CSGA
Canadian Seed Growers' Association

ACPS
Association canadienne des producteurs de semences

Canadian Regulations and Procedures for Pedigreed Seed Crop Production

Circular 6

Revised February 1, 2025

Table of Contents

II. Crop Specific Standards for Hybrid Cereals

Section 13

I. Crop Specific Standards for Canola, Carinata, Mustard and Radish Plots

Section 14

I. Crop Specific Standards for Miscellaneous Other Crop Kinds

Record of Amendments

The official version of the *Canadian Regulations and Procedures for Pedigreed Seed Crop Production* (Circular 6) is maintained on the CSGA website.

The following amendments to the **February 1, 2024** version were approved by the CSGA Board of Directors to become effective on **February 1, 2025**:

1. The requirements for **Qualification for Plot Grower Accreditation** are revised with the addition of text to clarify that the e-learning module/s must be completed by April 1st of the second year of Probation plot production to reduce the number of years of Probation plot production. (Section 1, Part III General Requirements for Probation Plot Production, Paragraph "1. Qualifications" Point #4)

The following amendments to the **February 1, 2023** version were approved by the CSGA Board of Directors to become effective on **February 1, 2024**:

1. Text regarding **Breeder Seed Production** in the General Requirements for All Pedigreed Seed Crops is revised to simply reference the revised Canadian Breeder Seed Requirements rather than repeating some of the requirements. (Section 1, General Requirements for All Pedigreed Seed Crops, paragraph "8. Breeder Seed Production")
2. The **Age of Stand for Forage and Turf Grasses and Forage Legumes** when the seed crop is established with Registered seed of a **variety with a Registered class** is clarified. (Age of Stand tables, Sections 6 & 7)
3. **Isolation Requirements and Maximum Impurity Standards for other crop kinds** are revised in **Forage and Turf Grasses and Forage Legumes** (Sections 6 & 7) as follows:
    a. **Other crop kinds are categorized** as contaminant species where:
        i. The other kind (contaminant) will **readily cross-pollinate (CP)** with the inspected crop;
        ii. Seeds of the other kind (contaminant) are considered **difficult to distinguish (DTD)** in a lab test from seeds of the inspected crop; and,
        iii. Seeds of the other kind (contaminant) are considered **difficult to separate (DTS)** from seeds of the inspected crop.
    b. **Contaminant tables have been added** to identify which species will CP, are DTD or are DTS.
    c. **Where the other kind will CP or is DTD, the isolation requirements and maximum impurity standards** are revised as follows:
        i. Where the other kind will readily **CP**, a greater **isolation** distance (e.g., 50 m) is required to the other kind to maintain varietal purity (i.e., equivalent to the isolation required for other varieties of the same kind).
        ii. Where the other kind is **DTD only** (the contaminant will not readily CP), a smaller **isolation** distance is required to the other kind to maintain mechanical purity but is **reduced from 3 meters to 2 meters** (like Section 2 & 3 crops).
        iii. The **maximum impurity standard** (MIS) for other kinds does not change in terms of the number of plants permitted (e.g., 1 plant/10m2) but now only other kinds that CP or are DTD will be counted and contribute towards the maximum impurity standard (i.e., the combined total number of plants that either CP, are DTD, or both, must not exceed the standard). Plants of species that are only considered **DTS will no longer be counted or contribute towards the MIS** for other kinds.
    d. Where the other kind is **DTS only** (does not readily CP and is not DTD), **isolation** is not required to the other kind, and **there is no maximum impurity standard**. Plants of the other kind will be **reported by frequency** in the field and will **not be a factor in the seed crop certification decision**.

4. The definition of 'Variety Maintainer' is revised to be consistent with the use of that terminology by other international seed certifying bodies including the Organisation for Economic Co-operation and Development (OECD) Seed Schemes as the individual or organization responsible for maintenance of a variety rather than an CSGA-Accredited Plot Grower producing Breeder seed. (Glossary of Terms)

The following amendments to the **February 1, 2022** version were approved by the CSGA Board of Directors to become effective on **February 1, 2023**:

1. **Isolation Requirements for Foundation, Registered and Certified status Bean, Chickpea, Fababean, Lentil, Lupin, Pea, and Soybean** are revised to remove the requirement for isolation for mechanical purity (i.e., to other crop kinds) e.g., an inspected crop of Soybeans for Registered status no longer requires isolation from a crop of peas. (Section 3)

The following amendments to the **February 1, 2021** version were approved by the CSGA Board of Directors to become effective on **February 1, 2022**:

1. **Previous Land Use Requirements for All Classes of Barley, Durum, Oat, Rye, Triticale and Wheat** (including hybrids of the relevant kinds) are revised to remove all references to Buckwheat. (Sections 2 & 12)
2. **Isolation Requirements for All Classes of Barley, Durum, Oat, Rye, Triticale and Wheat** (including hybrids of the relevant kinds) are revised to remove the requirement for isolation from Buckwheat. (Sections 2 & 12)
3. **Mechanical Purity Standards for All Classes of Barley, Durum, Oat, Rye, Triticale and Wheat** (including hybrids of the relevant kinds) are revised to remove the maximum impurity standard for Buckwheat. (Sections 2 & 12)
4. **Isolation Requirements for All Classes of Buckwheat** are revised to remove the requirement for isolation from Barley, Durum, Oat, Rye, Triticale and Wheat. (Sections 2 & 12)
5. **Mechanical Purity Standards for All Classes of Buckwheat** are revised to remove the maximum impurity standards for Barley, Durum, Oat, Rye, Triticale and Wheat. (Sections 2 & 12).
6. **Determination of Eligibility, Status and Class** is revised with the addition of text referencing the **Recertification Policy** to clarify that "A crop planted with Certified seed is not eligible to produce a pedigreed crop except as provided by CSGA's Recertification Policy". (Section 1, General Requirements for All Pedigreed Seed Crops, 3. Determination of Eligibility, Status and Class, 3(2))
7. Text indicating "**Crops for which a crop certificate has not been issued by April 30** of the year following crop inspections will be considered ineligible for certification unless approved by the CSGA. A fee will be assessed." is removed. (Section 1, General Requirements for All Pedigreed Seed Crops, 4. Crop Certificates, 4(4) is removed, 4(5-7) are renumbered to become 4(4-6))
8. Addition of text clarifying what is necessary for **Validation of a Crop Certificate** including the information that is required (estimated quantity harvested and signed declaration). (Section 1, General Requirements for All Pedigreed Seed Crops, 4. Crop Certificates, new 4(7))
9. **Eligibility for Certification** is clarified to indicate that "Growers must present satisfactory evidence of the pedigreed status or class, and the quantity, of the parent seed planted of crops for which an application for seed crop certification has been made". (Section 1, General Requirements for All Pedigreed Seed Crops, 14. Evidence of Pedigree, 14(1))
10. Text regarding the **Number of Varieties Permitted** is removed so there is no limit to the number of varieties and crop kinds a seed grower can produce. (Section 1, General Requirements for All Pedigreed Seed Crops, 12. Number of Varieties Permitted is revoked with the removal of 12(1))
11. **Revised Terminology for "Canaryseed";** now referred to as **"Canary seed"** in English only (no change to Alpiste des Canaries in French). (Numerous, throughout the document)
12. **Revised Translation for "Durum Wheat"**; now referred to as **"Blé dur (durum)"** to clarify that "blé dur", means

"Durum wheat". This is a revision to the French document only. (Numerous, throughout the document)

The following amendments to the **February 1, 2020** version were approved by the CSGA Board of Directors to become effective on **February 1, 2021**:

1. **Requirements for Plot Grower Accreditation** are revised regarding: (a) prior experience required to commence probation, including the type of crops which have been previously produced; (b) the size of probation plots; and (c) the length of probation. (Section 1, General Requirements for Probation Plot Production 1. (3, 4) Qualifications, 2. (5) Parent Seed Source and Status of Plots During Probation, 3. (1) Area of Probation Plots)
2. **Requirements for Foundation Status Seed Production** are revised to permit Foundation production of all Section 2 and 3 crop kinds by all seed growers. (Section 1, General Requirements for All Pedigreed Seed Crops, 15. (4, 5) Seed Classes and Generations and Specific Requirements under first sub-heading for barley, bean etc.)
3. Text related to the **Application for Seed Crop Certification** is revised to clarify that the *Application for CSGA Seed Crop Certification* shall be submitted to the CSGA in the name of the seed grower producing the seed crop from sowing to harvest. Housekeeping revisions were made to: (a) specify that a crop certificate will be issued in the name of the seed grower as indicated on the *Application for CSGA Seed Crop Certification*; (b) specify that the grower of a pedigreed seed crop may assign the crop certificate to an assignee; and (c) correct the definition of a seed grower to reference the "applicant for certification" and the "*Canadian Regulations and Procedures for Pedigreed Seed Crop Production*". (Section 1, General Requirements for All Pedigreed Seed Crops, 2.(2), *Application for CSGA Seed Crop Certification* and CSGA Membership Application/Renewal, 4.(1) Crop Certificates, 5.(1) Assignment of Crop Certificates, Glossary of Terms)
4. **CSGA Authority to Determine Seed Crop Certification Eligibility** is clarified with the addition of text specifying that the CSGA reserves the right to withhold and/or recall the crop certificate for seed crops where CSGA has reasonable grounds to believe that there is a varietal identity or varietal purity issue with either the parent seed, the seed crop or the seed harvested from the crop. The evidence may include, but is not limited to, information obtained through CFIA oversight and monitoring activities. (Section 1, General Requirements for All Pedigreed Seed Crops, 3. (4) Determination of Eligibility, Status and Class)
5. **Isolation Requirements for Select Plots** are revised to clarify that 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 the adjacent pedigreed seed crops providing that the adjacent seed crops were planted: (a) with the same seed; and (b) on land with the same previous land use history. (Section 1, General Requirements for Plot Production, 3. (1) Isolation for Select Plots)
6. **Isolation Requirements for Probation Plots** of Section 12 crop kinds is clarified with the addition of text like the Select plot requirements. (Section 1, General Requirements for Probation Plot Production, 4. (1- 4) Isolation for Probation Plots)
7. **NEW Certification Requirements for Composite and Synthetic Mustard (*S. alba*) for Certified production** of composite and synthetic *S. alba* (Section 5) and for **Foundation Plot Production** of the parent seed for composite and synthetic *S. alba.* (Section 13)
8. **NEW Certification Requirements for Feminized Hemp Seed (FHS) for Certified production** of FHS varieties which produce only female plants. (Section 10)
9. **NEW Certification Requirements for Certified Production of Hybrid Wheat** with Individual Parent Lines (Section 2). **Revised Certification Requirements for Certified Production of Hybrid Wheat** with Blended Parent Lines: (a) to permit production of the Select Hybrid Cereal Parent (HCP) by or under the supervision of a CSGA recognized plant breeder; (b) to clarify that the Select Technical Blend (TB) is a "seed" requirement and requires a Select TB crop certificate number; (c) to clarify the area of Select HCP plots, the number of plots, and total acreage of plots permitted; and (d) to clarify that border rows do not need to meet the isolation

requirements if not harvested for seed (Section 2). **Revised Certification Requirements for Plot Production of Parent Seed of Hybrid Wheat** to reduce the number of inspections required for plots containing the male sterile (female seed parent) A-line and to reflect the revisions made for Certified production of the hybrid described above. (Section 12)

10. **Higher Voluntary or Addition Certification Requirements** (HVR/ACR) are revised with the addition of text stipulating that where the Breeder/Variety Developer or Variety Distributor specifies that a laboratory test shall be completed on a representative sample of the harvested seed prior to certification of the seed crop, the CSGA shall withhold the crop certificate, pending receipt of satisfactory test results from a laboratory recognized by the Breeder/Variety Developer or Variety Distributor as defined in the higher voluntary or additional certification requirement as well as several "housekeeping" revisions. (Section 1, General Requirements for All Pedigreed Seed Crops, 23. (1-5) Higher Voluntary or Additional Certification Requirements)

    The definitions of HVR and ACR have also been added to the Glossary of Terms. (Section 1)

11. Text regarding **Authorized Inspectors and Crop Inspection** is revised to clarify that: (a) authorized inspectors include official CFIA inspectors and Licensed Seed Crop Inspectors (LSCI) operating under the supervision of an Authorized Seed Crop Inspection Service (ASCIS); (b) pedigreed seed crops must be inspected by an authorized inspector; (c) the different types of inspection and which inspectors are authorized to conduct each type of inspection; and (d) the intended purpose of the crop report. Text is also added to provide CSGA with the flexibility to accept an inspection report from an individual who is not an authorized inspector in exceptional circumstances. (Section 1, General Requirements for All Pedigreed Seed Crops, 17. (1, 7, 8, 9) Crop Inspection and Glossary of Terms).

Introduction

The Canadian Seed Growers' Association (CSGA) provides an officially recognized, third-party service that establishes and administers requirements for production of pedigreed seed of agricultural field crops. Federal regulations require CSGA certification of a "crop" for the "seed" from that crop to be eligible for final certification by the Canadian Food Inspection Agency (CFIA). A seed crop certificate from CSGA confers "pedigreed status" to the seed harvested from a specific field (or fields) and is the first step in the official certification of a seed lot.

Pedigreed status seed must be handled, stored and processed/conditioned by the grower of the seed or by a CFIA-registered seed establishment that is an approved conditioner in order to maintain its pedigreed status and be eligible for seed certification. After conditioning, the seed lot must be sampled, the sample tested and the seed lot graded and labelled with official certification labels by persons authorized by the CFIA. All of these activities are documented with a pedigreed seed declaration before a seed lot can be considered to be "finally certified" and eligible for sale as Foundation, Registered or Certified seed. Similar requirements pertain to seed that is sold as Select class.

The *Canadian Regulations and Procedures for Pedigreed Seed Crop Production*, commonly referred to as Circular 6, sets out the requirements that a seed grower and a seed crop must meet in order for the CSGA to issue a seed crop certificate (i.e., certify the seed crop). The first section of Circular 6 entitled "General Requirements for All Pedigreed Seed Crops" describes the requirements that are applicable to all pedigreed seed crops including Membership and *Application for CSGA Seed Crop Certification*. Requirements that are specifically applicable to plot production can be found in the "General Requirements for Plot Production" section. Requirements that are specifically applicable to probation plot production can be found in the "General Requirements for Probation Plot Production" section.

The remaining sections of Circular 6 describe crop specific standards for the relevant crop kind and class. They include requirements for land use and crop inspection as well as individual crop standards including: isolation for varietal and mechanical purity; weeds; maximum impurity standards for varietal and mechanical purity; and age of stand for perennial species.

Section 1

I. General Requirements for All Pedigreed Seed Crops

This section outlines the general requirements that are applicable to all pedigreed seed crops. Requirements for land use and crop inspection and individual crop standards for each crop kind can be found in the crop specific sections of Circular 6. General requirements that are applicable to plot production can be found in the "General Requirements for Plot Production" section. General requirements that are applicable to probation plot production can be found in the "General Requirements for Probation Plot Production" section.

1. Membership

(1) Any person, partnership or organization producing or undertaking to produce pedigree seed must apply for membership in the Canadian Seed Growers' Association (CSGA), in accordance with the by-laws.

(2) The *Application for CSGA Seed Crop Certification* and the *CSGA Membership Application/Renewal Form* must be submitted to the CSGA each year in which a seed crop is grown and presented for certification.

(3) An applicant must be of legal age. In the case of a partnership, at least one member of the partnership must be of legal age.

(4) In provinces or regions where there is a seed growers' organization approved by the Board of Directors of the CSGA, an applicant for membership in the CSGA is required to become a member of the Branch or Association in the province or region in which the crop is grown as a condition of membership in the CSGA.

2. Application for CSGA Seed Crop Certification and CSGA Membership Application/Renewal

(1) Applicants must apply for crop certification on the application form supplied by the CSGA. The *Application for CSGA Seed Crop Certification* and the *CSGA Membership Application/Renewal Form* are available from the CSGA's website at www.seedgrowers.ca

(2) The *Application for CSGA Seed Crop Certification* shall be submitted to the CSGA in the name of the seed grower producing the seed crop from sowing to harvest. The seed grower may be required to provide the CSGA with information confirming effective ongoing oversight and control of the production of the seed crop.

(3) Crops for which applications for certification are received by the CSGA after the CSGA's deadline date may be inspected but only when inspection resources are available.

(4) All inspections depend on an authorized inspector being able to safely provide the requested service at the proper time. Acceptance of application and fees by CSGA does not guarantee field inspection.

(5) In order to ensure field inspection, the *Application for CSGA Seed Crop Certification* and the *CSGA Membership Application/Renewal Form*, accompanied with the necessary fees, must be received by the CSGA deadline dates published by the CSGA.

3. Determination of Eligibility, Status and Class

(1) A condition which will bring pedigreed seed into disrepute may be cause for declining certification of the seed crop.

(2) The CSGA reserves the right to determine the eligibility of any seed crop for certification and the status of the seed crop produced. A crop planted with Certified seed is not eligible to produce a pedigreed crop except as provided by CSGA's Recertification Policy.

(3) CSGA may require submission of a seed sample for variety verification testing. Variety verification testing consists of varietal identity confirmation and varietal purity determinations. It is a check on the seed certification system and provides valuable data on the system's performance.

(4) The CSGA reserves the right to withhold and/or recall the crop certificate for seed crops where CSGA has reasonable grounds to believe that there is a varietal identity or varietal purity issue with either the parent seed, the seed crop or the seed harvested from the crop. The evidence may include, but is not limited to, information obtained through CFIA oversight and monitoring activities.

4. Crop Certificates

(1) A crop certificate will be issued in the name of the seed grower as indicated on the *Application for CSGA Seed Crop Certification* except as set out below.

(2) Crop certificates for hybrid crops may be issued to the person or company responsible for the variety.

(3) The record of seed crop production is credited to the CSGA production record of the grower of the crop.

(4) The grower may assign a crop certificate to another party on the *Application for CSGA Seed Crop Certification*. The names of both the seed grower and the assignee will appear on the crop certificate provided the assignment is received by the CSGA before the crop certificate is issued.

(5) The CSGA reserves the right to issue a crop certificate to the seed grower if an assignment has not been received prior to the certificate issuance.

(6) The CSGA reserves the right to delay issuing a crop certificate until the applicant's account has been paid in full.

(7) Crop certificates are not valid unless the grower (or assignee if covered by a separate declaration of the grower) signs the certificate declaring that the seed from the crop has not become mixed with any other seed while in their possession, except as authorized by the *Seeds Regulations*, and provides the total estimated quantity of seed harvested from the seed crop(s) before cleaning.

5. Assignment of Crop Certificates

(1) The grower of a pedigreed seed crop may assign the crop certificate to an assignee.

(2) Growers assign crop certificates to an assignee on the *Application for CSGA Seed Crop Certification*.

(3) Assignment of a crop certificate to an assignee means that the seed grower has directed the CSGA to issue that crop certificate to the assignee and to permit the assignee to access all CSGA certification records for that crop.

(4) Cancellation of an assigned crop certificate which has been issued requires a documented request to the CSGA that is agreed to by all parties involved.

6. Appeals

(1) A seed grower may request an appeal of the CSGA decision on an inspected crop. The appeal request must include a completed Appeal Application (Form 200) and factual, verifiable information. For most crop kinds, the appeal request should be submitted to CSGA by October 15th of the year of crop inspection. Growers should submit appeal request for fall sown crops by September 1st and for soybean crops by December 1st.

(2) Although an assignee may support the appeal, the Appeal Application must be submitted under the signature of the grower of the crop.

(3) The appeal will be reviewed by the Appeals Committee of the CSGA Board of Directors.

(4) If corrective action is taken by the seed grower to correct a problem with the crop, the grower should immediately request re-inspection by an authorized inspector.

7. Fees

(1) Applicable fees are published by and payable to the CSGA.

(2) Where applicable, the annual membership fee of the provincial affiliated organization (Branch or Association) of the CSGA must be paid as a condition of membership in the CSGA.

8. Breeder Seed Production

(1) The *Canadian Breeder Seed Requirements* (BSR), as amended from time to time, are used in conjunction with Circular 6 and describe additional certification requirements relating to Breeder seed production including requirements for the professional recognition of plant breeders, certification of Breeder seed and the approval of Breeder status seed that has not been certified by the CSGA.

9. Transfer and Sale of Seed from Pedigreed Seed Crops

(1) A grower does not need to have parent seed graded and labelled if the crop applied for inspection is grown by the same grower who produced the parent seed. Otherwise, documented pedigreed seed of an eligible class must be obtained to produce a crop for certification. If imported seed is sown, it must be labelled as authorized by an official seed certifying agency recognized by the CFIA.

(2) The CSGA may refuse to recognize the pedigreed status of parent seed if:

(a) In the case of Foundation and Registered status seed, the seed was transferred to the seed grower without being officially graded, tagged, labelled, or documented;

(b) Original container(s) of seed were split into different lots and the lots were not resealed according to the *Seeds Regulations* requirements;

(c) There is doubt as to the origin, pedigreed status, quantity, or validity of the documentation; or

(d) Official certification labels or documents were not on the parent seed containers when received by the purchaser.

(3) Select seed being sold or transferred must be in closed containers, identified with Select tags provided by the CSGA and must meet the grading and conditioning requirements, as well as germination and purity requirements of the Canada Foundation grade of the *Seeds Regulations*. A seed analysis certificate indicating mechanical purity and germination and test date shall accompany Select seed. The seller shall inform the buyer of how many generations from Breeder seed the seed has already been multiplied. If Select seed is to be demoted to a lower status, a Foundation crop certificate must be obtained from the CSGA to meet the requirements of the *Seeds Regulations* for seed to be of Foundation, Registered or Certified status if graded with one of the Canada Foundation, Registered or Certified grade names. To further demote Foundation status seed to Registered or Certified, the standard procedure for the demotion of Foundation status seed shall be followed.

(4) Seed from pedigreed crops, other than Breeder or Select seed, may be transferred to other parties for processing and grading in accordance with the *Seeds Regulations*.

(5) Bulk pedigreed seed may be delivered only by a Bulk Storage Facility registered pursuant to the *Seeds Regulations*. It shall be accompanied, when transferred, by a bulk pedigreed seed certificate.

(6) Applicants for crop certification are responsible for ensuring that seed crops destined for seed certification under the OECD Seed Schemes meet all of the certification requirements of the OECD Seed Schemes.

10. Imported Parent Seed

(1) Parent seed imported into Canada must meet the minimum standards for mechanical purity as described by the *Seeds Regulations*. Imported seed is also subject to the Plant Protection Act and other regulatory requirements.

(2) If the variety is subject to registration and is not registered for sale in Canada, the importer must comply with all requirements of the *Seeds Regulations*, which may include sale pursuant to a contract and responsibility for all production.

(3) Parent seed of foreign origin must be graded and labelled with a Canada pedigreed grade name, if sold as Foundation or Registered seed. When the seed is transferred to a grower, it must:

(a) Be labelled with the original seed certification labels of the foreign seed certifying agency

(b) Be labelled with official inter-agency certification labels/tags, or

(c) Be accompanied by a bulk pedigreed seed certificate.

(4) Breeder seed of foreign origin must be labelled with labels/tags that include the name of the variety, the crop kind, the Breeder seed crop certificate number (if certified by CSGA) or certification reference number (if certified by an official agency in another country), the lot number assigned by the Breeder or seed processor, and the signature, name and address of the CSGA recognized plant breeder responsible for the seed.

11. Storing of Parent Seed

(1) Clean, clearly identified and separate storage for all pedigreed seed is essential.

(2) If two or more Foundation or Registered seed lots of the same variety are combined, the *Seeds Regulations* require a new crop certificate to be issued by the CSGA.

12. Number of Varieties Permitted (Revoked February 1, 2022)

13. Requirements for Other Crops

(1) Requirements for crop kinds not provided in this publication may be available from the CSGA.

14. Evidence of Pedigree

(1) Growers must present satisfactory evidence of the pedigreed status or class, and the quantity, of the parent seed planted of crops for which an application for seed crop certification has been made.

(2) When seed is transferred from one party to another party, whether sold or not it must be either (a) in a sealed package, labelled with an official seed certification tag or (b) accompanied by a bulk pedigreed seed certificate if transferred in bulk.

(3) All pedigreed seed labels or documentation must be retained and made available to the authorized inspector and to the CSGA upon request.

15. Seed Classes and Generations and Specific Requirements

15.1 Barley, Bean, Buckwheat, Canary seed, Chickpea, Durum, Fababean, Flax, Lentil, Lupin, Oat, Pea, Rye, Soybean, Triticale, Wheat

(1) The number of official pedigreed classes is determined by the Breeder of the variety, normally Foundation, Registered and Certified.

(a) Breeder: no generation limit.

(b) Select: normally 5 generations (except Beans, which are limited to one generation).

(c) Foundation: one generation.

(d) Registered: one generation.

(e) Certified: one generation.

(2) Only CSGA recognized plant breeders can produce Breeder seed. Breeder seed is produced in plots (maximum 2.5 acres/plot).

(3) Only accredited Plot Growers can produce Select seed. Select seed is produced in plots (maximum 2.5 acres/plot).

(4) For those growers who are not accredited Plot Growers or on probation to become a Plot Grower, 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 Foundation, Registered or Certified crop certificate.

15.2 Canola, Carinata, Mustard, Radish, Rapeseed

(1) The number of official pedigreed classes is determined by the Breeder of the variety, normally Foundation and Certified.

(a) Breeder: no generation limit.

(b) Select Technical Blend: a physical blend of specific proportions of seed harvested from Breeder or Foundation plots used in the production of Certified seed crops of composite varieties. Crops sown with Select Technical Blend seed are for Certified status only.

(c) Foundation: one generation.

(d) Certified: one generation.

(2) Only CSGA recognized plant breeders can produce Breeder seed. Breeder seed is produced in plots (maximum 2.5 acres/plot).

(3) Only accredited Plot Growers can produce Foundation seed. Foundation seed is produced in plots (maximum 2.5 acres/plot). For hybrid varieties, Foundation is the parent line/s.

(4) For those growers who are not accredited Plot Growers who plant crops with Breeder seed, the CSGA reserves the right to determine the status of the inspected crop and may issue a Certified crop certificate.

(5) Composite varieties have descriptions that confirm they are not hybrids and that at least 70% of progeny result from crossing of the parent lines.

(6) Breeder or Foundation status seed must be used to establish all stands of Hybrid Canola, Hybrid Rapeseed and Hybrid Mustard for certification.

(7) It is recommended that not more than one variety or crop kind of Canola, Carinata, Mustard, Radish or Radish be grown under the management of one grower.

(8) The CSGA may require seed test results from a recognized laboratory, indicating a satisfactory erucic acid and/or glucosinolate content before a crop certificate is issued.

15.3 Alfalfa, Bentgrass, Birdsfoot Trefoil, Bluegrass, Bromegrass, Clover, Fescue, Foxtail, Junegrass, Needlegrass, Orchardgrass, Phacelia, Reed Canarygrass, Redtop, Ryegrass, Sainfoin, Timothy, Vetch, Wheatgrass, Wildrye

(1) Varieties will normally be multiplied through Breeder, Foundation and Certified classes only, 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. Some varieties have a Registered class.

(2) Only CSGA recognized plant breeders can produce Breeder seed. Breeder seed is produced in plots (maximum 2.5 acres/plot).

(3) A Foundation seed crop is normally grown from planting Breeder seed. No grower accreditation is required to produce Foundation seed and there is no maximum field size.

(4) A Registered seed crop is grown from planting Breeder or Foundation seed.

(5) A Certified seed crop is grown from planting Breeder, Foundation, or Registered seed.

(6) Tags from the seed planted must be retained for the life of the stand and made available to the authorized inspector and/or the CSGA upon request.

15.4 Industrial Hemp

(1) The number of official pedigreed classes is determined by the Breeder of the variety, normally Foundation, Registered and Certified.

(a) Breeder: no generation limit.

(b) Foundation: one generation.

(c) Registered: one generation.

(d) Certified: one generation.

(2) Only CSGA recognized plant breeders can produce Breeder seed. Breeder seed is produced in plots (maximum 2.5 acres/plot).

(3) Only accredited Plot Growers can produce Foundation seed. Foundation seed is produced in plots (maximum 2.5 acres/plot).

(4) For those growers who are not accredited Plot Growers who plant crops with Breeder seed, the CSGA reserves the right to determine the status of the inspected crop and may issue a Registered or Certified crop certificate.

(5) With the exception of Breeder seed, only varieties of Industrial Hemp approved by Health Canada are eligible for certification.

(6) CSGA recognized plant breeders may cultivate, and CSGA may certify, seed crops of varieties that are not approved by Health Canada.

(7) It is recommended that not more than one variety of Industrial Hemp be grown under the management of one grower.

(8) All male flowers rogued from the crop should be removed from the field and regrowth of rogued male flowers or plants must be prevented.

(9) Growers are required by Health Canada to obtain THC results, from a recognized laboratory, verifying that the THC content of their Industrial Hemp crop complies with Health Canada regulations. Growers may be required to submit these results to the CSGA before a crop certificate is issued.

16. Land Use Requirements

(1) Requirements governing the land which is eligible to produce a pedigreed seed crop are based on scientific principles and sound cropping practices.

(2) Crops should not be planted on land where volunteer growth from a previous crop may cause contamination.

(3) Minimum requirements have been established for each crop kind and are outlined in the crop specific sections of Circular 6.

(4) The status granted to crops of Barley, Bean, Buckwheat, Canary seed, Chickpea, Durum, Fababean, Flax, Lentil, Lupin, Oat, Pea, Rye, Soybean, Triticale and Wheat is determined by the previous crop.

(a) Land requirements prevent production of 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.

(5) When choosing land for a pedigreed seed crop the seed grower must consider the following:

(a) Will volunteer growth from the previous crop on this land provide a source of varietal contamination to the proposed seed crop?

(b) Will any volunteer plants be difficult to rogue from the seed crop, or will their seed be difficult to separate?

(c) Will seedborne disease problems occur in the crop as a result of previous crops?

(d) Was the previous crop inspected for certification and did it meet CSGA standards?

(6) If uncertain of the eligibility of the land for seed production, the grower should use the Land Use Verification Form (Form 101) to provide information to CSGA prior to planting.

(7) If the land use plans outlined in the Land Use Verification Form meet the CSGA requirements, a notice of approval is sent to the grower.

(8) If a grower wishes to establish a land use eligibility record for subsequent pedigreed seed crop production on a particular field, this field should be included on the *Application for CSGA Seed Crop Certification*. Fees for land use inspections are paid directly to the authorized seed crop inspection service. Land use inspections are not used for subsequent production of the same crop kind.

17. Crop Inspection

(1) The number of inspections required is determined by the crop kind. There shall be at least one field inspection of each seed crop. The inspection must be conducted by an authorized inspector. Authorized inspectors include official CFIA inspectors or inspectors licensed by the CFIA to perform seed crop inspection operating under the supervision of an authorized seed crop inspection service. The inspector must be licensed for the respective crop kind and class. The CSGA may, after approval by the CFIA, accept an inspection report from an individual who is not an authorized inspector in exceptional circumstances.

(2) 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.

(3) The number of inspections and the proper stage of growth have been established for each crop kind and are outlined in the crop specific sections of Circular 6.

(4) It is the grower's responsibility to ensure that crops are inspected prior to swathing or harvesting. A crop that is cut, swathed, or harvested prior to crop inspection is not eligible for pedigree.

(5) For perennial crops, crop inspection by an authorized inspector is required each year that a pedigreed seed crop is to be harvested.

(6) It is the responsibility of the grower at the time of application to correctly identify the location of the crops to be inspected.

(7) When the authorized inspector submits the completed Seed Crop Inspection Report to the CSGA, the grower also receives a copy. The report is appraised by the CSGA to determine the eligibility of the seed crop for certification.

(8) If corrective action verification is required by the CSGA (e.g., to correct an isolation issue) or if the grower voluntarily takes corrective action to seek certification of a declined field or to improve the status of a demoted field (e.g., rogues the field to reduce the number of impurities), the grower has the right to request a re-inspection at the grower's expense. Re-inspections must also be conducted by an authorized inspector.

(9) If not satisfied with the Seed Crop Inspection Report (e.g., the classification or identification of off-type plants is challenged), the grower may request a referee inspection, by an official CFIA inspector. Any charges incurred for such referee inspections will be the responsibility of the grower.

(10) The CSGA is under no obligation to authorize re-inspections requested because of a grower's failure to comply with Circular 6 requirements.

(11) A commercial crop may be inspected to assess the eligibility of the land for pedigreed seed production the following year.

18. Age of Stand

(1) For most perennial crops there is a specified maximum number of years during which pedigreed seed may be harvested from one planting, referred to as the Age of Stand. The Age of Stand requirements are

outlined in the crop specific sections of Circular 6. The Age of Stand may be extended with permission of CSGA.

(2) The pedigreed class of the seed crop will vary by crop species, the class of seed used to establish the crop, the classes of seed through which a given variety may be multiplied as designated by the Breeder or the authorized agent of the Breeder and the number of years the stand has been in production.

(3) Additional limitations on the 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.

(4) For calculating the Age of Stand:

(a) 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.

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

19. Crop Unit and Isolation

(1) Isolation requirements are outlined in the crop specific sections of Circular 6 and are the minimum isolation distances required.

(a) Boundaries must be clearly defined, and adjacent crops must not overlap. To maintain inspection integrity, fields must have separate applications, and seed crop inspection reports, if they are managed separately or are separated by large physical barriers or are clearly not contiguous or adjacent. The grower must contact CSGA if it is unclear if separate applications are required.

(b) Isolation strips are not considered part of the crop area.

(c) A part of the crop may be refused pedigreed status if it does not meet the standards. The remainder of the field may be granted pedigreed status if it has the proper isolation from the unacceptable portion and meets all other standards.

(d) The area, density, stage of maturity and location of contaminants within isolation strips may determine eligibility for pedigreed status.

(e) The required isolation must be provided prior to the time of flowering and crop inspection.

(2) Isolation requirements for Foundation, Registered and Certified production of Barley, Bean, Buckwheat, Canary seed, Chickpea, Durum, Fababean, Flax, Lentil, Lupin, Oat, Pea, Rye, Soybean, Triticale and Wheat include the following:

(a) The required isolation may be clean summerfallow, non-contaminating native growth, forage crop, cultivated row crop of another kind, the seeds of which are not difficult to separate from the seeds of the inspected crop, or a mowed grain crop, provided the plants in the mowed isolation do not form seed heads or in any way constitute a source of contamination.

(b) Any plants considered a source of contamination found within 3 meters (10 feet) of the inspected crop may be reason for declining pedigreed status.

(c) The required isolation of 2 meters (6 feet) for mechanical purity is not required if there is a definite physical barrier, defined as a natural or artificial obstacle between two adjacent crops that prevents access and accidental harvest.

(d) Staking of a field is permitted in lieu of the 1 meter (3 feet) isolation strip required between inspected pedigreed crops of the same variety provided it meets the following requirements:

(i) Stake locations must be clearly identified on map(s) provided to authorized inspectors.

(ii) Stakes must be placed no more than 100 meters (330 feet) apart.

(iii) Staking must be clearly visible and clearly define the border of the field at the time of inspection.

(3) A crop for pedigreed status may be grown with a companion crop provided permission is obtained from the CSGA. The companion crop must not interfere with the seed crop inspection.

(4) The crop should be planted in such a manner as to facilitate inspection and effective removal of plants of off-types and other varieties, and, where required, other crop kinds and weeds. Walkways in crops such as peas and industrial hemp can be helpful.

20. Disease

(1) Prevention of disease in pedigreed crops and seed is a very important factor in maintaining high production and seed quality. A crop may be declined pedigreed status because of the presence of disease which exceeds the limits established from time to time by the CSGA unless the crop or seed is treated as recommended.

(2) A strict watch shall be maintained for plant diseases at all levels of production. Suspicion of an unknown disease shall be reported to the CFIA or provincial authority who can advise as to the necessary control treatment.

(3) When seed treatment is recommended, all seed should be treated before planting.

21. Weeds

(1) All crops for pedigree must be free of Prohibited noxious weeds.

(2) Very weedy crops will be declined pedigreed status.

22. Maximum Impurity Standards

(1) Crops contaminated with limited amounts of other crop kinds which are readily removable in processing and do not hinder crop inspection may be allowed pedigreed status.

(2) Impurities in pedigreed seed crops should be removed prior to crop inspection.

(3) Any combination of impurities may be reason for declining pedigreed status.

(4) Impurity standards have been established for each crop kind and are outlined in the crop specific sections of Circular 6 and are the maximum levels for impurities. Variants may be specified by the responsible Breeder and are not considered impurities unless reported in excess of the acceptable level specified.

(5) Impurity standards indicate the maximum number of plants of off-types/other varieties or other kinds permitted. For most crop kinds (e.g., Wheat, Soybeans), the standard indicates how many plants are permitted in 10,000 plants. For some crop kinds (e.g., Alfalfa, Timothy), the standard indicates how many plants are permitted in 10 or 100 m^2. The authorized inspector makes 6 counts in the field to determine the number of impurities. The resulting average must not exceed the maximum impurity standard for the crop kind and class.

23. Higher Voluntary or Additional Certification Requirements

(1) Seed crops may be subject to higher voluntary or additional certification requirements that are clearly defined provided that the higher voluntary or additional certification requirements have been approved by the CSGA.

(2) The higher voluntary or additional certification requirements must be communicated by the Breeder/Variety Developer or Variety Distributor to all parties involved with regulation and production of the variety.

(3) Where the Breeder/Variety Developer or Variety Distributor specifies that a laboratory test shall be completed on a representative sample of the harvested seed prior to certification of the seed crop, the CSGA shall withhold the crop certificate, pending receipt of satisfactory test results from a laboratory

recognized by the Breeder/Variety Developer or Variety Distributor as defined in the higher voluntary or additional certification requirement.

(4) Examples of higher voluntary or additional certification requirements include previous land use or isolation distance or border row requirements that exceed the requirements set out in this document, and lab tests for variety or trait purity verification.

(5) For higher voluntary requirements that involve varietal blends for plant pest tolerance management purposes, a Refuge Declaration (Form 182) stating the percentage of each component must be submitted to CSGA before a crop certificate is issued. Unless otherwise specified in the higher voluntary requirements, the Refuge Declaration shall provide the year the seed was produced, the CSGA crop sequence numbers, the test method name or number, the number of seeds tested and the confidence level of the test results.

24. Varietal Purity Seed Standard

(1) Although field inspection of the seed crop remains the primary method for assessing varietal purity in Canada, the standards for varietal purity of seed for Foundation, Registered and Certified status are those established by the Association of Official Seed Certifying Agencies (AOSCA) and published in the AOSCA Certification Handbook.

(2) Exceptions to the AOSCA seed standards are the following maximum impurity standards for off-types and other varieties in Field Peas: 2/10,000 Foundation; 5/10,000 Registered; 20/10,000 Certified.

II. General Requirements for Plot Production

General requirements that are applicable to all pedigreed seed crops can be found in the "General Requirements for All Pedigreed Seed Crops" section of Circular 6. Requirements for land use and crop inspection and individual crop standards for each crop kind can be found in the crop specific sections. In addition, the following general requirements apply to plot production.

1. Parent Seed Source for Select and Foundation Plots

1.1 Barley, Bean, Buckwheat, Canary seed, Chickpea, Durum, Fababean, Flax, Lentil, Lupin, Oat, Pea, Rye, Soybean, Triticale, Wheat

(1) Plots for Select status must be planted with Breeder seed approved by the CSGA or Select seed. OECD Pre-Basic may be eligible for Select plot production. Growers should confirm eligibility with CSGA in advance.

(2) Select Bean plots must be planted with Breeder seed approved by the CSGA unless otherwise specified by the Breeder, to reduce the risk of seedborne disease transmission.

(3) Select seed obtained from another Plot Grower may be used for the production of a Select plot provided that it is transferred in compliance with CSGA requirements. The total number of generations from Breeder seed permitted remains the same.

(4) Normally five generations of Select plot production from Breeder seed are permitted. Beans are limited to one generation. The number of generations may be increased with permission of CSGA.

(5) Accredited Plot Growers producing Select seed must obtain new Breeder seed or Select seed if the plot is demoted or declined for any reason other than excess acreage.

(6) Breeder seed is obtained directly from the organization responsible for the distribution of the variety.

1.2 Canola, Carinata, Mustard, Radish, Rapeseed

(1) Plots for Foundation status must be planted with Breeder seed approved by the CSGA. OECD Pre-Basic may be eligible for Foundation plot production. Growers should confirm eligibility with CSGA in advance.

(2) Breeder seed is obtained directly from the organization responsible for the distribution of the variety.

1.3 Industrial Hemp

(1) Plots for Foundation status must be planted with Breeder seed approved by the CSGA of a variety on Health Canada's List of Approved Cultivars. OECD Pre-Basic may be eligible for Foundation plot production. Growers should confirm eligibility with CSGA in advance.

(2) Breeder seed is obtained directly from the organization responsible for the distribution of the variety.

2. Area of Select and Foundation Plots

(1) There is no limit on total acreage of plots, number of crop kinds, number of varieties or acreage of one variety. Each plot is limited to 1 hectare (2.5 acres) in size.

(2) When unforeseen circumstances do not permit proper maintenance of the entire plot, it is recommended that the area be reduced by destroying part of the plot or by isolating a part to meet the requirements of a lower status pedigreed seed. The remainder of the plot must meet the requirements of plot production.

(3) The area of the plot includes "walkways" provided within the plot to facilitate effective roguing.

3. Isolation for Select Plots

(1) 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 the adjacent pedigreed seed crops providing that the adjacent seed crops were planted:

(a) with the same seed;

(b) on land with the same previous land use history.

(2) The isolation strip must not be a source of contamination.

(3) Plots of Barley, Buckwheat, Camelina, Canary seed, Durum, Fenugreek, Flax, Oat, Rye, Triticale and Wheat need not be isolated from crops of Bean, Chickpea, Fababean, Lentil, Lupin, Pea and Soybean.

(4) Staking of a plot perimeter is permitted, except for Bean plots, in lieu of the 1 meter (3 feet) isolation strip if it meets CSGA requirements for plot staking, which include the following:

(a) Stake locations must be clearly identified on map(s) provided to crop inspectors;

(b) Staking must include at least 8 stakes that are clearly visible and clearly define the perimeter of the plot at the time of inspection;

(c) Impurities reported within a plot's isolation distance are considered within the plot for CSGA appraisal purposes.

4. Specific Requirements for Select and Foundation Plots

(1) Any means of processing or conditioning of seed from a plot which may contaminate the varietal purity of the seed is prohibited.

(2) A Report of Plot Production (Form 50) for each variety must be completed and submitted to the CSGA prior to issuance of the crop certificate.

(3) A sample of clean seed from plots of each variety, one sample per crop certificate, must be submitted for variety verification. The sample must be representative of the seed harvested from the plot/s.

III. General Requirements for Probation Plot Production

General requirements that are applicable to all pedigreed seed crops can be found in the "General Requirements for All Pedigreed Seed Crops" section of Circular 6. Requirements for land use and crop inspection and individual crop standards for each crop kind can be found in the crop specific sections. The crop specific requirements for Select and Foundation plot production are applicable to Probation plot production e.g., the previous land use and isolation requirements for Select Wheat plots are also applicable to Probation Wheat plots. In addition, the following general requirements apply to Probation plot production.

1. Qualifications

(1) An individual seed grower wishing to produce Select and/or Foundation plots must receive permission from the CSGA and meet the requirements of the CSGA before commencing Probation plot production.

(2) An Application to Commence Probation Plot Production (Form 154) is available from the CSGA's website at www.seedgrowers.ca and should be submitted prior to March 31 for spring seeded crops and prior to July 31 for fall seeded crops.

(3) The grower may be required to have grown pedigreed seed crops in at least three (3) of the previous five (5) years. This can be reduced to two (2) of the previous four (4) years, providing:

  (a) An accredited Plot Grower or CSGA recognized plant breeder submits a declaration that the grower has sufficient seed crop production knowledge to produce plots, or

  (b) The grower has completed the required e-learning module/s.

(4) An individual seed grower must complete three (3) successful years of Probation plot production to be granted accredited Plot Grower status. This can be reduced to two (2) years providing the grower has completed the required e-learning module/s by April 1st of the second year of Probation plot production.

  (a) This status is granted to an individual seed grower only.

  (b) This status cannot be acquired through an affiliation with another seed grower or transferred to or from other accredited Plot Growers.

(5) Probationary growers may change the variety within the crop kind which they started their probation without receiving prior permission from the CSGA. Growers must complete the entire probationary period within the same crop kind.

(6) Probationary plot growers may produce only one plot in each year of probation.

2. Parent Seed Source and Status of Plots During Probation

2.1 Barley, Bean, Buckwheat, Canary seed, Chickpea, Durum, Fababean, Flax, Lentil, Lupin, Oat, Pea, Rye, Soybean, Triticale, Wheat

(1) Plots for first year probation status must be planted with Breeder seed approved by the CSGA. Select seed may be planted with the prior approval of the CSGA. OECD Pre-Basic may be eligible for Probation plot production. Growers should confirm eligibility with CSGA in advance.

(2) Probation Bean plots must be planted with Breeder seed approved by the CSGA each year of probation, unless otherwise specified by the Breeder, to reduce the risk of seedborne disease transmission.

(3) Probation plot growers must obtain new Breeder or Select seed if the plot is demoted or declined for any reason other than excess acreage.

(4) Breeder seed is obtained directly from the organization responsible for the distribution of the variety.

(5) The status granted to plots produced during the probation period is as follows:

  (a) Prior to final year of probation: provided all requirements are met, the plot will be granted Foundation status. Sufficient seed is selected from this plot to plant the Probation plot the next year and the balance of this seed may be used to produce Registered or Certified seed.

(b) Final year of probation: provided all requirements are met, the plot will be granted Select status and the seed may be used for further Select or Foundation production. The grower is now eligible to produce Select and Foundation plots.

2.2 Canola, Carinata, Mustard, Radish, Rapeseed

(1) Plots for Probation status must be planted with Breeder seed approved by the CSGA each year of probation. OECD Pre-Basic may be eligible for Probation plot production. Growers should confirm eligibility with CSGA in advance.

(2) Breeder seed is obtained directly from the organization responsible for the distribution of the variety.

(3) The status granted to plots produced during the probation period is as follows:

(a) Prior to final year of probation: provided all requirements are met, the plot will be granted Foundation status. Breeder or Pre-Basic seed must be obtained for the next year plot.

(b) Final year of probation: provided all requirements are met, the plot will be granted Foundation status. The grower is now eligible to produce Select and Foundation plots.

2.3 Industrial Hemp

(1) Plots for Probation status must be planted with Breeder seed approved by the CSGA of a variety on Health Canada's List of Approved Cultivars each year of probation. OECD Pre-Basic may be eligible for Probation plot production. Growers should confirm eligibility with CSGA in advance.

(2) Breeder seed is obtained directly from the organization responsible for the distribution of the variety.

(3) The status granted to plots produced during the probation period is as follows:

(a) Prior to final year of probation: provided all requirements are met, the plot will be granted Foundation status. Breeder or Pre-Basic seed must be obtained for the next year plot.

(b) Final year of probation: provided all requirements are met, the plot will be granted Foundation status. The grower is now eligible to produce Select and Foundation plots.

3. Area of Probation Plots

(1) The total area of a Probation plot must not exceed 1.0 hectare (2.5 acres) or be less than 0.25 hectare (0.5 acre).

(2) The total area of a Probation plot includes "walkways" provided within the plot to facilitate effective roguing.

(3) When unforeseen circumstances do not permit proper maintenance of the entire plot, it is recommended that the area be reduced by destroying part of the plot or by isolating a part to meet the requirements of a lower status of pedigreed seed. The remainder must meet the requirements for Probation plot production.

4. Isolation for Probation Plots

4.1 Barley, Buckwheat, Canary seed, Chickpea, Durum, Fababean, Flax, Lentil, Lupin, Oat, Pea, Rye, Soybean, Triticale, Wheat

(1) A 1 meter (3 feet) isolation strip is required between plots of the same variety and between plots and the adjacent pedigreed seed crops providing that the adjacent seed crops were planted:

(a) with the same seed;

(b) on land with the same previous land use history.

(2) The isolation strip must not be a source of contamination.

(3) Plots of Barley, Buckwheat, Camelina, Canary seed, Durum, Fenugreek, Flax, Oat, Rye, Triticale and Wheat need not be isolated from crops of Bean, Chickpea, Fababean, Lentil, Lupin, Pea and Soybean.

(4) Staking of a plot perimeter is permitted, in lieu of the 1 meter (3 feet) isolation strip if it meets CSGA requirements for plot staking, which include the following:

(a) Stake locations must be clearly identified on map(s) provided to crop inspectors;

(b) Staking must include at least 8 stakes that are clearly visible and clearly define the perimeter of the plot at the time of inspection;

(c) Impurities reported within a plot's isolation distance are considered within the plot for CSGA appraisal purposes.

5. Specific Requirements for Probation Plots

(1) Any means of processing or conditioning of seed from a Probation plot which may contaminate the varietal purity of the seed is prohibited.

(2) A Report of Plot Production (Form 50) for each Probation plot must be completed and submitted to the CSGA prior to issuance of the crop certificate.

(3) A sample of clean seed from each Probation plot must be submitted for variety verification. The sample must be representative of the seed harvested from the plot.

IV. Glossary of Terms

Accredited Plot Grower – A seed grower approved by the CSGA to produce Select and Foundation class seed plots.

Additional Certification Requirement (ACR) – A requirement that is over and above the standards and requirements prescribed in the *Canadian Regulations and Procedures for Pedigreed Seed Crop Production* (Circular 6) where the additional standard or requirement is directly related to maintaining the varietal identity and purity of the seed crop, e.g., where a variety requires a higher minimum isolation distance than prescribed in Circular 6 to reduce the risk of contamination from other crops due to a higher level of outcrossing than typical varieties.

Age of Stand – The number of years a perennial crop may be offered for pedigree from one planting. The first seed crop is considered the first year in which a seed crop would normally be harvested, irrespective of time or method of planting. Each calendar year thereafter is considered a seed crop year.

Assignee – Refers to the party to which a grower has legally transferred the ownership of a crop certificate.

Assignment of crop certificate – Refers to the process whereby by a grower legally transfers the ownership of a crop certificate to another party.

Associate Plant Breeder – A person recognized by the CSGA Plant Breeders' Committee and approved by the CSGA to produce Breeder seed or inbreds under the supervision of a fully qualified and recognized Plant Breeder.

Authorized Seed Crop Inspection Service (ASCIS) – A service provider that has been authorized by the CFIA and recognized by the CSGA to conduct pedigreed seed crop inspections.

Authorized Inspector – An official CFIA inspector or an inspector licensed by the CFIA to conduct seed crop inspections working under the supervision of an authorized seed crop inspection service.

Basic seed – A class of seed designated by the OECD Seed Schemes. It is normally the progeny of Pre-Basic seed, is considered equivalent Foundation class seed in Canada and is used to produce Certified class seed.

Breeder – See Plant Breeder.

Breeder seed – Seed recognized by the CSGA as being seed of a variety (cultivar) that has been produced by a recognized plant breeder, or a plant breeder responsible for the maintenance of the variety, under conditions which have ensured that the specific traits of the variety have been maintained. It is the source for the initial and recurring increases of seed for the pedigreed classes.

***Canadian Regulations and Procedures for Breeder Seed Crop Production* –** The CSGA's requirements for professional recognition for Plant Breeders and for certification of Breeder status seed crops.

Certified seed – The approved progeny of Breeder, Select, Foundation or Registered seed produced by seed growers and so managed to maintain varietal identity and purity. It is the class of seed recommended for commercial crop production.

Circular 6 – The designation commonly used for the publication entitled, *Canadian Regulations and Procedures for Pedigreed Seed Crop Production*, published by the CSGA.

Class (of seed and seed crop) – Refers to the generations of pedigreed seed and seed crops, such as Breeder, Select, Foundation, Registered and Certified.

Companion crop – A crop grown in association with another crop.

Composite variety – A plant population in which at least 70% of progeny result from cross pollination between the parent lines.

Conditioning of seed – A term used to describe the preparation of seed for sale by cleaning, processing, packing, treating, or changing in any other manner the nature of the seed lot.

Contaminating Plant – An unintended plant within the inspected crop or an unintended pollen source within the inspected crop or the required isolation distance that poses a risk to the mechanical or varietal purity of the inspected seed crop.

Crop Certificate – A document issued by the CSGA which certifies that the crops identified have met the CSGA standards for the class of crop designated.

Crop Kind – A species of plant listed in Schedule I to the *Seeds Regulations.*

Cultivar – A variety of a cultivated crop. See Variety.

Foundation seed – The approved progeny of Breeder or Select seed produced by seed growers and so managed to maintain its specific varietal identity and purity.

Higher Voluntary Requirement (HVR) – A requirement that is over and above the standards and requirements prescribed in the *Canadian Regulations and Procedures for Pedigreed Seed Crop Production* (Circular 6) where the additional standard or requirement is intended to meet an objective that is not directly related to maintaining the varietal identity and purity of the seed crop, e.g., the post-harvest requirement to have midge tolerant wheat varieties tested to verify the proportion of the refuge (susceptible) variety in the blend to meet the objective of maintaining the viability of the midge tolerance gene.

Hybrid – The first generation progeny of a cross between two different plants of the same species often resulting in a plant that is more vigorous and productive than either parent.

Inbred – A relatively true breeding strain resulting from several successive generations of controlled self-fertilization or back-crossing to a recurrent parent with selection or its equivalent.

Identity Preserved (IP) – Programs that segregate commercial crops, usually by variety or group of varieties, for delivery to markets with variety-specific requirements. IP program requirements usually include the planting of Certified seed.

Inspection (crop) – The act of inspecting a pedigreed seed crop by an inspector authorized to report to the CSGA on the condition of the seed crop offered for pedigreed status. The inspector reports on varietal impurities, difficult to separate other crop kinds, isolation, objectionable weed content, previous land use and the pedigree of the parent seed planted.

Inspector – See Authorized Inspector and Official Inspector.

Interagency tags – Labels or tags applied to pedigreed seed that has been controlled by two or more certifying agencies from one country or state to another. Pedigreed seed brought into Canada for resale is usually labelled with Interagency tags.

Isolation Requirements – The distance required to isolate pedigreed seed crops from other crops which may be a source of pollen or seed contamination.

Land use inspection – An inspection of a non-pedigreed crop to determine the degree of contamination in the crop which may pose a varietal purity problem in a pedigreed seed crop planned to be grown on the same land the following crop season.

Licensed Seed Crop Inspector (LSCI) – An individual who has been licensed by the CFIA to conduct pedigreed seed crop inspection for an authorized seed crop inspection service.

Mechanical purity – Refers to the degree of freedom of a seed lot from seeds of other crop kinds, weed seeds and inert matter.

Member: Regular Member of CSGA – Any person, partnership or organization producing or undertaking the production of pedigreed seed may become a Regular Member of the CSGA by applying for inspection of crops planted with parent seed eligible for certifying and paying the applicable fees.

Native Plant Certification (NPC) – A voluntary quality control process provided by the CSGA for native plant seed identification. Although legally separate from pedigreed seed crop certification, similar CSGA documents and

procedures are used to verify the origin, of collection or production, of native plant reproductive materials which have not been released as a variety. The CSGA's NPC program documents the identity of plant material and verifies that it is from a designated geographic location (Source Identified class) or selected for specific characteristics (Selected class).

Non-Pedigreed crop – A crop for which a crop certificate has not been issued or recognized by the CSGA.

Noxious weed – A weed or plant that is considered undesirable and so categorized by the *Weed Seeds Order*, a Ministerial order under the *Seeds Act.*

Official Inspector – A CFIA employee who is designated under the authority of the *Canadian Food Inspection Agency Act* and authorized to conduct pedigreed seed crop inspections.

Off type – Plants in a seed field which deviate in one or more characteristics from the official description of the variety.

Other crop seed – One of the four components of a seed purity test, seeds of other crop kinds in the seed sample being tested.

Parent or stock seed – Seed used to produce a crop eligible for pedigreed status.

Partnership – The CSGA may establish a partnership record for the production of pedigreed seed restricted to those members who are actively participating in a single farm unit and may include contractual employees or shareholders.

Pedigreed class or status – See Class.

Pedigreed crop – A crop for which the CSGA, based on a crop inspection report and compliance with all certification requirements, has issued a crop certificate which indicates that the crop has been granted Breeder, Select, Foundation, Registered or Certified crop status.

Pedigreed seed – Seed is recognized as having pedigreed status when derived from a pedigreed crop. Seed originating outside of Canada must be certified by an official certifying agency as defined in the *Seeds Regulations* before being considered pedigreed seed in Canada.

Pedigreed graded seed – Pedigreed seed meeting the grade requirements of the federal *Seeds Act* as set out in the *Seeds Regulations*.

Plant Breeder – For pedigreed seed production, a plant breeder is any person recognized as such by the Plant Breeders' Committee of the CSGA and the CSGA Board of Directors and who is knowledgeable in the principles and practices of plant breeding and related disciplines and engaged in the selection and synthesis of superior varieties, production and maintenance of cultivars true to identity and purity.

Pollen parent – The parent that furnishes the pollen which fertilizes the ovules of the seed parent in the production of seed.

Pre-Basic seed – An OECD class of pedigreed seed which is considered in Canada as equivalent to Breeder or Select seed and is used for the production of Basic seed or Foundation seed. It is supposed to be labelled with the number of generations it precedes Certified 1st generation.

Pre-Variety Germplasm – The category of AOSCA certification standards used for the collections and selections of plants, usually perennial native forage grasses, legumes and forbs, that are not sufficiently distinct, uniform or stable to be certified as varieties. In Canada, separate from pedigreed seed crop certification, these standards are used in the CSGA's Native Plant Certification (NPC) program for Source Identified and Selected class seed crop certification.

Progeny – Offspring or plants grown from seed.

Prohibited noxious weed – A weed or plant that is considered so undesirable that it is categorized as Prohibited Noxious (Class 1) in the *Weed Seeds Order*.

Referee Inspection – A separate inspection, completed by an official CFIA inspector where the grower is not satisfied with or disputing a *Seed Crop Inspection Report*.

Referee Plant Breeder – A plant breeder recognized by the CSGA to make decisions on varietal identification of crops.

Registered seed – The approved progeny of Breeder, Select or Foundation seed produced by seed growers and so managed to maintain specific varietal identity and purity.

Re-Inspection – Inspection of a seed crop by an authorized inspector to verify corrective action taken to improve the status of the seed crop.

Renovation or rejuvenation – The process of restoring productivity to plants growing in solid stands by cultivation, fertilization, reseeding, or other methods.

Responsible Plant Breeder – The plant breeder or breeding organization that is officially recognized as the maintainer of Breeder seed reference samples and production for a variety.

Rogues – Undesirable plants growing in a pedigreed seed crop. May arise as a result of a mutation, intercrossing, mechanical mixtures or cross pollination.

Roguing – Process of removing rogues, off-types, other crop kinds and undesirable plants from seed crops.

***Seeds Act* –** The Canadian legislation that covers the import, export and sale of seed including all pedigreed seed certification. The official version is available from the Government of Canada website.

***Seed Crop Inspection Report* –** A document completed by the authorized inspector which describes the crop offered for pedigreed status and which is appraised by the CSGA to determine the eligibility of the seed crop for certification.

Seed grower (pedigreed) – An applicant for certification of a crop offered for pedigree, grows the crop in accordance with the *Canadian Regulations and Procedures for Pedigreed Seed Crop Production* of the CSGA and who accepts full responsibility for the production and management of the seed crop and all related financial obligations.

Selected – The seed certification class of pre-variety germplasm which provides third party assurance of identity, usually for perennial native forage grasses, legumes and forbs produced from selected parent populations with distinctive, identifiable characteristics or potential genetic improvement. Selected class seed labels, issued by the CSGA, identify the name assigned to the selection by the responsible Plant Breeder.

Select seed – The approved progeny of Breeder or Select seed produced in a manner by seed growers authorized by the CSGA to maintain its varietal identity and purity. Select seed may be produced from Select seed for a maximum of five multiplications from Breeder seed.

Select Technical Blend (TB) – A CSGA category for a specific combination or mixture of seed lots used for the production of composite varieties (e.g. composite canola) or the production of Certified hybrid seed for cereals produced from a mixture of the two parents (e.g. hybrid wheat).

Source Identified (SI) – The seed certification class of pre-variety germplasm which provides third party assurance of geographic origin, usually for perennial native forage grasses, legumes and forbs produced from parent populations which have not been selected. Source Identified class seed labels, issued by the CSGA, identify the original geographic location, of the collection or production, that has been declared by the responsible Plant Breeder.

Stock or parent seed – Seed used to produce a crop eligible for pedigreed status.

Strain or line – A term used to designate a relatively uniform population of plants.

Variant – Any seed or plant which (a) is distinct within the variety but occurs naturally within the variety; (b) is stable and predictable with a degree of reliability compared to other varieties of the same kind, within known tolerances; and (c) is described as a variation in the official variety description. It is not an off-type, and only considered an impurity if reported in excess of the acceptable level specified by the responsible Breeder.

Varietal purity – Trueness to type or variety.

Variety (cultivar) – Has the meaning assigned to ***cultivar*** by the International Union of Biological Sciences' Commission for the Nomenclature of Cultivated Plants and denotes an assemblage of cultivated plants, including hybrids constituted by controlled cross-pollination, that a) are distinguished by common morphological, physiological, cytological, chemical or other characteristics, and b) retain their distinguishing characteristics when re-produced.

Variety description – Document approved by the CFIA or CSGA in which the responsible Plant Breeder specifies the distinguishing characteristics of a variety.

Variety maintainer – The person or organization responsible for the production or maintenance of a bred variety included in a list of varieties eligible for certification by an AOSCA agency or under an OECD Seed Scheme. The maintainer shall ensure that the variety remains true to type throughout its full life-span and, in the case of hybrid varieties, that the formula for hybridization is followed.

Volunteer plants – A plant that grows on its own, from seeds in the soil from the previous crop, rather than being deliberately planted.

Section 2

I. Crop Specific Standards for Cereals & Small Grains

Barley – Foundation, Registered and Certified Production

Barley includes Spring and Winter Barley.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Barley.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Spring & Winter **Certified**	In the previous year produced: • a non-pedigreed crop of Barley, Durum, Oat, Rye, Triticale or Wheat. • a crop of a different variety of Barley. • a non-pedigreed crop of Canary seed, Flax, Safflower or Sunflower which followed a non-pedigreed crop of Barley 2 years prior or a different variety of Barley 2 years prior.
Spring & Winter **Foundation & Registered**	In the previous year produced: • a non-pedigreed crop of Barley, Durum, Oat, Rye, Triticale or Wheat. • a crop of a different variety of Barley. • a non-pedigreed crop of Bean, Canary seed, Chickpea, Fababean, Flax, Lentil, Lupin, Pea, Safflower, Soybean or Sunflower which followed a non-pedigreed crop of Barley 2 years prior or a different variety of Barley 2 years prior.

Crop Inspection

Barley crops must be inspected between heading and maturity.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

		Distance
1.	Varietal Purity	
a.	Inspected pedigreed Barley of same variety	1 meter (3 feet)
b.	Different varieties of Barley or non-pedigreed Barley	3 meters (10 feet)
2.	Mechanical Purity	Distance
a.	Durum, Oat, Rye, Triticale, Wheat	2 meters (6 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Foundation – 1
   b. Registered – 3
   c. Certified – 8
2. Mechanical Purity (other crop kinds, the seeds of which are difficult to separate from the seeds of the inspected crop, on average in 10,000 plants)

Other Kind	Foundation	Registered	Certified
Durum	1	1	2
Oat	2	2	4
Rye	1	1	3
Triticale	2	2	4
Wheat	2	2	8

Buckwheat – Foundation, Registered and Certified Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Buckwheat.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Certified	In the previous year produced: • a non-pedigreed crop of Buckwheat. • a crop of a different variety of Buckwheat.
Foundation & Registered	In either of the preceding 2 years produced: • a non-pedigreed crop of Buckwheat. • a crop of a different variety of Buckwheat.

Crop Inspection

Buckwheat crops must be inspected when the crop is in bloom.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Buckwheat of same variety	1 meter (3 feet)
b. Crop planted with Certified seed of the same variety*	3 meters (10 feet)*
c. Different varieties of Buckwheat or non-pedigreed Buckwheat	200 meters (660 feet)

* 3 meters (10 feet) is sufficient isolation to a crop planted with Certified seed provided the pedigree of the Certified seed used can be established and that the adjacent crop is free for 200 meters (660 feet) from non-pedigreed or different varieties of Buckwheat.

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Foundation – 1
   b. Registered – 3
   c. Certified – 8

Canary seed – Foundation, Registered and Certified Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Canary seed.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Foundation, Registered & Certified	In the previous year produced: • a non-pedigreed crop of Canary seed. • a crop of a different variety of Canary seed. • a crop of Flax. • a non-pedigreed crop of Barley, Bean, Buckwheat, Chickpea, Durum, Fababean, Lentil, Lupin, Oat, Pea, Rye, Safflower, Soybean, Sunflower, Triticale or Wheat which followed a non-pedigreed crop of Canary seed 2 years prior or a different variety of Canary seed 2 years prior.

Crop Inspection

Canary seed crops must be inspected when the crop is in bloom.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

	Distance
1. Varietal Purity	
a. Inspected pedigreed Canary seed of same variety	1 meter (3 feet)
b. Different varieties of Canary seed or non-pedigreed Canary seed	3 meters (10 feet)
2. Mechanical Purity	Distance
a. Flax	2 meters (6 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Foundation – 1
   b. Registered – 3
   c. Certified – 8

Durum – Foundation, Registered and Certified Production

Durum is separate from Wheat. References to Wheat in the Durum requirements includes Spring and Winter Wheat unless otherwise specified. **Wheat** and **Hybrid Wheat** can be found under their own heading.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Durum.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Certified	In the previous year produced: • a non-pedigreed** crop of Barley, Durum, Oat, Rye, Triticale, Winter Wheat or Spring Wheat. • a crop of a different* variety of Durum.
Foundation & Registered	In the previous year produced: • a non-pedigreed** crop of Barley, Durum, Oat, Rye, Winter Wheat or Triticale. • a crop of a different* variety of Durum. • a non-pedigreed crop which followed a non-pedigreed** crop of Durum 2 years prior or a different* variety of Durum 2 years prior. In either of the preceding 2 years produced: • a crop of Spring Wheat.

Crop Inspection

Durum crops must be inspected between heading and maturity.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Durum of same* variety	1 meter (3 feet)
b. Different* varieties of Durum or non-pedigreed** Durum	3 meters (10 feet)
2. Mechanical Purity	**Distance**
a. Barley, Oat, Rye, Triticale, Wheat	2 meters (6 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Foundation – 1
   b. Registered – 3
   c. Certified – 8
2. Mechanical Purity (other crop kinds, the seeds of which are difficult to separate from the seeds of the inspected crop, on average in 10,000 plants)

Other Kind	Foundation	Registered	Certified
Barley	1	1	2
Oat	4	4	8
Rye	1	1	3
Triticale	1	1	5
Wheat	1	1	5

_____
* 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.
** "Non-pedigreed crop" means a crop that did not meet the requirements of Circular 6.

Flax – Foundation, Registered and Certified Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Flax.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Foundation, Registered & Certified	In the previous year produced: • a non-pedigreed crop of Flax. • a crop of a different variety of Flax. • a crop of Canary seed. • a non-pedigreed crop of Barley, Bean, Buckwheat, Chickpea, Durum, Fababean, Lentil, Lupin, Oat, Pea, Rye, Safflower, Soybean, Sunflower, Triticale or Wheat which followed a non-pedigreed crop of Flax 2 years prior or a different variety of Flax 2 years prior.

Crop Inspection

Flax crops must be inspected at full bloom. The inspection should take place in the morning.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

	Distance
1. Varietal Purity	
a. Inspected pedigreed Flax of same variety	1 meter (3 feet)
b. Different varieties of Flax or non-pedigreed Flax	3 meters (10 feet)
2. Mechanical Purity	Distance
a. Canary seed	2 meters (6 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Foundation – 1
   b. Registered – 3
   c. Certified – 8

Oat – Foundation, Registered and Certified Production

Oat includes Covered and Naked Oat.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Oat.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Certified	In the previous year produced: • a non-pedigreed crop of Barley, Durum, Oat, Rye, Triticale or Wheat. • a crop of a different variety of Oat. • a non-pedigreed crop of Canary seed, Flax, Safflower or Sunflower which followed a non-pedigreed crop of Oat 2 years prior or a different variety of Oat 2 years prior.
Foundation & Registered	In the previous year produced: • a non-pedigreed crop of Barley, Durum, Oat, Rye, Triticale or Wheat. • a crop of a different variety of Oat. • a non-pedigreed crop of Bean, Canary seed, Chickpea, Fababean, Flax, Lentil, Lupin, Pea, Safflower, Soybean or Sunflower which followed a non-pedigreed crop of Oat 2 years prior or a different variety of Oat 2 years prior.

Crop Inspection

Oat crops must be inspected between heading and maturity.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

	Distance
1. Varietal Purity	
a. Inspected pedigreed Oat of same variety	1 meter (3 feet)
b. Different varieties of Oat or non-pedigreed Oat	3 meters (10 feet)
2. Mechanical Purity	Distance
a. Barley, Durum, Rye, Triticale, Wheat	2 meters (6 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Foundation – 1
   b. Registered – 3
   c. Certified – 8

2. Mechanical Purity (other crop kinds, the seeds of which are difficult to separate from the seeds of the inspected crop, on average in 10,000 plants)

Other Kind	Foundation	Registered	Certified
Barley	1	1	2
Durum	2	2	4
Rye	1	1	3
Triticale	4	4	8
Wheat	4	4	8

Rye – Foundation, Registered and Certified Production

Rye includes Spring and Winter Rye. **Hybrid Rye** is not included and can be found under its own heading.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Rye.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Spring **Certified** Winter **Certified**	In the previous year produced: • a non-pedigreed crop of Barley, Durum, Oat, Rye, Triticale or Wheat. • a crop of a different variety of Rye. • a non-pedigreed crop of Canary seed, Flax, Safflower or Sunflower which followed a non-pedigreed crop of Rye 2 years prior or a different variety of Rye 2 years prior.
Spring **Registered** Winter **Foundation and Registered**	In the previous year produced: • a non-pedigreed crop of Barley, Durum, Oat, Rye, Triticale or Wheat. • a crop of a different variety of Rye. • a non-pedigreed crop of Bean, Canary seed, Chickpea, Fababean, Flax, Lentil, Lupin, Pea, Safflower, Soybean or Sunflower which followed a non-pedigreed crop of Rye 2 years prior or a different variety of Rye 2 years prior.
Spring **Foundation**	In the previous year produced: • a non-pedigreed crop of Barley, Durum, Oat, Triticale or Wheat. • a non-pedigreed crop of Bean, Canary seed, Chickpea, Fababean, Flax, Lentil, Lupin, Pea, Safflower, Soybean or Sunflower which followed a non-pedigreed crop of Spring Rye 3 years prior or a different variety of Spring Rye 3 years prior. In either of the preceding 2 years produced: • a non-pedigreed crop of Rye. • a crop of a different variety of Rye.

Crop Inspection

Rye crops must be inspected between heading and maturity.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Rye of same variety	1 meter (3 feet)
b. Crop planted with Certified seed of the same variety*	3 meters (10 feet)*
c. Different varieties of Rye or non-pedigreed Rye	300 meters (984 feet)
2. Mechanical Purity	**Distance**
a. Barley, Durum, Oat, Triticale, Wheat	2 meters (6 feet)

* 3 meters (10 feet) is sufficient isolation to a crop planted with Certified seed of the same variety provided the pedigree of the Certified seed used can be established and that the adjacent crop is free for 300 meters (984 feet) from non-pedigreed or different varieties of Rye.

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Foundation – 1
   b. Registered – 3
   c. Certified – 8
2. Mechanical Purity (other crop kinds, the seeds of which are difficult to separate from the seeds of the inspected crop, on average in 10,000 plants)

Other Kind	Foundation	Registered	Certified
Barley	2	2	4
Durum	2	2	4
Oat	2	2	4
Triticale	2	2	4
Wheat	2	2	4

Triticale – Foundation, Registered and Certified Production

Triticale includes Spring and Winter Triticale.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Triticale.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Spring **Certified** Winter **Certified**	In the previous year produced: • a non-pedigreed crop of Barley, Durum, Oat, Rye, Triticale or Wheat. • a crop of a different variety of Triticale. • a non-pedigreed crop of Canary seed, Flax, Safflower or Sunflower which followed a non-pedigreed crop of Triticale 2 years prior or a different variety of Triticale 2 years prior.
Spring **Registered** Winter **Foundation and Registered**	In the previous year produced: • a non-pedigreed crop of Barley, Durum, Oat, Rye, Triticale or Wheat. • a crop of a different variety of Triticale. • a non-pedigreed crop of Bean, Canary seed, Chickpea, Fababean, Flax, Lentil, Lupin, Pea, Safflower, Soybean or Sunflower which followed a non-pedigreed crop of Triticale 2 years prior or a different variety of Triticale 2 years prior.
Spring **Foundation**	In the previous year produced: • a non-pedigreed crop of Barley, Durum, Oat, Rye or Wheat. • a non-pedigreed crop of Bean, Canary seed, Chickpea, Fababean, Flax, Lentil, Lupin, Pea, Safflower, Soybean or Sunflower which followed a non-pedigreed crop of Spring Triticale 3 years prior or a different variety of Spring Triticale 3 years prior. In either of the preceding 2 years produced: • a non-pedigreed crop of Triticale. • a crop of a different variety of Triticale.

Crop Inspection

Triticale crops must be inspected between heading and maturity.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Triticale of same variety	1 meter (3 feet)
b. Different varieties of Triticale or non-pedigreed Triticale	3 meters (10 feet)
2. Mechanical Purity	**Distance**
a. Barley, Durum, Oat, Rye, Wheat	2 meters (6 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Foundation – 1
   b. Registered – 3
   c. Certified – 8
2. Mechanical Purity (other crop kinds, the seeds of which are difficult to separate from the seeds of the inspected crop, on average in 10,000 plants)

Other Kind	Foundation	Registered	Certified
Barley	2	2	4
Durum	1	1	5
Oat	4	4	8
Rye	1	1	3
Wheat	1	1	5

Wheat – Foundation, Registered and Certified Production

Wheat includes Spring and Winter Wheat, Einkorn, Emmer and Spelt (unless otherwise specified).
Durum and **Hybrid Wheat** are not included and can be found under their own heading.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Wheat.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Spring **Certified** Winter **Certified**	In the previous year produced: • a non-pedigreed** crop of Barley, Oat, Rye, Triticale or Wheat. • a crop of a different* variety of Wheat. • a crop of Durum. • a non-pedigreed crop of Canary seed, Flax, Safflower or Sunflower which followed a non-pedigreed** crop of Wheat 2 years prior or a different* variety of Wheat 2 years prior.
Spring **Registered** Winter **Foundation and Registered**	In the previous year produced: • a non-pedigreed** crop of Barley, Oat, Rye, Triticale or Wheat. • a crop of a different* variety of Wheat. • a crop of Durum. • a non-pedigreed crop of Bean, Canary seed, Chickpea, Fababean, Flax, Lentil, Lupin, Pea, Safflower, Soybean or Sunflower which followed a non-pedigreed** crop of Wheat 2 years prior or a different* variety of Wheat 2 years prior.
Spring **Foundation**	In the previous year produced: • a non-pedigreed crop of Barley, Oat, Rye or Triticale. • a crop of Durum. • a non-pedigreed crop of Bean, Canary seed, Chickpea, Fababean, Flax, Lentil, Lupin, Pea, Safflower, Soybean or Sunflower which followed a non-pedigreed** crop of Spring Wheat 3 years prior or a different* variety of Spring Wheat 3 years prior. In either of the preceding 2 years produced: • a non-pedigreed** crop of Wheat. • a crop of a different* variety of Wheat.

Crop Inspection

Wheat crops must be inspected between heading and maturity.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Wheat of same* variety	1 meter (3 feet)
b. Different* varieties of Wheat or non-pedigreed** Wheat	3 meters (10 feet)
2. Mechanical Purity	**Distance**
a. Barley, Durum, Oat, Rye, Triticale	2 meters (6 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Foundation – 1
   b. Registered – 3
   c. Certified – 8
2. Mechanical Purity (other crop kinds, the seeds of which are difficult to separate from the seeds of the inspected crop, on average in 10,000 plants)

Other Kind	Foundation	Registered	Certified
Barley	2	2	4
Durum	1	1	5
Oat	4	4	8
Rye	1	1	3
Triticale	1	1	5

* 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.
** "Non-pedigreed crop" means a crop that did not meet the requirements of Circular 6.

II. Crop Specific Standards for Hybrid Cereals

Rye – Foundation and Certified Production of Hybrid Rye

The requirements shown here are specifically for Foundation parent production and Certified production of **Hybrid Rye.** References to Rye shown here includes Spring and Winter Rye (unless otherwise specified).

Rye is not included and can be found under its own heading.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Hybrid Rye.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Spring & Winter **Certified**	In the previous year produced: • a non-pedigreed crop of Barley, Durum, Oat, Rye, Triticale or Wheat. • a crop of a different variety of Rye. • a non-pedigreed crop of Canary seed, Flax, Safflower or Sunflower which followed a non-pedigreed crop of Rye 2 years prior or a different variety of Rye 2 years prior.
Winter **Foundation**	In the previous year produced: • a non-pedigreed crop of Barley, Durum, Oat, Rye, Triticale or Wheat. • a crop of a different variety of Rye. • a non-pedigreed crop of Bean, Canary seed, Chickpea, Fababean, Flax, Lentil, Lupin, Pea, Safflower, Soybean or Sunflower which followed a non-pedigreed crop of Rye 2 years prior or a different variety of Rye 2 years prior.
Spring **Foundation**	In the previous year produced: • a non-pedigreed crop of Barley, Durum, Oat, Triticale or Wheat. • a non-pedigreed crop of Bean, Canary seed, Chickpea, Fababean, Flax, Lentil, Lupin, Pea, Safflower, Soybean or Sunflower which followed a non-pedigreed crop of Spring Rye 3 years prior or a different variety of Spring Rye 3 years prior. In either of the preceding 2 years produced: • a non-pedigreed crop of Rye. • a crop of a different variety of Rye.

Crop Inspection

Hybrid Rye crops must be inspected between heading and maturity.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Rye of same variety	3 meter (10 feet)*
b. Crop planted with Certified seed of the same variety*	3 meters (10 feet)**
c. Different varieties of Rye or non-pedigreed Rye	500 meters (1640 feet) for Certified 1000 meters (3280 feet) for Foundation

2. Mechanical Purity	Distance
a. Barley, Durum, Oat, Triticale, Wheat	2 meters (6 feet)

*3 meters (10 feet) is sufficient isolation to a crop planted with Breeder or Foundation seed of the same pollen bearing (male) parent line, provided the pedigree of the seed used can be established.
** 3 meters (10 feet) is sufficient isolation to a crop planted with Certified seed of the same variety provided the pedigree of the Certified seed used can be established.

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Foundation – 1
   b. Certified – 8
2. Mechanical Purity (other crop kinds, the seeds of which are difficult to separate from the seeds of the inspected crop, on average in 10,000 plants)

Other Kind	Foundation	Registered	Certified
Barley	2	2	4
Durum	2	2	4
Oat	2	2	4
Triticale	2	2	4
Wheat	2	2	4

3. Hybridity
   a. Percent hybrid seed shall not be less than 95% and shall be determined by a method approved by the CFIA. The balance of the seed should be parent line derivative resulting from incompletely controlled pollination in the seed field.
   b. The CSGA, at its discretion, may require a declaration stating the actual percent seed of a representative sample of the hybrid seed crop and the method of determining the percent hybrid seed. Unless otherwise specified in the variety description, the declaration of percent hybrid seed shall also provide the following information: CSGA Crop Sequence Number, the test method name or number, the number of seeds tested and the confidence level of the test.

Wheat – Certified Production of Hybrid Wheat with Blended Parent Lines

The requirements shown here are specifically for Certified production of Cytoplasmic Male Sterile (CMS) Hybrid Wheat with Blended Parent Lines where the Certified hybrid is produced from a mixture of the two parents. Certified production with Individual Parent Lines where the Certified hybrid is produced from parents that are planted individually in alternating male and female bays can be found under its own heading. References to Wheat shown here includes Spring and Winter Wheat, Einkorn, Emmer and Spelt (unless otherwise specified).

Durum and **Wheat** are not included and can be found under their own heading.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Hybrid Wheat with Blended Parent Lines.

Classes and Generations

The following classes and generations are utilized in the certification of CMS Hybrid Wheat and parent lines:

Breeder:

- used, as well as Select HCP class, to produce plots of A-lines (A x B), B-lines, and R-lines;
- produced by or under supervision of a CSGA recognized plant Breeder;
- no generation limit unless prescribed by the Breeder responsible for the variety.

Select Hybrid Cereal Parent (HCP) class seed:

- used, as well as Breeder class, to produce plots of A-lines (A x B), B-lines, and R-lines;
- produced by or under supervision of a CSGA recognized plant breeder or accredited plot growers;
- generation limits are prescribed by the variety description.

Certified class hybrid seed:

- produced from Breeder or Select Hybrid Cereal Parent (HCP);
- sold to commercial producers and not eligible for certification.

Seed Requirements

1. Certified hybrid seed must be produced from Breeder class or Select HCP class seed: or if imported from AOSCA Breeder or Foundation class or from OECD Pre-Basic or Basic class parent seed.
2. Certified hybrid seed produced using blended parent lines, requires a seed mixture containing male sterile female parent (A-line) seed and restorer (R-line) seed (A+R). This mixture of Breeder or Select HCP seed is considered a Select Technical Blend (TB) and requires a new Select TB crop certificate number from the CSGA. As this Select TB is used to produce the Certified hybrid seed it is limited to one generation and cannot be used to produce subsequent generations of Select TB seed. Select TB seed must meet the following minimum requirements:
   a. Produced with mixing equipment, procedures, designated personnel, and records that verify homogeneous, uniform finished mixtures; and
   b. Packaged and labelled with tags issued by the CSGA that identify the Select TB class, the variety name, and the Select TB crop certificate number.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Spring & Winter **Certified**	In the preceding year has been planted with or produced a crop of: • Wheat • Durum

Crop Inspection

Crops for Certified production of CMS Hybrid Wheat with Blended Parent Lines must be inspected at least once by an authorized inspector after plants assume mature colour to report off-types or other varieties. Variety descriptions may include additional requirements.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

	Distance
1. Varietal Purity	
a. Inspected pedigreed CMS Hybrid Wheat of same* variety	1 meter (3 feet)***
b. Different* varieties of Wheat or non-pedigreed** Wheat	100 meters (330 feet)****
2. Mechanical Purity	Distance
a. Barley, Durum, Oat, Rye, Triticale	2 meters (6 feet)

Additional Isolation Requirements:

1. The required isolation must be provided prior to flowering and crop inspection.
2. Subject to 5 and 6 below, any considered plants a source of contamination found within 3 meters (10 feet) of the inspected crop may be reason for declining certification.
3. The entire crop must be inspected, but a portion or all of a crop may be approved for certification provided corrections for improper isolations, verified as required by CSGA, are made by:
   a. discarding contaminating Wheat plants before their pollen is shed; or
   b. discarding, before harvest, the female parent plants improperly isolated from contaminating Wheat.
4. The first 50 meters of isolation must be practically free from plants that can cross pollinate with the inspected crop (not more than 1 plant per 100 square meters, on average) and the remaining distance must be reasonably free from plant that can cross pollinate with the inspected crop (not more than 1 plant per 10 square meters, on average). Contaminants within the required isolation distance, depending on density, stage of maturity, location, and distance from the inspected crop, may be cause for declining certification.
5. The required isolation of 2 meters (6 feet) for mechanical purity is not required if there is a definite physical barrier, defined as a natural or artificial obstacle between two adjacent crops that prevents access and accidental harvest.

6. Staking of a field is permitted in lieu of the 1 meter (3 feet) isolation strip required between inspected pedigreed crops of the same* variety provided it meets the following requirements:
   a. Stake locations must be clearly identified on map(s) provided to crop inspectors.
   b. Stakes must be placed no more than 100 meters apart.
   c. Staking must be clearly visible and clearly define the border of the field at the time of inspection.

---

* In hybrid crops and crops of pest tolerant varietal blends, "different" variety means a crop planted with a different pollen (male) parent seed.
** "Non-pedigreed crop" means a crop that did not meet the requirements of Circular 6.
***1 meter (3 feet) is sufficient to a crop planted with the same pollen bearing (male) parent seed, provided the pedigree of the parent seed planted is verified.
**** 100 meters (330 feet) is required to a crop planted with a different pollen (male) parent.

Border Rows

1. Border rows are recommended but not required. Border rows must be planted with the same seed as the pollen (male) parent rows. Border rows do not have to meet the isolation requirements of the inspected crop if they will not be harvested for pedigreed seed.
2. Border rows should be planted such that synchronous flowering occurs with receptive female parent plants of the inspected crop.

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Certified – 10
2. Mechanical Purity (other crop kinds, the seeds of which are difficult to separate from the seeds of the inspected crop, on average in 10,000 plants; for Wheat that includes Barley, Durum, Oat, Rye and Triticale)
   a. Certified – 5
3. Hybridity
   a. Percent hybrid seed shall not be less than 75% and shall be determined by a method approved by the CFIA. The balance of the seed is generally parent lines or their derivatives and is subject to the CSGA varietal purity seed standard for visually distinguishable impurities of not more than 0.2% of other varieties. Varietal impurities other than the parent lines or their derivatives shall not exceed 2%.
   b. A declaration (CSGA Form 180) stating the actual percent hybrid seed of a representative sample of the Hybrid Wheat crop, and the method of determining the percent hybrid seed, must be submitted to the CSGA prior to a crop certificate being issued. Unless otherwise specified in the variety description, the declaration of percent hybrid seed shall also provide the following information: CSGA Crop Sequence number, the test method name or number, the number of seeds tested and the confidence level of the test.

Specific Requirements

1. CSGA may require submission of a seed sample for varietal verification testing.

Wheat – Certified Production of Hybrid Wheat with Individual Parent Lines

The requirements shown here are specifically for Certified production of Cytoplasmic Male Sterile (CMS) Hybrid Wheat with Individual Parent Lines where the Certified hybrid is produced from parents that are planted individually in alternating male and female bays. Certified hybrid production with Blended Parent Lines where the Certified hybrid is produced from a mixture of the two parents can be found under its own heading. References to Wheat shown here includes Spring and Winter Wheat, Einkorn, Emmer and Spelt (unless otherwise specified).

Durum and **Wheat** are not included and can be found under their own heading.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Hybrid Wheat with Individual Parent Lines.

Classes and Generations

The following classes and generations are utilized in the certification of CMS Hybrid Wheat and parent lines:

Breeder:

- used, as well as Select HCP class, to produce plots of A-lines (A x B), B-lines, and R-lines;
- produced by or under supervision of a CSGA recognized plant Breeder;
- no generation limit unless prescribed by the Breeder responsible for the variety.

Select Hybrid Cereal Parent (HCP) class seed:

- used, as well as Breeder class, to produce plots of A-lines (A x B), B-lines, and R-lines;
- produced by or under supervision of a CSGA recognized plant breeder or accredited plot growers;
- generation limits are prescribed by the variety description.

Certified class hybrid seed:

- produced from Breeder or Select Hybrid Cereal Parent (HCP);
- sold to commercial producers and not eligible for certification.

Seed Requirements

1. Certified hybrid seed must be produced from Breeder class or Select HCP class seed: or if imported from AOSCA Breeder or Foundation class or from OECD Pre-Basic or Basic class parent seed.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Spring & Winter **Certified**	In the **preceding** year has been planted with or produced a crop of: • Wheat • Durum

Crop Inspection

Crops for Certified production of CMS Hybrid Wheat with Individual Parent Lines must be inspected at least twice by an authorized inspector. The first inspection must be completed during anthesis (flowering) to report pollen shedders in A-line plants. The second inspection must be completed after plants assume mature colour to report off-types or other varieties. Variety descriptions may include additional requirements.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed CMS Hybrid Wheat of same* variety	1 meter (3 feet)***
b. Different* varieties of Wheat or non-pedigreed** Wheat	100 meters (330 feet)****
2. Mechanical Purity	**Distance**
a. Barley, Durum, Oat, Rye, Triticale	2 meters (6 feet)

Additional Isolation Requirements:

1. The required isolation must be provided prior to flowering and crop inspection.
2. Subject to 5 and 6 below, any plants considered a source of contamination found within 3 meters (10 feet) of the inspected crop may be reason for declining certification.
3. The entire crop must be inspected, but a portion or all of a crop may be approved for certification provided corrections for improper isolations, verified as required by CSGA, are made by:
   a. discarding contaminating Wheat plants before their pollen is shed; or
   b. discarding, before harvest, the female parent plants improperly isolated from contaminating Wheat.
4. The first 50 meters of isolation must be practically free from plants that can cross pollinate with the inspected crop (not more than 1 plant per 100 square meters, on average) and the remaining distance must be reasonably free from plant that can cross pollinate with the inspected crop (not more than 1 plant per 10 square meters, on average). Contaminants within the required isolation distance, depending on density, stage of maturity, location, and distance from the inspected crop, may be cause for declining certification.
5. The required isolation of 2 meters (6 feet) for mechanical purity is not required if there is a definite physical barrier, defined as a natural or artificial obstacle between two adjacent crops that prevents access and accidental harvest.
6. Staking of a field is permitted in lieu of the 1 meter (3 feet) isolation strip required between inspected pedigreed crops of the same* variety provided it meets the following requirements:
   a. Stake locations must be clearly identified on map(s) provided to crop inspectors.
   b. Stakes must be placed no more than 100 meters apart.
   c. Staking must be clearly visible and clearly define the border of the field at the time of inspection.

---

* In hybrid crops and crops of pest tolerant varietal blends, “different” variety means a crop planted with a different pollen (male) parent seed.
** “Non-pedigreed crop” means a crop that did not meet the requirements of Circular 6.
***1 meter (3 feet) is sufficient to a crop planted with the same pollen bearing (male) parent seed, provided the pedigree of the parent seed planted is verified.
**** 100 meters (330 feet) is required to a crop planted with a different pollen (male) parent.

Border Rows

1. Border rows are recommended but not required. Border rows must be planted with the same seed as the pollen (male) parent rows. Border rows do not have to meet the isolation requirements of the inspected crop if they will not be harvested for pedigreed seed.
2. Border rows should be planted such that synchronous flowering occurs with receptive female parent plants of the inspected crop.

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
    a. Certified – 10
2. Purity – (pollen shedders on average in 10,000 plants; applicable to A-line bays only and the final certification decision may be made based on hybridity test results)
    a. Certified – 10
3. Mechanical Purity (other crop kinds, the seeds of which are difficult to separate from the seeds of the inspected crop, on average in 10,000 plants; for Wheat that includes Barley, Durum, Oat, Rye and Triticale)
    a. Certified – 5
4. Hybridity
    a. Percent hybrid seed shall not be less than 75% and shall be determined by a method approved by the CFIA. The balance of the seed is generally parent lines or their derivatives and is subject to the CSGA varietal purity seed standard for visually distinguishable impurities of not more than 0.2% of other varieties. Varietal impurities other than the parent lines or their derivatives shall not exceed 2%.
    b. A declaration (CSGA Form 180) stating the actual percent hybrid seed of a representative sample of the Hybrid Wheat crop, and the method of determining the percent hybrid seed, must be submitted to the CSGA prior to a crop certificate being issued. Unless otherwise specified in the variety description, the declaration of percent hybrid seed shall also provide the following information: CSGA Crop Sequence number, the test method name or number, the number of seeds tested and the confidence level of the test.

Specific Requirements

1. CSGA may require submission of a seed sample for varietal verification testing.

Section 3

I. Crop Specific Standards for Pulses & Soybeans

Bean – Foundation, Registered and Certified Production

Bean includes Field, Garden, White, Coloured, Navy or Dry edible type Bean.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Bean.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Foundation, Registered & Certified	In the previous year produced: • a non-pedigreed crop of Bean. • a different variety of Bean.

Crop Inspection

Bean crops must be inspected at flowering.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

	Distance
1. Varietal Purity – Foundation	
a. Inspected pedigreed Bean seed crop	3 meters (10 feet)
b. Non-pedigreed Bean crop	20 meters (65 feet)
2. Varietal Purity – Registered and Certified	Distance
a. Any crop of Bean	3 meters (10 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Foundation – 1
   b. Registered – 2
   c. Certified – 5

Chickpea – Foundation, Registered and Certified Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Chickpea.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Foundation, Registered & Certified	In the previous year produced: • a non-pedigreed crop of Chickpea • a different variety of Chickpea.

Crop Inspection

Chickpea crops must be inspected at flowering.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Chickpea of same variety	1 meter (3 feet)
b. Different varieties of Chickpea or non-pedigreed Chickpea	3 meters (10 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Foundation – 1
   b. Registered – 2
   c. Certified – 5

Fababean – Foundation, Registered and Certified Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Fababean.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Foundation, Registered & Certified	In the previous year produced: • a non-pedigreed crop of Fababean. • a different variety of Fababean.

Crop Inspection

Fababean crops must be inspected at flowering.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

	Distance
1. Varietal Purity	
a. Inspected pedigreed Fababean of same variety	1 meter (3 feet)
b. Different varieties of Fababean or non-pedigreed Fababean	10 meters (30 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Foundation – 5
   b. Registered – 10
   c. Certified – 20

Lentil – Foundation, Registered and Certified Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Lentil.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Foundation, Registered & Certified	In the previous year produced: • a non-pedigreed crop of Lentil. • a different variety of Lentil.

Crop Inspection

Lentil crops must be inspected at flowering.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Lentil of same variety	1 meter (3 feet)
b. Different varieties of Lentil or non-pedigreed Lentil	3 meters (10 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Foundation – 1
   b. Registered – 2
   c. Certified – 5

Lupin – Foundation, Registered and Certified Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Lupin.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Foundation, Registered & Certified	In the previous year produced: • a non-pedigreed crop of Lupin. • a different variety of Lupin.

Crop Inspection

Lupin crops must be inspected at flowering.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Lupin of same variety	1 meter (3 feet)
b. Different varieties of Lupin or non-pedigreed Lupin	3 meters (10 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Foundation – 1
   b. Registered – 2
   c. Certified – 5

Pea – Foundation, Registered and Certified Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Pea.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Foundation, Registered & Certified	In the previous year produced: • a non-pedigreed crop of Pea. • a different variety of Pea.

Crop Inspection

Pea crops must be inspected at flowering.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Pea of same variety	1 meter (3 feet)
b. Different varieties of Pea or non-pedigreed Pea	3 meters (10 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Foundation – 1
   b. Registered – 2
   c. Certified – 5

Soybean – Foundation, Registered and Certified Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Soybean.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Foundation, Registered & Certified	In the previous year produced: • a non-pedigreed crop of Soybean. • a different variety of Soybean except as below*.

*Certified Crops of Herbicide Tolerant Soybean Varieties

A seed crop of soybeans for Certified status may be produced on land that in the previous year was planted with pedigreed seed of a variety of soybeans not tolerant to at least one herbicide active ingredient if that herbicide active ingredient is applied to the seed crop being produced.

Crop Inspection

Soybean crops must be inspected at maturity when at least 90% of the plants have dropped their leaves and the mature plants have distinguishing pod, pubescence and hilum colour characteristics.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Soybean of same variety	1 meter (3 feet)
b. Different varieties of Soybean or non-pedigreed Soybean	3 meters (10 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Foundation – 10
   b. Registered – 20
   c. Certified – 30

Section 4

I. Crop Specific Standards for Canola, Carinata, Mustard and Radish

Canola & Rapeseed – Certified Production of *B. napus* & *B. rapa*

The requirements shown here are specifically for Certified production of Spring and Winter varieties of Open-pollinated *B. napus* and *B. rapa*. **Hybrid *B. napus*** and ***B. rapa*** are not included and can be found under their own heading.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Open-pollinated *B. napus* and *B. rapa*.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Certified	In any of the preceding 3 years has been planted with or produced a crop of: • Canola/Rapeseed (*B. napus, B. rapa*) • Carinata (*B. carinata*) • Mustard (*B. juncea, S. alba*) • Radish (*R. sativus*)
Inspected Crop	**MAY be grown on land which:**
Certified	In any of the preceding 3 years has produced: • a plot of the same variety that was granted Foundation status

Crop Inspection

Open-pollinated *B. napus* and *B. rapa* crops must be inspected when the crop is in the early flowering stage.

Crop Standards

Isolation

The first 50 meters of isolation must be practically free from plants that may cross pollinate (CP in table below) with the inspected seed crop (not more than 1 plant per 100 square meters, on average) and the remaining distance reasonably free from plants that may cross pollinate with the inspected crop (not more than 1 plant per 10 square meters, on average).

The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Crop planted with Certified* seed of the same variety	3 meters (10 feet)
b. Different variety of *B. napus* or *B. rapa*	100 meters (328 feet)
c. Non-pedigreed crop of *B. napus* or *B. rapa*	100 meters (328 feet)
d. *B. juncea* or *B. carinata*	100 meters (328 feet)

* Provided the pedigree of the Certified seed used can be established.

2. Mechanical Purity	Distance
a. *S. alba* or *R. sativus*	3 meters (10 feet)

Weeds

1. The presence of Cleavers (*Galium aparine*) is cause for declining pedigreed status.
2. Wild mustard (*Sinapis arvensis*) must not be present in the area of the crop to be harvested for seed at an average of more than 1 plant/10,000 plants.

Maximum Impurity Standards

1. Varietal Purity (on average in 10,000 plants)
   a. Off-types/other varieties of the same species – 1.5
   b. Plants of species that may cross pollinate (CP in table below) – 1
2. Mechanical Purity (on average in 10,000 plants)
   a. Plants of species with difficult to separate seeds (DTS in table below) – 3

Species	Canola (*B. napus*)	Canola (*B. rapa*)	Mustard Brown/Oriental (*B. juncea*)	Mustard White/Yellow (*S. alba*)	Carinata (*B. carinata*)	Radish (*R. sativus*)
B. napus	n/a	CP	CP	DTS	CP	DTS
B. rapa	CP	n/a	CP	DTS	CP	DTS

Carinata – Certified Production of *B. carinata*

The requirements shown here are specifically for Certified production of Open-pollinated *B. carinata.* **Mustard species** are not included and can be found under separate headings.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Open-pollinated *B. carinata*.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Certified	In any of the preceding 3 years has been planted with or produced a crop of: • Canola/Rapeseed (*B. napus, B. rapa*) • Carinata (*B. carinata*) • Mustard (*B. juncea, S. alba*) • Radish (*R. sativus*)
Inspected Crop	**MAY be grown on land which:**
Certified	In any of the preceding 3 years has produced: • a plot of the same variety that was granted Foundation status

Crop Inspection

Open-pollinated *B. carinata* crops must be inspected when the crop is in the early flowering stage.

Crop Standards

Isolation

The first 50 meters of isolation must be practically free from plants that may cross pollinate (CP in table below) with the inspected seed crop (not more than 1 plant per 100 square meters, on average) and the remaining distance reasonably free from plants that may cross pollinate with the inspected crop (not more than 1 plant per 10 square meters, on average).

The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Crop planted with Certified* seed of the same variety	3 meters (10 feet)
B. juncea	100 meters (328 feet)
b. Different variety of *B. carinata* or non-pedigreed crop of *B. carinata*	200 meters (656 feet)
c. *B. napus* or *B. rapa*	200 meters (656 feet)

* Provided the pedigree of the Certified seed used can be established.

2. Mechanical Purity	Distance
a. *S. alba* or *R. sativus*	3 meters (10 feet)

Weeds

1. The presence of Cleavers (*Galium aparine*) is cause for declining pedigreed status.
2. Wild mustard (*Sinapis arvensis*) must not be present in the area of the crop to be harvested for seed at an average of more than 1 plant/10,000 plants.

Maximum Impurity Standards

1. Varietal Purity (on average in 10,000 plants)
   a. Off-types/other varieties of the same species – 1.5
   b. Plants of species that may cross pollinate (CP in table below) – 1
2. Mechanical Purity (on average in 10,000 plants)
   a. Plants of species with difficult to separate seeds (DTS in table below) – 3

Species	Canola (*B. napus*)	Canola (*B. rapa*)	Mustard Brown/Oriental (*B. juncea*)	Mustard White/Yellow (*S. alba*)	Carinata (*B. carinata*)	Radish (*R. sativus*)
B. carinata	CP	CP	CP	DTS	n/a	DTS

Mustard – Certified Production of *B. juncea*

The requirements shown here are specifically for Certified production of Open-pollinated *B. juncea* (including canola quality *B. juncea*). **Hybrid *B. juncea, S. alba*** and **Carinata** are not included and can be found under separate headings.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Open-pollinated *B. juncea*.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Certified	In any of the preceding 3 years has been planted with or produced a crop of: • Canola/Rapeseed (*B. napus, B. rapa*) • Carinata (*B. carinata*) • Mustard (*B. juncea, S. alba*) • Radish (*R. sativus*)
Inspected Crop	**MAY be grown on land which**:
Certified	In any of the preceding 3 years has produced: • a plot of the same variety that was granted Foundation status

Crop Inspection

Open-pollinated *B. juncea* crops must be inspected when the crop is in the early flowering stage.

Crop Standards

Isolation

The first 50 meters of isolation must be practically free from plants that may cross pollinate (CP in table below) with the inspected seed crop (not more than 1 plant per 100 square meters, on average) and the remaining distance reasonably free from plants that may cross pollinate with the inspected crop (not more than 1 plant per 10 square meters, on average).

The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Crop planted with Certified* seed of the same variety	3 meters (10 feet)
B. carinata	100 meters (328 feet)
b. Different variety of *B. juncea* or non-pedigreed crop of *B. juncea*	200 meters (656 feet)
c. *B. napus* or *B. rapa*	200 meters (656 feet)

* Provided the pedigree of the Certified seed used can be established.

2. Mechanical Purity	Distance
a. *S. alba* or *R. sativus*	3 meters (10 feet)

Weeds

1. The presence of Cleavers (*Galium aparine*) is cause for declining pedigreed status.
2. Wild mustard (*Sinapis arvensis*) must not be present in the area of the crop to be harvested for seed at an average of more than 1 plant/10,000 plants.

Maximum Impurity Standards

1. Varietal Purity (on average in 10,000 plants)
   a. Off-types/other varieties of the same species – 1.5
   b. Plants of species that may cross pollinate (CP in table below) – 1
2. Mechanical Purity (on average in 10,000 plants)
   a. Plants of species with difficult to separate seeds (DTS in table below) – 3

Species	Canola (*B. napus*)	Canola (*B. rapa*)	Mustard Brown/Oriental (*B. juncea*)	Mustard White/Yellow (*S. alba*)	Carinata (*B. carinata*)	Radish (*R. sativus*)
B. juncea	CP	CP	n/a	DTS	CP	DTS

Mustard – Certified Production of *S. alba*

The requirements shown here are specifically for Certified production of Open-pollinated *S. alba.* **Hybrid, Composite and Synthetic *S. alba, B. juncea*** and **Carinata** are not included and can be found under separate headings.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Open-pollinated *S. alba*.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Certified	In any of the preceding 3 years has been planted with or produced a crop of: • Canola/Rapeseed (*B. napus, B. rapa*) • Carinata (*B. carinata*) • Mustard (*B. juncea, S. alba*) • Radish (*R. sativus*)
Inspected Crop	**MAY be grown on land which:**
Certified	In any of the preceding 3 years has produced: • a plot of the same variety that was granted Foundation status

Crop Inspection

Open-pollinated *S. alba* crops must be inspected when the crop is in the early flowering stage.

Crop Standards

Isolation

The first 50 meters of isolation must be practically free from plants that may cross pollinate (CP in table below) with the inspected seed crop (not more than 1 plant per 100 square meters, on average) and the remaining distance reasonably free from plants that may cross pollinate with the inspected crop (not more than 1 plant per 10 square meters, on average).

The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Crop planted with Certified* seed of the same variety	3 meters (10 feet)
b. Different variety of *S. alba* or non-pedigreed crop of *S. alba*	200 meters (656 feet)

* Provided the pedigree of the Certified seed used can be established.

2. Mechanical Purity	Distance
a. *B. napus*, *B. rapa, B. juncea, B. carinata*, or *R. sativus*	3 meters (10 feet)

Weeds

1. The presence of Cleavers (*Galium aparine*) is cause for declining pedigreed status.
2. Wild mustard (*Sinapis arvensis*) must not be present in the area of the crop to be harvested for seed at an average of more than 1 plant/10,000 plants.

Maximum Impurity Standards

1. Varietal Purity (on average in 10,000 plants)
   a. Off-types/other varieties of the same species – 1.5
   b. Plants of species that may cross pollinate (CP in table below) – 1
2. Mechanical Purity (on average in 10,000 plants)
   a. Plants of species with difficult to separate seeds (DTS in table below) – 3

Species	Canola (*B. napus*)	Canola (*B. rapa*)	Mustard Brown/Oriental (*B. juncea*)	Mustard White/Yellow (*S. alba*)	Carinata (*B. carinata*)	Radish (*R. sativus*)
S. alba	DTS	DTS	DTS	n/a	DTS	DTS

Radish – Certified Production of *R. sativus*

The requirements shown here are specifically for Certified production of Open-pollinated *R. sativus.*

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Open-pollinated *R. sativus*.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Certified	In any of the preceding 3 years has been planted with or produced a crop of: • Canola/Rapeseed (*B. napus, B. rapa*) • Carinata (*B. carinata*) • Mustard (*B. juncea, S. alba*) • Radish (*R. sativus*)
Inspected Crop	**MAY be grown on land which:**
Certified	In any of the preceding 3 years has produced: • a plot of the same variety that was granted Foundation status

Crop Inspection

Open-pollinated *R. sativus* crops must be inspected when the crop is in the early flowering stage.

Crop Standards

Isolation

The first 50 meters of isolation must be practically free from plants that may cross pollinate (CP in table below) with the inspected seed crop (not more than 1 plant per 100 square meters, on average) and the remaining distance reasonably free from plants that may cross pollinate with the inspected crop (not more than 1 plant per 10 square meters, on average).

The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Crop planted with Certified* seed of the same variety	3 meters (10 feet)
b. Different variety of *R. sativus* or non-pedigreed crop of *R. sativus*	200 meters (656 feet)

* Provided the pedigree of the Certified seed used can be established.

2. Mechanical Purity	Distance
a. *B. napus, B. rapa, B. juncea, B. carinata*, or *S. alba*	3 meters (10 feet)

Weeds

1. The presence of Cleavers (*Galium aparine*) is cause for declining pedigreed status.
2. Wild mustard (*Sinapis arvensis*) must not be present in the area of the crop to be harvested for seed at an average of more than 1 plant/10,000 plants.

Maximum Impurity Standards

1. Varietal Purity (on average in 10,000 plants)
   a. Off-types/other varieties of the same species – 1.5
   b. Plants of species that may cross pollinate (CP in table below) – 1
2. Mechanical Purity (on average in 10,000 plants)
   a. Plants of species with difficult to separate seeds (DTS in table below) – 3

Species	Canola (*B. napus*)	Canola (*B. rapa*)	Mustard Brown/Oriental (*B. juncea*)	Mustard White/Yellow (*S. alba*)	Carinata (*B. carinata*)	Radish (*R. sativus*)
R. sativus	DTS	DTS	DTS	DTS	DTS	n/a

Section 5

I. Crop Specific Standards for Hybrid Canola and Mustard

Canola & Rapeseed – Certified Production of Hybrid *B.napus* & *B.rapa*

The requirements shown here are specifically for Certified production of spring and winter varieties of Hybrid *B. napus* and *B. rapa*. **Open-pollinated *B. napus*** and ***B. rapa*** are not included and can be found under their own heading.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Hybrid *B. napus* and *B. rapa*.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Brassica rapa & Winter *Brassica napus* **Certified**	In any of the preceding 5 years has been planted with or produced a crop of: • *B. rapa* or Winter *B. napus* In any of the preceding 3 years has been planted with or produced a crop of: • Spring *B. napus* • Carinata (*B. carinata*) • Mustard (*B. juncea, S. alba)* • Radish (*R. sativus*)
Spring *Brassica napus* **Certified**	In any of the preceding 3 years has been planted with or produced a crop of: • Canola/Rapeseed (*B. napus, B. rapa*) • Carinata (*B. carinata*) • Mustard (*B. juncea, S. alba*) • Radish (*R. sativus)*

Crop Inspection

Hybrid *B. napus* and *B. rapa* crops must be inspected when the crop is in the early flowering stage of the female parent (A-line). Additional inspections may be warranted. Both the A line and the Restorer line are inspected.

Crop Standards

Isolation

The first 50 meters of isolation must be practically free from plants that may cross pollinate (CP in table below) with the inspected seed crop (not more than 1 plant per 100 square meters, on average) and the remaining distance reasonably free from plants that may cross pollinate with the inspected crop (not more than 1 plant per 10 square meters, on average).

The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Crop planted with Foundation* seed of the same pollen bearing (male) parent	3 meters (10 feet)
b. *B. juncea* or *B. carinata*	100 meters (328 feet)
c. Different variety of *B. napus* or *B. rapa* or non-pedigreed crop of *B. napus* or *B. rapa*	800 meters (2624 feet)

* Provided the pedigree of the Foundation seed used can be established. Does not apply to S.I. hybrid crop production.

2. Mechanical Purity	Distance
a. *S. alba* or *R. sativus*	3 meters (10 feet)

Border Rows

1. Must be planted with the same seed as the pollen (male) parent rows.
2. Must be planted such that synchronous flowering occurs with pollen (male) parent rows and, more importantly, with receptive female parent plants of the inspected crop.

Weeds

1. The presence of Cleavers (*Galium aparine*) is cause for declining pedigreed status.
2. Wild mustard (*Sinapis arvensis*) must not be present in the area of the crop to be harvested for seed at an average of more than 1 plant/10,000 plants.

Maximum Impurity Standards

1. Varietal Purity (on average in 10,000 plants)
   a. Off-types/other varieties of the same species – 1.5
   b. Plants of species that may cross pollinate (CP in table below) – 1
2. Mechanical Purity (on average in 10,000 plants)
   a. Plants of species with difficult to separate seeds (DTS in table below) – 3

Species	Canola (*B. napus*)	Canola (*B. rapa*)	Mustard Brown/Oriental (*B. juncea*)	Mustard White/Yellow (*S. alba*)	Carinata (*B. carinata*)	Radish (*R. sativus*)
B. napus	n/a	CP	CP	DTS	CP	DTS
B. rapa	CP	n/a	CP	DTS	CP	DTS

3. Hybridity
   a. Percent hybrid seed shall be determined by a method approved by the CFIA.
   b. Percent hybrid seed shall not be less than 80% for Hybrid Canola or Hybrid Rapeseed and not less than 70% hybridity or heterozygosity for composite varieties of Canola. The balance of the seed should be parent line derivatives, resulting from incompletely controlled pollination in the seed field.
   c. A declaration (CSGA Form 180) stating the actual percent hybrid seed of a representative sample of the Hybrid Canola, Hybrid Rapeseed or composite variety seed crop, and the method of determining the percent hybrid seed, must be submitted to the CSGA prior to a crop certificate being issued.

Mustard – Certified Production of Hybrid *B. juncea*

The requirements shown here are specifically for Certified production of Hybrid *B. juncea*, (including canola quality *B. juncea*). **Open-pollinated *B. juncea***, ***S. alba*** and **Carinata** are not included and can be found under separate headings.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Hybrid *B. juncea*.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Certified	In any of the preceding 5 years has been planted with or produced a crop of: • Canola or Rapeseed (*B. napus, B. rapa*) In any of the preceding 3 years has been planted with or produced a crop of: • Carinata (*B. carinata*) • Mustard (*B. juncea, S. alba*) • Radish (*R. sativus*)

Crop Inspection

Hybrid *B. juncea* crops must be inspected when the crop is in the early flowering stage of the female parent. Both the A line and the Restorer line are inspected.

Crop Standards

Isolation

The first 50 meters of isolation must be practically free from plants that may cross pollinate (CP in table below) with the inspected seed crop (not more than 1 plant per 100 square meters, on average) and the remaining distance reasonably free from plants that may cross pollinate with the inspected crop (not more than 1 plant per 10 square meters, on average).

The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Crop planted with Foundation* seed of the same pollen bearing (male) parent	3 meters (10 feet)
b. Crop planted with different pollen (male) parent of *B. juncea* or non-pedigreed crop of *B. juncea*	800 meters (2624 feet)
c. *B. napus, B. rapa or B. carinata*	800 meters (2624 feet)

* Provided the pedigree of the Foundation seed used can be established.

2. Mechanical Purity	Distance
a. *S. alba* or *R. sativus*	3 meters (10 feet)

Border Rows

1. Must be planted with the same seed as the pollen (male) parent rows.
2. Must be planted such that synchronous flowering occurs with pollen (male) parent rows and, more importantly, with receptive female parent plants of the inspected crop.

Weeds

1. The presence of Cleavers (*Galium aparine*) is cause for declining pedigreed status.
2. Wild mustard (*Sinapis arvensis*) must not be present in the area of the crop to be harvested for seed at an average of more than 1 plant/10,000 plants.

Maximum Impurity Standards

1. Varietal Purity (on average in 10,000 plants)
   a. Off-types/other varieties of the same species – 1.5
   b. Plants of species that may cross pollinate (CP in table below) – 1
2. Mechanical Purity (on average in 10,000 plants)
   a. Plants of species with difficult to separate seeds (DTS in table below) – 3

Species	Canola (*B. napus*)	Canola (*B. rapa*)	Mustard Brown/Oriental (*B. juncea*)	Mustard White/Yellow (*S. alba*)	Carinata (*B. carinata*)	Radish (*R. sativus*)
B. juncea	CP	CP	n/a	DTS	CP	DTS

3. Hybridity
   a. Percent hybrid seed shall be determined by a method approved by the CFIA.
   b. Percent hybrid seed shall not be less than 80% for Hybrid Mustard. The balance of the seed should be parent line derivatives, resulting from incompletely controlled pollination in the seed field.
   c. A declaration (CSGA Form 180) stating the actual percent hybrid seed of a representative sample of the Hybrid Mustard seed crop, and the method of determining the percent hybrid seed, must be submitted to the CSGA prior to a crop certificate being issued.

Mustard – Certified Production of Hybrid *S. alba*

The requirements shown here are specifically for Certified production of Hybrid *S. alba*. **Open-pollinated, Composite and Synthetic *S. alba***, ***B. juncea*** and **Carinata** are not included and can be found under separate headings.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Hybrid *S. alba*.

Requirements

Inspected Crop	Must NOT be grown on land which:
Certified	In any of the preceding 5 years has been planted with or produced a crop of: • Canola or Rapeseed (*B. napus, B. rapa*) In any of the preceding 3 years has been planted with or produced a crop of: • Carinata (*B. carinata*) • Mustard (*B. juncea, S. alba*) • Radish (*R. sativus*)

Crop Inspection

Hybrid *S. alba* crops must be inspected when the crop is in the early flowering stage of the female parent. Both the A line and the Restorer line are inspected.

Crop Standards

Isolation

The first 50 meters of isolation must be practically free from plants that may cross pollinate (CP in table below) with the inspected seed crop (not more than 1 plant per 100 square meters, on average) and the remaining distance reasonably free from plants that may cross pollinate with the inspected crop (not more than 1 plant per 10 square meters, on average).

The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Crop planted with Foundation* seed of the same pollen bearing (male) parent	3 meters (10 feet)
b. Crop planted with different pollen (male) parent of *S. alba* or non-pedigreed crop of *S. alba*	800 meters (2624 feet)
c. *B. napus*, *B. rapa*, *B. juncea* or *B. carinata*	100 meters (328 feet)

* Provided the pedigree of the Foundation seed used can be established.

2. Mechanical Purity	Distance
a. *R. sativus*	3 meters (10 feet)

Border Rows

1. Must be planted with the same seed as the pollen (male) parent rows.
2. Must be planted such that synchronous flowering occurs with pollen (male) parent rows and, more importantly, with receptive female parent plants of the inspected crop.

Weeds

1. The presence of Cleavers (*Galium aparine*) is cause for declining pedigreed status.
2. Wild mustard (*Sinapis arvensis*) must not be present in the area of the crop to be harvested for seed at an average of more than 1 plant/10,000 plants.

Maximum Impurity Standards

1. Varietal Purity (on average in 10,000 plants)
   a. Off-types/other varieties of the same species – 1.5
   b. Plants of species that may cross pollinate (CP in table below) – 1
2. Mechanical Purity (on average in 10,000 plants)
   a. Plants of species with difficult to separate seeds (DTS in table below) – 3

Species	Canola (*B. napus*)	Canola (*B. rapa*)	Mustard Brown/Oriental (*B. juncea*)	Mustard White/Yellow (*S. alba*)	Carinata (*B. carinata*)	Radish (*R. sativus*)
S. alba	CP	CP	CP	n/a	CP	DTS

3. Hybridity
   a. Percent hybrid seed shall be determined by a method approved by the CFIA.
   b. Percent hybrid seed shall not be less than 80% for Hybrid Mustard. The balance of the seed should be parent line derivatives, resulting from incompletely controlled pollination in the seed field.
   c. A declaration (CSGA Form 180) stating the actual percent hybrid seed of a representative sample of the Hybrid Mustard seed crop, and the method of determining the percent hybrid seed, must be submitted to the CSGA prior to a crop certificate being issued.

Mustard – Certified Production of Composite and Synthetic *S. alba*

The requirements shown here are specifically for Certified production of Composite and Synthetic *S. alba.* **Open-pollinated and Hybrid *S. alba, B. juncea*** and **Carinata** are not included and can be found under separate headings.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Composite and Synthetic *S. alba*.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Certified	In any of the preceding 3 years has been planted with or produced a crop of: • Canola/Rapeseed (*B. napus, B. rapa*) • Carinata (*B. carinata*) • Mustard (*B. juncea, S. alba*) • Radish (*R. sativus*)

Crop Inspection

Composite and Synthetic *S. alba* crops must be inspected when the crop is in the early flowering stage.

Crop Standards

Isolation

The first 50 meters of isolation must be practically free from plants that may cross pollinate (CP in table below) with the inspected seed crop (not more than 1 plant per 100 square meters, on average) and the remaining distance reasonably free from plants that may cross pollinate with the inspected crop (not more than 1 plant per 10 square meters, on average).

The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Crop planted with Certified* seed of the same variety	3 meters (10 feet)
b. Different variety of *S. alba* or non-pedigreed crop of *S. alba*	200 meters (656 feet)

* Provided the pedigree of the Certified seed used can be established.

2. Mechanical Purity	Distance
a. *B. napus, B. rapa, B. juncea, B. carinata,* or *R. sativus*	3 meters (10 feet)

Weeds

1. The presence of Cleavers (*Galium aparine*) is cause for declining pedigreed status.
2. Wild mustard (*Sinapis arvensis*) must not be present in the area of the crop to be harvested for seed at an average of more than 1 plant/10,000 plants.

Maximum Impurity Standards

1. Varietal Purity (on average in 10,000 plants)
   a. Off-types/other varieties of the same species – 1.5
   b. Plants of species that may cross pollinate (CP in table below) – 1
2. Mechanical Purity (on average in 10,000 plants)
   a. Plants of species with difficult to separate seeds (DTS in table below) – 3

Species	Canola (*B. napus*)	Canola (*B. rapa*)	Mustard Brown/Oriental (*B. juncea*)	Mustard White/Yellow (*S. alba*)	Carinata (*B. carinata*)	Radish (*R. sativus*)
S. alba	DTS	DTS	DTS	n/a	DTS	DTS

Section 6

I. Crop Specific Standards for Forage & Turf Grasses

Bentgrass – Foundation, Registered and Certified Production

The requirements shown here are specifically for Foundation, Registered and Certified production of Colonial, Creeping, and Velvet Bentgrass.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Bentgrass.

Land Requirements*

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

*Except where chemical control measures acceptable to the CSGA have been taken to eradicate growth from a previous crop of Bentgrass.

Crop Inspection

Bentgrass crops must be inspected when the crop is headed and before harvest.

Age of Stand

The maximum number of years pedigreed seed can be produced from a stand of Bentgrass established with Breeder or Foundation seed is outlined below. The class that can be produced from a stand varies with the class used to establish the crop, the classes of seed through which a given variety may be multiplied and the number of years the stand has been in production.

	When crop is established with:							
	Breeder seed of a variety without a Registered class		Breeder seed of a variety with a Registered class		Foundation seed of a variety without a Registered class*		Foundation seed of a variety with a Registered class	
Inspected crop	Foundation	Certified	Foundation	Registered	Certified		Registered	Certified
Colonial, Creeping, Velvet	3 yrs. +	2 yrs.	3 yrs. +	2 yrs.	5 yrs.		3 yrs. +	2 yrs.

*Or when crop is established with Registered seed of a variety with a Registered class.

Crop Standards

Isolation

The isolation must be reasonably free from plants that may cross pollinate with the inspected crop. The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop. Not more than 3 plants per square meter, on average, of plants that may cross pollinate with the inspected crop should be in the required isolation adjacent to an inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Bentgrass of same variety and class	1 meter (3 feet)
b. Inspected pedigreed Bentgrass of same variety, different class	3 meters (10 feet)
c. Planted with Certified seed of the same variety	3 meters (10 feet)*
d. Different varieties of the same crop kind or non-pedigreed crop of the same crop kind	Isolation table below
e. Species that may cross pollinate (CP/DTD in contaminant table below)	Isolation table below

* For Certified crop status only, provided the pedigree of the Certified seed used can be established.

	Minimum Isolation Distance		
Area of Inspected Crop	Foundation	Registered	Certified
5 acres or less	400 m (1312 ft)	300 m (984 ft)	150 m (492 ft)
More than 5 acres	300 m (984 ft)	100 m (328 ft)	50 m (164 ft)

2. Mechanical Purity	Distance
a. Bentgrass species with seed difficult to distinguish in a lab test from seed of the inspected crop, but do not cross pollinate (DTD only in contaminant table below)	2 meters (6 feet)
b. Redtop	2 meters (6 feet)

Border Removal in Lieu of Isolation:

For seed crops in excess of 5 acres, removal of a border from the inspected crop in lieu of the required isolation to a different variety or non-pedigreed Bentgrass is permitted as outlined in the table below. The border must be allowed to shed pollen before being discarded.

	Border Removal in Lieu of Isolation Distances	
Inspected Crop	**Actual isolation distance from contaminating source**	**Distance to be removed from the inspected seed crop**
Foundation	300 m (984 ft) +	0 m (0 ft)
	200 - 299 m (656 - 983 ft)	3 m (10 ft)
	150 - 199 m (492 - 655 ft)	5 m (16 ft)
	less than 150 m (492 ft)	5 m (16 ft) + 150 m (492 ft) minus the actual isolation distance
Registered	100 m (328 ft) +	0 m (0 ft)
	75 - 99 m (246 - 327 ft)	3 m (10 ft)
	50 - 74 m (164 - 245 ft)	5 m (16 ft)
	less than 50 m (164 ft)	5 m (16 ft) + 50 m (164 ft) minus the actual isolation distance
Certified	50 m (164 ft)	0 m (0 ft)
	30 - 49 m (98 - 163 ft)	3 m (10 ft)
	25 - 29 m (82 - 97 ft)	5 m (16 ft)
	less than 25 m (82 ft)	5 m (16 ft) + 25 m (82 ft) minus the actual isolation distance

Maximum Impurity Standards

1. Varietal Purity (on average in either 10 or 100 m^2)
    a. Off-types/other varieties of the same crop kind
        i. Foundation – 3 plants/100 m^2
        ii. Registered – 1 plant/10 m^2
        iii. Certified – 1 plant/10 m^2
2. Mechanical Purity (on average in either 10 or 100 m^2)
    a. Plants of species that may cross pollinate (CP/DTD in contaminant table below) and plants of species with seed difficult to distinguish in a lab test from seed of the inspected crop, but do not cross pollinate (DTD only in contaminant table below) and plants of Redtop i.e., the combined total number of contaminant plants must not exceed
        i. Foundation – 3 plants/100 m^2
        ii. Registered – 1 plant/10 m^2
        iii. Certified – 1 plant/10 m^2
    b. Plants with seed difficult to separate (DTS) from seed of the inspected crop will be reported by frequency in the field and will not be a factor in the seed crop certification decision. For Bentgrass, that includes Bluegrass and Orchardgrass.

Inspected Crop	Contaminant		
	Colonial	Creeping	Velvet
Colonial (Browntop)	n/a	CP/DTD	DTD
Creeping	CP/DTD	n/a	DTD
Velvet	DTD	DTD	n/a

Bluegrass – Foundation, Registered and Certified Production

The requirements shown here are specifically for Foundation, Registered and Certified production of Alpine, Big, Canada, Fowl, Kentucky and Rough Bluegrass.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Bluegrass.

Land Requirements*

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

*Except where chemical control measures acceptable to the CSGA have been taken to eradicate growth from a previous crop of Bluegrass.

Crop Inspection

Bluegrass crops must be inspected when the crop is headed and before harvest.

Age of Stand

The maximum number of years pedigreed seed can be produced from a stand of Bluegrass established with Breeder or Foundation seed is outlined below. The class that can be produced from a stand varies with the class used to establish the crop, the classes of seed through which a given variety may be multiplied and the number of years the stand has been in production.

	When crop is established with:									
	Breeder seed of a variety without a Registered class			Breeder seed of a variety with a Registered class			Foundation seed of a variety without a Registered class*	Foundation seed of a variety with a Registered class		
Inspected crop	Foundation		Certified	Foundation		Registered	Certified	Registered		Certified
Alpine, Big, Canada, Fowl, Kentucky, Rough	4 yrs.	+	2 yrs.	4 yrs.	+	2 yrs.	6 yrs.	4 yrs.	+	2 yrs.

*Or when crop is established with Registered seed of a variety with a Registered class.

Crop Standards

Isolation

The isolation must be reasonably free from plants that may cross pollinate with the inspected crop. The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop. Not more than 3 plants per square meter, on average, of plants that may cross pollinate with the inspected crop should be in the required isolation adjacent to an inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed crop of same variety and class	1 meter (3 feet)
b. Inspected pedigreed crop of same variety, different class	3 meters (10 feet)
c. Planted with Certified seed of the same variety	3 meters (10 feet)*
d. Different varieties of the same crop kind or non-pedigreed crop of the same crop kind	Isolation table below

* For Certified crop status only, provided the pedigree of the Certified seed used can be established.

Inspected Crop	Area of Inspected Crop	Minimum Isolation Distance		
		Foundation	Registered	Certified
All Bluegrasses (apomictic species)	Any size	20 m (65 ft)	10 m (33 ft)	5 m (16 ft)

Border Removal in Lieu of Isolation:

For seed crops in excess of 5 acres, removal of a border from the inspected crop in lieu of the required isolation to a different variety or non-pedigreed crop of the same crop kind is permitted as outlined in the table below. The border must be allowed to shed pollen before being discarded.

Inspected Crop	Border Removal in Lieu of Isolation Distances	
	Actual isolation distance from contaminating source	Distance to be removed from the inspected seed crop
Foundation	300 m (984 ft) +	0 m (0 ft)
	200 - 299 m (656 - 983 ft)	3 m (10 ft)
	150 - 199 m (492 - 655 ft)	5 m (16 ft)
	less than 150 m (492 ft)	5 m (16 ft) + 150 m (492 ft) minus the actual isolation distance
Registered	100 m (328 ft) +	0 m (0 ft)
	75 - 99 m (246 - 327 ft)	3 m (10 ft)
	50 - 74 m (164 - 245 ft)	5 m (16 ft)
	less than 50 m (164 ft)	5 m (16 ft) + 50 m (164 ft) minus the actual isolation distance
Certified	50 m (164 ft)	0 m (0 ft)
	30 - 49 m (98 - 163 ft)	3 m (10 ft)
	25 - 29 m (82 - 97 ft)	5 m (16 ft)
	less than 25 m (82 ft)	5 m (16 ft) + 25 m (82 ft) minus the actual isolation distance

Maximum Impurity Standards

1. Varietal Purity (on average in either 10 or 100 m^2)
   a. Off-types/other varieties of the same crop kind
      i. Foundation – 3 plants/100 m^2
      ii. Registered – 1 plant/10 m^2
      iii. Certified – 1 plant/10 m^2
2. Mechanical Purity
   a. Plants with seed difficult to separate (DTS) from seed of the inspected crop will be reported by frequency in the field and will not be a factor in the seed crop certification decision. For Bluegrass, that also includes Bentgrass, Orchardgrass and Redtop.

	Contaminant					
Inspected Crop	**Alpine**	**Big**	**Canada**	**Fowl**	**Kentucky**	**Rough**
Alpine	n/a	DTS	DTS	DTS	DTS	DTS
Big	DTS	n/a	DTS	DTS	DTS	DTS
Canada	DTS	DTS	n/a	DTS	DTS	DTS
Fowl	DTS	DTS	DTS	n/a	DTS	DTS
Kentucky	DTS	DTS	DTS	DTS	n/a	DTS
Rough	DTS	DTS	DTS	DTS	DTS	n/a

Bromegrass – Foundation, Registered and Certified Production

The requirements shown here are specifically for Foundation, Registered and Certified production of Meadow, Smooth and Hybrid Bromegrass.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Bromegrass.

Land Requirements*

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

*Except where chemical control measures acceptable to the CSGA have been taken to eradicate growth from a previous crop of Bromegrass. Meadow or Smooth Bromegrass prior to Hybrid Bromegrass would be considered the same kind.

Crop Inspection

Bromegrass crops must be inspected when the crop is headed and before harvest.

Age of Stand

The maximum number of years pedigreed seed can be produced from a stand of Bromegrass established with Breeder or Foundation seed is outlined below. The class that can be produced from a stand varies with the class used to establish the crop, the classes of seed through which a given variety may be multiplied and the number of years the stand has been in production.

	When crop is established with:											
	Breeder seed of a variety without a Registered class			Breeder seed of a variety with a Registered class			Foundation seed of a variety without a Registered class*	Foundation seed of a variety with a Registered class		
Inspected crop	Foundation		Certified	Foundation		Registered	Certified	Registered		Certified
Meadow	4 yrs.	+	2 yrs.	4 yrs.	+	2 yrs.	6 yrs.	4 yrs.	+	2 yrs.
Smooth & Hybrid	4 yrs.	+	4 yrs.	4 yrs.	+	4 yrs.	8 yrs.	4 yrs.	+	4 yrs.

*Or when crop is established with Registered seed of a variety with a Registered class.

Crop Standards

Isolation

The isolation must be reasonably free from plants that may cross pollinate with the inspected crop. The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop. Not more than 3 plants per square meter, on average, of plants that may cross pollinate with the inspected crop should be in the required isolation adjacent to an inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed crop of same variety and class	1 meter (3 feet)
b. Inspected pedigreed crop of same variety, different class	3 meters (10 feet)
c. Planted with Certified seed of the same variety	3 meters (10 feet)*
d. Different varieties of the same crop kind or non-pedigreed crop of the same crop kind	Isolation table below
e. Species that may cross pollinate (CP/DTD in contaminant table below)**	Isolation table below

* For Certified crop status only, provided the pedigree of the Certified seed used can be established.
** Although non-hybrid Meadow Bromegrass and Smooth Bromegrass varieties can cross-pollinate, asynchronous flowering can provide adequate temporal isolation, and typically exceeds two weeks in the major production regions of western Canada, but the mechanical purity isolation requirement of 2 meters (6 feet) would still be necessary.

	Minimum Isolation Distance		
Area of Inspected Crop	Foundation	Registered	Certified
5 acres or less	400 m (1312 ft)	300 m (984 ft)	150 m (492 ft)
More than 5 acres	300 m (984 ft)	100 m (328 ft)	50 m (164 ft)

Border Removal in Lieu of Isolation:

For seed crops in excess of 5 acres, removal of a border from the inspected crop in lieu of the required isolation to a different variety or non-pedigreed crop of the same crop kind is permitted as outlined in the table below. The border must be allowed to shed pollen before being discarded.

Inspected Crop	Border Removal in Lieu of Isolation Distances	
	Actual isolation distance from contaminating source	**Distance to be removed from the inspected seed crop**
Foundation	300 m (984 ft) +	0 m (0 ft)
	200 - 299 m (656 - 983 ft)	3 m (10 ft)
	150 - 199 m (492 - 655 ft)	5 m (16 ft)
	less than 150 m (492 ft)	5 m (16 ft) + 150 m (492 ft) minus the actual isolation distance
Registered	100 m (328 ft) +	0 m (0 ft)
	75 - 99 m (246 - 327 ft)	3 m (10 ft)
	50 - 74 m (164 - 245 ft)	5 m (16 ft)
	less than 50 m (164 ft)	5 m (16 ft) + 50 m (164 ft) minus the actual isolation distance
Certified	50 m (164 ft)	0 m (0 ft)
	30 - 49 m (98 - 163 ft)	3 m (10 ft)
	25 - 29 m (82 - 97 ft)	5 m (16 ft)
	less than 25 m (82 ft)	5 m (16 ft) + 25 m (82 ft) minus the actual isolation distance

Maximum Impurity Standards

1. Varietal Purity (on average in either 10 or 100 m^2)
   a. Off-types/other varieties of the same crop kind
      i. Foundation – 3 plants/100 m^2
      ii. Registered – 1 plant/10 m^2
      iii. Certified – 1 plant/10 m^2
2. Mechanical Purity (on average in either 10 or 100 m^2)
   a. Plants of species that may cross pollinate (CP/DTD in contaminant table below)
      i. Foundation – 3 plants/100 m^2
      i. Registered – 1 plant/10 m^2
      ii. Certified – 1 plant/10 m^2
   b. Plants with seed difficult to separate (DTS) from seed of the inspected crop will report by frequency in the field and will not be a factor in the seed crop certification decision. For Bromegrass, that includes Meadow Fescue, Wheatgrass and Wildrye.

Inspected Crop	Contaminant		
	Meadow	**Smooth**	**Hybrid**
Meadow	n/a	CP/DTD	CP/DTD
Smooth	CP/DTD	n/a	CP/DTD
Hybrid	CP/DTD	CP/DTD	n/a

Fescue – Foundation, Registered and Certified Production

The requirements shown here are specifically for Foundation, Registered and Certified production of Chewing's, Creeping Red, Hard, Meadow, Sheep and Tall Fescue.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Fescue.

Land Requirements*

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

*Except where chemical control measures acceptable to the CSGA have been taken to eradicate growth from a previous crop of Fescue.

Crop Inspection

Fescue crops must be inspected when the crop is headed and before harvest.

Age of Stand

The maximum number of years pedigreed seed can be produced from a stand of Fescue established with Breeder or Foundation seed is outlined below. The class that can be produced from a stand varies with the class used to establish the crop, the classes of seed through which a given variety may be multiplied and the number of years the stand has been in production.

	When crop is established with:											
	Breeder seed of a variety without a Registered class			Breeder seed of a variety with a Registered class			Foundation seed of a variety without a Registered class*	Foundation seed of a variety with a Registered class				
Inspected crop	Foundation		Certified	Foundation		Registered	Certified	Registered		Certified		
Chewing's, Creeping Red, Hard, Sheep	4 yrs.	+	2 yrs.	4 yrs.	+	2 yrs.	6 yrs.	4 yrs.	+	2 yrs.		
Meadow, Tall	3 yrs.	+	3 yrs.	3 yrs.	+	3 yrs.	6 yrs.	3 yrs.	+	3 yrs.		

*Or when crop is established with Registered seed of a variety with a Registered class.

Crop Standards

Isolation

The isolation must be reasonably free from plants that may cross pollinate with the inspected crop. The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop. Not more than 3 plants per square meter, on average, of plants that may cross pollinate with the inspected crop should be in the required isolation adjacent to an inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed crop of same variety and class	1 meter (3 feet)
b. Inspected pedigreed crop of same variety, different class	3 meters (10 feet)
c. Planted with Certified seed of the same variety	3 meters (10 feet)*
d. Different varieties of the same crop kind or non-pedigreed crop of the same crop kind**	Isolation table below
e. Species tht may cross pollinate (CP/DTD in contaminant table below)	Isolation table below

* For Certified crop status only, provided the pedigree of the Certified seed used can be established.
** Varieties of a different ploidy level may not cross pollinate and therefore may not require isolation for varietal purity but the mechanical purity isolation requirement (below) would still be necessary.

	Minimum Isolation Distance		
Area of Inspected Crop	Foundation	Registered	Certified
5 acres or less	400 m (1312 ft)	300 m (984 ft)	150 m (492 ft)
More than 5 acres	300 m (984 ft)	100 m (328 ft)	50 m (164 ft)

2. Mechanical Purity	Distance
a. Fescue species with seed difficult to distinguish in a lab test from seed of the inspected crop, but do not cross pollinate (DTD only in contaminant table below)	2 meters (6 feet)
b. Fescue variety of the same kind but a different ploidy level	5 meters (16 feet)

Border Removal in Lieu of Isolation:

For seed crops in excess of 5 acres, removal of a border from the inspected crop in lieu of the required isolation to a different variety or non-pedigreed crop of the same crop kind is permitted as outlined in the table below. The border must be allowed to shed pollen before being discarded.

	Border Removal in Lieu of Isolation Distances	
Inspected Crop	**Actual isolation distance from contaminating source**	**Distance to be removed from the inspected seed crop**
Foundation	300 m (984 ft) +	0 m (0 ft)
	200 - 299 m (656 - 983 ft)	3 m (10 ft)
	150 - 199 m (492 - 655 ft)	5 m (16 ft)
	less than 150 m (492 ft)	5 m (16 ft) + 150 m (492 ft) minus the actual isolation distance
Registered	100 m (328 ft) +	0 m (0 ft)
	75 - 99 m (246 - 327 ft)	3 m (10 ft)
	50 - 74 m (164 - 245 ft)	5 m (16 ft)
	less than 50 m (164 ft)	5 m (16 ft) + 50 m (164 ft) minus the actual isolation distance
Certified	50 m (164 ft)	0 m (0 ft)
	30 - 49 m (98 - 163 ft)	3 m (10 ft)
	25 - 29 m (82 - 97 ft)	5 m (16 ft)
	less than 25 m (82 ft)	5 m (16 ft) + 25 m (82 ft) minus the actual isolation distance

Border Removal in Lieu of Isolation (10% Rule) for **Certified** Crops of **Creeping Red Fescue** (not applicable to Foundation or Registered crops or any other types of Fescue):

For a Certified seed crop, 50 meters (164 feet) is normally required from the edge of the inspected crop to adjacent contaminating pollen sources including crops of different varieties or a non-pedigreed crop of Creeping Red Fescue. However, isolation requirements are based on the size of the Certified crop and the percentage of the crop within 50 meters of a contaminating pollen source (see demonstration of the 10% rule).

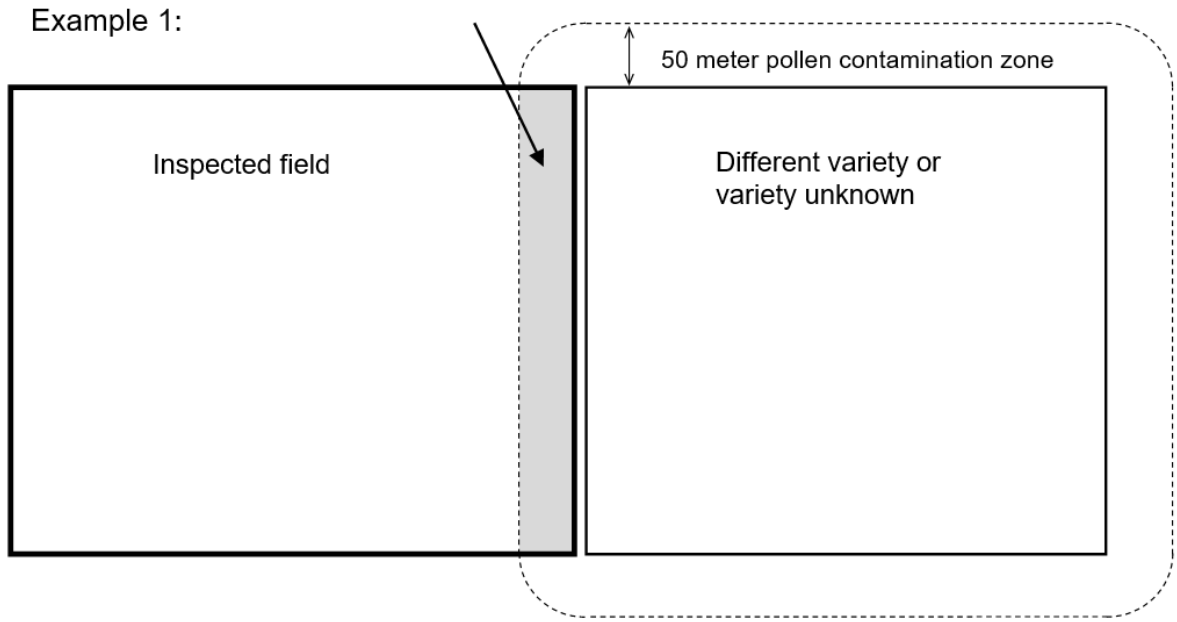
If the calculated area makes up more than 10% of the total inspected area of the seed crop, then border removal in lieu of isolation will be required (see table above). Borders must be allowed to shed pollen before being discarded.

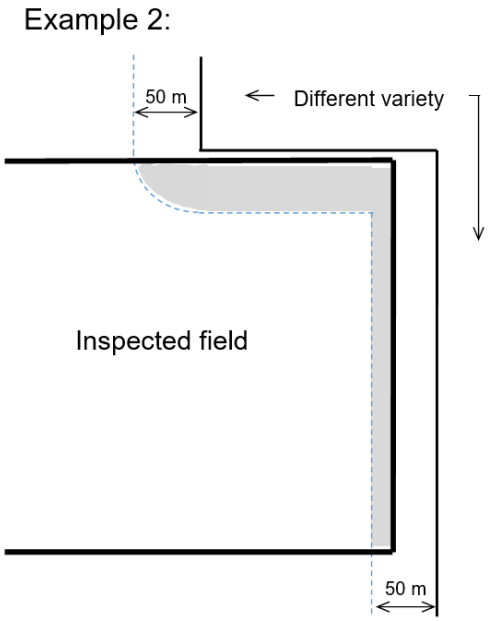
Even if each contaminating pollen source is separately affecting less than 10% of the seed field, the isolation correction/s will be required if, when combined, the sum total of all areas being affected is more than 10% of the entire seed field. For example, isolation correction is required if 6% of the west side of the field, and 5% of the south side of the field are within 50 meters of a different variety. Although each source of contamination is affecting less than 10% of the field, 11% (6+5) of the field is being affected in total so all sides affected will need to be corrected.

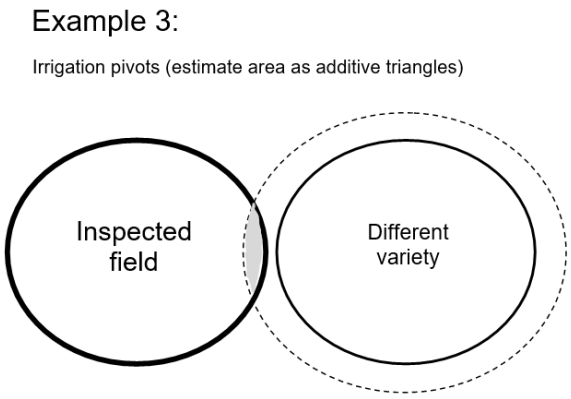
If the calculated area makes up 10% or less of the total inspected area of the seed crop, no border removal will be required provided there are at least 3 meters of isolation. A 3 meter isolation strip is always required between the inspected crop and adjacent contaminating pollen sources to prevent accidental harvest of the contaminating pollen source.

Demonstration of the 10% rule for Certified Crops of Creeping Red Fescue

The pollen contamination zone **(shaded area)** within the inspected field must not comprise more than 10 percent of the inspected seed crop area.







Maximum Impurity Standards

1. Varietal Purity (on average in either 10 or 100 m^2)
   a. Off-types/other varieties of the same crop kind
      i. Foundation – 3 plants/100 m^2
      ii. Registered – 1 plant/10 m^2
      iii. Certified – 1 plant/10 m^2
2. Mechanical Purity (on average in either 10 or 100 m^2)
   a. Plants of species that may cross pollinate (CP/DTD in contaminant table below) and plants of species with seed difficult to distinguish in a lab test from seed of the inspected crop, but do not cross pollinate (DTD only in contaminant table below) i.e., the combined total number of contaminant plants must not exceed
      i. Foundation – 3 plants/100 m^2
      ii. Registered – 1 plant/10 m^2
      iii. Certified – 1 plant/10 m^2
   b. Plants with seed difficult to separate (DTS) from seed of the inspected crop will be reported by frequency in the field and will not be a factor in the seed crop certification decision. For Fescue, that also includes Bromegrass, Ryegrass, Wheatgrass and Wildrye.

	Contaminant					
Inspected Crop	**Chewings**	**Creeping Red**	**Hard**	**Meadow**	**Sheep**	**Tall**
Chewings	n/a	CP/DTD	DTD	DTS	DTD	DTS
Creeping Red	CP/DTD	n/a	DTD	DTS	DTD	DTS
Hard	DTD	DTD	n/a	DTS	DTD	DTS
Meadow	DTS	DTS	DTS	n/a	DTS	DTS
Sheep	DTD	DTD	DTD	DTS	n/a	DTS
Tall	DTS	DTS	DTS	DTS	DTS	n/a

Foxtail – Foundation, Registered and Certified Production

The requirements shown here are specifically for Foundation, Registered and Certified production of Creeping and Meadow Foxtail.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Foxtail.

Land Requirements*

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

*Except where chemical control measures acceptable to the CSGA have been taken to eradicate growth from a previous crop of Foxtail.

Crop Inspection

Foxtail crops must be inspected when the crop is headed and before harvest.

Age of Stand

The maximum number of years pedigreed seed can be produced from a stand of Foxtail established with Breeder or Foundation seed is outlined below. The class that can be produced from a stand varies with the class used to establish the crop, the classes of seed through which a given variety may be multiplied and the number of years the stand has been in production.

	When crop is established with:									
	Breeder seed of a variety without a Registered class			Breeder seed of a variety with a Registered class			Foundation seed of a variety without a Registered class*	Foundation seed of a variety with a Registered class		
Inspected crop	Foundation		Certified	Foundation		Registered	Certified	Registered		Certified
Creeping, Meadow	3 yrs.	+	2 yrs.	3 yrs.	+	2 yrs.	5 yrs.	3 yrs.	+	2 yrs.

*Or when crop is established with Registered seed of a variety with a Registered class.

Crop Standards

Isolation

The isolation must be reasonably free from plants that may cross pollinate with the inspected crop. The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop. Not more than 3 plants per square meter, on average, of plants that may cross pollinate with the inspected crop should be in the required isolation adjacent to an inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed crop of same variety and class	1 meter (3 feet)
b. Inspected pedigreed crop of same variety, different class	3 meters (10 feet)
c. Planted with Certified seed of the same variety	3 meters (10 feet)*
d. Different varieties of the same crop kind or non-pedigreed crop of the same crop kind	Isolation table below

* For Certified crop status only, provided the pedigree of the Certified seed used can be established.

Area of Inspected Crop	Minimum Isolation Distance		
	Foundation	Registered	Certified
5 acres or less	400 m (1312 ft)	300 m (984 ft)	150 m (492 ft)
More than 5 acres	300 m (984 ft)	100 m (328 ft)	50 m (164 ft)

Border Removal in Lieu of Isolation:

For seed crops in excess of 5 acres, removal of a border from the inspected crop in lieu of the required isolation to a different variety or non-pedigreed crop of the same crop kind is permitted as outlined in the table below. The border must be allowed to shed pollen before being discarded.

Inspected Crop	Border Removal in Lieu of Isolation Distances	
	Actual isolation distance from contaminating source	**Distance to be removed from the inspected seed crop**
Foundation	300 m (984 ft) +	0 m (0 ft)
	200 - 299 m (656 - 983 ft)	3 m (10 ft)
	150 - 199 m (492 - 655 ft)	5 m (16 ft)
	less than 150 m (492 ft)	5 m (16 ft) + 150 m (492 ft) minus the actual isolation distance
Registered	100 m (328 ft) +	0 m (0 ft)
	75 - 99 m (246 - 327 ft)	3 m (10 ft)
	50 - 74 m (164 - 245 ft)	5 m (16 ft)
	less than 50 m (164 ft)	5 m (16 ft) + 50 m (164 ft) minus the actual isolation distance
	less than 25 m (82 ft)	5 m (16 ft) + 25 m (82 ft) minus the actual isolation distance
Certified	50 m (164 ft)	0 m (0 ft)
	30 - 49 m (98 - 163 ft)	3 m (10 ft)
	25 - 29 m (82 - 97 ft)	5 m (16 ft)
	less than 25 m (82 ft)	5 m (16 ft) + 25 m (82 ft) minus the actual isolation distance

Maximum Impurity Standards

1. Varietal Purity (on average in either 10 or 100 m^2)
    a. Off-types/other varieties of the same crop kind
        i. Foundation – 3 plants/100 m^2
        ii. Registered – 1 plant/10 m^2
        iii. Certified – 1 plant/10 m^2

Junegrass – Foundation, Registered and Certified Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Junegrass.

Land Requirements*

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

*Except where chemical control measures acceptable to the CSGA have been taken to eradicate growth from a previous crop of Junegrass.

Crop Inspection

Junegrass crops must be inspected when the crop is headed and before harvest.

Age of Stand

The maximum number of years pedigreed seed can be produced from a stand of Junegrass established with Breeder or Foundation seed is outlined below. The class that can be produced from a stand varies with the class used to establish the crop, the classes of seed through which a given variety may be multiplied and the number of years the stand has been in production.

When crop is established with:									
Breeder seed of a variety without a Registered class			Breeder seed of a variety with a Registered class			Foundation seed of a variety without a Registered class*	Foundation seed of a variety with a Registered class		
Foundation		Certified	Foundation		Registered	Certified	Registered		Certified
2 yrs.	+	1 yr.	2 yrs.	+	1 yr.	3 yrs.	2 yrs.	+	1 yr.

*Or when crop is established with Registered seed of a variety with a Registered class.

Crop Standards

Isolation

The isolation must be reasonably free from plants that may cross pollinate with the inspected crop. The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop. Not more than 3 plants per square meter, on average, of plants that may cross pollinate with the inspected crop should be in the required isolation adjacent to an inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Junegrass of same variety and class	1 meter (3 feet)
b. Inspected pedigreed Junegrass of same variety, different class	3 meters (10 feet)
c. Planted with Certified seed of the same variety	3 meters (10 feet)*
d. Different varieties of Junegrass or non-pedigreed Junegrass	Isolation table below

* For Certified crop status only, provided the pedigree of the Certified seed used can be established.

Area of Inspected Crop	Minimum Isolation Distance		
	Foundation	Registered	Certified
5 acres or less	400 m (1312 ft)	300 m (984 ft)	150 m (492 ft)
More than 5 acres	300 m (984 ft)	100 m (328 ft)	50 m (164 ft)

Border Removal in Lieu of Isolation:

For seed crops in excess of 5 acres, removal of a border from the inspected crop in lieu of the required isolation to a different variety or non-pedigreed Junegrass is permitted as outlined in the table below. The border must be allowed to shed pollen before being discarded.

Inspected Crop	Border Removal in Lieu of Isolation Distances	
	Actual isolation distance from contaminating source	**Distance to be removed from the inspected seed crop**
Foundation	300 m (984 ft) +	0 m (0 ft)
	200 - 299 m (656 - 983 ft)	3 m (10 ft)
	150 - 199 m (492 - 655 ft)	5 m (16 ft)
	less than 150 m (492 ft)	5 m (16 ft) + 150 m (492 ft) minus the actual isolation distance
Registered	100 m (328 ft) +	0 m (0 ft)
	75 - 99 m (246 - 327 ft)	3 m (10 ft)
	50 - 74 m (164 - 245 ft)	5 m (16 ft)
	less than 50 m (164 ft)	5 m (16 ft) + 50 m (164 ft) minus the actual isolation distance
Certified	50 m (164 ft)	0 m (0 ft)
	30 - 49 m (98 - 163 ft)	3 m (10 ft)
	25 - 29 m (82 - 97 ft)	5 m (16 ft)
	less than 25 m (82 ft)	5 m (16 ft) + 25 m (82 ft) minus the actual isolation distance

Maximum Impurity Standards

1. Varietal Purity (on average in either 10 or 100 m^2)
    a. Off-types/other varieties of the same crop kind
        i. Foundation – 3 plants/100 m^2
        ii. Registered – 1 plant/10 m^2
        iii. Certified – 1 plant/10 m^2
2. Mechanical Purity
    a. Plants with seed difficult to separate (DTS) from seed of the inspected crop will be reported by frequency in the field and will not be a factor in the seed crop certification decision. For Junegrass, that includes Bentgrass, Bluegrass, Orchardgrass and Redtop.

Needlegrass – Foundation, Registered and Certified Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Needlegrass. Land Requirements*

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

*Except where chemical control measures acceptable to the CSGA have been taken to eradicate growth from a previous crop of Needlegrass.

Crop Inspection

Needlegrass crops must be inspected when the crop is headed and before harvest.

Age of Stand

The maximum number of years pedigreed seed can be produced from a stand of Needlegrass established with Breeder or Foundation seed is outlined below. The class that can be produced from a stand varies with the class used to establish the crop, the classes of seed through which a given variety may be multiplied and the number of years the stand has been in production.

When crop is established with:							
Breeder seed of a variety without a Registered class			**Breeder seed of a variety with a Registered class**		**Foundation seed of a variety without a Registered class***	**Foundation seed of a variety with a Registered class**	
Foundation	**Certified**		**Foundation**	**Registered**	**Certified**	**Registered**	**Certified**
2 yrs.	+	2 yrs.	2 yrs.	+ 2 yrs.	4 yrs.	2 yrs.	+ 2 yrs.

*Or when crop is established with Registered seed of a variety with a Registered class.

Crop Standards

Isolation

The isolation must be reasonably free from plants that may cross pollinate with the inspected crop. The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop. Not more than 3 plants per square meter, on average, of plants that may cross pollinate with the inspected crop should be in the required isolation adjacent to an inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Needlegrass of same variety and class	1 meter (3 feet)
b. Inspected pedigreed Needlegrass of same variety, different class	3 meters (10 feet)
c. Planted with Certified seed of the same variety	3 meters (10 feet)*
d. Different varieties of Needlegrass or non-pedigreed Needlegrass	Isolation table below

* For Certified crop status only, provided the pedigree of the Certified seed used can be established.

Area of Inspected Crop	Minimum Isolation Distance		
	Foundation	Registered	Certified
5 acres or less	400 m (1312 ft)	300 m (984 ft)	150 m (492 ft)
More than 5 acres	300 m (984 ft)	100 m (328 ft)	50 m (164 ft)

Border Removal in Lieu of Isolation:

For seed crops in excess of 5 acres, removal of a border from the inspected crop in lieu of the required isolation to a different variety or non-pedigreed Needlegrass is permitted as outlined in the table below. The border must be allowed to shed pollen before being discarded.

Inspected Crop	Border Removal in Lieu of Isolation Distances	
	Actual isolation distance from contaminating source	Distance to be removed from the inspected seed crop
Foundation	300 m (984 ft) +	0 m (0 ft)
	200 - 299 m (656 - 983 ft)	3 m (10 ft)
	150 - 199 m (492 - 655 ft)	5 m (16 ft)
	less than 150 m (492 ft)	5 m (16 ft) + 150 m (492 ft) minus the actual isolation distance
Registered	100 m (328 ft) +	0 m (0 ft)
	75 - 99 m (246 - 327 ft)	3 m (10 ft)
	50 - 74 m (164 - 245 ft)	5 m (16 ft)
	less than 50 m (164 ft)	5 m (16 ft) + 50 m (164 ft) minus the actual isolation distance

Inspected Crop	Border Removal in Lieu of Isolation Distances	
	Actual isolation distance from contaminating source	Distance to be removed from the inspected seed crop
Certified	50 m (164 ft)	0 m (0 ft)
	30 - 49 m (98 - 163 ft)	3 m (10 ft)
	25 - 29 m (82 - 97 ft)	5 m (16 ft)
	less than 25 m (82 ft)	5 m (16 ft) + 25 m (82 ft) minus the actual isolation distance

Maximum Impurity Standards

1. Varietal Purity (on average in either 10 or 100 m^2)
    a. Off-types/other varieties of the same crop kind
        i. Foundation – 3 plants/100 m^2
        ii. Registered – 1 plant/10 m^2
        iii. Certified – 1 plant/10 m^2
2. Mechanical Purity
    a. Plants with seed difficult to separate (DTS) from seed of the inspected crop will be reported by frequency in the field and will not be a factor in the seed crop certification decision. For Needlegrass that includes Bromegrass, Fescue, Ryegrass, Wheatgrass and Wildrye.

Orchardgrass – Foundation, Registered and Certified Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Orchardgrass.

Land Requirements*

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

*Except where chemical control measures acceptable to the CSGA have been taken to eradicate growth from a previous crop of Orchardgrass.

Crop Inspection

Orchardgrass crops must be inspected when the crop is headed and before harvest.

Age of Stand

The maximum number of years pedigreed seed can be produced from a stand of Orchardgrass established with Breeder or Foundation seed is outlined below. The class that can be produced from a stand varies with the class used to establish the crop, the classes of seed through which a given variety may be multiplied and the number of years the stand has been in production.

When crop is established with:									
Breeder seed of a variety without a Registered class			Breeder seed of a variety with a Registered class			Foundation seed of a variety without a Registered class*	Foundation seed of a variety with a Registered class		
Foundation		Certified	Foundation		Registered	Certified	Registered		Certified
3 yrs.	+	3 yrs.	3 yrs.	+	3 yrs.	6 yrs.	3 yrs.	+	3 yrs.

*Or when crop is established with Registered seed of a variety with a Registered class.

Crop Standards

Isolation

The isolation must be reasonably free from plants that may cross pollinate with the inspected crop. The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop. Not more than 3 plants per square meter, on average, of plants that may cross pollinate with the inspected crop should be in the required isolation adjacent to an inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Orchardgrass of same variety and class	1 meter (3 feet)
b. Inspected pedigreed Orchardgrass of same variety, different class	3 meters (10 feet)
c. Planted with Certified seed of the same variety	3 meters (10 feet)*
d. Different varieties of Orchardgrass or non-pedigreed Orchardgrass	Isolation table below

* For Certified crop status only, provided the pedigree of the Certified seed used can be established.

Area of Inspected Crop	Minimum Isolation Distance		
	Foundation	Registered	Certified
5 acres or less	400 m (1312 ft)	300 m (984 ft)	150 m (492 ft)
More than 5 acres	300 m (984 ft)	100 m (328 ft)	50 m (164 ft)

Border Removal in Lieu of Isolation:

For seed crops in excess of 5 acres, removal of a border from the inspected crop in lieu of the required isolation to a different variety or non-pedigreed Orchardgrass is permitted as outlined in the table below. The border must be allowed to shed pollen before being discarded.

Inspected Crop	Border Removal in Lieu of Isolation Distances	
	Actual isolation distance from contaminating source	**Distance to be removed from the inspected seed crop**
Foundation	300 m (984 ft) +	0 m (0 ft)
	200 - 299 m (656 - 983 ft)	3 m (10 ft)
	150 - 199 m (492 - 655 ft)	5 m (16 ft)
	less than 150 m (492 ft)	5 m (16 ft) + 150 m (492 ft) minus the actual isolation distance
Registered	100 m (328 ft) +	0 m (0 ft)
	75 - 99 m (246 - 327 ft)	3 m (10 ft)
	50 - 74 m (164 - 245 ft)	5 m (16 ft)
	less than 50 m (164 ft)	5 m (16 ft) + 50 m (164 ft) minus the actual isolation distance
Certified	50 m (164 ft)	0 m (0 ft)
	30 - 49 m (98 - 163 ft)	3 m (10 ft)
	25 - 29 m (82 - 97 ft)	5 m (16 ft)
	less than 25 m (82 ft)	5 m (16 ft) + 25 m (82 ft) minus the actual isolation distance

Maximum Impurity Standards

1. Varietal Purity (on average in either 10 or 100 m^2)
    a. Off-types/other varieties of the same crop kind
        i. Foundation – 3 plants/100 m^2
        ii. Registered – 1 plant/10 m^2
        iii. Certified – 1 plant/10 m^2
2. Mechanical Purity
    a. Plants with seed difficult to separate (DTS) from seed of the inspected crop will be reported by frequency in the field and will not be a factor in the seed crop certification decision. For Orchardgrass that includes Bentgrass, Bluegrass and Redtop.

Redtop – Foundation, Registered and Certified Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Redtop.

Land Requirements*

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

*Except where chemical control measures acceptable to the CSGA have been taken to eradicate growth from a previous crop of Redtop.

Crop Inspection

Redtop crops must be inspected when the crop is headed and before harvest.

Age of Stand

The maximum number of years pedigreed seed can be produced from a stand of Redtop established with Breeder or Foundation seed is outlined below. The class that can be produced from a stand varies with the class used to establish the crop, the classes of seed through which a given variety may be multiplied and the number of years the stand has been in production.

When crop is established with:									
Breeder seed of a variety without a Registered class			Breeder seed of a variety with a Registered class			Foundation seed of a variety without a Registered class*	Foundation seed of a variety with a Registered class		
Foundation		Certified	Foundation		Registered	Certified	Registered		Certified
4 yrs.	+	2 yrs.	4 yrs.	+	2 yrs.	6 yrs.	4 yrs.	+	2 yrs.

*Or when crop is established with Registered seed of a variety with a Registered class.

Crop Standards

Isolation

The isolation must be reasonably free from plants that may cross pollinate with the inspected crop. The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop. Not more than 3 plants per square meter, on average, of plants that may cross pollinate with the inspected crop should be in the required isolation adjacent to an inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Redtop of same variety and class	1 meter (3 feet)
b. Inspected pedigreed Redtop of same variety, different class	3 meters (10 feet)
c. Planted with Certified seed of the same variety	3 meters (10 feet)*
d. Different varieties of Redtop or non-pedigreed Redtop	Isolation table below

* For Certified crop status only, provided the pedigree of the Certified seed used can be established.

Area of Inspected Crop	Minimum Isolation Distance		
	Foundation	Registered	Certified
5 acres or less	400 m (1312 ft)	300 m (984 ft)	150 m (492 ft)
More than 5 acres	300 m (984 ft)	100 m (328 ft)	50 m (164 ft)

2. Mechanical Purity	Distance
a. Bentgrasses (Colonial/Browntop Creeping, Velvet)	2 meters (6 feet)

Border Removal in Lieu of Isolation:

For seed crops in excess of 5 acres, removal of a border from the inspected crop in lieu of the required isolation to a different variety or non-pedigreed Redtop is permitted as outlined in the table below. The border must be allowed to shed pollen before being discarded.

Inspected Crop	Border Removal in Lieu of Isolation Distances	
	Actual isolation distance from contaminating source	**Distance to be removed from the inspected seed crop**
Foundation	300 m (984 ft) +	0 m (0 ft)
	200 - 299 m (656 - 983 ft)	3 m (10 ft)
	150 - 199 m (492 - 655 ft)	5 m (16 ft)
	less than 150 m (492 ft)	5 m (16 ft) + 150 m (492 ft) minus the actual isolation distance
Registered	100 m (328 ft) +	0 m (0 ft)
	75 - 99 m (246 - 327 ft)	3 m (10 ft)
	50 - 74 m (164 - 245 ft)	5 m (16 ft)
	less than 50 m (164 ft)	5 m (16 ft) + 50 m (164 ft) minus the actual isolation distance
Certified	50 m (164 ft)	0 m (0 ft)
	30 - 49 m (98 - 163 ft)	3 m (10 ft)
	25 - 29 m (82 - 97 ft)	5 m (16 ft)
	less than 25 m (82 ft)	5 m (16 ft) + 25 m (82 ft) minus the actual isolation distance

Maximum Impurity Standards

1. Varietal Purity (on average in either 10 or 100 m^2)
    a. Off-types/other varieties of the same crop kind
        i. Foundation – 3 plants/100 m^2
        ii. Registered – 1 plant/10 m^2
        iii. Certified – 1 plant/10 m^2
2. Mechanical Purity (on average in either 10 or 100 m^2)
    a. Plants of species with seed difficult to distinguish in a lab test from seed of the inspected crop, but do not cross pollinate; for Redtop, that includes Colonial/Browntop, Creeping, and Velvet Bentgrass.
        i. Foundation – 3 plants/100 m^2
        ii. Registered – 1 plant/10 m^2
        iii. Certified – 1 plant/10 m^2
    b. Plants with seed difficult to separate (DTS) from seed of the inspected crop will be reported by frequency in the field and will not be a factor in the seed crop certification decision. For Redtop, that includes Bluegrass and Orchardgrass.

Reed Canarygrass – Foundation, Registered and Certified Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Reed Canarygrass.

Land Requirements*

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

*Except where chemical control measures acceptable to the CSGA have been taken to eradicate growth from a previous crop of Reed Canarygrass.

Crop Inspection

Reed Canarygrass crops must be inspected when the crop is headed and before harvest.

Age of Stand

The maximum number of years pedigreed seed can be produced from a stand of Reed Canarygrass established with Breeder or Foundation seed is outlined below. The class that can be produced from a stand varies with the class used to establish the crop, the classes of seed through which a given variety may be multiplied and the number of years the stand has been in production.

When crop is established with:							
Breeder seed of a variety without a Registered class			Breeder seed of a variety with a Registered class		Foundation seed of a variety without a Registered class*	Foundation seed of a variety with a Registered class	
Foundation		Certified	Foundation	Registered	Certified	Registered	Certified
4 yrs.	+	4 yrs.	4 yrs.	+ 4 yrs.	8 yrs.	4 yrs.	+ 4 yrs.

*Or when crop is established with Registered seed of a variety with a Registered class.

Crop Standards

Isolation

The isolation must be reasonably free from plants that may cross pollinate with the inspected crop. The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop. Not more than 3 plants per square meter, on average, of plants that may cross pollinate with the inspected crop should be in the required isolation adjacent to an inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Reed Canarygrass of same variety and class	1 meter (3 ft)
b. Inspected pedigreed Reed Canarygrass of same variety, different class	3 meters (10 ft)
c. Planted with Certified seed of the same variety	3 meters (10 ft)*
d. Different varieties of Reed Canarygrass or non-pedigreed Reed Canarygrass	Isolation table below

* For Certified crop status only, provided the pedigree of the Certified seed used can be established.

Area of Inspected Crop	Minimum Isolation Distance		
	Foundation	Registered	Certified
5 acres or less	400 m (1312 ft)	300 m (984 ft)	150 m (492 ft)
More than 5 acres	300 m (984 ft)	100 m (328 ft)	50 m (164 ft)

Border Removal in Lieu of Isolation:

For seed crops in excess of 5 acres, removal of a border from the inspected crop in lieu of the required isolation to a different variety or non-pedigreed Reed Canarygrass is permitted as outlined in the table below. The border must be allowed to shed pollen before being discarded.

Inspected Crop	Border Removal in Lieu of Isolation Distances	
	Actual isolation distance from contaminating source	**Distance to be removed from the inspected seed crop**
Foundation	300 m (984 ft) +	0 m (0 ft)
	200 - 299 m (656 - 983 ft)	3 m (10 ft)
	150 - 199 m (492 - 655 ft)	5 m (16 ft)
	less than 150 m (492 ft)	5 m (16 ft) + 150 m (492 ft) minus the actual isolation distance
Registered	100 m (328 ft) +	0 m (0 ft)
	75 - 99 m (246 - 327 ft)	3 m (10 ft)
	50 - 74 m (164 - 245 ft)	5 m (16 ft)
	less than 50 m (164 ft)	5 m (16 ft) + 50 m (164 ft) minus the actual isolation distance
Certified	50 m (164 ft)	0 m (0 ft)
	30 - 49 m (98 - 163 ft)	3 m (10 ft)
	25 - 29 m (82 - 97 ft)	5 m (16 ft)
	less than 25 m (82 ft)	5 m (16 ft) + 25 m (82 ft) minus the actual isolation distance

Maximum Impurity Standards

1. Varietal Purity (on average in either 10 or 100 m^2)
    a. Off-types/other varieties of the same crop kind
        i. Foundation – 3 plants/100 m^2
        ii. Registered – 1 plant/10 m^2
        iii. Certified – 1 plant/10 m^2

Ryegrass – Foundation, Registered and Certified Production

The requirements shown here are specifically for Foundation, Registered and Certified production of Annual, Italian, Intermediate, Perennial and Westerwold Ryegrass.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Ryegrass.

Land Requirements*

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

*Except where chemical control measures acceptable to the CSGA have been taken to eradicate growth from a previous crop of Ryegrass.
**Annual Ryegrass for Certified crop status only, may be grown on land which in the 2 years prior to seeding produced a pedigreed crop of the same variety.

Crop Inspection

Ryegrass crops must be inspected when the crop is headed and before harvest.

Age of Stand

The maximum number of years pedigreed seed can be produced from a stand of Ryegrass established with Breeder or Foundation seed is outlined below. The class that can be produced from a stand varies with the class used to establish the crop, the classes of seed through which a given variety may be multiplied and the number of years the stand has been in production.

	When crop is established with:											
	Breeder seed of a variety without a Registered class			Breeder seed of a variety with a Registered class			Foundation seed of a variety without a Registered class*	Foundation seed of a variety with a Registered class		
Inspected crop	Foundation		Certified	Foundation		Registered	Certified	Registered		Certified
Annual, Italian, Westerwold	1 yr.	+	0	1 yr.	+	0	1 yr.	1 yr.	+	0
Intermediate	1 yr.	+	2 yrs.	1 yr.	+	2 yrs.	3 yrs.	1 yr.	+	2 yrs.
Perennial	2 yrs.	+	1 yr.	2 yrs.	+	1 yr.	3 yrs.	2 yrs.	+	1 yr.

*Or when crop is established with Registered seed of a variety with a Registered class.

Crop Standards

Isolation

The isolation must be reasonably free from plants that may cross pollinate with the inspected crop. The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop. Not more than 3 plants per square meter, on average, of plants that may cross pollinate with the inspected crop should be in the required isolation adjacent to an inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed crop of same variety and class	1 meter (3 feet)
b. Inspected pedigreed crop of same variety, different class	3 meters (10 feet)
c. Planted with Certified seed of the same variety	3 meters (10 feet)*
d. Different varieties of the same crop kind or non-pedigreed crop of the same crop kind**	Isolation table below
e. Species that may cross pollinatae (CP/DTD in contaminant table below)	Isolation table below

* For Certified crop status only, provided the pedigree of the Certified seed used can be established.
** Varieties of a different ploidy level may not cross pollinate and therefore may not require isolation for varietal purity, but the mechanical purity isolation requirement (below) would still be necessary.

	Minimum Isolation Distance		
Area of Inspected Crop	Foundation	Registered	Certified
5 acres or less	400 m (1312 ft)	300 m (984 ft)	150 m (492 ft)
More than 5 acres	300 m (984 ft)	100 m (328 ft)	50 m (164 ft)

2. Mechanical Purity	Distance
a. Ryegrass variety of the same kind but a different ploidy level (i.e. diploid vs tetraploid)	5 meters (16 feet)

Border Removal in Lieu of Isolation:

For seed crops in excess of 5 acres, removal of a border from the inspected crop in lieu of the required isolation to a different variety or non-pedigreed crop of the same crop kind is permitted as outlined in the table below. The border must be allowed to shed pollen before being discarded.

Inspected Crop	Border Removal in Lieu of Isolation Distances	
	Actual isolation distance from contaminating source	**Distance to be removed from the inspected seed crop**
Foundation	300 m (984 ft) +	0 m (0 ft)
	200 - 299 m (656 - 983 ft)	3 m (10 ft)
	150 - 199 m (492 - 655 ft)	5 m (16 ft)
	less than 150 m (492 ft)	5 m (16 ft) + 150 m (492 ft) minus the actual isolation distance
Registered	100 m (328 ft) +	0 m (0 ft)
	75 - 99 m (246 - 327 ft)	3 m (10 ft)
	50 - 74 m (164 - 245 ft)	5 m (16 ft)
	less than 50 m (164 ft)	5 m (16 ft) + 50 m (164 ft) minus the actual isolation distance
Certified	50 m (164 ft)	0 m (0 ft)
	30 - 49 m (98 - 163 ft)	3 m (10 ft)
	25 - 29 m (82 - 97 ft)	5 m (16 ft)
	less than 25 m (82 ft)	5 m (16 ft) + 25 m (82 ft) minus the actual isolation distance

Maximum Impurity Standards

1. Varietal Purity (on average in either 10 or 100 m^2)
   a. Off-types/other varieties of the same crop kind
      i. Foundation – 3 plants/100 m^2
      ii. Registered – 1 plant/10 m^2
      iii. Certified – 1 plant/10 m^2
2. Mechanical Purity (on average in either 10 or 100 m^2)
   a. Plants of species that may cross pollinate (CP/DTD in contaminant table below)
      i. Foundation – 3 plants/100 m^2
      ii. Registered – 1 plant/10 m^2
      iii. Certified – 1 plant/10 m^2
   b. Plants with seed difficult to separate (DTS) from seed of the inspected crop will be reported by frequency in the field and will not be a factor in the seed crop certification decision. For Ryegrass that includes Fescue and Wheatgrass.

	Contaminant				
Inspected Crop	**Annual**	**Italian**	**Intermediate**	**Perennial**	**Westerwold**
Annual	n/a	CP/DTD	CP/DTD	CP/DTD	CP/DTD
Italian	CP/DTD	n/a	CP/DTD	CP/DTD	CP/DTD
Intermediate	CP/DTD	CP/DTD	n/a	CP/DTD	CP/DTD
Perennial	CP/DTD	CP/DTD	CP/DTD	n/a	CP/DTD
Westerwold	CP/DTD	CP/DTD	CP/DTD	CP/DTD	n/a

Timothy – Foundation, Registered and Certified Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Timothy.

Land Requirements*

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

*Except where chemical control measures acceptable to the CSGA have been taken to eradicate growth from a previous crop of Timothy.

Crop Inspection

Timothy crops must be inspected when the crop is headed and before harvest.

Age of Stand

The maximum number of years pedigreed seed can be produced from a stand of Timothy established with Breeder or Foundation seed is outlined below. The class that can be produced from a stand varies with the class used to establish the crop, the classes of seed through which a given variety may be multiplied and the number of years the stand has been in production.

When crop is established with:									
Breeder seed of a variety without a Registered class			Breeder seed of a variety with a Registered class			Foundation seed of a variety without a Registered class*	Foundation seed of a variety with a Registered class		
Foundation		Certified	Foundation		Registered	Certified	Registered		Certified
3 yrs.	+	2 yrs.	3 yrs.	+	2 yrs.	5 yrs.	3 yrs.	+	2 yrs.

*Or when crop is established with Registered seed of a variety with a Registered class.

Crop Standards

Isolation

The isolation must be reasonably free from plants that may cross pollinate with the inspected crop. The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop. Not more than 3 plants per square meter, on average, of plants that may cross pollinate with the inspected crop should be in the required isolation adjacent to an inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Timothy of same variety and class	1 meter (3 feet)
b. Inspected pedigreed Timothy of same variety, different class	3 meters (10 feet)
c. Planted with Certified seed of the same variety	3 meters (10 feet)*
d. Different varieties of Timothy or non-pedigreed Timothy	Isolation table below

* For Certified crop status only, provided the pedigree of the Certified seed used can be established.

Area of Inspected Crop	Minimum Isolation Distance		
	Foundation	Registered	Certified
5 acres or less	400 m (1312 ft)	300 m (984 ft)	150 m (492 ft)
More than 5 acres	300 m (984 ft)	100 m (328 ft)	50 m (164 ft)

Border Removal in Lieu of Isolation:

For seed crops in excess of 5 acres, removal of a border from the inspected crop in lieu of the required isolation to a different variety or non-pedigreed Timothy is permitted as outlined in the table below. The border must be allowed to shed pollen before being discarded.

Inspected Crop	Border Removal in Lieu of Isolation Distances	
	Actual isolation distance from contaminating source	**Distance to be removed from the inspected seed crop**
Foundation	300 m (984 ft) +	0 m (0 ft)
	200 - 299 m (656 - 983 ft)	3 m (10 ft)
	150 - 199 m (492 - 655 ft)	5 m (16 ft)
	less than 150 m (492 ft)	5 m (16 ft) + 150 m (492 ft) minus the actual isolation distance
Registered	100 m (328 ft) +	0 m (0 ft)
	75 - 99 m (246 - 327 ft)	3 m (10 ft)
	50 - 74 m (164 - 245 ft)	5 m (16 ft)
	less than 50 m (164 ft)	5 m (16 ft) + 50 m (164 ft) minus the actual isolation distance
Certified	50 m (164 ft)	0 m (0 ft)
	30 - 49 m (98 - 163 ft)	3 m (10 ft)
	25 - 29 m (82 - 97 ft)	5 m (16 ft)
	less than 25 m (82 ft)	5 m (16 ft) + 25 m (82 ft) minus the actual isolation distance

Border Removal in Lieu of Isolation (10% Rule) for **Certified** Crops of Timothy (not applicable to Foundation or Registered crops):

For a Certified seed crop, 50 meters (164 feet) is normally required from the edge of the inspected crop to adjacent contaminating pollen sources including crops of different varieties or a non-pedigreed crop of Timothy. However, isolation requirements are based on the size of the Certified crop and the percentage of the crop within 50 meters of a contaminating pollen source (see demonstration of the 10% rule).

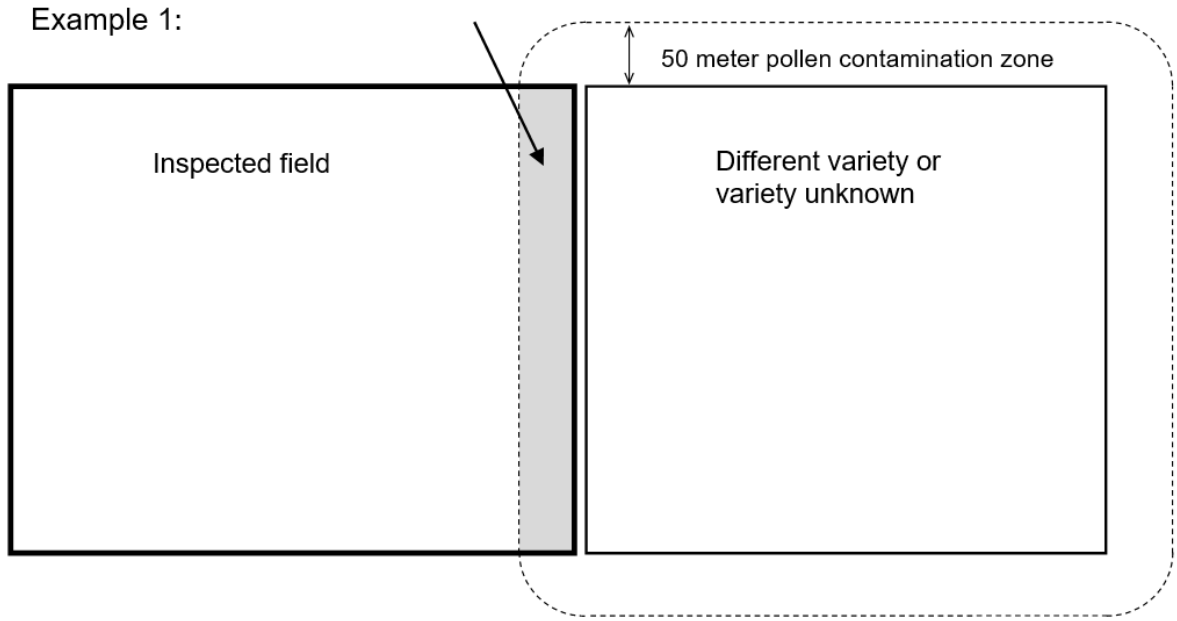
If the calculated area makes up more than 10% of the total inspected area of the seed crop, then border removal in lieu of isolation will be required (see table above). Borders must be allowed to shed pollen before being discarded.

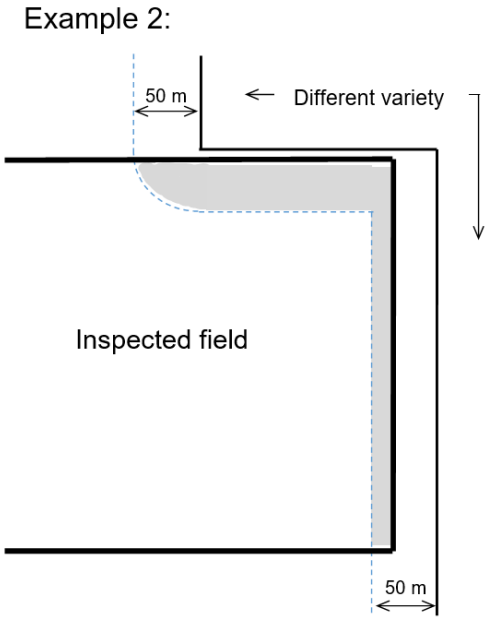
Even if each contaminating pollen source is separately affecting less than 10% of the seed field, the isolation correction/s will be required if, when combined, the sum total of all areas being affected is more than 10% of the entire seed field. For example, isolation correction is required if 6% of the west side of the field, and 5% of the south side of the field are within 50 meters of a different variety. Although each source of contamination is affecting less than 10% of the field, 11% (6+5) of the field is being affected in total so all sides affected will need to be corrected.

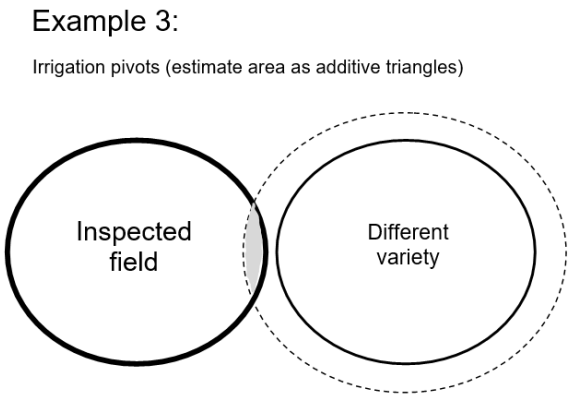
If the calculated area makes up 10% or less of the total inspected area of the seed crop, no border removal will be required provided there are at least 3 meters of isolation. A 3 meter isolation strip is always required between the inspected crop and adjacent contaminating pollen sources to prevent accidental harvest of the contaminating pollen source.

Demonstration of the 10% rule for Certified Crops of Timothy

The pollen contamination zone (shaded area) within the inspected field must not comprise more than 10 percent of the inspected seed crop area.







Maximum Impurity Standards

1. Varietal Purity (on average in either 10 or 100 m^2)
   a. Off-types/other kinds of the same crop kind
      i. Foundation – 3 plants/100 m^2
      ii. Registered – 1 plant/10 m^2
      iii. Certified – 1 plant/10 m^2

Wheatgrass – Foundation, Registered and Certified Production

The requirements shown here are specifically for Foundation, Registered and Certified production of Broadglumed, Crested, RS Hybrid, Intermediate, Northern, Pubescent, Siberian, Slender, Streambank, Tall and Western Wheatgrass.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Wheatgrass.

Land Requirements*

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

*Except where chemical control measures acceptable to the CSGA have been taken to eradicate growth from a previous crop of Wheatgrass.

Crop Inspection

Wheatgrass crops must be inspected when the crop is headed and before harvest.

Age of Stand

The maximum number of years pedigreed seed can be produced from a stand of Wheatgrass established with Breeder or Foundation seed is outlined below. The class that can be produced from a stand varies with the class used to establish the crop, the classes of seed through which a given variety may be multiplied and the number of years the stand has been in production.

	When crop is established with:											
	Breeder seed of a variety without a Registered class			Breeder seed of a variety with a Registered class			Foundation seed of a variety without a Registered class*	Foundation seed of a variety with a Registered class				
Inspected crop	**Foundation**		**Certified**	**Foundation**		**Registered**	**Certified**	**Registered**		**Certified**		
Broadglumed, Slender	3 yrs.	+	2 yrs.	3 yrs.	+	2 yrs.	5 yrs.	3 yrs.	+	2 yrs.		
Crested, Siberian	4 yrs.	+	4 yrs.	4 yrs.	+	4 yrs.	8 yrs.	4 yrs.	+	4 yrs.		
RS Hybrid, Northern, Streambank, Tall, Western	4 yrs.	+	2 yrs.	4 yrs.	+	2 yrs.	6 yrs.	4 yrs.	+	2 yrs.		
Intermediate, Pubescent	3 yrs.	+	3 yrs.	3 yrs.	+	3 yrs.	6 yrs.	3 yrs.	+	3 yrs.		

*Or when crop is established with Registered seed of a variety with a Registered class.

Crop Standards

Isolation

The isolation must be reasonably free from plants that may cross pollinate with the inspected crop. The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop. Not more than 3 plants per square meter, on average, of plants that may cross pollinate with the inspected crop should be in the required isolation adjacent to an inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed crop of same variety and class	1 meter (3 feet)
b. Inspected pedigreed crop of same variety, different class	3 meters (10 feet)
c. Planted with Certified seed of the same variety	3 meters (10 feet)*
d. Different varieties of the same crop kind or non-pedigreed crop of the same crop kind**	Isolation table below
e. Species that may cross pollinate (CP/DTD in contaminant table below)	Isolation table below

* For Certified crop status only, provided the pedigree of the Certified seed used can be established.
** Varieties of a different ploidy level may not cross pollinate and therefore may not require isolation for varietal purity, but the mechanical purity isolation requirement (below) would still be necessary.

Inspected Crop	Area of Inspected Crop	Minimum Isolation Distance		
		Foundation	Registered	Certified
All kinds except Slender* Wheatgrass (cross-pollinated species)	5 acres or less	400 m (1312 ft)	300 m (984 ft)	150 m (492 ft)
	More than 5 acres	300 m (984 ft)	100 m (328 ft)	50 m (164 ft)
Slender* Wheatgrass (self-pollinated species)	Any size	20 m (65 ft)	10 m (33 ft)	5 m (16 ft)

* Includes Broadglumed

2. Mechanical Purity	Distance
a. Wheatgrass species with seed difficult to distinguish in a lab test from seed of the inspected crop, but do not cross pollinate (DTD only in contaminant table below)	2 meters (6 feet)
b. Dahurian wildrye (in the case of *Elymus* spp. only)	2 meters (6 feet)
c. Wheatgrass variety of the same kind but a different ploidy level (i.e. diploid vs tetraploid e.g. Fairway vs Kirk Crested Wheatgrass)	5 meters (16 feet)

*Elymus spp. include Broadglumed, Slender, Northern, Streambank and RS Hybrid

Border Removal in Lieu of Isolation:

For seed crops in excess of 5 acres, removal of a border from the inspected crop in lieu of the required isolation to a different variety or non-pedigreed crop of the same crop kind is permitted as outlined in the table below. The border must be allowed to shed pollen before being discarded.

Inspected Crop	Border Removal in Lieu of Isolation Distances	
	Actual isolation distance from contaminating source	Distance to be removed from the inspected seed crop
Foundation	300 m (984 ft) +	0 m (0 ft)
	200 - 299 m (656 - 983 ft)	3 m (10 ft)
	150 - 199 m (492 - 655 ft)	5 m (16 ft)
	less than 150 m (492 ft)	5 m (16 ft) + 150 m (492 ft) minus the actual isolation distance
Registered	100 m (328 ft) +	0 m (0 ft)
	75 - 99 m (246 - 327 ft)	3 m (10 ft)
	50 - 74 m (164 - 245 ft)	5 m (16 ft)
	less than 50 m (164 ft)	5 m (16 ft) + 50 m (164 ft) minus the actual isolation distance
Certified	50 m (164 ft)	0 m (0 ft)
	30 - 49 m (98 - 163 ft)	3 m (10 ft)
	25 - 29 m (82 - 97 ft)	5 m (16 ft)
	less than 25 m (82 ft)	5 m (16 ft) + 25 m (82 ft) minus the actual isolation distance

Maximum Impurity Standards

1. Varietal Purity (on average in either 10 or 100 m^2)
   a. Off-types/other varieties of the same crop kind
      i. Foundation – 3 plants/100 m^2
      ii. Registered – 1 plant/10 m^2
      iii. Certified – 1 plant/10 m^2
2. Mechanical Purity (on average 10 or 100 m^2)
   a. Plants of species that may cross pollinate (CP/DTD in contaminant table below) and plants of species with seed difficult to distinguish in a lab test from seed of the inspected crop, but do not cross pollinate (DTD only in contaminant table below) and plants of Dahurian wildrye (in the case of *Elymus* spp. only)* i.e., the combined total number of contaminant plants must not exceed
      i. Foundation – 3 plants/100 m^2
      ii. Registered – 1 plant/10 m^2
      iii. Certified – 1 plant/10 m^2
   b. Plants with seed difficult to separate (DTS) from seed of the inspected crop will be reported by frequency in the field and will not be a factor in the seed crop certification decision. For Wheatgrass, that also includes Bromegrass, Fescue, Ryegrass and Altai and Russian Wildrye.

*_Elymus_* spp. include Broadglumed, Slender, Northern, Streambank and RS Hybrid
**Broadglumed and Slender are self-pollinated

Contaminant (Right) / Inspected Crop (Below)	Agropyron		Elymus					Thinopyrum			Pascopyrum
	Crested	Siberian	Broadglumed	Slender	Northern	Streambank	RS Hybrid	Intermediate	Pubescent	Tall	Western
Crested	n/a	CP/DTD	DTS	DTS	DTS	DTS	DTS	DTS	DTS	DTS	DTS
Siberian	CP/DTD	n/a	DTS	DTS	DTS	DTS	DTS	DTS	DTS	DTS	DTS
Broadglumed**	DTS	DTS	n/a	DTD	DTS	DTS	DTS	DTS	DTS	DTS	DTS
Slender**	DTS	DTS	DTD	n/a	DTS	DTS	DTS	DTS	DTS	DTS	DTS
Northern	DTS	DTS	DTS	DTS	n/a	CP/DTD	DTS	DTS	DTS	DTS	DTS
Streambank	DTS	DTS	DTS	DTS	CP/DTD	n/a	DTS	DTS	DTS	DTS	DTS
RS Hybrid	DTS	DTS	DTS	DTS	DTS	DTS	n/a	DTS	DTS	DTS	DTD
Intermediate	DTS	DTS	DTS	DTS	DTS	DTS	DTS	n/a	CP/DTD	DTS	DTS
Pubescent	DTS	DTS	DTS	DTS	DTS	DTS	DTS	CP/DTD	n/a	DTS	DTS
Tall	DTS	DTS	DTS	DTS	DTS	DTS	DTS	DTS	DTS	n/a	DTS
Western	DTS	DTS	DTS	DTS	DTS	DTS	DTD	DTS	DTS	DTS	n/a

Wildrye – Foundation, Registered and Certified Production

The requirements shown here are specifically for Foundation, Registered and Certified production of Altai, Dahurian and Russian Wildrye.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Wildrye.

Land Requirements*

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

*Except where chemical control measures acceptable to the CSGA have been taken to eradicate growth from a previous crop of Wildrye.

Crop Inspection

Wildrye crops must be inspected when the crop is headed and before harvest.

Age of Stand

The maximum number of years pedigreed seed can be produced from a stand of Wildrye established with Breeder or Foundation seed is outlined below. The class that can be produced from a stand varies with the class used to establish the crop, the classes of seed through which a given variety may be multiplied and the number of years the stand has been in production.

	When crop is established with:											
	Breeder seed of a variety without a Registered class			Breeder seed of a variety with a Registered class			Foundation seed of a variety without a Registered class*	Foundation seed of a variety with a Registered class				
Inspected crop	**Foundation**		**Certified**	**Foundation**		**Registered**	**Certified**	**Registered**		**Certified**		
Altai, Russian	5 yrs.	+	5 yrs.	5 yrs.	+	5 yrs.	10 yrs.	5 yrs.	+	5 yrs.		
Dahurian	3 yrs.	+	0	3 yrs.	+	0	3 yrs.	3 yrs.	+	0		

*Or when crop is established with Registered seed of a variety with a Registered class.

Crop Standards

Isolation

The isolation must be reasonably free from plants that may cross pollinate with the inspected crop. The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop. Not more than 3 plants per square meter, on average, of plants that may cross pollinate with the inspected crop should be in the required isolation adjacent to an inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed crop of same variety and class	1 meter (3 feet)
b. Inspected pedigreed crop of same variety, different class	3 meters (10 feet)
c. Planted with Certified seed of the same variety	3 meters (10 feet)*
d. Different varieties of the same crop kind or non-pedigreed crop of the same crop kind	Isolation table below

* For Certified crop status only, provided the pedigree of the Certified seed used can be established.

Inspected Crop	Area of Inspected Crop	Minimum Isolation Distance		
		Foundation	Registered	Certified
Altai & Russian Wildrye (cross-pollinated species)	5 acres or less	400 m (1312 ft)	300 m (984 ft)	150 m (492 ft)
	More than 5 acres	300 m (984 ft)	100 m (328 ft)	50 m (164 ft)
Dahurian Wildrye (self-pollinated species)	Any size	20 m (65 ft)	10 m (33 ft)	5 m (16 ft)

2. Mechanical Purity	Distance
a. Elymus* spp. of Wheatgrass (in the case of Dahurian only)	2 meters (6 feet)

*Elymus spp. include Broadglumed, Slender, Northern, Streambank and RS Hybrid

Border Removal in Lieu of Isolation:

For seed crops in excess of 5 acres, removal of a border from the inspected crop in lieu of the required isolation to a different variety or non-pedigreed crop of the same crop kind is permitted as outlined in the table below. The border must be allowed to shed pollen before being discarded.

	Border Removal in Lieu of Isolation Distances	
Inspected Crop	**Actual isolation distance from contaminating source**	**Distance to be removed from the inspected seed crop**
Foundation	300 m (984 ft) +	0 m (0 ft)
	200 - 299 m (656 - 983 ft)	3 m (10 ft)
	150 - 199 m (492 - 655 ft)	5 m (16 ft)
	less than 150 m (492 ft)	5 m (16 ft) + 150 m (492 ft) minus the actual isolation distance
Registered	100 m (328 ft) +	0 m (0 ft)
	75 - 99 m (246 - 327 ft)	3 m (10 ft)
	50 - 74 m (164 - 245 ft)	5 m (16 ft)
	less than 50 m (164 ft)	5 m (16 ft) + 50 m (164 ft) minus the actual isolation distance
Certified	50 m (164 ft)	0 m (0 ft)
	30 - 49 m (98 - 163 ft)	3 m (10 ft)
	25 - 29 m (82 - 97 ft)	5 m (16 ft)
	less than 25 m (82 ft)	5 m (16 ft) + 25 m (82 ft) minus the actual isolation distance

Maximum Impurity Standards

1. Varietal Purity (on average in either 10 or 100 m^2)
   a. Off-types/other varieties of the same crop kind
      i. Foundation – 3 plants/100 m^2
      ii. Registered – 1 plant/10 m^2
      iii. Certified – 1 plant/10 m^2
2. Mechanical Purity (on average in either 10 or 100 m^2)
   a. Plants of *Elymus** spp. of Wheatgrass (in the case of Dahurian only)
      i. Foundation – 3 plants/100 m^2
      ii. Registered – 1 plant/10 m^2
      iii. Certified – 1 plant/10m^2

b. Plants with seed difficult to separate (DTS) from seed of the inspected crop will be reported by frequency in the field and will not be a factor in the seed crop certification decision. For Dahurian Wildrye, that also includes Fescue and non-Elymus spp. of Wheatgrass. For Altai and Russian Wildrye, that also includes Fescue and all Wheatgrass.

_____
**Elymus* spp. include Broadglumed, Slender, Northern, Streambank and RS Hybrid

	Contaminant		
Inspected Crop	**Altai**	**Russian**	**Dahurian**
Altai	n/a	DTS	DTS
Russian	DTS	n/a	DTS
Dahurian	DTS	DTS	n/a

Section 7

I. Crop Specific Standards for Forage Legumes

Alfalfa – Foundation, Registered and Certified Production

The requirements shown here are specifically for Foundation, Registered and Certified production of Open-pollinated Alfalfa. **Hybrid Alfalfa** is not included and can be found under its own heading.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Alfalfa.

Land Requirements*

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

*Except where chemical control measures acceptable to the CSGA have been taken to eradicate growth from a previous crop of Alfalfa.

Crop Inspection

Alfalfa crops must be inspected when the crop is in bloom and before harvest.

Age of Stand

The maximum number of years pedigreed seed can be produced from a stand of Alfalfa established with Breeder or Foundation seed is outlined below. The class that can be produced from a stand varies with the class used to establish the crop, the classes of seed through which a given variety may be multiplied and the number of years the stand has been in production.

When crop is established with:							
Breeder seed of a variety without a Registered class		Breeder seed of a variety with a Registered class		Foundation seed of a variety without a Registered class*	Foundation seed of a variety with a Registered class	
Foundation	Certified	Foundation	Registered	Certified	Registered	Certified
5 yrs. +	3 yrs.	5 yrs. +	3 yrs.	8 yrs.	5 yrs. +	3 yrs.

*Or when crop is established with Registered seed of a variety with a Registered class.

Crop Standards

Isolation

The isolation must be reasonably free from plants that may cross pollinate with the inspected crop. The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Alfalfa of same variety and class	1 meter (3 feet)
b. Inspected pedigreed Alfalfa of same variety, different class	3 meters (10 feet)
c. Different varieties of Alfalfa or non-pedigreed Alfalfa	Isolation table below

Area of Inspected Crop	Minimum Isolation Distance		
	Foundation	Registered	Certified
5 acres or less	300 m (984 ft)	150 m (492 ft)	50 m (164 ft)
More than 5 acres	200 m (656 ft)	100 m (328 ft)	50 m (164 ft)

Border Removal in Lieu of Isolation (10% Rule) for **Certified** Crops of Alfalfa (not applicable to Foundation or Registered crops):

For a Certified seed crop, 50 meters (164 feet) is normally required from the edge of the inspected crop to adjacent contaminating pollen sources including crops of different varieties or a non-pedigreed crop of Alfalfa. However, isolation requirements are based on the size of the Certified crop and the percentage of the crop within 50 meters of a contaminating pollen source (see demonstration of the 10% rule).

If the calculated area makes up more than 10% of the total inspected area of the seed crop, then border removal in lieu of isolation will be required so that the area harvested for seed is at least 50 meters from all contaminating pollen sources. Borders must be allowed to shed pollen before being discarded.

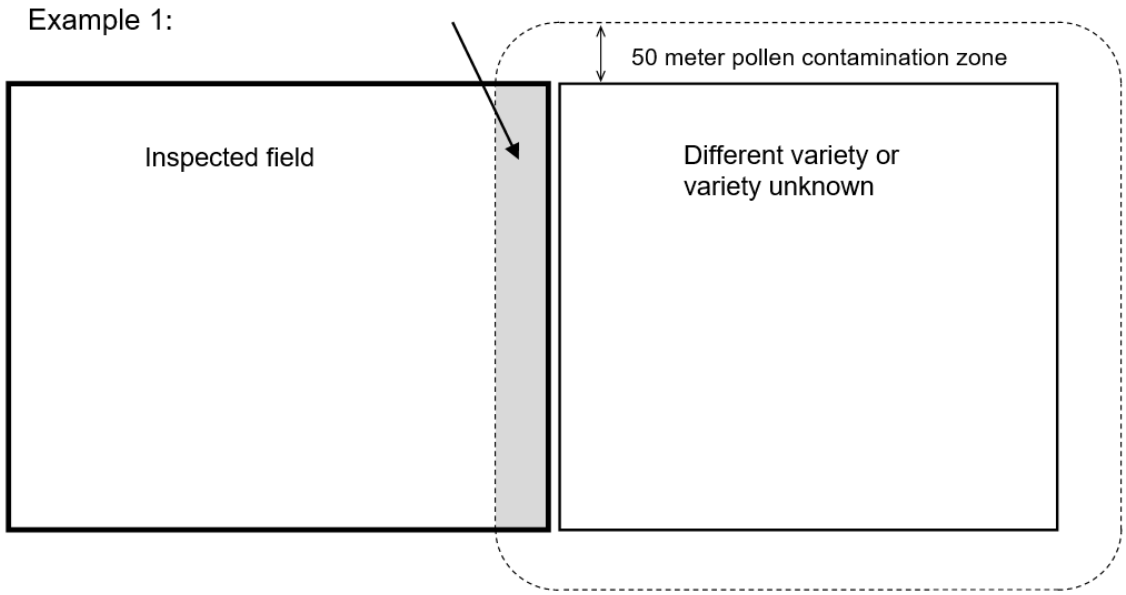
Even if each contaminating pollen source is separately affecting less than 10% of the seed field, the isolation correction/s will be required if, when combined, the sum total of all areas being affected is more than 10% of the entire seed field. For example, isolation correction is required if 6% of the west side of the field, and 5% of the south side of the field are within 50 meters of a different variety. Although each source of contamination is affecting less than 10% of the field, 11% (6+5) of the field is being affected in total so all sides affected will need to be corrected. Using this same example, if the west side of the field is 4 meters and the south side is 5 meters from

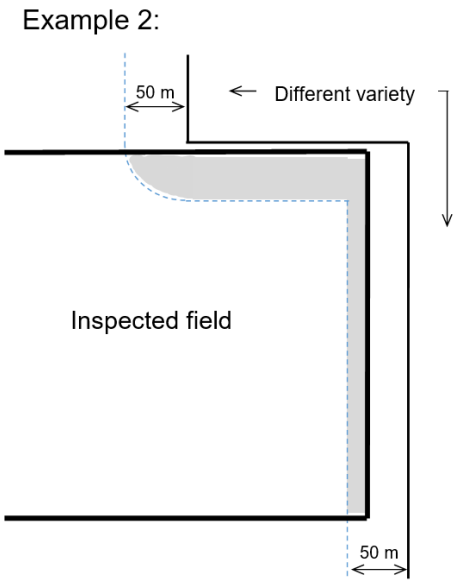
a different variety, a border of 46 meters on the west side and 45 meters on the south side would need to be removed after pollen shed.

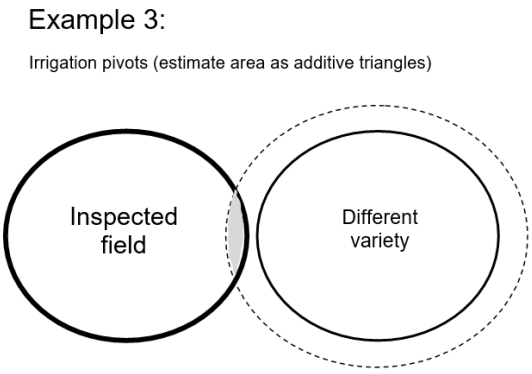
If the calculated area makes up 10% or less of the total inspected area of the seed crop, no border removal will be required provided there are at least 3 meters of isolation. A 3 meter isolation strip is always required between the inspected crop and adjacent contaminating pollen sources to prevent accidental harvest of the contaminating pollen source.

Demonstration of the 10% rule for Certified Crops of Alfalfa

The pollen contamination zone **(shaded area)** within the inspected field must not comprise more than 10 percent of the inspected seed crop area.







Maximum Impurity Standards

1. Varietal Purity (on average in either 10 or 100 m^2)
    a. Off-types/other varieties of the same crop kind
        i. Foundation – 3 plants/100 m^2
        ii. Registered – 1 plant/10 m^2
        iii. Certified – 1 plant/10 m^2
2. Mechanical Purity
    a. Plants with seed difficult to separate (DTS) from seed of the inspected crop will be reported by frequency in the field and will not be a factor in the seed crop certification decision. For Alfalfa, that includes Red Clover and Sweet Clover.

Birdsfoot Trefoil – Foundation, Registered and Certified Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Birdsfoot Trefoil.

Land Requirements*

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

*Except where chemical control measures acceptable to the CSGA have been taken to eradicate growth from a previous crop of Birdsfoot Trefoil.

Crop Inspection

Birdsfoot Trefoil crops must be inspected when the crop is in bloom and before harvest.

Age of Stand

The maximum number of years pedigreed seed can be produced from a stand of Birdsfoot Trefoil established with Breeder or Foundation seed is outlined below. The class that can be produced from a stand varies with the class used to establish the crop, the classes of seed through which a given variety may be multiplied and the number of years the stand has been in production.

When crop is established with:								
Breeder seed of a variety without a Registered class			Breeder seed of a variety with a Registered class			Foundation seed of a variety without a Registered class*	Foundation seed of a variety with a Registered class	
Foundation		Certified	Foundation		Registered	Certified	Registered	Certified
4 yrs.	+	no limit**	4 yrs.	+	no limit**	no limit**	4 yrs. +	no limit**

*Or when crop is established with Registered seed of a variety with a Registered class.
**When stands have been established for 5 years, and at each 5 year interval thereafter, a 100 gram sample of the Birdsfoot Trefoil seed crop produced in that year must be submitted for a variety verification test.

Crop Standards

Isolation

The isolation must be reasonably free from plants that may cross pollinate with the inspected crop. The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Birdsfoot Trefoil of same variety and class	1 meter (3 feet)
b. Inspected pedigreed Birdsfoot Trefoil of same variety, different class	3 meters (10 feet)
c. Different varieties of Birdstoot Trefoil or non-pedigreed Birdsfoot Trefoil	Isolation table below

Area of Inspected Crop	Minimum Isolation Distance		
	Foundation	Registered	Certified
5 acres or less	300 m (984 ft)	150 m (492 ft)	50 m (164 ft)
More than 5 acres	200 m (656 ft)	100 m (328 ft)	50 m (164 ft)

Maximum Impurity Standards

1. Varietal Purity (on average in either 10 or 100 m^2)
   a. Off-types/other varieties of the same crop kind
      i. Foundation – 3 plants/100 m^2
      ii. Registered – 1 plant/10 m^2
      iii. Certified – 1 plant/10 m^2
2. Mechanical Purity
   a. Plants with seed difficult to separate (DTS) from seed of the inspected crop will be reported by frequency in the field and will not be a factor in the seed crop certification decision. For Birdsfoot Trefoil that includes Alsike Clover, Black Medick and White Clover.

Clover – Foundation, Registered and Certified Production

The requirements shown here are specifically for Foundation, Registered and Certified production of Alsike, Red (single cut and double cut), Sweet and White Clover.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Clover.

Land Requirements*

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

*Except where chemical control measures acceptable to the CSGA have been taken to eradicate growth from a previous crop of the same crop kind.

Crop Inspection

Clover crops must be inspected when the crop is in bloom and before harvest.

Age of Stand

The maximum number of years pedigreed seed can be produced from a stand of Clover established with Breeder or Foundation seed is outlined below. The class that can be produced from a stand varies with the class used to establish the crop, the classes of seed through which a given variety may be multiplied and the number of years the stand has been in production.

	When crop is established with:											
	Breeder seed of a variety without a Registered class			Breeder seed of a variety with a Registered class			Foundation seed of a variety without a Registered class*	Foundation seed of a variety with a Registered class		
Inspected crop	Foundation		Certified	Foundation		Registered	Certified	Registered		Certified
Alsike, White	2 yrs.	+	2 yrs.	2 yrs.	+	2 yrs.	4 yrs.	2 yrs.	+	2 yrs.
Red – double cut	1 yr.	+	1 yr.	1 yr.	+	1 yr.	2 yrs.	1 yr.	+	1 yr.
Red – single cut	2 yrs.	+	1 yr.	2 yrs.	+	1 yr.	3 yrs.	2 yrs.	+	1 yr.
Sweet	1 yr.	+	0	1 yr.	+	0	1 yr.	1 yr.	+	0

*Or when crop is established with Registered seed of a variety with a Registered class.

Crop Standards

Isolation

The isolation must be reasonably free from plants that may cross pollinate with the inspected crop. The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

	Distance
1. Varietal Purity	
a. Inspected pedigreed crop of same variety and class	1 meter (3 feet)
b. Inspected pedigreed crop of same variety, different class	3 meters (10 feet)
c. Different varieties of the same crop kind or non-pedigreed crop of the same crop kind	Isolation table below

Area of Inspected Crop	Minimum Isolation Distance		
	Foundation	Registered	Certified
5 acres or less	300 m (984 ft)	150 m (492 ft)	50 m (164 ft)
More than 5 acres	200 m (656 ft)	100 m (328 ft)	50 m (164 ft)

Maximum Impurity Standards

1. Varietal Purity (on average in either 10 or 100 m^2)
   a. Off-types/other varieties of the same crop kind
      i. Foundation – 3 plants/100 m^2
      ii. Registered – 1 plant/10 m^2
      iii. Certified – 1 plant/10 m^2

2. Mechanical Purity

a. Plants with seed difficult to separate (DTS) from seed of the inspected crop will be reported by frequency in the field and will not be a factor in the seed crop certification decision. For Alsike Clover, that includes Birdsfoot Trefoil, Black Medick and White Clover. For Red Clover, that includes Alfalfa and Sweet Clover. For Sweet Clover, that includes Alfalfa and Red Clover. And for White Clover, that includes Alsike Clover, Birdsfoot Trefoil and Black Medick.

Phacelia – Foundation, Registered and Certified Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Phacelia.

Land Requirements*

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

*Except where chemical control measures acceptable to the CSGA have been taken to eradicate growth from a previous crop of Phacelia.

Crop Inspection

Phacelia crops must be inspected when the crop is in bloom and before harvest.

Age of Stand

The maximum number of years pedigreed seed can be produced from a stand of Phacelia established with Breeder or Foundation seed is outlined below. The class that can be produced from a stand varies with the class used to establish the crop, the classes of seed through which a given variety may be multiplied and the number of years the stand has been in production.

When crop is established with:									
Breeder seed of a variety without a Registered class			Breeder seed of a variety with a Registered class			Foundation seed of a variety without a Registered class*	Foundation seed of a variety with a Registered class		
Foundation		Certified	Foundation		Registered	Certified	Registered		Certified
1 yr.	+	0	1 yr.	+	0	1 yr.	1 yr.	+	0.

*Or when crop is established with Registered seed of a variety with a Registered class.

Crop Standards

Isolation

The isolation must be reasonably free from plants that may cross pollinate with the inspected crop. The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Phacelia of same variety and class	1 meter (3 feet)
b. Inspected pedigreed Phacelia of same variety, different class	3 meters (10 feet)
c. Different varieties of Phacelia or non-pedigreed Phacelia	Isolation table below

Area of Inspected Crop	Minimum Isolation Distance		
	Foundation	Registered	Certified
5 acres or less	300 m (984 ft)	150 m (492 ft)	50 m (164 ft)
More than 5 acres	200 m (656 ft)	100 m (328 ft)	50 m (164 ft)

Maximum Impurity Standards

1. Varietal Purity (on average in either 10 or 100 m^2)
   a. Off-types/other varieties of the same crop kind
      i. Foundation – 3 plants/100 m^2
      ii. Registered – 1 plant/10 m^2
      iii. Certified – 1 plant/10 m^2

Sainfoin – Foundation, Registered and Certified Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Sainfoin.

Land Requirements*

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

*Except where chemical control measures acceptable to the CSGA have been taken to eradicate growth from a previous crop of Sainfoin.

Crop Inspection

Sainfoin crops must be inspected when the crop is in bloom and before harvest.

Age of Stand

The maximum number of years pedigreed seed can be produced from a stand of Sainfoin established with Breeder or Foundation seed is outlined below. The class that can be produced from a stand varies with the class used to establish the crop, the classes of seed through which a given variety may be multiplied and the number of years the stand has been in production.

When crop is established with:							
Breeder seed of a variety without a Registered class			Breeder seed of a variety with a Registered class			Foundation seed of a variety without a Registered class*	Foundation seed of a variety with a Registered class		
Foundation		Certified	Foundation		Registered	Certified	Registered		Certified
5 yrs.	+	0	5 yrs.	+	0	5 yrs.	5 yrs.	+	0

*Or when crop is established with Registered seed of a variety with a Registered class.

Crop Standards

Isolation

The isolation must be reasonably free from plants that may cross pollinate with the inspected crop. The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

		Distance
1.	Varietal Purity	
a.	Inspected pedigreed Sainfoin of same variety and class	1 meter (3 feet)
b.	Inspected pedigreed Sainfoin of same variety, different class	3 meters (10 feet)
c.	Different varieties of Sainfoin or non-pedigreed Sainfoin	Isolation table below

Area of Inspected Crop	Minimum Isolation Distance		
	Foundation	Registered	Certified
5 acres or less	300 m (984 ft)	150 m (492 ft)	50 m (164 ft)
More than 5 acres	200 m (656 ft)	100 m (328 ft)	50 m (164 ft)

Maximum Impurity Standards

1. Varietal Purity (on average in either 10 or 100 m^2)
   a. Off-types/other varieties of the same crop kind
      i. Foundation – 3 plants/100 m^2
      ii. Registered – 1 plant/10 m^2
      iii. Certified – 1 plant/10 m^2
2. Mechanical Purity
   a. Plants with seed difficult to separate (DTS) from seed of the inspected crop will be reported by frequency in the field and will not be a factor in the seed crop certification decision. For Sainfoin, that includes Barley, Oats and Wheat.

Vetch – Foundation, Registered and Certified Production

The requirements shown here are specifically for Foundation, Registered and Certified production of Crown and Milk Vetch.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Vetch.

Land Requirements*

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

*Except where chemical control measures acceptable to the CSGA have been taken to eradicate growth from a previous crop of the same crop kind.

Crop Inspection

Vetch crops must be inspected when the crop is in bloom and before harvest.

Age of Stand

The maximum number of years pedigreed seed can be produced from a stand of Vetch established with Breeder or Foundation seed is outlined below. The class that can be produced from a stand varies with the class used to establish the crop, the classes of seed through which a given variety may be multiplied and the number of years the stand has been in production.

	When crop is established with:									
	Breeder seed of a variety without a Registered class			Breeder seed of a variety with a Registered class			Foundation seed of a variety without a Registered class*	Foundation seed of a variety with a Registered class		
Inspected crop	**Foundation**		**Certified**	**Foundation**		**Registered**	**Certified**	**Registered**		**Certified**
Crown, Milk	5 yrs.	+	3 yrs.	5 yrs.	+	3 yrs.	8 yrs.	5 yrs.	+	3 yrs.

*Or when crop is established with Registered seed of a variety with a Registered class.

Crop Standards

Isolation

The isolation must be reasonably free from plants that may cross pollinate with the inspected crop. The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed crop of same variety and class	1 meter (3 feet)
b. Inspected pedigreed crop of same variety, different class	3 meters (10 feet)
c. Different varieties of the same crop kind or non-pedigreed crop of the same crop kind	Isolation table below

Area of Inspected Crop	Minimum Isolation Distance		
	Foundation	**Registered**	**Certified**
5 acres or less	300 m (984 ft)	150 m (492 ft)	50 m (164 ft)
More than 5 acres	200 m (656 ft)	100 m (328 ft)	50 m (164 ft)

Maximum Impurity Standards

1. Varietal Purity (on average in either 10 or 100 m^2)
   a. Off-types/other varieties of the same crop kind
      i. Foundation – 3 plants/100 m^2
      ii. Registered – 1 plant/10 m^2
      iii. Certified – 1 plant/10 m^2
2. Mechanical Purity
   a. Plants with seed difficult to separate (DTS) from seed of the inspected crop will be reported by frequency in the field and will not be a factor in the seed crop certification decision. For Vetch, that includes Canola and other Vetch species.

II. Crop Specific Standards for Hybrid Forage Legumes

Alfalfa – Certified Production of Hybrid Alfalfa

The requirements shown here are specifically for Certified production of Hybrid Alfalfa including all varieties of Hybrid Alfalfa (*Medicago sativa*) but not interspecific hybrids of *Medicago sativa* and *Medicago falcata*. **Open-pollinated Alfalfa** is not included and can be found under its own heading.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Hybrid Alfalfa.

Classes and Generations

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 must not be more than 2:1.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Certified	In any of the 2 years prior to the year of seeding produced: • a non-pedigreed crop of Alfalfa. • a different variety of Alfalfa.

Crop Inspection

Hybrid Alfalfa crops must be inspected 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.

Age of Stand

The maximum number of years pedigreed seed can be produced from a stand of Hybrid Alfalfa established with parent seed is 8 years.

Crop Standards

Isolation

The isolation must be reasonably free from plants that may cross pollinate with the inspected crop. The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity
    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 50 meters (165 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 3 meters (10 feet) of isolation is required between crops.

Border Removal in Lieu of Isolation for Certified Crops of Hybrid Alfalfa:

For a Certified seed crop, 50 meters (164 feet) is normally required from the edge of the inspected crop to adjacent contaminating pollen sources including crops of different varieties or a non-pedigreed crop of Hybrid Alfalfa. However, isolation requirements are based on the size of the Certified crop and the percentage of the crop within 50 meters of a contaminating pollen source (see demonstration of the 10% rule).

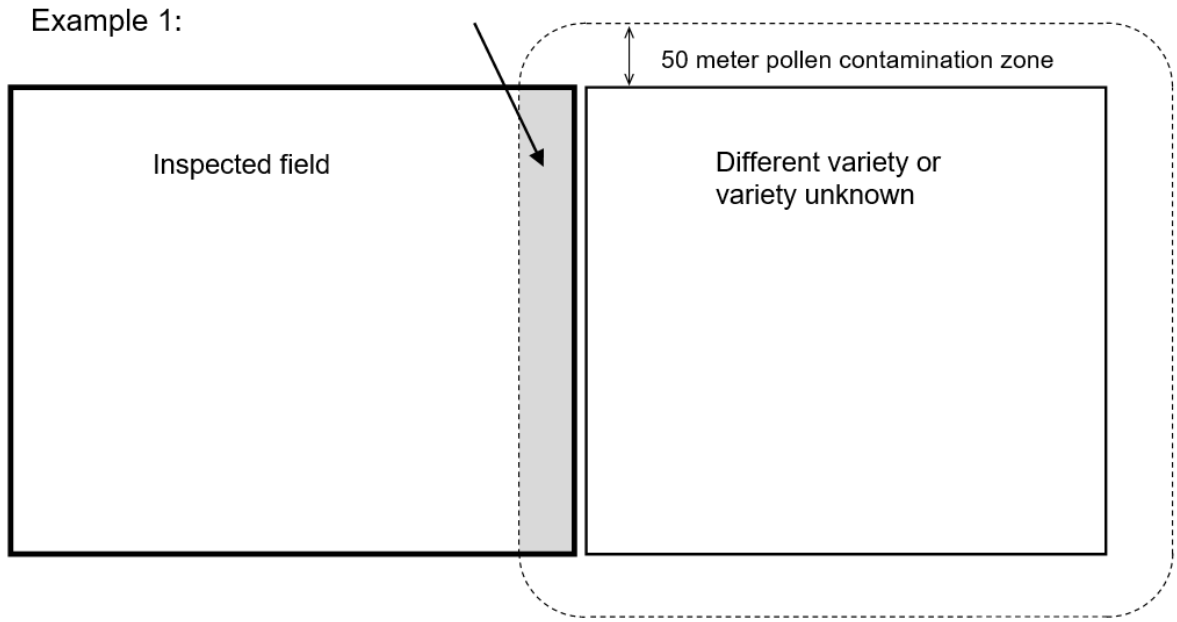
If the calculated area makes up more than 10% of the total inspected area of the seed crop, then border removal in lieu of isolation will be required so that the area harvested for seed is at least 50 meters from all contaminating pollen sources. Borders must be allowed to shed pollen before being discarded.

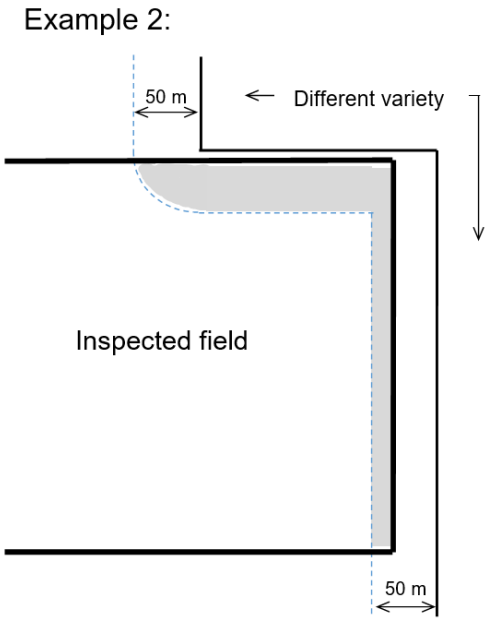
Even if each contaminating pollen source is separately affecting less than 10% of the seed field, the isolation correction/s will be required if, when combined, the sum total of all areas being affected is more than 10% of the entire seed field. For example, isolation correction is required if 6% of the west side of the field, and 5% of the south side of the field are within 50 meters of a different variety. Although each source of contamination is affecting less than 10% of the field, 11% (6+5) of the field is being affected in total so all sides affected will need to be corrected. Using this same example, if the west side of the field is 4 meters and the south side is 5 meters from a different variety, a border of 46 meters on the west side and 45 meters on the south side would need to be removed after pollen shed.

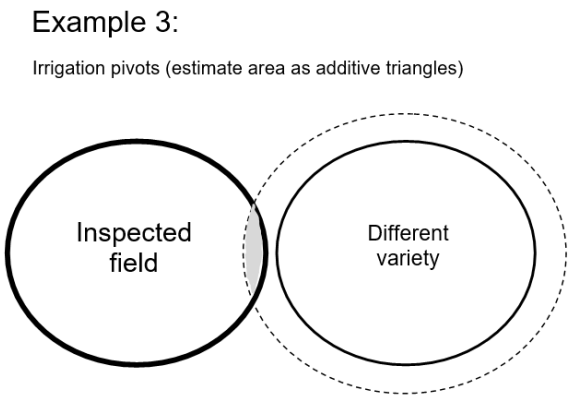
If the calculated area makes up 10% or less of the total inspected area of the seed crop, no border removal will be required provided there are at least 3 meters of isolation. A 3 meter isolation strip is always required between the inspected crop and adjacent contaminating pollen sources to prevent accidental harvest of the contaminating pollen source.

Demonstration of the 10% rule for Certified Crops of Hybrid Alfalfa

The pollen contamination zone (shaded area) within the inspected field must not comprise more than 10 percent of the inspected seed crop area.







Maximum Impurity Standards

1. Varietal Purity (off-types or other varieties on average in 1000 plants)
    a. Foundation – 1 plant/1,000 plants
    b. Certified – 1 plant/1,000 plants

Specific Requirements

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 amounts 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 of all classes are added together and divided by the total number of plants examined to come up with the 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

The maximum allowable 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 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.

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
Certified – composite of female and male		
75% hybrid	((A)* x (B)*) + (C)*	0.25

*Parent Seed Identity

Section 8

I. Crop Specific Standards for Hybrid Corn

Corn – Foundation and Certified Production of Hybrid Corn

The requirements shown here are specifically for Foundation and Certified production of Hybrid Corn. **Open-pollinated Corn** is not included and can be found under its own heading.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Hybrid Corn.

Classes and Generations

Breeder: no generation limit.

Foundation: no generation limit.

Certified: one generation.

Seed Requirements

Breeder or Foundation seed must be planted to produce Certified crops. The direction of the cross of Corn hybrids must remain unchanged throughout the life of the hybrid variety.

Land Requirements

There are no requirements as to previous land use, except the “Corn after Corn” inspection requirement described below.

Crop Inspection

1. All fields must be inspected 3 times by an authorized inspector when the silks of the seed (female) parent are receptive.
2. The entire field must be inspected, but a portion or all of a field may be approved for certification provided corrections for improper isolations are made by either:
   a. discarding or detasselling the necessary amount of contaminating Corn before its pollen is shed; or
   b. discarding before harvest the female parent plants which are improperly isolated from contaminating Corn, and having the discard verified by inspection prior to harvesting the portion of the crop eligible for pedigree.
3. When Corn is planted on land that produced a Corn crop in the previous or current year, an inspection must be made to determine freedom of the seed crop from plants which have volunteered from the previous crop.
4. The removal of interplanted male rows should be done within a reasonable time after pollination to allow for inspection prior to harvest.

Crop Standards

Isolation

Minimum Isolation Distances Required

1. The table below indicates the relationship of the size of field, distance from contaminating pollen source and the required number of border rows in order to provide isolation for the hybrid seed crop's (female) parent plants.
2. 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.
3. A farm lane, or similar gap, must exceed 10 meters (33 feet) to be considered as dividing a field for isolation purposes.
4. 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.
5. 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.
6. 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.
7. 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.

Distance separating seed crop (female) parent row from contaminating Corn	Number of pollen (male parent) Border Rows to be provided when total acres of field unit for seed crop inspection is:	
	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

Border Rows

1. Border rows must be planted with the same seed as the pollen (male) parent rows.
2. Border rows must be planted on land managed by the producer.
3. Border rows must shed pollen simultaneously with the pollen (male) parent and silk emergence of the seed (female) parent.
4. Spacing between border rows shall not be less than 40 cm (15 inches) in width and be consistent with the row spacing used throughout the field.
5. 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.
6. Border rows are not required when the seed (female) parent is more than 200 meters (656 feet) from the contaminating Corn.

Maximum Impurity Standards

1. 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.
2. 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.
3. 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.

Detasselling

1. 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%.
2. 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.

Male Sterile (Female) Parent

1. A male sterile seed (female) parent can be used to produce Certified Hybrid Corn seed by either of two methods:
   a. 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
   b. by using a pollen (male) parent which contains a specific restorer line or lines so that no fewer than one-third of the plants grown from the resulting hybrid will produce pollen which appears normal in all respects.

Section 9

I. Crop Specific Standards for Corn

Corn – Foundation, Registered and Certified Production

The requirements shown here are specifically for Foundation, Registered and Certified production of Open-pollinated Corn. **Hybrid Corn** is not included and can be found under its own heading.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Corn.

Classes and Generations

Breeder: no generation limit.

Foundation: one generation.

Registered: one generation.

Certified: one generation.

Seed Requirements

Breeder seed must be planted to produce Foundation crops. Breeder, Foundation or Registered seed must be used to plant Certified crops.

Land Requirements

There are no requirements as to previous land use, except the “Corn after Corn” inspection requirement described below.

Crop Inspection

1. A field inspection must be made at the time the silks are receptive to determine whether isolation has been provided in accordance with the regulations and whether there are any detectable off-type plants.
2. A crop or a portion of a crop may be eligible for pedigreed status but the rejected parts of the crop must be removed and confirmed by a licensed seed crop inspector.
3. When Corn is planted on land that produced a Corn crop in the previous or current year, an inspection must be made to determine freedom of the seed crop from plants which have volunteered from the previous crop.

Crop Standards

Isolation

1. Open-pollinated Corn must be isolated by a minimum of 200 meters (656 feet) from any contaminating Corn. This isolation distance may be modified by designating certain rows of the same variety for pollen-shedding purposes only.
2. The table below indicates the relationship of the size of the field, distance from contaminating pollen source and the required number of border rows in order to provide isolation for the seed crop.

3. Rows that function to provide isolation shall not be harvested for pedigreed seed and their removal shall be confirmed by a licensed seed crop inspector.
4. Three meters (10 feet) isolation is required between different pedigreed classes of the same variety.

Distance separating seed crop from contaminating Corn	Number of Border Rows to be provided when total acres of field unit for seed crop inspection is:	
	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

Maximum Impurity Standards

There shall not be more than 1/20 of 1 per cent (0.05% or 1 plant in 2,000) detectable admixture with plants of other varieties or off-type plants in the variety being inspected.

Section 10

I. Crop Specific Standards for Industrial Hemp

Hemp (Dioecious) – Registered and Certified Production

Dioecious type Industrial Hemp includes varieties with male and female flowers on separate plants.

Monoecious type Industrial Hemp (with male and female flowers on the same plant) is not included and can be found under its own heading.

Feminized Hemp Seed varieties (which produce only female plants) is not included and can be found under its own heading.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Dioecious type Industrial Hemp.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Registered	In any of the preceding 3 years produced: • a crop of Industrial Hemp.
Certified	In the preceding year produced: • a pedigreed crop of the same variety. In either of the preceding 2 years produced: • a non-pedigreed crop of Industrial Hemp. • a crop of a different variety of Industrial Hemp.

Crop Inspection

Dioecious type crops must be inspected after flowering when male plants are beginning to senesce.

Crop Standards

Isolation*

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity – Registered	Distance
a. Seed crop of same variety that meets Registered standards for varietal purity	1 meter (3 feet)
b. Seed crop of same variety that meets Certified standards for varietal purity	1600 meters (5249 feet)
c. Different varieties of Industrial Hemp or non-pedigreed Industrial Hemp	4800 meters (15,748 feet)

2. Varietal Purity – Certified	Distance
a. Seed crop of same variety that meets Certified standards for varietal purity	1 meter (3 feet)
b. Planted with pedigreed seed of same variety that meets Certified standards for varietal purity	200 meters (656 feet)
c. Different varieties of Industrial Hemp or non-pedigreed Industrial Hemp	800 meters (2624 feet)

* There must not be any Industrial Hemp plants within 100 m of the crop and not more than 10 plants/ha beyond 100 m.

Weeds

1. The presence of Broomrape (*Orobanche* spp.) in Industrial Hemp crops is cause for declining pedigreed status.

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Registered – 10
   b. Certified – 20

Hemp (Monoecious) – Registered and Certified Production

Monoecious type Industrial Hemp includes varieties with male and female flowers on the same plant.

Dioecious type Industrial Hemp (with male and female flowers on separate plants) is not included and can be found under its own heading.

Feminized Hemp Seed varieties (which produce only female plants) is not included and can be found under its own heading.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Monoecious type Industrial Hemp.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Registered	In any of the preceding 3 years produced: • a crop of Industrial Hemp.
Certified	In the preceding year produced: • a pedigreed crop of the same variety. In either of the preceding 2 years produced: • a non-pedigreed crop of Industrial Hemp. • a crop of a different variety of Industrial Hemp.

Crop Inspection

Monoecious type crops must have two inspections, one just before or at early flowering and one when seeds are well forming.

Crop Standards

Isolation*

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity – Registered	Distance
a. Seed crop of same variety that meets Registered standards for varietal purity	1 meter (3 feet)
b. Seed crop of same variety that meets Certified standards for varietal purity	1000 meters (3230 feet)
c. Different varieties of the same type of Industrial Hemp (Monoecious or female hybrid)	2000 meters (6460 feet)
d. Dioecious variety of Industrial Hemp or non-pedigreed Industrial Hemp	4800 meters (15,748 feet)

2. Varietal Purity – Certified	Distance
a. Seed crop of same variety that meets Certified standards for varietal purity	1 meter (3 feet)
b. Planted with pedigreed seed of same variety that meets Certified standards for varietal purity	200 meters (656 feet)
c. Different varieties of the same type of Industrial Hemp (Monoecious or female hybrid)	200 meters (656 feet)
d. Different varieties of Industrial Hemp or non-pedigreed Industrial Hemp	1000 meters (3230 feet)

* There must not be any Industrial Hemp plants within 100 m of the crop and not more than 10 plants/ha beyond 100 m.

Weeds

1. The presence of Broomrape (*Orobanche* spp.) in Industrial Hemp crops is cause for declining pedigreed status.

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Registered – 10
   b. Certified – 20
2. Varietal Purity (Dioecious male plants shedding pollen on average in 10,000 plants)
   a. Registered – 2
   b. Certified – 100

Hemp – Certified Production of Feminized Hemp Seed

The requirements shown here are specifically for Certified seed production of Feminized Hemp Seed (FHS) varieties which produce only female plants. Traditional production of Dioecious and Monoecious type varieties of **Open-pollinated Industrial Hemp** is not included and can be found under separate headings.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to FHS production.

Classes and Generations

Certified: one generation.

Parent Material Requirements

Breeder or Foundation status parent material must be used to produce Certified seed. Parental germplasm, propagating methods and protocols for Certified seed production must be described by a CSGA recognized Plant Breeder in the application for variety certification eligibility (Form 300) and remain the same throughout the life of the variety.

Types of FHS Varieties

There are several types of FHS varieties depending on the parental germplasm and the propagation methods that are used. FHS varieties can be single genotypes, polycrosses or hybrids. They can be derived from clones, seed or a combination of both. Seed production protocols include maintenance of the parent material and the procedures used to generate Certified seed of the FHS variety. A FHS variety is a separate variety from the parent material from which it is derived.

Land & Growth Facility Requirements

All types of FHS varieties can be produced in a contained growth facility (growth room, greenhouse, polyhouse) or in a field.

Field Production

Seed crops of FHS varieties must not be planted on land which in the previous three years grew a crop of industrial hemp.

Growth Facility

The growth facility must contain only plants used in the production of Certified seed of the variety. There must be a period of 60 days between successive productions of Certified seed, unless the same pollen parent is used, in which case the interval is 10 days.

Crop Inspection

It is the seed grower's responsibility to ensure that the seed crop is inspected twice by an authorized inspector, once just prior to any pollen release, and once when the pollination period is complete (all male flowers have shed their pollen).

Crop Standards

Isolation

All types of FHS varieties, whether produced inside a growth facility or in a field, must maintain a minimum isolation distance from any sources of contaminating pollen as described below.

Field Production

Outdoor seed crops of FHS varieties must be at least 4800 m from any contaminating pollen sources.

Growth Facility

Indoor seed crops of FHS varieties must be at least 4800 m from outdoor contaminating pollen sources. Other growth facilities which contain different pollen parent plants must be at least 800 m away. These requirements can be adjusted provided there is adequate pollen control pursuant to an agreement with the CSGA.

Maximum Impurity Standards

Crop Standards

1. All true male (dioecious, XY) and monoecious (XX) plants must be removed from the parent material prior to the first inspection (prior to any pollen shed) for all types of FHS varieties.
2. Any vegetative reproductive material which differs significantly in appearance from the average of the parental reproductive material, is likely a somaclonal variant ('sport') and must be removed prior to the first inspection (prior to any pollen shed).
3. In seed derived parent material, plants not conforming to the norm of the variety may be considered off-types. The maximum number of off-types permitted is 1 in 100 plants of the seed parent.

Seed Standards

There is insufficient information currently available to determine with any certainty the appropriate levels of varietal purity for FHS varieties. As FHS varieties are intended to be grown in the absence of pollen, any male plants are particularly undesirable. It may, however, be practically impossible to produce seed lots with no males and/or monoecious plants. Until there is more detailed information the following will serve as guidelines:

1. The maximum number of male (XY) individuals in a Certified seed lot of an FHS variety is 3/10,000 plants.
2. The maximum number of monoecious (XX) individuals in a Certified seed lot of an FSH variety is 5/10,000 plants.

Specific Requirements

1. A CSGA recognized Plant Breeder's documented Quality Management System (QMS) is required for production of Certified seed of FHS varieties. The QMS seed production protocols must address all the certification requirements for FHS production, be approved by the CSGA and audited by an independent third-party.

Section 11

I. Crop Specific Standards for Industrial Hemp Plots

Hemp (Dioecious) – Foundation Plot Production

Dioecious type Industrial Hemp includes varieties with male and female flowers on separate plants.

Monoecious type Industrial Hemp (with male and female flowers on the same plant) is not included and can be found under its own heading.

General Requirements for All Pedigreed Seed Crops and Plots

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Dioecious type Industrial Hemp.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Foundation	In any of the preceding 3 years produced: • a crop of Industrial Hemp.

Crop Inspection

For Dioecious type plots the first inspection must be made after flowering when male plants are beginning to senesce and the second inspection must be made when seeds are well forming.

Crop Standards

Isolation*

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Plot of same variety	3 meters (10 feet)
b. Lower pedigreed class seed crop of same variety	2000 meters (6460 feet)
c. Different varieties of Industrial Hemp or non-pedigreed Industrial Hemp	4800 meters (15,748 feet)

* There must not be any Industrial Hemp plants within 100 m of the crop and not more than 10 plants/ha beyond 100 m.

Weeds

1. The presence of Broomrape (*Orobanche* spp.) in an Industrial Hemp plot is cause for declining pedigreed status.

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Foundation – 3

Hemp (Monoecious) – Foundation Plot Production

Monoecious type Industrial Hemp includes varieties with male and female flowers on the same plant.

Dioecious type Industrial Hemp (with male and female flowers on separate plants) is not included and can be found under its own heading.

General Requirements for All Pedigreed Seed Crops and Plots

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Monoecious type Industrial Hemp.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Foundation	In any of the preceding 3 years produced: • a crop of Industrial Hemp.

Crop Inspection

For Monoecious type plots the first inspection must be made just before or at early flowering and the second inspection must be made when seeds are well forming.

Crop Standards

Isolation*

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Plot of same variety	5 meters (16 feet)
b. Lower pedigreed class seed crop of same variety	3000 meters (9690 feet)
c. Other monoecious varieties	3000 meters (9690 feet)
d. Dioecious variety or non-pedigreed Industrial Hemp	4800 meters (15,748 feet)

* There must not be any Industrial Hemp plants within 100 m of the crop and not more than 10 plants/ha beyond 100 m.

Weeds

1. The presence of Broomrape (Orobanche spp.) in an Industrial Hemp plot is cause for declining pedigreed status.

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Foundation – 3

2. Varietal Purity (Dioecious male plants shedding pollen on average in 10,000 plants)
    a. Foundation – 1

Section 12

I. Crop Specific Standards for Cereal, Small Grain, Pulse & Soybean Plots

Barley – Select Plot Production

Barley includes Spring and Winter Barley.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Barley.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Spring & Winter **Select**	In the previous year produced: • a Foundation, Registered or Certified crop of Barley. In either of the preceding 2 years produced: • a non-pedigreed crop of Barley, Durum, Oat, Rye, Triticale or Wheat. • a crop of a different variety of Barley. • a Certified crop of Barley.

Crop Inspection

Barley plots must be inspected between heading and maturity.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

		Distance
1.	Varietal Purity	
a.	Inspected pedigreed Barley of same variety	3 meters (10 feet)
b.	Different varieties of Barley or non-pedigreed Barley	10 meters (33 feet)
c.	Inspected pedigreed Barley of same variety contaminated with off-types or other varieties of Barley	10 meters (33 feet)
2.	Mechanical Purity	Distance
a.	Durum, Oat, Rye, Triticale, Wheat	3 meters (10 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 20,000 plants)
   a. Select - 1
2. Mechanical Purity (other crop kinds, the seeds of which are difficult to separate from the seeds of the inspected crop, on average in 20,000 plants; for Barley that includes all cereals)
   a. Select – 1

Bean – Select Plot Production

Bean includes Field, Garden, White, Coloured, Navy or Dry edible type Bean.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production*. In addition, the following standards apply to Bean.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Select	In the previous year produced: • a non-pedigreed crop of Bean. • a crop of a different variety of Bean. • a Foundation, Registered or Certified crop of Bean.

Crop Inspection

Bean plots must be inspected at flowering.

Crop Standards

Isolation**

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Bean of same variety	30 meters (100 feet)
b. Different varieties of Bean or non-pedigreed Bean	30 meters (100 feet)
c. Inspected pedigreed Bean of same variety contaminated with off-types or other varieties of Bean	30 meters (100 feet)

2. Mechanical Purity	Distance
a. Chickpea, Fababean, Lentil, Pea, Soybean	3 meters (10 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 20,000 plants)
   a. Select - 1
2. Mechanical Purity (other crop kinds, the seeds of which are difficult to separate from the seeds of the inspected crop, on average in 20,000 plants; for Bean that includes Chickpea, Fababean, Pea and Soybean)
   a. Select – 1

_____
* Normally 5 generations of Select plot production from Breeder seed are allowed. Field beans are limited to one generation.
** Normally a 1 meter isolation strip or staking in lieu of the 1 meter is required between plots of the same variety and between plots and adjacent pedigreed seed crops planted with the same seed. This is not permitted for Bean plots.

Buckwheat – Select Plot Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Buckwheat.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Select	In the previous year produced: • a Foundation, Registered or Certified crop of Buckwheat. In either of the preceding 2 years produced: • a non-pedigreed crop of Buckwheat. • a crop of a different variety of Buckwheat. • a Certified crop of Buckwheat.

Crop Inspection

Buckwheat plots must be inspected when the crop is in bloom.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Buckwheat of same variety	3 meters (10 feet)
b. Crop planted with Certified seed of same variety	3 meters (10 feet)*
c. An adjacent crop that has more than 0.5% plants of Buckwheat	150 meters (492 feet)
d. Different varieties of Buckwheat or non-pedigreed Buckwheat	400 meters (1,320 feet)
e. Inspected pedigreed Buckwheat of same variety contaminated with off-types or other varieties of Buckwheat	400 meters (1,320 feet)

* 3 meters (10 feet) is sufficient isolation to a crop planted with Certified seed provided the pedigree of the Certified seed used can be established and that the adjacent crop is free for 400 meters (1,320 feet) from non-pedigreed or different varieties of Buckwheat.

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 20,000 plants)
   a. Select - 1

Canary seed – Select Plot Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Canary seed.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Select	In the previous year produced: • a Foundation, Registered or Certified crop of Canary seed. In either of the preceding 2 years produced: • a non-pedigreed crop of Canary seed, Fenugreek or Flax. • a crop of a different variety of Canary seed. • a Certified crop of Canary seed.

Crop Inspection

Canary seed plots must be inspected when the crop is in bloom.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

		Distance
1.	Varietal Purity	
a.	Inspected pedigreed Canary seed of same variety	3 meters (10 feet)
b.	Different varieties of Canary seed or non-pedigreed Canary seed	10 meters (33 feet)
c.	Inspected pedigreed Canary seed of same variety contaminated with off-types or other varieties of Canary seed	10 meters (33 feet)
2.	Mechanical Purity	Distance
a.	Camelina, Fenugreek, Flax	3 meters (10 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 20,000 plants)
   a. Select - 1
2. Mechanical Purity (other crop kinds, the seeds of which are difficult to separate from the seeds of the inspected crop, on average in 20,000 plants; for Canary seed that includes Flax)
   a. Select – 1

Chickpea – Select Plot Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Chickpea.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Select	In the previous year produced: • a crop of Chickpea.

Crop Inspection

Chickpea plots must be inspected at flowering.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Chickpea of same variety	3 meters (10 feet)
b. Different varieties of Chickpea or non-pedigreed Chickpea	10 meters (33 feet)
c. Inspected pedigreed Chickpea of same variety contaminated with off-types or other varieties of Chickpea	10 meters (33 feet)

2. Mechanical Purity	Distance
a. Bean, Fababean, Lupin, Pea, Soybean	3 meters (10 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 20,000 plants)
   a. Select – 1
2. Mechanical Purity (other crop kinds, the seeds of which are difficult to separate from the seeds of the inspected crop, on average in 20,000 plants; for Chickpea that includes Bean, Fababean, Pea and Soybean)
   a. Select – 1

Durum – Select Plot Production

Durum is separate from Wheat. References to Wheat in the Durum requirements includes Spring and Winter Wheat unless otherwise specified.

Wheat and **Hybrid Wheat** can be found under their own heading.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Durum.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Select	In the previous year produced: • a Foundation, Registered or Certified crop of Durum. In either of the preceding 2 years produced: • a crop of Spring Wheat. • a non-pedigreed** crop of Barley, Durum, Winter Wheat, Oat, Rye or Triticale. • a crop of a different* variety of Durum. • a Certified crop of Durum.

Crop Inspection

Durum plots must be inspected between heading and maturity.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

		Distance
1.	**Varietal Purity**	
a.	Inspected pedigreed Durum of same variety	3 meters (10 feet)
b.	Different* varieties of Durum or non-pedigreed Durum	10 meters (33 feet)
c.	Inspected pedigreed Durum of same variety contaminated with off-types or different* varieties of Durum	10 meters (33 feet)
2.	**Mechanical Purity**	**Distance**
a.	Barley, Oat, Rye, Triticale, Wheat	3 meters (10 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 20,000 plants)
   a. Select - 1
2. Mechanical Purity (other crop kinds, the seeds of which are difficult to separate from the seeds of the inspected crop, on average in 20,000 plants; for Durum that includes all cereals)
   a. Select – 1

_____
* 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.
** "Non-pedigreed crop" means a crop that did not meet the requirements of Circular 6.

Fababean – Select Plot Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Fababean.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Select	In the previous year produced: • a non-pedigreed crop of Fababean. • a crop of a different variety of Fababean. • a Foundation, Registered or Certified crop of Fababean.

Crop Inspection

Fababean plots must be inspected at flowering.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

		Distance
1.	Varietal Purity	
a.	Inspected pedigreed Fababean of same variety	3 meters (10 feet)
b.	Different varieties of Fababean or non-pedigreed Fababean	100 meters (328 feet)
c.	Inspected pedigreed Fababean of same variety contaminated with off-types or other varieties of Fababean	100 meters (328 feet)
2.	Mechanical Purity	Distance
a.	Bean, Chickpea, Lentil, Lupin, Pea, Soybean	3 meters (10 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 20,000 plants)
   a. Select - 5
2. Mechanical Purity (other crop kinds, the seeds of which are difficult to separate from the seeds of the inspected crop, on average in 20,000 plants; for Fababean that includes Bean, Chickpea, Pea and Soybean)
   a. Select – 1

Flax – Select Plot Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Flax.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Select	In the previous year produced: • a Foundation, Registered or Certified crop of Flax. In either of the preceding 2 years produced: • a non-pedigreed crop of Canary seed, Fenugreek or Flax. • a crop of a different variety of Flax. • a Certified crop of Flax.

Crop Inspection

Flax plots must be inspected at full bloom. The inspection should take place in the morning.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

	Varietal Purity	Distance
a.	Inspected pedigreed Flax of same variety	3 meters (10 feet)
b.	Different varieties of Flax or non-pedigreed Flax	10 meters (33 feet)
c.	Inspected pedigreed Flax of same variety contaminated with off-types or other varieties of Flax	10 meters (33 feet)

	Mechanical Purity	Distance
a.	Canary seed, Fenugreek	3 meters (10 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 20,000 plants)
   a. Select - 1
2. Mechanical Purity (other crop kinds, the seeds of which are difficult to separate from the seeds of the inspected crop, on average in 20,000 plants; for Flax that includes Canary seed)
   a. Select – 1

Lentil – Select Plot Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Lentil.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Select	In the previous year produced: • a crop of Lentil.

Crop Inspection

Lentil plots must be inspected at flowering.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Lentil of same variety	3 meters (10 feet)
b. Different varieties of Lentil or non-pedigreed Lentil	10 meters (33 feet)
c. Inspected pedigreed Lentil of same variety contaminated with off-types or other varieties of Lentil	10 meters (33 feet)

2. Mechanical Purity	Distance
a. Bean, Fababean, Lupin, Soybean	3 meters (10 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 20,000 plants)
   a. Select – 1

Lupin – Select Plot Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Lupin.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Select	In the previous year produced: • a crop of Lupin.

Crop Inspection

Lupin plots must be inspected at flowering.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Lupin of same variety	3 meters (10 feet)
b. Different varieties of Lupin or non-pedigreed Lupin	10 meters (33 feet)
c. Inspected pedigreed Lupin of same variety contaminated with off-types or other varieties of Lupin	10 meters (33 feet)

2. Mechanical Purity	Distance
a. Bean, Chickpea, Fababean, Lentil, Pea, Soybean	3 meters (10 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 20,000 plants)
   a. Select - 1

Oat – Select Plot Production

Oat includes Covered and Naked Oat.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Oat.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Select	In the previous year produced: • a Foundation, Registered or Certified crop of Oat. In either of the preceding 2 years produced: • a non-pedigreed crop of Barley, Durum, Oat, Rye, Triticale or Wheat. • a crop of a different variety of Oat. • a Certified crop of Oat.

Crop Inspection

Oat plots must be inspected between heading and maturity.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

		Distance
1.	Varietal Purity (All types)	
a.	Inspected pedigreed Oat of same variety	3 meters (10 feet)
b.	Different varieties of Oat or non-pedigreed Oat	10 meters (33 feet)
c.	Inspected pedigreed Oat of same variety contaminated with off-types or other varieties of Oat	10 meters (33 feet)
2.	Varietal Purity (Hulless only)	Distance
a.	Any crop contaminated with Wild Oat	20 meters (66 feet)
3.	Mechanical Purity	
a.	Barley, Durum, Rye, Triticale, Wheat	3 meters (10 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 20,000 plants)
   a. Select - 1
2. Mechanical Purity (other crop kinds, the seeds of which are difficult to separate from the seeds of the inspected crop, on average in 20,000 plants; for Oat that includes all cereals)
   a. Select – 1

Pea – Select Plot Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Pea.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Select	In the previous year produced: • a crop of Pea.

Crop Inspection

Pea plots must be inspected at flowering.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Pea of same variety	3 meters (10 feet)
b. Different varieties of Pea or non-pedigreed Pea	10 meters (33 feet)
c. Inspected pedigreed Pea of same variety contaminated with off-types or other varieties of Pea	10 meters (33 feet)

2. Mechanical Purity	Distance
a. Bean, Chickpea, Fababean, Lupin, Soybean	3 meters (10 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 20,000 plants)
   a. Select - 1
2. Mechanical Purity (other crop kinds, the seeds of which are difficult to separate from the seeds of the inspected crop, on average in 20,000 plants; for Pea that includes Bean, Chickpea, Fababean and Soybean)
   a. Select – 1

Rye – Select Plot Production

Rye includes Spring and Winter Rye.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Rye.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Winter **Select**	In the previous year produced: • a Foundation, Registered or Certified crop of Rye. In either of the preceding 2 years produced: • a non-pedigreed crop of Barley, Durum, Oat, Rye, Triticale or Wheat. • a crop of a different variety of Rye. • a Certified crop of Rye.
Spring **Select**	In the previous year produced: • a Foundation, Registered or Certified crop of Rye. In either of the preceding 2 years produced: • a non-pedigreed crop of Barley, Durum, Oat, Triticale or Wheat. • a non-pedigreed crop of Rye. • a crop of a different variety of Rye. • a Certified crop of Rye. In the third (3rd) year prior produced: • a non-pedigreed crop of Spring Rye, a different variety of Spring Rye or a Certified crop of Spring Rye unless, in the previous year, the land produced a corn crop or a cultivated row crop such as a potato or vegetable crop.

Crop Inspection

Rye plots must be inspected between heading and maturity.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Rye of same variety	3 meters (10 feet)
b. Crop planted with Certified seed of same variety	3 meters (10 feet)*
c. An adjacent crop that has more than 0.5% plants of Rye	150 meters (492 feet)
d. Different varieties of Rye or non-pedigreed Rye	400 meters (1,320 feet)
e. Inspected pedigreed Rye of same variety contaminated with off-types or other varieties of Rye	400 meters (1,320 feet)

* 3 meters (10 feet) is sufficient isolation to a crop planted with Certified seed provided the pedigree of the Certified seed used can be established and that the adjacent crop is free for 400 meters (1,320 feet) from non-pedigreed or different varieties of Rye.

2. Mechanical Purity	Distance
a. Barley, Durum, Oat, Triticale, Wheat	3 meters (10 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 20,000 plants)
   a. Select - 1
2. Mechanical Purity (other crop kinds, the seeds of which are difficult to separate from the seeds of the inspected crop, on average in 20,000 plants; for Rye that includes all cereals)
   a. Select – 1

Soybean – Select Plot Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Soybean.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Select	In the previous year produced: • a non-pedigreed crop of Soybean. • a crop of a different variety of Soybean. • a Foundation, Registered or Certified crop of Soybean.

Crop Inspection

Soybean plots must be inspected at maturity when at least 90% of the plants have dropped all their leaves and the mature plants have distinguishing pod, pubescence and hilum colour characteristics.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

		Distance
1.	Varietal Purity	
a.	Inspected pedigreed Soybean of same variety	3 meters (10 feet)
b.	Different varieties of Soybean or non-pedigreed Soybean	10 meters (33 feet)
c.	Inspected pedigreed Soybean of same variety contaminated with off-types or other varieties of Soybean	10 meters (33 feet)
2.	Mechanical Purity	Distance
a.	Bean, Chickpea, Fababean, Lentil, Lupin, Pea	3 meters (10 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 20,000 plants)
   a. Select - 10
2. Mechanical Purity (other crop kinds, the seeds of which are difficult to separate from the seeds of the inspected crop, on average in 20,000 plants; for Soybean that includes Bean, Chickpea, Lupin and Pea)
   a. Select – 1

Triticale – Select Plot Production

Triticale includes Spring and Winter Triticale.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Triticale.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Winter **Select**	In the previous year produced: • a Foundation, Registered or Certified crop of Triticale. In either of the preceding 2 years produced: • a non-pedigreed crop of Barley, Durum, Oat, Rye, Triticale or Wheat. • a crop of a different variety of Triticale. • a Certified crop of Triticale.
Spring **Select**	In the previous year produced: • a Foundation, Registered or Certified crop of Triticale. In either of the preceding 2 years produced: • a non-pedigreed crop of Barley, Durum, Oat, Rye, or Wheat. • a non-pedigreed crop of Triticale. • a crop of a different variety of Triticale. • a Certified crop of Triticale. In the third (3rd) year prior produced: • a non-pedigreed crop of Spring Triticale, a different variety of Spring Triticale or a Certified crop of Spring Triticale unless, in the previous year, the land produced a corn crop or a cultivated row crop such as a potato or vegetable crop.

Crop Inspection

Triticale plots must be inspected between heading and maturity.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Triticale of same variety	3 meters (10 feet)
b. Different varieties of Triticale or non-pedigreed Triticale	30 meters (100 feet)
c. Inspected pedigreed Triticale of same variety contaminated with off-types or other varieties of Triticale	30 meters (100 feet)

2. Mechanical Purity	Distance
a. Barley, Durum, Oat, Rye, Wheat	3 meters (10 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 20,000 plants)
   a. Select - 1
2. Mechanical Purity (other crop kinds, the seeds of which are difficult to separate from the seeds of the inspected crop, on average in 20,000 plants; for Triticale that includes all cereals)
   a. Select – 1

Wheat – Select Plot Production

Wheat includes Spring and Winter Wheat, Einkorn, Emmer and Spelt (unless otherwise specified).
Durum and **Hybrid Wheat** are not included and can be found under their own heading.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Wheat.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Winter **Select**	In the previous year produced: • a Foundation, Registered or Certified crop of Wheat. In either of the preceding 2 years produced: • a non-pedigreed** crop of Barley, Durum, Oat, Rye, Triticale or Wheat. • a crop of a different* variety of Wheat. • a Certified crop of Wheat.
Spring **Select**	In the previous year produced: • a Foundation, Registered or Certified crop of Wheat. • a crop of Durum. In either of the preceding 2 years produced: • a non-pedigreed** crop of Barley, Durum, Oat, Rye, or Triticale. • a non-pedigreed** crop of Wheat. • a crop of a different* variety of Wheat. • a Certified crop of Wheat. In the third (3rd) year prior produced: • a non-pedigreed** crop of Spring Wheat, a different* variety of Spring Wheat or a Certified crop of Spring Wheat unless, in the previous year, the land produced a corn crop or a cultivated row crop such as a potato or vegetable crop.

Crop Inspection

Wheat plots must be inspected between heading and maturity.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Wheat of same variety	3 meters (10 feet)
b. Different* varieties of Wheat or non-pedigreed Wheat	10 meters (33 feet)
c. Inspected pedigreed Wheat of same variety contaminated with off-types or different* varieties of Wheat	10 meters (33 feet)

2. Mechanical Purity	Distance
a. Barley, Durum, Oat, Rye, Triticale	3 meters (10 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 20,000 plants)
   a. Select - 1
2. Mechanical Purity (other crop kinds, the seeds of which are difficult to separate from the seeds of the inspected crop, on average in 20,000 plants; for Wheat that includes all cereals)
   a. Select – 1

_____
* 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.
** "Non-pedigreed crop" means a crop that did not meet the requirements of Circular 6.

II. Crop Specific Standards for Hybrid Cereals

Wheat – Plot Production of Parent Seed of Hybrid Wheat

The requirements shown here are specifically for plot production of parent seed of Cytoplasmic Male Sterile (CMS) Hybrid Wheat where the Certified hybrid seed is produced with the parents either blended (comingled) or planted individually in alternating bays. References to Wheat shown here includes Spring and Winter Wheat, Einkorn, Emmer and Spelt (unless otherwise specified).

Durum and **Wheat** are not included and can be found under their own heading.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to plot production of parent seed of Hybrid Wheat.

Classes and Generations

The following classes and generations are utilized in the certification of CMS Hybrid Wheat and parent lines:

Breeder:

- used, as well as Select HCP class, to produce plots of A-lines (A x B), B-lines, and R-lines;
- produced by or under supervision of a CSGA recognized plant breeder;
- no generation limit unless prescribed by the Breeder responsible for the variety.

Select Hybrid Cereal Parent (HCP) class seed:

- used, as well as Breeder class, to produce plots of A-lines (A x B), B-lines, and R-lines;
- produced by or under supervision of a CSGA recognized plant breeder or accredited plot growers;
- generation limits are prescribed by the variety description.

Certified class hybrid seed:

- produced from Breeder or Select Hybrid Cereal Parent (HCP) seed;
- sold to commercial producers and not eligible for certification.

Seed Requirements

1. Plots of Select HCP must be produced from Breeder class or Select HCP class seed; or if imported from AOSCA Breeder or Foundation class or from OECD Pre-Basic or Basic class parent seed.
2. Certified hybrid seed must be produced from Breeder class or Select HCP class seed: or if imported from AOSCA Breeder or Foundation class or from OECD Pre-Basic or Basic class parent seed.
3. Where the Certified hybrid seed will be produced using blended parent lines, a seed mixture containing male sterile female parent (A-line) seed and restorer (R-line) seed (A+R) must be produced. This mixture of Breeder or Select HCP seed is considered a Select Technical Blend (TB) and requires a new Select TB crop certificate number from the CSGA. As this Select TB is used to produce the Certified hybrid seed it is limited to one generation and cannot be used to produce subsequent generations of Select TB seed. Select TB seed must meet the following minimum requirements:
   a. Produced with mixing equipment, procedures, designated personnel, and records that verify homogeneous, uniform finished mixtures; and
   b. Packaged and labelled with tags issued by the CSGA that identify the Select TB class, the variety name, and the Select TB crop certificate number.
4. Both Select HCP and Select TB seed must comply with the general requirements for certification of Select seed which include most requirements of the *Seeds Regulations* for Foundation seed.

Area of Select HCP Plots

1. There is no limit on the number of plots or the total acreage of plots. However, the area of each Select HCP plot is limited to 4 hectares (10 acres) in size.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Spring & Winter **Select HCP**	In any of the preceding 2 years has been planted with or produced a crop of: • Wheat • Durum

Crop Inspection

1. Plots of Select HCP must be inspected as follows:
   a. Plots containing male sterile (female seed parent) A-lines require two (2) inspections:
      i. First inspection must be completed during anthesis (flowering) to report pollen shedders in A-line plants;
      ii. Second inspection must be completed after heads assume a mature colour to report off-types/other varieties.
   b. Plots of (male maintainer) B-lines or (restorer) R-lines require one (1) inspection:
      i. Inspection must be completed after heads assume a mature colour to report off-types/other varieties.

Crop Standards

Isolation - Plots containing A-line (male sterile) female parent seed

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed crop of same* parent line/variety	1 meter (3 feet)***
b. Different* varieties of Wheat or non-pedigreed** Wheat	800 meters (2,625 feet)****
2. Mechanical Purity	**Distance**
a. Barley, Durum, Oat, Rye, Triticale	2 meters (6 feet)

Isolation - Plots containing B-line or R-line (male fertile) male parent seed

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed crop of same* parent line/variety	1 meter (3 feet)***
b. Different* varieties of Wheat or non-pedigreed** Wheat	10 meters (33 feet)*****
2. Mechanical Purity	**Distance**
a. Barley, Durum, Oat, Rye, Triticale	2 meters (6 feet)

Additional Isolation Requirements:

1. The perimeter of Select HCP plots must be clearly defined, and the isolation distance required must be provided prior to crop inspection.

2. Subject to 3 and 4 below, any plants considered a source of contamination found within 10 meters (33 feet) of the Select HCP plot may be reason for declining certification.
3. The first 50 meters of isolation must be practically free from plants that can cross pollinate with the inspected crop (not more than 1 plant per 100 square meters, on average) and the remaining distance must be reasonably free from plant that can cross pollinate with the inspected crop (not more than 1 plant per 10 square meters, on average). Contaminants within the required isolation distance, depending on density, stage of maturity, location, and distance from the inspected crop, may be cause for declining certification.
4. The required isolation of 2 meters (6 feet) for mechanical purity is not required if there is a definite physical barrier, defined as a natural or artificial obstacle between two adjacent crops that prevents access and accidental harvest.
5. Staking of a field is permitted in lieu of the 1 meter (3 feet) isolation strip required between inspected pedigreed crops of the same* variety provided it meets the following requirements:
    a. Stake locations must be clearly identified on map(s) provided to crop inspectors.
    b. Stakes must be placed no more than 100 meters apart.
    c. Staking must be clearly visible and clearly define the border of the field at the time of inspection.

_____
* In hybrid crops and crops of pest tolerant varietal blends, "different" variety means a crop planted with a different pollen (male) parent seed.
** "Non-pedigreed crop" means a crop that did not meet the requirements of Circular 6.
***1 meter (3 feet) is sufficient to a crop planted with the same pollen bearing (male) parent seed, provided the pedigree of the parent seed planted is verified.
**** 800 meters (2,625 feet) is required to a crop planted with a different pollen (male) parent.
****** 10 meters (33 feet) is required or as specified by the variety description.

Border Rows

1. Border rows are recommended for production of A-line plots but not required. Border rows must be planted with the same seed as the pollen (male) parent rows. Border rows do not have to meet the isolation requirements of the inspected crop if they will not be harvested for pedigreed seed.
2. Border rows should be planted such that synchronous flowering occurs with receptive female parent plants of the inspected crop.

Maximum Impurity Standards

1. Varietal Purity – (off-types/ other varieties on average in 20,000 plants)
    a. Select HCP – 20
2. Varietal Purity – (pollen shedders on average in 20,000 plants)
    a. Select HCP – 20
3. Mechanical Purity (other crop kinds, the seeds of which are difficult to separate from the seeds of the inspected crop, on average in 20,000 plants; for Wheat that includes Barley, Durum, Oat, Rye and Triticale)
    a. Select HCP – 2

Specific Requirements

1. CSGA requires submission of a seed sample from Select HCP for varietal verification testing.

Section 13

I. Crop Specific Standards for Canola, Carinata, Mustard and Radish Plots

Canola & Rapeseed – Foundation Production of *B. napus*

The requirements shown here are specifically for Foundation plot production of Open-pollinated *B. napus*. **Hybrid *B. napus*** and ***B. rapa*** are not included and can be found under separate headings.General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Foundation plot production of Open-pollinated *B. napus*.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Foundation	In any of the preceding 5 years has been planted with or produced a crop of: • Canola or Rapeseed (*B. napus, B. rapa*) • Carinata (*B. carinata*) • Mustard (*B. juncea, S. alba*) • Radish (*R. sativus*)

Crop Inspection

Foundation plot production of Open-pollinated *B. napus* must be inspected when the crop is in the early flowering stage.

Crop Standards

Isolation

The first 50 meters of isolation must be practically free from plants that may cross pollinate (CP in table below) with the inspected seed crop (not more than 1 plant per 100 square meters, on average) and the remaining distance reasonably free from plants that may cross pollinate with the inspected crop (not more than 1 plant per 10 square meters, on average).

The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Planted with Breeder* or Foundation* seed of the same variety	3 meters (10 feet)
b. Planted with Certified* seed of the same variety.	100 meters (328 feet)
c. *B. juncea* or *B. carinata*	100 meters (328 feet)
d. Different variety of *B. napus* or non-pedigreed crop of *B. napus*	200 meters (656 feet)
e. *B. rapa*	200 meters (656 feet)

* Provided the pedigree of the Breeder, Foundation or Certified seed used can be established.

2. Mechanical Purity — Distance

   a. *S. alba* or *R. sativus* — 3 meters (10 feet)

Weeds

1. The presence of Cleavers (*Galium aparine*) is cause for declining pedigreed status.
2. Wild mustard (*Sinapis arvensis*) must not be present in the area of the crop to be harvested for seed at an average of more than 1 plant/20,000 plants.

Maximum Impurity Standards

1. Varietal Purity (on average in 20,000 plants)
   a. Off-types/other varieties of the same species – 1
   b. Plants of species that may cross pollinate (CP in table below) – 1
2. Mechanical Purity (on average in 20,000 plants)
   a. Plants of species with difficult to separate seeds (DTS in table below) – 1

Species	Canola (*B. napus*)	Canola (*B. rapa*)	Mustard Brown/Oriental (*B. juncea*)	Mustard White/Yellow (*S. alba*)	Carinata (*B. carinata*)	Radish (*R. sativus*)
B. napus	n/a	CP	CP	DTS	CP	DTS

Canola & Rapeseed – Foundation Production of *B. rapa*

The requirements shown here are specifically for Foundation plot production of Open-pollinated *B. rapa*. **Hybrid *B. rapa*** and ***B. napus*** are not included and can be found under separate headings.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Foundation plot production of Open-pollinated *B. rapa*.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Foundation	In any of the preceding 5 years has been planted with or produced a crop of: • Canola or Rapeseed (*B. napus, B. rapa*) • Carinata (*B. carinata*) • Mustard (*B. juncea, S. alba*) • Radish (*R. sativus*)

Crop Inspection

Foundation plot production of Open-pollinated *B. rapa* must be inspected when the crop is in the early flowering stage.

Crop Standards

Isolation

The first 50 meters of isolation must be practically free from plants that may cross pollinate (CP in table below) with the inspected seed crop (not more than 1 plant per 100 square meters, on average) and the remaining distance reasonably free from plants that may cross pollinate with the inspected crop (not more than 1 plant per 10 square meters, on average).

The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Planted with Breeder* or Foundation* seed of the same variety	3 meters (10 feet)
b. Planted with Certified* seed of the same variety.	100 meters (328 feet)

c.	*B. napus, B. juncea* or *B. carinata*	100 meters (328 feet)
d.	Different variety of *B. rapa* or non-pedigreed crop of *B. rapa*	400 meters (1312 feet)

* Provided the pedigree of the Breeder, Foundation or Certified seed used can be established.

2. Mechanical Purity	Distance
a. *S. alba* or *R. sativus*	3 meters (10 feet)

Weeds

1. The presence of Cleavers (*Galium aparine*) is cause for declining pedigreed status.
2. Wild mustard (*Sinapis arvensis*) must not be present in the area of the crop to be harvested for seed at an average of more than 1 plant/20,000 plants.

Maximum Impurity Standards

1. Varietal Purity (on average in 20,000 plants)
   a. Off-types/other varieties of the same species – 1
   b. Plants of species that may cross pollinate (CP in table below) – 1
2. Mechanical Purity (on average in 20,000 plants)
   a. Plants of species with difficult to separate seeds (DTS in table below) – 1

Species	Canola (*B. napus*)	Canola (*B. rapa*)	Mustard Brown/Oriental (*B. juncea*)	Mustard White/Yellow (*S. alba*)	Carinata (*B. carinata*)	Radish (*R. sativus*)
B. rapa	CP	n/a	CP	DTS	CP	DTS

Canola & Rapeseed – Foundation Production of Parent Seed of Hybrid *B. napus* & *B. rapa*

The requirements shown here are specifically for Foundation plot production of the parent seed for Hybrid *B. napus* and *B. rapa*. **Open-pollinated *B. napus*** and ***B. rapa*** are not included and can be found under their own heading.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Foundation plot production of parent seed of Hybrid *B. napus* and *B. rapa*.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Foundation	In any of the preceding 5 years has been planted with or produced a crop of: • Canola or Rapeseed (*B. napus, B. rapa*) • Carinata (*B. carinata*) • Mustard (*B. juncea, S. alba*) • Radish (*R. sativus*)

Crop Inspection

Foundation plot production of the parent seed for Hybrid *B. napus* and *B. rapa* must be inspected when the crop is in the early flowering stage.

Crop Standards

Isolation

The first 50 meters of isolation must be practically free from plants that may cross pollinate (CP in table below) with the inspected seed crop (not more than 1 plant per 100 square meters, on average) and the remaining distance reasonably free from plants that may cross pollinate with the inspected crop (not more than 1 plant per 10 square meters, on average).

The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Certified seed crops planted with Breeder * or Foundation* seed of the same pollen bearing (male) parent	3 meters (10 feet)
b. Plot of the same pollen bearing (male) parent	3 meters (10 feet)
c. *B. juncea* or *B. carinata*	200 meters (656 feet)

d.	Different variety of *B. napus* or *B. rapa*	800 meters (2624 feet)
e.	Non-pedigreed crops of *B. napus* or *B. rapa*	800 meters (2624 feet)

* Provided the pedigree of the Breeder or Foundation seed used can be established.

2. Mechanical Purity	Distance
a. *S. alba* or *R. sativus*	3 meters (10 feet)

Border Rows

1. Must be planted with the same seed as the pollen (male) parent rows.
2. Must be planted such that synchronous flowering occurs with pollen (male) parent rows and, more importantly, with receptive female parent plants of the inspected crop.

Weeds

1. The presence of Cleavers (*Galium aparine*) is cause for declining pedigreed status.
2. Wild mustard (*Sinapis arvensis*) must not be present in the area of the crop to be harvested for seed at an average of more than 1 plant/20,000 plants.

Maximum Impurity Standards

1. Varietal Purity (on average in 20,000 plants)
   a. Off-types/other varieties of the same species – 1
   b. Plants of species that may cross pollinate (CP in table below) – 1
2. Mechanical Purity (on average in 20,000 plants)
   a. Plants of species with difficult to separate seeds (DTS in table below) – 1

Species	Canola (*B. napus*)	Canola (*B. rapa*)	Mustard Brown/Oriental (*B. juncea*)	Mustard White/Yellow (*S. alba*)	Carinata (*B. carinata*)	Radish (*R. sativus*)
B. napus	n/a	CP	CP	DTS	CP	DTS
B. rapa	CP	n/a	CP	DTS	CP	DTS

Carinata – Foundation Production of *B. carinata*

The requirements shown here are specifically for Foundation plot production of Open-pollinated *B. carinata*. **Mustard species** are not included and can be found under separate headings.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Foundation plot production of Open-pollinated *B. carinata*.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Foundation	In any of the preceding 5 years has been planted with or produced a crop of: • Canola or Rapeseed (*B. napus, B. rapa*) • Carinata (*B. carinata*) • Mustard (*B. juncea, S. alba*) • Radish (*R. sativus*)

Crop Inspection

Foundation plot production of Open-pollinated *B. carinata* must be inspected when the crop is in the early flowering stage.

Crop Standards

Isolation

The first 50 meters of isolation must be practically free from plants that may cross pollinate (CP in table below) with the inspected seed crop (not more than 1 plant per 100 square meters, on average) and the remaining distance reasonably free from plants that may cross pollinate with the inspected crop (not more than 1 plant per 10 square meters, on average).

The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Planted with Breeder* or Foundation* seed of the same variety	3 meters (10 feet)
b. Planted with Certified* seed of the same variety.	100 meters (328 feet)

c.	*B. napus, B. rapa* or *B. juncea*	100 meters (328 feet)
d.	Different variety of *B. carinata* or non-pedigreed crop of *B. carinata*	200 meters (656 feet)

* Provided the pedigree of the Breeder, Foundation or Certified seed used can be established.

2. Mechanical Purity	Distance
a. *S. alba* or *R. sativus*	3 meters (10 feet)

Weeds

1. The presence of Cleavers (*Galium aparine*) is cause for declining pedigreed status.
2. Wild mustard (*Sinapis arvensis*) must not be present in the area of the crop to be harvested for seed at an average of more than 1 plant/20,000 plants.

Maximum Impurity Standards

1. Varietal Purity (on average in 20,000 plants)
   a. Off-types/other varieties of the same species – 1
   b. Plants of species that may cross pollinate (CP in table below) – 1
2. Mechanical Purity (on average in 20,000 plants)
   a. Plants of species with difficult to separate seeds (DTS in table below) – 1

Species	Canola (*B. napus*)	Canola (*B. rapa*)	Mustard Brown/Oriental (*B. juncea*)	Mustard White/Yellow (*S. alba*)	Carinata (*B. carinata*)	Radish (*R. sativus*)
B. carinata	CP	CP	CP	DTS	n/a	DTS

Mustard – Foundation Production of *B. juncea*

The requirements shown here are specifically for Foundation plot production of Open-pollinated *B. juncea* (including canola quality *B. juncea*). **Hybrid *B. juncea***, ***S. alba*** and **Carinata** are not included and can be found under separate headings.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Foundation plot production of Open-pollinated *B. juncea*.

Land Requirements

Inspected Crop	**Must NOT be grown on land which:**
Foundation	In any of the preceding 5 years has been planted with or produced a crop of: • Canola or Rapeseed (*B. napus, B. rapa*) • Carinata (*B. carinata*) • Mustard (*B. juncea, S. alba*) • Radish (*R. sativus*)

Crop Inspection

Foundation plot production of Open-pollinated *B. juncea* must be inspected when the crop is in the early flowering stage.

Crop Standards

Isolation

The first 50 meters of isolation must be practically free from plants that may cross pollinate (CP in table below) with the inspected seed crop (not more than 1 plant per 100 square meters, on average) and the remaining distance reasonably free from plants that may cross pollinate with the inspected crop (not more than 1 plant per 10 square meters, on average).

The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Planted with Breeder* or Foundation* seed of the same variety	3 meters (10 feet)
b. Planted with Certified* seed of the same variety.	100 meters (328 feet)

c.	*B. napus, B. rapa* or *B. carinata*	100 meters (328 feet)
d.	Different variety of *B. juncea* or non-pedigreed crop of *B. juncea*	200 meters (656 feet)

* Provided the pedigree of the Breeder, Foundation or Certified seed used can be established.

2. Mechanical Purity	Distance
a. *S. alba* or *R. sativus*	3 meters (10 feet)

Weeds

1. The presence of Cleavers (*Galium aparine*) is cause for declining pedigreed status.
2. Wild mustard (*Sinapis arvensis*) must not be present in the area of the crop to be harvested for seed at an average of more than 1 plant/20,000 plants.

Maximum Impurity Standards

1. Varietal Purity (on average in 20,000 plants)
   a. Off-types/other varieties of the same species – 1
   b. Plants of species that may cross pollinate (CP in table below) – 1
2. Mechanical Purity (on average in 20,000 plants)
   a. Plants of species with difficult to separate seeds (DTS in table below) – 1

Species	Canola (B. napus)	Canola (B. rapa)	Mustard Brown/Oriental (B. juncea)	Mustard White/Yellow (S. alba)	Carinata (B. carinata)	Radish (R. sativus)
B. juncea	CP	CP	n/a	DTS	CP	DTS

Mustard – Foundation Production of *S. alba*

The requirements shown here are specifically for Foundation plot production of Open-pollinated *S. alba.* **Hybrid, Composite and Synthetic *S. alba*, *B. juncea*** and **Carinata** are not included and can be found under separate headings.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Foundation plot production of Open-pollinated *S. alba*.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Foundation	In any of the preceding 5 years has been planted with or produced a crop of: • Canola or Rapeseed (*B. napus, B. rapa*) • Carinata (*B. carinata*) • Mustard (*B. juncea, S. alba*) • Radish (*R. sativus*)

Crop Inspection

Foundation plot production of Open-pollinated *S. alba* must be inspected when the crop is in the early flowering stage.

Crop Standards

Isolation

The first 50 meters of isolation must be practically free from plants that may cross pollinate (CP in table below) with the inspected seed crop (not more than 1 plant per 100 square meters, on average) and the remaining distance reasonably free from plants that may cross pollinate with the inspected crop (not more than 1 plant per 10 square meters, on average).

The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Planted with Breeder* or Foundation* seed of the same variety	3 meters (10 feet)
b. Planted with Certified* seed of the same variety.	100 meters (328 feet)
c. Different variety of *S. alba* or non-pedigreed crop of *S. alba*	400 meters (1312 feet)

2. Mechanical Purity	Distance
a. *B. napus, B. rapa, B. juncea, B. carinata* or *R. sativus*	3 meters (10 feet)

* Provided the pedigree of the Breeder, Foundation or Certified seed used can be established.

Weeds

1. The presence of Cleavers (*Galium aparine*) is cause for declining pedigreed status.
2. Wild mustard (*Sinapis arvensis*) must not be present in the area of the crop to be harvested for seed at an average of more than 1 plant/20,000 plants.

Maximum Impurity Standards

1. Varietal Purity (on average in 20,000 plants)
   a. Off-types/other varieties of the same species – 1
   b. Plants of species that may cross pollinate (CP in table below) – 1
2. Mechanical Purity (on average in 20,000 plants)
   a. Plants of species with difficult to separate seeds (DTS in table below) – 1

Species	Canola (*B. napus*)	Canola (*B. rapa*)	Mustard Brown/Oriental (*B. juncea*)	Mustard White/Yellow (*S. alba*)	Carinata (*B. carinata*)	Radish (*R. sativus*)
S. alba	DTS	DTS	DTS	n/a	DTS	DTS

Mustard – Foundation Production of Parent Seed of Hybrid *B. juncea*

The requirements shown here are specifically for Foundation plot production of the parent seed for Hybrid *B. juncea* (including canola quality *B. juncea*). **Open-pollinated *B. juncea*, *S. alba*** and **Carinata** are not included and can be found under separate headings.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Foundation plot production of parent seed of Hybrid *B. juncea*.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Foundation	In any of the preceding 5 years has been planted with or produced a crop of: • Canola or Rapeseed (*B. napus, B. rapa*) • Carinata (*B. carinata*) • Mustard (*B. juncea, S. alba*) • Radish (*R. sativus*)

Crop Inspection

Foundation plot production of the parent seed for Hybrid *B. juncea* must be inspected when the crop is in the early flowering stage.

Crop Standards

Isolation

The first 50 meters of isolation must be practically free from plants that may cross pollinate (CP in table below) with the inspected seed crop (not more than 1 plant per 100 square meters, on average) and the remaining distance reasonably free from plants that may cross pollinate with the inspected crop (not more than 1 plant per 10 square meters, on average).

The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Certified seed crops planted with Breeder * or Foundation* seed of the same pollen bearing (male) parent	3 meters (10 feet)
b. Plot of the same pollen bearing (male) plant	3 meters (10 feet)

c.	Crop planted with different pollen (male) parent of *B. juncea* or non-pedigreed crop of *B. juncea*	800 meters (2624 feet)
d.	*B. napus*, *B. rapa* or *B. carinata*	800 meters (2624 feet)

* Provided the pedigree of the Breeder or Foundation seed used can be established.

2. Mechanical Purity	Distance
a. *S. alba* or *R. sativus*	3 meters (10 feet)

Border Rows

1. Must be planted with the same seed as the pollen (male) parent rows.
2. Must be planted such that synchronous flowering occurs with pollen (male) parent rows and, more importantly, with receptive female parent plants of the inspected crop.

Weeds

1. The presence of Cleavers (*Galium aparine*) is cause for declining pedigreed status.
2. Wild mustard (*Sinapis arvensis*) must not be present in the area of the crop to be harvested for seed at an average of more than 1 plant/20,000 plants.

Maximum Impurity Standards

1. Varietal Purity (on average in 20,000 plants)
   a. Off-types/other varieties of the same species – 1
   b. Plants of species that may cross pollinate (CP in table below) – 1
2. Mechanical Purity (on average in 20,000 plants)
   a. Plants of species with difficult to separate seeds (DTS in table below) – 1

Species	Canola (*B. napus*)	Canola (*B. rapa*)	Mustard Brown/Oriental (*B. juncea*)	Mustard White/Yellow (*S. alba*)	Carinata (*B. carinata*)	Radish (*R. sativus*)
B. juncea	CP	CP	n/a	DTS	CP	DTS

Mustard – Foundation Production of Parent Seed of Hybrid *S. alba*

The requirements shown here are specifically for Foundation plot production of the parent seed for Hybrid *S. alba*. **Open-pollinated, Composite and Synthetic *S. alba*, *B. juncea*** and **Carinata** are not included and can be found under separate headings.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Foundation plot production of parent seed of Hybrid *S. alba*.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Foundation	In any of the preceding 5 years has been planted with or produced a crop of: • Canola or Rapeseed (*B. napus, B. rapa*) • Carinata (*B. carinata*) • Mustard (*B. juncea, S. alba*) • Radish (*R. sativus*)

Crop Inspection

Foundation plot production of the parent seed for Hybrid *S. alba* must be inspected when the crop is in the early flowering stage.

Crop Standards

Isolation

The first 50 meters of isolation must be practically free from plants that may cross pollinate (CP in table below) with the inspected seed crop (not more than 1 plant per 100 square meters, on average) and the remaining distance reasonably free from plants that may cross pollinate with the inspected crop (not more than 1 plant per 10 square meters, on average).

The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Certified seed crops planted with Breeder* or Foundation* seed of the same pollen bearing (male) parent	3 meters (10 feet)
b. Plot of the same pollen bearing (male) parent	3 meters (10 feet)

c.	*B. napus*, *B. rapa*, or *B. carinata*	200 meters (656 feet)
d.	Crop planted with different pollen (male) parent of *S. alba* or non-pedigreed crop of *S. alba*	800 meters (2624 feet)

*Provided the pedigree of the Breeder or Foundation seed used can be established.

2. Mechanical Purity

		Distance
a.	*R. sativus*	3 meters (10 feet)

Border Rows

1. Must be planted with the same seed as the pollen (male) parent rows.
2. Must be planted such that synchronous flowering occurs with pollen (male) parent rows and, more importantly, with receptive female parent plants of the inspected crop.

Weeds

1. The presence of Cleavers (*Galium aparine*) is cause for declining pedigreed status.
2. Wild mustard (*Sinapis arvensis*) must not be present in the area of the crop to be harvested for seed at an average of more than 1 plant/20,000 plants.

Maximum Impurity Standards

1. Varietal Purity (on average in 20,000 plants)
   a. Off-types/other varieties of the same species – 1
   b. Plants of species that may cross pollinate (CP in table below) – 1
2. Mechanical Purity (on average in 20,000 plants)
   a. Plants of species with difficult to separate seeds (DTS in table below) – 1

Species	Canola (*B. napus*)	Canola (*B. rapa*)	Mustard Brown/Oriental (*B. juncea*)	Mustard White/Yellow (*S. alba*)	Carinata (*B. carinata*)	Radish (*R. sativus*)
S. alba	CP	CP	CP	n/a	CP	DTS

Mustard – Foundation Production of Parent Seed of Composite & Synthetic *S. alba*

The requirements shown here are specifically for Foundation plot production of the parent seed for Composite and Synthetic *S. alba*. **Open-pollinated and Hybrid *S. alba*, *B. juncea*** and **Carinata** are not included and can be found under separate headings.

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Foundation plot production of parent seed of Composite and Synthetic *S. alba*.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Foundation	In any of the preceding 5 years has been planted with or produced a crop of: • Canola or Rapeseed (*B. napus, B. rapa*) • Carinata (*B. carinata*) • Mustard (*B. juncea, S. alba*) • Radish (*R. sativus*)

Crop Inspection

Foundation plot production of the parent seed for Composite and Synthetic *S. alba* must be inspected when the crop is in the early flowering stage.

Crop Standards

Isolation

The first 50 meters of isolation must be practically free from plants that may cross pollinate (CP in table below) with the inspected seed crop (not more than 1 plant per 100 square meters, on average) and the remaining distance reasonably free from plants that may cross pollinate with the inspected crop (not more than 1 plant per 10 square meters, on average).

The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

		Distance
1.	Varietal Purity	
a.	Plot of the same pollen parent	3 meters (10 feet)
b.	Different variety of *S. alba* or non-pedigreed crop of *S. alba*	400 meters (1312 feet)
2.	Mechanical Purity	Distance
a.	*B. napus, B. rapa, B. juncea, B. carinata* or *R. sativus*	3 meters (10 feet)

Weeds

1. The presence of Cleavers (*Galium aparine*) is cause for declining pedigreed status.
2. Wild mustard (*Sinapis arvensis*) must not be present in the area of the crop to be harvested for seed at an average of more than 1 plant/20,000 plants.

Maximum Impurity Standards

1. Varietal Purity (on average in 20,000 plants)
   a. Off-types/other varieties of the same species – 1
   b. Plants of species that may cross pollinate (CP in table below) – 1
2. Mechanical Purity (on average in 20,000 plants)
   a. Plants of species with difficult to separate seeds (DTS in table below) – 1

Species	Canola (*B. napus*)	Canola (*B. rapa*)	Mustard Brown/Oriental (*B. juncea*)	Mustard White/Yellow (*S. alba*)	Carinata (*B. carinata*)	Radish (*R. sativus*)
S. alba	DTS	DTS	DTS	n/a	DTS	DTS

Radish – Foundation Production of *R. sativus*

The requirements shown here are specifically for Foundation plot production of Open-pollinated *R. sativus.*

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Foundation plot production of Open-pollinated *R. sativus*.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Foundation	In any of the preceding 5 years has been planted with or produced a crop of: • Canola or Rapeseed (*B. napus, B. rapa*) • Carinata (*B. carinata*) • Mustard (*B. juncea, S. alba*) • Radish (*R. sativus*)

Crop Inspection

Foundation plot production of Open-pollinated *R. sativus* must be inspected when the crop is in the early flowering stage.

Crop Standards

Isolation

The first 50 meters of isolation must be practically free from plants that may cross pollinate (CP in table below) with the inspected seed crop (not more than 1 plant per 100 square meters, on average) and the remaining distance reasonably free from plants that may cross pollinate with the inspected crop (not more than 1 plant per 10 square meters, on average).

The risk to varietal purity posed by plants that may cross pollinate varies depending on area, density, stage of maturity and distance from the inspected crop. These factors will be taken into consideration in determining the pedigreed status of the inspected crop.

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Planted with Breeder* or Foundation* seed of the same variety	3 meters (10 feet)
b. Planted with Certified* seed of the same variety.	100 meters (328 feet)
c. Different variety of *R. sativus* or non-pedigreed crop of *R. sativus*	400 meters (1312 feet)

* Provided the pedigree of the Breeder, Foundation or Certified seed used can be established.

2. Mechanical Purity	Distance
a. *B. napus, B. rapa, B. juncea, B. carinata* or *S. alba*	3 meters (10 feet)

Weeds

1. The presence of Cleavers (*Galium aparine*) is cause for declining pedigreed status.
2. Wild mustard (*Sinapis arvensis*) must not be present in the area of the crop to be harvested for seed at an average of more than 1 plant/20,000 plants.

Maximum Impurity Standards

1. Varietal Purity (on average in 20,000 plants)
   a. Off-types/other varieties of the same species – 1
   b. Plants of species that may cross pollinate (CP in table below) – 1
2. Mechanical Purity (on average in 20,000 plants)
   a. Plants of species with difficult to separate seeds (DTS in table below) – 1

Species	Canola (*B. napus*)	Canola (*B. rapa*)	Mustard Brown/Oriental (*B. juncea*)	Mustard White/Yellow (*S. alba*)	Carinata (*B. carinata*)	Radish (*R. sativus*)
R. sativus	DTS	DTS	DTS	DTS	DTS	n/a

Section 14

I. Crop Specific Standards for Miscellaneous Other Crop Kinds

Asparagus – Certified Production of Hybrid Asparagus

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Hybrid Asparagus.

Classes and Parent Seed Source

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 (e.g. D-97-08) for certification of Nuclear Stock class seed potatoes, and with the requirements of the CSGA recognized Plant Breeder responsible for maintaining the variety.
2. Certification of Hybrid Asparagus is limited to Certified status crops.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Certified	In the previous year produced: • a crop of Asparagus

(1) The land must also be free of volunteer Asparagus plants at the time of planting.

Crop Inspection

Hybrid Asparagus crops must be inspected at least once during the mid-bloom stage.

Crop Standards

Isolation

(1) 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).

(2) 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:
   a. 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).
   b. Each enclosure may not contain plants of more than one pollen bearing (male) parent line.

(3) The required isolation must be provided prior to flowering and crop inspection.

Maximum Impurity Standards

1. During flowering or pollination, the maximum number of plants of off-types/other varieties or volunteers permitted is ten (10) plants in approximately 10,000 plants in both male and female plants of the inspected crop.
2. 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.
3. Impurities in pedigreed crops should be removed prior to crop inspection.

Specific Requirements

1. CSGA may require submission of a seed sample for varietal verification testing.

Camelina – Foundation, Registered and Certified Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Camelina.

Classes and Generations

Breeder: no generation limit.

Select: five generations.

Foundation: one generation.

Registered: one generation.

Certified: one generation.

For those growers who are not accredited Plot Growers and who plant crops with Breeder or Select seed, CSGA reserves the right to determine the status of the crop and may issue a Registered or Certified crop certificate.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Foundation, Registered & Certified	In the previous year produced: • a non-pedigreed crop of Camelina or a different variety of Camelina. • a crop of Canola, Carinata, Mustard, Radish or Rapeseed.

(1) The status granted to crops of Camelina is determined by the previous crop.
   a. Land requirements prevent production of 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.

Crop Inspection

Camelina crops must be inspected during the bloom stage but not before at least 50% of the plants are showing one or more blossoms.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Camelina of same variety	1 meters (3 feet)
b. Different varieties of Camelina or non-pedigreed Camelina	3 meters (10 feet)
2. Mechanical Purity	**Distance**
a. Canary seed, Canola, Carinata, Flax, Mustard, Radish, Rapeseed	3 meters (10 feet)

Weeds

1. Prickly Lettuce (*Lactuca serriola*), Stinkweed (*Thlaspi arvensis*) and Shepherds Purse (*Capsella bursa-pastoris*) plants can produce seeds that are difficult to separate from Camelina and seed crops with excessive numbers of these weeds may be declined pedigreed status.

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Foundation – 2
   b. Registered – 5
   c. Certified – 10

Camelina – Select Plot Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Camelina.

Classes and Generations

Breeder: no generation limit.

Select: five generations.

Foundation: one generation.

Registered: one generation.

Certified: one generation.

For those growers who are not accredited Plot Growers and who plant crops with Breeder or Select seed, CSGA reserves the right to determine the status of the crop and may issue a Registered or Certified crop certificate.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Select	In the previous year produced: • a crop of Camelina, Canola, Carinata, Mustard, Radish or Rapeseed.

(1) The status granted to crops of Camelina is determined by the previous crop.
   (a) Land requirements prevent production of higher pedigreed status crop (of the same variety) than the pedigreed status of the crop produced on that land the previous year.

Crop Inspection

Camelina plots must be inspected during the bloom stage but not before at least 50% of the plants are showing one or more blossoms.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Camelina of same variety	3 meters (10 feet)
b. Different varieties of Camelina or non-pedigreed Camelina	10 meters (33 feet)

c.	Inspected pedigreed Camelina of same variety contaminated with off-types or other varieties of Camelina	10 meters (33 feet)

2. Mechanical Purity		Distance
a.	Canary seed, Canola, Carinata, Flax, Mustard, Radish, Rapeseed	3 meters (10 feet)

Weeds

1. Prickly Lettuce (*Lactuca serriola*), Stinkweed (*Thlaspi arvensis*) and Shepherds Purse (*Capsella bursa-pastoris*) plants can produce seeds that are difficult to separate from Camelina and seed crops with excessive numbers of these weeds may be declined pedigreed status.

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 20,000 plants)
   a. Select – 1

Quinoa – Foundation, Registered and Certified Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Quinoa.

Classes and Generations

Breeder: no generation limit.

Select: five generations.

Foundation: one generation.

Registered: one generation.

Certified: one generation.

For those growers who are not accredited Plot Growers and who plant crops with Breeder or Select seed, CSGA reserves the right to determine the status of the crop and may issue a Registered or Certified crop certificate.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Foundation, Registered & Certified	In the previous year produced: • a non-pedigreed crop of Quinoa or a different variety of Quinoa.

(1) The status granted to crops of Quinoa is determined by the previous crop.
   a. Land requirements prevent production of 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.

Crop Inspection

Quinoa crops must be inspected at least once during the bloom stage but not before at least 50% of the plants are showing one or more blossoms.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Quinoa of same variety	1 meters (3 feet)
b. Different varieties of Quinoa or non-pedigreed Quinoa	100 meters (328 feet) for Certified 100 meters (328 feet) for Registered 200 meters (656 feet) for Foundation

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Foundation – 10
   b. Registered – 15
   c. Certified – 20

Quinoa – Select Plot Production

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. The basic standards for all plots are set out in General Requirements for Plot Production. In addition, the following standards apply to Quinoa.

Classes and Generations

Breeder: no generation limit.

Select: five generations.

Foundation: one generation.

Registered: one generation.

Certified: one generation.

For those growers who are not accredited Plot Growers and who plant crops with Breeder or Select seed, CSGA reserves the right to determine the status of the crop and may issue a Registered or Certified crop certificate.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Select	In the previous year produced: • a non-pedigreed crop of Quinoa or a different variety of Quinoa.

(1) The status granted to crops of Quinoa is determined by the previous crop.
   a. Land requirements prevent production of higher pedigreed status crop (of the same variety) than the pedigreed status of the crop produced on that land the previous year.

Crop Inspection

Quinoa plots must be inspected at least once during the bloom stage but not before at least 50% of the plants are showing one or more blossoms.

Crop Standards

Isolation

Minimum Isolation Distances Required from an Inspected Crop to Other Crops:

1. Varietal Purity	Distance
a. Inspected pedigreed Quinoa of same variety	3 meters (10 feet)
b. Different varieties of Quinoa or non-pedigreed Quinoa	200 meters (656 feet)

c.	Inspected pedigreed Quinoa of same variety contaminated with off-types or other varieties of Quinoa	200 meters (656 feet)

Maximum Impurity Standards

1. Varietal Purity (off-types/other varieties on average in 10,000 plants)
   a. Foundation – 10
   b. Registered – 15
   c. Certified – 20

Tobacco – Breeder and Certified Production

Type includes Burley, Dark and Flue-cured

General Requirements for All Pedigreed Seed Crops

The basic standards for all crops are set out in General Requirements for All Pedigreed Seed Crops. In addition, the following standards apply to Tobacco.

Classes and Generations

Breeder: under the control of the Breeder.

Certified: the progeny of Breeder; one generation.

Propagation Requirements

A new greenhouse plant bed must be used each year unless the plant bed is effectively treated with a soil sterilant prior to seeding.

Land Requirements

Inspected Crop	Must NOT be grown on land which:
Breeder **Certified**	In the previous year produced: • a crop of Tobacco. • a crop of Industrial Hemp.

Crop Inspection

Seed pods picked or seed heads harvested prior to inspection are not eligible for certification. Tobacco crops must be inspected after the crop is in the flower bud stage.

Crop Standards

Isolation

1. Isolation between self-pollinated varieties of different types of Tobacco must be at least 400 m (1312 ft.).
2. Isolation between varieties of the same type of Tobacco, must be provided as prescribed below.

Self-Pollinated Varieties

Fields producing any class of seed must be separated by any one of the following methods:

1. Isolation of at least 45 m (148 ft.).
2. Protected from cross pollination by bagging prior to pollen shedding.
3. Separated by four rows of male-sterile Tobacco not to be used for seed purposes.

4. In fields where two or more self-pollinated varieties of the same type are grown side by side, four rows of each variety, between the two varieties, must be allowed to bloom and set seed, but must not be harvested for seed.

Parents for Producing Hybrids

There are two kinds of parent crop varieties in the production of Hybrid Tobacco seed:

- *a Male Fertile Pollen Producing Male parent variety; and*
- *a Male Sterile Female parent variety.*

Male Fertile Pollen Producing Male Parent varieties must comply with any one of the following isolation requirements:

1. Varieties producing pollen of the same type must be separated by at least 15 m (50 ft.).
2. Protected from cross pollination by bagging.
3. Separated by four rows of male-sterile Tobacco not to be used for seed purposes.
4. In fields where two or more self-pollinated varieties of the same type are grown side by side, four rows of each variety, between the two varieties, must be allowed to bloom and set seed, but must not be harvested for seed.
5. In fields where two or more self-pollinated varieties of the same type are grown side by side, no separation is required if closed flower removal for the purpose of pollen collection is strictly adhered to. Seed may not be harvested from these plants.

Male Sterile Female Parent varieties must comply with the following isolation requirements:

1. Varieties of the same type must be isolated from pollen producing plants by at least 45 m (148 ft.) except plants of the male fertile parent variety used to pollinate the male sterile female parent variety of that hybrid.
2. Male sterile crops of the same type do not require isolation from each other.
3. Different types of male sterile varieties must be separated by at least 200 m (656 ft.).
4. Male sterile varieties and pollinators of different types must be separated by at least 400 m (1312 ft.).

Maximum Impurity Standards

1. Impurities in pedigreed crops shall be removed prior to crop inspection. The Maximum Impurity Standard for other varieties and off-types is 0.

Special Requirements

1. Diseases: Plants affected by Tobacco Ringspot Virus must be destroyed. Plants affected with Tobacco Mosaic Virus must be destroyed or identified and isolated.