crop of a different variety, strain, species or type of the same crop kind - Non-pedigreed crop of the same kind - Crop of the same variety but contaminated with other varieties or types of the same kind as the inspected plot	30 meters (100 feet)

* In crops of pest tolerant varietal blends, "different" variety means a variety other than the varieties prescribed in the description of the pest tolerant variety.

12.6.3 Weeds

- a) The plot must show evidence of good weed control and should be free of Prohibited and Primary noxious weeds.
- b) Very weedy plots may be declined pedigreed status.

12.6.4 Maximum Impurity Standards

The inspector makes 6 counts (20,000 plants each) in the plot to determine the number of impurities. The resulting average must not exceed the maximum impurity standards.

- a) The plot must not contain more than 1 plant in approximately 20,000 plants of another variety or off-type unless variants are specified by the responsible Breeder.
- b) In a **Soybean** plot, the plot must not contain more than 2 plants in approximately 20,000 plants of another variety or off-type unless otherwise specified by the Breeder of the variety.
- c) The plot must not contain more than 1 plant in approximately 20,000 plants of other crop kinds difficult to separate from the seed produced in the plot.

SECTION 14

FOUNDATION, REGISTERED AND CERTIFIED PRODUCTION OF OTHER CROPS

In addition to the crop kinds in this Section, Regulations are available from the CSGA for pedigreed seed crop production of other crops.

- 14.1 Millet
- 14.2 Sorghum
- 14.3 Hybrid Sorghum
- 14.4 Hybrid Alfalfa
- 14.5 Coriander
- 14.6 Hybrid Pearl Millet
- 14.7 Niger
- 14.8 Peanut
- 14.9 Fenugreek
- 14.10 Camelina
- 14.11 Hybrid Asparagus
- 14.12 Sugar Beet

SECTION 14.4

PRODUCTION OF HYBRID ALFALFA

In this Section:

- **Hybrid Alfalfa** includes all varieties of Hybrid Alfalfa (*Medicago sativa*) but not interspecific hybrids of *Medicago sativa* and *Medicago falcata*.

Section 1, *Regulations for All Pedigreed Seed Crops*, together with the following, constitute the production regulations.

14.4.1 SEED CLASSES AND GENERATIONS

- 14.4.1.1 The number of official pedigreed classes is determined by the Breeder of the variety and either Select Synthetic or Foundation status parental material is normally planted to maintain male sterile parent material and to produce Certified hybrid crops.

Currently in Canada, hybrid alfalfa production involves the blending of parental seed lines in specific ratios. Select Synthetic or Foundation seed of male and female lines are blended in a specific proportion under the supervision of the plant breeder. The ratio of male sterile and either maintainer line or male fertile line shall not be more than 2:1.

14.4.2 LAND REQUIREMENTS

- 14.4.2.1 Hybrid Alfalfa crops must not be grown on land which in the previous two (2) years grew a non-pedigreed crop of Alfalfa or a different variety of Alfalfa.

14.4.3 CROP INSPECTION

The basic standards for all crops are set out in Section 1.7. In addition, the following apply to crops in this section:

- 14.4.3.1 It is the grower's responsibility to ensure that crops are inspected by an authorized inspector prior to swathing or harvesting.
- 14.4.3.2 A crop that is cut, swathed or harvested prior to crop inspection is not eligible for pedigree.
- 14.4.3.3 The crop must be inspected at a stage of growth when varietal purity is best determined. Crops not inspected at the proper stage for best determining varietal purity may be cause for declining pedigreed status.
- 14.4.3.4 A crop inspection shall be made during the bloom stage, after 75% of the plants are showing one or more blossoms but before most seed has set. At the time of crop inspection, the Pollen Production Index (PPI) of the male sterile (female) parent must be determined as explained in the Specific Requirements in Section 14.4.5.1.

14.4.4 CROP STANDARDS

14.4.4.1 Isolation

- a) Hybrid Alfalfa female parent crops for Foundation status must be isolated by a distance of 400 meters (1312 feet) from other varieties of Alfalfa or from a non-pedigreed crop of Hybrid Alfalfa.
- b) Hybrid Alfalfa crops for Certified status, or male parent crops for Foundation status, must be isolated by a distance of 200 meters (656 feet) from other varieties of Alfalfa or from a non-pedigreed crop of Hybrid Alfalfa.
- c) In producing either Foundation parent material or Certified hybrid crops of the same variety, at least 2 metres (6 feet) isolation is required between crops.
- d) The required isolation must be provided prior to the time of flowering and crop inspection.

14.4.4.2 Weeds

- a) All crops for pedigree must be free of Prohibited noxious weeds.
- b) Very weedy crops may be declined pedigreed status.

14.4.4.3 Maximum Impurity Standards

The maximum impurity levels outlined in Table 14.1.4.3 apply, unless variants are specified by the responsible Breeder.

Table 14.4.4.3: Maximum Impurity Standards

Impurity	Maximum Permitted	
	Foundation	Certified
Other varieties of Alfalfa	1 per 1,000 plants	1 per 1,000 plants

14.4.5 SPECIFIC REQUIREMENTS

14.4.5.1 Pollen Production Index

During crop inspection, at the bloom stage after 75% of the plants are showing one or more blossoms but before most seed has set, the Pollen Production Index (PPI) of the male sterile (female) parent must be determined. This is done by examining untripped flowers on 200 plants. Plants must be sampled in a manner that is representative of the crop and inspectors classify each of the 200 plants as:

- Male Sterile (MS) - no pollen
- Partially Male Sterile (PMS) - trace amount of pollen
- Partially Fertile (PF) - substantially less than normal amount of pollen
- Fertile (F) - normal pollen

To determine the PPI, the number of plants in each class of fertility must be multiplied by a factor, the results all classes are added together and divided by the total number of plants examined to come up with an Pollen Production Index (PPI) value for the crop. The factors are as follows:

MS multiply the number of plants by 0
 PMS multiply the number of plants by 0.1
 PF multiply the number of plants by 0.6
 F multiply the number of plants by 1

As outlined in Table 14.4.5.1 below, the maximum allowable Pollen Production Index (PPI) for a Foundation crop would be 0.14. For crops with separate male and female plants, the maximum allowable PPI for a Certified crop with a 95% hybridity standard is 0.06 and the maximum allowable PPI for a Certified crop with a 75% hybridity standard is 0.42. For composite crops of male and female plants, the maximum allowable PPI for a Certified crop with a 75% hybridity standard is 0.25.

If less than 68% of the plants are male sterile, then no further examinations are required because the crop will not meet CSGA requirements. If more than 80% of the plants are male sterile, no further examinations are required because the crop will clearly meet CSGA requirements. If between 68% and 80% of the plants are male sterile, then another 100 plants shall be sampled and included in the calculation.

Table 14.4.5.1: Maximum Pollen Production Index (PPI)

Inspected Crop	Parent Seed Planted	Maximum PPI Index
Foundation	(A)* in rows	0.14
Certified	separate female and male	
95% hybrid	(A)* x (B)* in rows	0.06
75% hybrid	(A)* x (B)* in rows	0.42
	composite of female and male	
75% hybrid	$((A)* \times (B)*) + (C)*$	0.25

* Parent Seed Identity

SECTION 14.5

FOUNDATION, REGISTERED AND CERTIFIED PRODUCTION OF CORIANDER

In this Section:

- **Coriander** includes all varieties of Coriander (*Coriandrum sativum*).

Section 1, *Regulations for All Pedigreed Seed Crops*, together with the following, constitute the production regulations.

14.5.1 SEED CLASSES AND GENERATIONS

- 14.5.1.1 The number of official pedigreed classes is determined by the Breeder of the variety and are normally Foundation, Registered and Certified.
- 14.5.1.2 For Select and Probation plot production, refer also to the plot requirements of Section 12. Land and crop inspection requirements for plot production are the same as for Foundation status crops.
- 14.5.1.3 For those growers who are not accredited by the CSGA to grow Probation, Select or Foundation plots, and who plant crops with Breeder or Select seed, the CSGA reserves the right to determine the status of the crop and may issue a Registered or Certified crop certificate.

14.5.2 LAND REQUIREMENTS

- 14.5.2.1 Coriander crops for Foundation or Registered pedigreed status must not be grown on land which in the preceding 5 years grew a different variety or non-pedigreed crop of Coriander.
- 14.5.2.2 Coriander crops for Certified pedigreed status must not be grown on land which in the preceding 3 years grew a different variety or non-pedigreed crop of Coriander.

14.5.3 CROP INSPECTION

The basic standards for all crops are set out in Section 1.7. In addition, the following apply to crops in this section:

- 14.5.3.1 It is the grower's responsibility to ensure that crops are inspected by an authorized inspector prior to swath or harvesting.
- 14.5.3.2 A crop that is cut, swathed or harvested prior to crop inspection is not eligible for pedigree.
- 14.5.3.3 The crop must be inspected at a stage of growth when varietal purity is best determined. Crops not inspected at the proper stage for best determining varietal purity may be cause for declining pedigreed status.
- 14.5.3.4 A field inspection should be made during the bloom stage after at least 50 percent of the plants are showing one or more blossoms.

14.5.4 **CROP STANDARDS**

14.5.4.1 **Isolation**

- a) Coriander crops for Foundation or Registered status must be isolated by a distance of 400 meters (1312 feet) from other varieties of Coriander or from a non-pedigreed crop of Coriander.
- b) Coriander crops for Certified status must be isolated by a distance of 200 meters (656 feet) from other varieties of Coriander or from a non-pedigreed crop of Coriander.
- c) The required isolation must be provided prior to the time of flowering and crop inspection.

14.5.4.2 **Weeds**

- a) All crops for pedigree must be free of Prohibited noxious weeds.
- b) Very weedy crops may be declined pedigreed status.
- c) Wild Buckwheat (*Polygonum convolvulus*) plants can produce seeds that are difficult to separate from Coriander. Seed crops with excessive numbers of difficult to separate weeds or other crop kinds may be declined pedigreed status.

14.5.4.3 **Maximum Impurity Standards**

The maximum impurity levels outlined in Table 14.5.4.3 apply, unless variants are specified by the responsible Breeder.

Table 14.5.4.3: Maximum Impurity Standards

Impurity	Maximum Permitted in Each Class	
	Foundation and Registered	Certified
Other varieties of Coriander	1 per 30 sq. metres	1 per 10 sq. metres

SECTION 14.11

CERTIFIED PRODUCTION OF HYBRID ASPARAGUS

In this Section:

- **Hybrid Asparagus** includes all varieties of hybrid asparagus (*Asparagus officinalis*).

Regulations for production of self-pollinated Asparagus (*Asparagus officinalis*) are in Section 19.

Section 1, *Regulations for All Pedigreed Seed Crops*, together with the following, constitute the production regulations.

14.11.1 SEED CLASSES AND GENERATIONS

14.11.1.1 The male and female planting stock used to establish Certified status hybrid asparagus crops must be tissue culture produced plants, or vegetative propagules of such plants, that have been produced in compliance with the production, maintenance and multiplication requirements of the CFIA directive (eg. D-97-08) for certification of Nuclear Stock class seed potatoes, and with the requirements of the recognized Breeder responsible for maintaining the variety.

14.11.1.2 Certification of hybrid asparagus is limited to Certified status crops

14.11.2 LAND REQUIREMENTS

14.11.2.1 Hybrid Asparagus crops must not be grown on land which in the previous year grew Asparagus. The land must also be free of volunteer asparagus plants at the time of planting.

14.11.3 CROP INSPECTION

The basic standards for all crops are set out in Section 1.7. In addition, the following apply to crops in this section:

14.11.3.1 It is the grower's responsibility to ensure that crops are inspected by an authorized inspector prior to harvesting.

14.11.3.2 A crop that is harvested prior to crop inspection is not eligible for pedigree.

14.11.3.3 The crop must be inspected at a stage of growth when varietal purity is best determined. Crops not inspected at the proper stage for best determining varietal purity may be cause for declining pedigree status.

14.11.3.4 At least one field inspection shall be made of Hybrid Asparagus crops during the mid-bloom stage.

14.11.4 CROP STANDARDS

14.11.4.1 Isolation

- a) Hybrid Asparagus crops that are not produced in an enclosed protected environment, such as greenhouses, mesh tents or cages, and Hybrid Asparagus crops produced in a protected environment that is not in good condition, must be at least 1610 meters (5280 feet) from any other asparagus crops except pedigreed crops produced from the same pollen bearing (male) parent planting stock, which require a minimum isolation distance of at least 3 meters (10 feet).
- b) Hybrid Asparagus crops that are produced in an enclosed protected environment, such as greenhouses, mesh tents or cages, that is in good condition, must meet the following isolation requirements:
 - i) Crops must be in an enclosure that is located at least 50 meters (164 feet) from any other asparagus crops except pedigreed crops produced from the same pollen bearing (male) parent planting stock or other pedigreed seed crops in enclosed protected environments that are in good condition, which require a minimum isolation distance of at least 3 meters (10 feet).
 - ii) Each enclosure may not contain plants of more than one pollen bearing (male) parent line.
- c) The required isolation must be provided prior to flowering and crop inspection.

14.11.4.2 Weeds

- a) All crops for pedigree must be free of Prohibited noxious weeds.
- b) Very weedy crops may be declined pedigree status.

14.11.4.3 Maximum Impurity Standards

- a) During flowering or pollination, the maximum number of plants of other varieties, off-types or volunteers permitted is ten (10) plants in approximately 10,000 plants in both male and female plants of the inspected crop.
- b) The inspector makes 6 counts (10,000 plants each) in the field to determine the number of impurities. The resulting average must not exceed the maximum impurity standard.
- c) Impurities in pedigreed crops should be removed prior to crop inspection.

14.11.5 SPECIFIC REQUIREMENTS

- 14.11.5.1 CSGA may require submission of a seed sample for varietal identity verification testing.

SECTION 14.12

FOUNDATION AND CERTIFIED PRODUCTION OF SUGAR BEET

In this Section:

- **Sugar Beet** includes all varieties of sugar beet (*Beta vulgaris*).

Section 1, *Regulations for All Pedigreed Seed Crops*, together with the following, constitute the production regulations.

14.12.1 SEED CLASSES AND GENERATIONS

- a) Breeder: controlled by the Breeder
- b) Foundation: one generation
- c) Certified: one generation

14.12.2 LAND REQUIREMENTS

14.12.2.1 Sugar Beet crops for foundation or Certified status must not be planted on land which has been planted with or produced any *Beta vulgaris* during the preceding 5 years (60 months from harvest to planting).

14.12.3 CROP INSPECTION

The basic standards for all crops are set out in Section 1.7. In addition, the following apply to crops in this section:

- 14.12.3.1 It is the grower's responsibility to ensure that crops are inspected by an authorized inspector prior to harvesting.
- 14.12.3.2 A crop that is harvested prior to crop inspection is not eligible for pedigree.
- 14.12.3.3 The crop must be inspected at a stage of growth when varietal purity is best determined. Crops not inspected at the proper stage for best determining varietal purity may be cause for declining pedigreed status.
- 14.12.3.4 Two field inspections shall be made of Sugar Beet crops. First inspections shall be made when plants are in the early leaf stage and second inspections are at the flowering stage.
- 14.12.3.5 Sugar Beet crops must be planted in distinct rows.

14.12.4 CROP STANDARDS**14.12.4.1 Isolation**

- a) Under optimum conditions, not more than 3 plants per square meter of harmful contaminants (other Sugar Beet varieties and all sub-species of genus *Beta*) are permitted within the required isolation distance(s) adjacent to the inspected crops. The conditions of each crop are assessed by the CSGA which may alter this standard, usually by reducing the number of contaminant plants permitted per square meter, according to the contamination risks involved.
- b) Harmful contamination within the required isolation distance, depending on density, location and distance from the inspected crop, may be cause for declining pedigreed status. Harmful contaminants for crop certification include other Sugar Beet varieties and all other sub-species of genus *Beta*. Examples include Fodder Beet, Mangels, Red Beet and Swiss Chard.
- c) The required isolation in Table 14.12.4.2 must be provided prior to the time of flowering and crop inspection.

Table 14.12.4.2: Minimum Isolation Distances Required from an Inspected Sugar Beet Crop to Other Crops

Inspected Crop	Other Crops	Minimum Isolation Distance Required
Foundation	Crops planted with Foundation seed of the same pollen source	3 meters (10 feet), provided the pedigree of the Foundation seed used can be established and the prescribed isolation distance is free from harmful contamination (i.e. other species which can cross pollinate with the inspected crop)
	Non-pedigreed Sugar Beet pollen source	1525 meters (5000 feet) or more, as specified by the Breeder
	Other or unknown pollinator of genus <i>Beta</i> (including fodder beet, mangel, red beet, swiss chard)	3110 meters (10200 feet)
Foundation -Varieties with Monogerm pollinator	- Monogerm pollinator sources	1525 meters (5000 feet)
Certified	Crops planted with Foundation seed of the same pollen source	3 meters (10 feet), provided the pedigree of the Foundation seed used can be established and the prescribed isolation distance is free from harmful contamination (i.e. other species which can cross pollinate with the inspected crop)
	Non-pedigreed Sugar Beet pollen source	975 meters (3200 feet) or more, as specified by the Breeder
	Other or unknown pollinator of genus <i>Beta</i> (including fodder beet, mangel, red beet, swiss chard)	2440 meters (8000 feet)
Certified -Varieties with Monogerm pollinator	- Monogerm pollinator sources	1525 meters (5000 feet)

14.12.4.2 Weeds

- a) All crops for pedigree must be free of Prohibited noxious weeds.
- b) Very weedy crops may be declined pedigreed status.

14.12.4.3 Maximum Impurity Standards

- a) During flowering or pollination, the maximum number of plants of other varieties, off-types or volunteers of genus *Beta* plants permitted in Certified status crops is fifty (50) plants in approximately 10,000 plants of the inspected crop (i.e. 0.5%).
- b) During flowering or pollination, no plants of other varieties, off-types or volunteers of genus *Beta* plants are permitted in Foundation status crop (i.e. 0.0%).
- c) The inspector makes 6 counts (10,000 plants each) in the field to determine the number of impurities. The resulting average must not exceed the maximum impurity standard.
- d) Impurities in pedigreed crops should be removed prior to crop inspection.

14.12.5 SPECIFIC REQUIREMENTS

- 14.12.5.1 CSGA may require submission of a seed sample for varietal identity verification testing.

APPENDIX A

DOCUMENTS

In this Appendix:

Documents that are used in pedigreed seed crop certification are described in Appendix A of the *CSGA Regulations and Procedures for Pedigreed Seed Crop Production (Circular 6)*.

These documents are available from the CSGA's website at: www.seedgrowers.ca or the CSGA office at the address below, by phone (613-236-0497), and fax (613-563-7855).

- A.1** Application for Crop Inspection and Membership in CSGA (Form 100)
 - A.2** Report of Seed Crop Inspection (CFIA Form 1115)
 - A.3** Report of Plot Production (Form 50)
 - A.4** Authorizations to Assign Crop Certificate (Forms 179 and 179A)
 - A.5** Crop Certificate and Seed Disposal Record
 - A.6** Application to Commence Probation Plot Production (Form 154)
 - A.7** Official Seed Tags
 - A.8** Appeal (Form 200)
 - A.9** Land Use Verification – Prior to Planting (Form 101)
 - A.10** Declaration of Percent Hybrid Seed (Form 180)
 - A.11** Demotion of Breeder Seed Application (Form 45)
 - A.12** Application for Breeder Seed Crop Certificate and Certification Eligibility (Form 43)
 - A.13** Variety Certification Eligibility Application (Form 300)
 - A.14** Refuge Declaration (Form 182)
 - A.15** Authorization to Release Personal Information on CSGA Website (Form 111)
-

A.1 APPLICATION FOR CROP INSPECTION AND MEMBERSHIP IN CSGA

Each spring, the CSGA sends *Applications for Crop Inspection and Membership in the CSGA* to growers who applied to the CSGA the previous year for crop inspection. Additional forms are available from CSGA at the address below, by phone (613-236-0497), fax (613-563-7855), or from the CSGA's website at: www.seedgrowers.ca. Forms may also be obtained from the Secretary of the provincial or regional Branch/Association of the CSGA, authorized crop inspection offices and provincial departments of agriculture.

Crops for pedigreed status shall be grown according to the CSGA's *Canadian Regulations and Procedures for Pedigreed Crop Production – Circular 6*. Copies of *Circular 6* are available from the CSGA office or website at: www.seedgrowers.ca.

The standing field crop is inspected by authorized seed crop inspectors on behalf of the CSGA. The CSGA appraises the crop inspection report prepared by the inspector and if all requirements are met, pedigreed status is granted and an official crop certificate is issued.

Please ensure that the *Application for Crop Inspection and Membership* is completed before submitting it to the CSGA by the deadline dates.

- April 25th - Winter canola/rapeseed
- May 25th - Fall seeded cereals
- June 10th - Forages, flax, canola, mustard, corn and field peas
- June 20th - All other crops
- July 10th - Field beans, buckwheat and soybeans

Membership and crop inspection fees are submitted with the *Application for Crop Inspection and Membership* and are payable to: Canadian Seed Growers' Association.

By post to:
Canadian Seed Growers' Association
Box 8455
Ottawa, Ontario K1G 3T1

By courier to:
Canadian Seed Growers' Association
240 Catherine St., Suite 202
Ottawa, Ontario K2P 2G8

Application forms are also available from the CSGA website at: www.seedgrowers.ca.

A.2 REPORT OF SEED CROP INSPECTION (CFIA Form 1115)

The decision to grant pedigreed status to an inspected crop rests solely with the CSGA. This decision is based on the CSGA's appraisal of the crop's compliance with their regulatory requirements. CSGA's appraisal requires the information on the crop inspection report prepared by an authorized crop inspector and other information which may be provided by the grower. The inspector is responsible for completion of the crop inspection report. The inspector does not make a decision on the status of the crop.

Once the *Application for Crop Inspection and Membership* is received by the CSGA, a pre-printed *Report of Seed Crop Inspection* (also called "crop inspection report") is created for each field. A copy of the *Application for Crop Inspection and Membership* and the crop inspection report form for each field is sent to the authorized crop inspector.

The official *Report of Seed Crop Inspection* for each pedigreed seed crop is completed at the time of inspection by an authorized crop inspector.

Much of the information for the *Report of Seed Crop Inspection* comes from the application for crop inspection which the grower completes. Accuracy in completing the application reduces the risk of additional information being required by the CSGA, which delays the issuance of a crop certificate.

The original copy of the *Report of Seed Crop Inspection* is forwarded to the CSGA. One copy of the report is provided as soon as possible to the grower. The completed *Report of Seed Crop Inspection* is appraised by the CSGA. A Crop Certificate, a request for further information or a decline letter is issued based on the CSGA's appraisal.

The CSGA's appraisal of the *Report of Seed Crop Inspection* considers all certification requirements of the crop. If the crop does not meet the requirements outlined in the *Canadian Regulations and Procedures for Pedigreed Seed Crop Production* (Circular 6), the crop will be declined pedigreed status.

The onus is on the grower to ensure, prior to the time of inspection, that the crop meets the standards established by the CSGA. Growers should carefully review the completed *Report of Seed Crop Inspection* for accuracy and compliance with CSGA's requirements. If growers have any questions concerning the crop inspection report, they should contact the CSGA as soon as possible, and/or call to arrange a reinspection if necessary.

A.8 APPEAL APPLICATION (Form 200)

The *Appeal Application* (Form 200) is submitted to the CSGA, by October 15th of the year of crop inspection for most crop kinds, to appeal a decision on an inspected crop to the CSGA Board of Directors.

A.9 LAND USE VERIFICATION – Prior to Planting (Form 101)

The *Land Use Verification* (Form 101) is used to verify the eligibility of land for pedigreed seed production. It is submitted prior to planting to the CSGA to verify whether the proposed LAND USE PLAN meets CSGA's requirements.

A.10 DECLARATION OF PERCENT HYBRID SEED (Form 180)

The *Declaration of Percent Hybrid Seed* (Form 180) is submitted to the CSGA to complete certification of those hybrid pedigreed seed crops with this regulatory requirement in Circular 6. The CSGA verifies that the information in this declaration complies with certification standards for the variety.

A.11 DEMOTION OF BREEDER SEED APPLICATION (Form 45)

The *Demotion of Breeder Seed Application* (Form 45) is submitted to the CSGA to demote Breeder seed for the purpose of selling it as Foundation, Registered and/or Certified seed.

A.12 APPLICATION FOR BREEDER SEED CROP CERTIFICATE AND CERTIFICATION ELIGIBILITY (Form 43)

The *Application for Breeder Seed Crop Certificate and Certification Eligibility* (Form 43) is submitted to the CSGA by Plant Breeders to certify Breeder seed crops and verify the eligibility of a variety for certification.

A.13 VARIETY CERTIFICATION ELIGIBILITY APPLICATION (Form 300)

The *Variety Certification Eligibility Application* (Form 300) is submitted to the CSGA only once, in the first year of official seed crop certification in Canada, for each new variety which will be identified by variety name on official seed certification tags.

A.14 REFUGE DECLARATION (Form 182)

The *Refuge Declaration* (Form 182) is submitted to the CSGA to complete certification of pest tolerant pedigreed seed crops with variety descriptions that include this additional certification requirement (Circular 6, Section 1.21.3).

A.15 AUTHORIZATION TO RELEASE PERSONAL INFORMATION ON CSGA WEBSITE (Form 111)

The *Authorization to Release Personal Information on CSGA Website* (Form 111) is submitted to the CSGA by recognized Plant Breeders and accredited Plot Producers to authorize the release of their contact information to a listing on the CSGA website.

Dicotyledonous (dicot) – Refers to plants which have two seed leaves in the seed and leaf veins that are branched.

Double-cross hybrid – The first generation progeny of a cross between two single cross hybrids.

Ecovar™ (ecological variety) – A seed source of a plant species that can be licensed and that is the result of merging plant collections from a diversity of populations and environments within an ecozone with the objective of providing a diverse commercial seed source.

Electrophoresis – The movement of colloidal particles through a fluid under the action of an electric field.

Emasculation – Removal of anthers from a flower before pollen is shed to prevent self pollination.

Embryo – The rudimentary plant within the seed.

Endosperm – Food storage material in the seed.

Enzymes – Substance produced from a gene that controls or regulates cell functions and hence the entire organism. It may catalyze and initiate a biochemical reaction.

F1 – The first generation progeny from a cross. The first filial generation.

FIS – *Federation International des Semences*, an international federation of the seed trade.

Fatuoid – A common mutant found in Oat crops. Sometimes called a False Wild Oat. It usually has heavier protruding black awns distinguishable at maturity.

Federal Seeds Act and Regulations – See *Canada Seeds Act and Regulations*.

Floret – The stamens, pistil and lodiculae enclosed by the lemma and palea.

Forages – Plants grown primarily for livestock feed and in which nearly all the top growth is harvested.

Form 43A – *Application for Plant Breeder Recognition* (Appendix A.3 of Breeder Seed Crop Regulations)

Form 43 – *Application for Breeder Seed Crop Certificate* (Appendix A.1 of Breeder Seed Crop Regulations).

Form 45 – *Breeder Seed Demotion Application* (Appendix A.11 of Circular 6).

Form 50 – *Report of Plot Production* (Appendix A.3 of Circular 6).

Form 100 – *Application for Crop Inspection* (Appendix A.1 of Circular 6).

Form 101 – *Land Use Verification – Prior to Planting* (Appendix A.9 of Circular 6).

Form 111 – *Authorization to Release Personal Information on CSGA Website* (Appendix A.15 of Circular 6).

Form 154 – *Application to Commence Probation Plot Production* (Appendix A.6 of Circular 6).

Form 179 – *Authorization to Assign a Crop Certificate* (Appendix A.4 of Circular 6).

Form 179A – *Annual Authorization to Assign a Crop Certificate* (Appendix A.4 of Circular 6).

Form 180 – *Declaration of Percent Hybrid Seed* (Appendix A.10 of Circular 6).

Form 182 – *Refuge Declaration* (Appendix A.14 of Circular 6).

Form 200 – *Appeal Application* (Appendix A.8 of Circular 6).

Form 300 – *Variety Certification Eligibility Application*. (Appendix A.13 of Circular 6).

Foundation seed – The approved progeny of Breeder or Select seed produced by seed growers authorized by the CSGA for the production of seed of this class, and which has been so managed to maintain its specific varietal identity and purity. The seed is graded by a person authorized by the CFIA. Foundation is the highest official pedigreed class of seed of commerce.

Foundation plot grower – A seed grower approved by the CSGA to produce Foundation class seed plots, such as plots of Canola, Rapeseed, Mustard, Oilseed Radish and Industrial Hemp. This person has completed a three-year probationary period in plot production after three recent years of pedigreed seed production.

Foundation single cross – A single cross used in the production of a double-cross, a three-way cross or a top cross.

Fungi – Microscopic plants consisting of a vegetative structure called a mycelium, lacking chlorophyll and conductive tissue and reproduced by spores.

Fusiform – A plant's seed head spike that is widest in the middle and tapers to both its tip and base.

Gene – The unit of inheritance composed of DNA forming part of a chromosome, which controls the transmission and development of inherited characteristics. Its effect is generally conditioned by its interaction with other genes, the cytoplasm and environmental factors.

Generation – The designation for multiplication generations, in the Native Plant Certification program, which replaces pedigreed class names. For example, Generation 1 (G1) is equivalent to Breeder status and Generation 2 (G2) is equivalent to Foundation status in the Source Identified and Selected classes of pre-variety germplasm certification.

Genetic code – The means of storing genetic information as sequences of nucleotide bases in the chromosomal DNA.

Genetic engineering – The deliberate modification of an organism's characteristics by manipulation of DNA and transformation of certain genes.

Genotype – The genetic composition of the plant.

Germination – The resumption of growth by the embryo and development of a young plant from seed.

Germplasm – Refers to plant materials that serve as a basis of crop improvement or a reservoir of genes for research. The total hereditary makeup of organisms that determines the hereditary properties of an organism.