# Appendix 1

# Seed Field Production Standards 2014

## Ministry for Primary Industries
## Seed Varietal & Phytosanitary Certification Programme

Ministry for Primary Industries
Manatū Ahu Matua

# AMENDMENT RECORD and IMPLEMENTATION SCHEDULE

Amendments to Appendix 1 are produced by AsureQuality Limited on behalf of the Ministry for Primary Industries (MPI), Plant Exports and New Zealand Seed Quality Management Authority will be given a consecutive number and will be dated.

Please ensure that all amendments are inserted, obsolete pages removed, and the record below is completed.

| Amendment No: | Date: | Specification: | Implementation Date: |
|---|---|---|---|
| **1** | 24/5/10 | 2010- 2011 Update | 24/5/10 |
| **2** | 25/05/12 | 2012 Update | 25/05/2012 |
| **3** | 12/03/14 | 2014 Update | 12/03/14 |
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| **6** | | | |
| **7** | | | |
| **8** | | | |
| **9** | | | |
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# Seed Field Production Standards
# 2014

## 1.0 SEED CERTIFICATION – GENERAL INTRODUCTION

Seed certification operates to ensure that varieties of important agricultural plant species maintain their identity through successive generations of multiplication for the ultimate benefit of end users.

An effective seed industry needs:

- Plant breeders to produce suitable varieties for the differing requirements in various parts of the country.
- An authority to supervise the multiplication of the seed produced by the breeder.
- Skilled and efficient farmers to grow the seed.
- Modern cleaning plants capable of removing impurities from the seed harvested.
- An efficient seed trade to expedite the flow of seed from producer to consumer both in New Zealand and to other countries.
- A means of ensuring that contaminated seed does not spread undesirable weeds through the country.
- Plant quarantine regulations, which can effectively prevent the entry of diseases, insects and undesirable species.
- A prompt and accurate seed testing service.

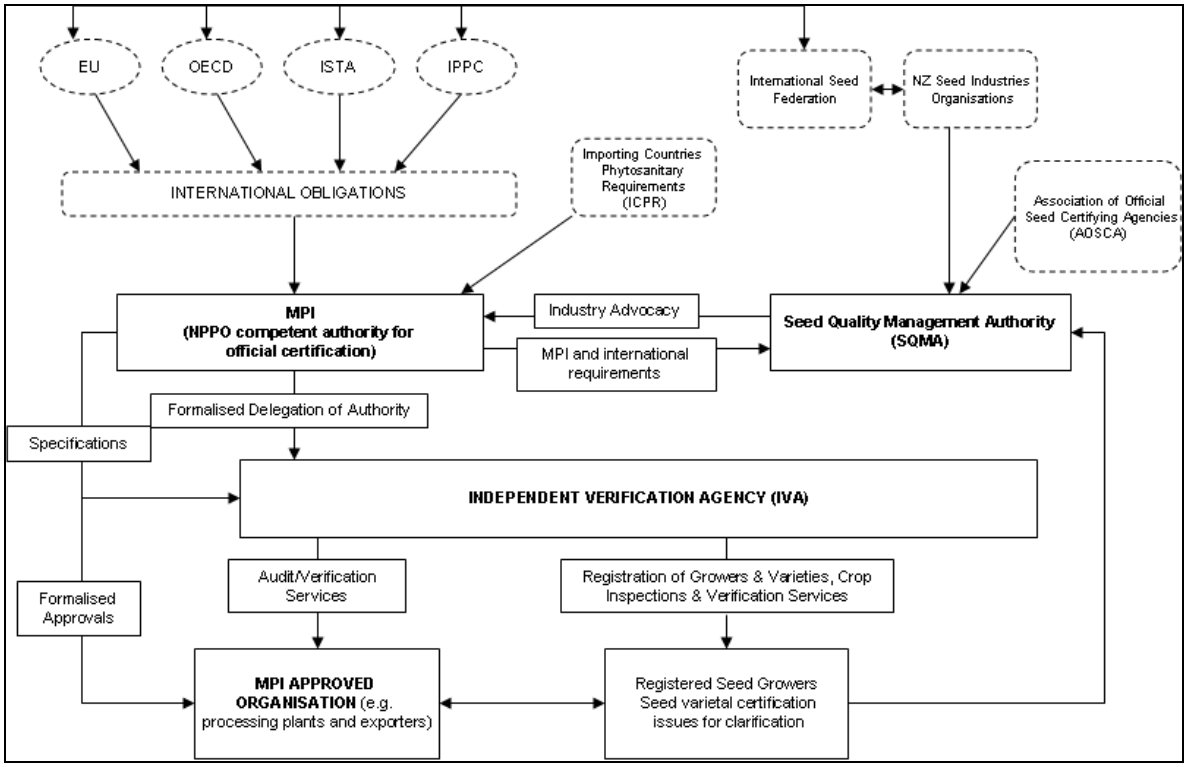
The New Zealand Seed Certification Scheme operates on a voluntary basis. There are no parliamentary acts or regulations governing its operation.

The scheme aims at providing the consumer with seed of high varietal purity but gives no guarantee of this other than to certify that an acceptable procedure has been followed to attain this goal. It gives no warranty as to the germination of the seed but requires a minimum standard of physical purity. Strict rules and standards must be observed during the production and processing of certified seed and these are amended from time to time to conform with domestic, international (OECD) and AOSCA requirements.

Satisfactory arrangements must be made for the maintenance of varieties at the pre-basic stages of multiplication. The maintainer of the variety, usually the breeder or an agent, is responsible for ensuring that multiplication of Breeders/Pre-Basic seed is carried out in a satisfactory manner so that only authentic, uncontaminated seed of the variety is released for further multiplication under the seed certification scheme. AsureQuality staff must have access to records of maintenance of all varieties in the certification scheme.

**The following diagram details the structure of the seed industries operating within the Seed Certification schemes in New Zealand.**

**Structure of Seed Industry for Official Certification**




## 1.1 Register of Varieties Eligible for Certification

With the exception of those solely for multiplication and re-export, varieties accepted will be placed on the "New Zealand National List of Varieties Eligible for Certification". The list can be found at:
http://www.biosecurity.govt.nz/files/regs/stds/seed-varieties-eligible-cert-nz.pdf

Refer to section 1.7 (page 11) for variety registration conditions. Enquiries concerning the List should be directed to:

Seed Certification Bureau
AsureQuality Limited
PO Box 609
Palmerston North 4440

When a variety is no longer being maintained, it will be removed from the list.

## 1.2 CLASSES AND SOURCES OF CERTIFIED SEED

There are four main classes in certification, viz. Breeders/Pre-Basic, Basic, Certified 1st Generation and Certified 2nd Generation seed.

**Breeders Seed (Pre-Basic):** Produced from nucleus material grown by the plant breeder.

**Basic Seed:** Produced from areas sown with Breeders seed. It is produced by selected growers under the supervision of the breeder or his agent.

**Certified Seed 1st Generation:** Produced from areas sown with Basic seed and is traded freely both in New Zealand and overseas.

**Certified Seed 2nd Generation:** Produce from areas sown with certified seed 1st Generation and applies to certain arable crops only. (See under standards for varieties).

## 1.3 CERTIFICATION REQUIREMENTS

### *1.3.1 MPI Approved Organisation System:*

*Any merchant, exporter and seed cleaning operator involved in seed certification must have a MPI approved organisation system detailing their operating procedures. Please contact the Seed Certification Bureau (SCB) for details.*

### *1.3.2 Variety Registration:*

A seed variety must be registered with the SCB for it to be eligible for certification. A Growers Application will not be accepted if the variety has not been listed. The procedure for variety registration is described on page 11. Registration forms can be downloaded from http://www.seedlab.co.nz

### *1.3.3 Grower Registration:*

A Grower must be registered with the SCB to be eligible to grow certified seed. A Growers Application will not be accepted if the Grower is not registered. Please contact the SCB for registration details.

### *1.3.4 Application for Certification:*

These must be on the form specified for the purpose and signed by the Grower or Growers agent. Applications received after the closing date set for that species incur a late entry fee and are accepted only if it is convenient for AsureQuality Limited to perform the work involved. Closing dates are on pages 14 to 16. Application forms can be downloaded from http://www.seedlab.co.nz

### *1.3.5 Proprietary Varieties:*

Applications for certification of proprietary varieties cannot be accepted from growers who do not hold a contract or agreement with the owner of the variety. The SCB will act on information supplied by the variety owner or their agent to ensure this provision is met. Varieties bred in the past as public or common varieties, even those managed by an agent, are not subject to this requirement. Such varieties are generally not protected by Plant Variety Rights.

### *1.3.6 Origin of Seed Sown:*

To establish the origin of the seed sown, documentary evidence in the form of labels must accompany each new application for certification.

### *1.3.7 Crop Site Requirements:*

Growers entering areas for certification must ensure that every effort is made to prevent contamination of the resultant crop. The main sources of contamination are from:

- Inadequately cleaned sowing and harvesting equipment.
- Buried seed of other varieties / species.
- Threshed straw or hay of a different variety previously fed out on the area.

Certification of the area may be refused if, at field inspection, the crop is too weedy, is badly lodged or is insufficiently developed to enable a satisfactory inspection to be made. Note special conditions under Lotus (3.21), Red Clover (3.9), White Clover (3.11) and Strawberry Clover (3.10).

Certification takes into account the following criteria:

- *Origin of the seed:* The seed must be of an origin that makes it eligible for certification.
- *Paddock history:* Certain minimum time intervals must be observed between seed crops of different species and different varieties / classes of the same species. Previous cropping history requirements are set out under the species concerned from section 3.0. Note special conditions under Lotus (3.21), Red Clover (3.9), White Clover (3.11) and Strawberry Clover (3.10).

**Note:** Successive crops of the same variety and certification class may be sown in the same area without any time interval EXCEPT that successive crops of Peas and Beans may not be grown. **A harvest season is the period during which an area would normally be expected to produce a seed crop.** An area not harvested in any particular season, will for degrading purposes be considered to have passed through that season.

**Crop means any crop grown for seed, fodder or any other purpose. Any seed sown which fails to establish is counted as a crop.**

### *1.3.8 Isolation (Herbage species):*

Minimum isolation distances must be observed between cross-pollinating species.

| **Grasses and Herbage Legumes** | **For areas 2ha or less** | **For areas larger than 2ha** |
|---|---|---|
| To produce Breeders and Basic Seed | 200m | 100m |
| To produce 1st Generation Seed | 100m | 50m |
| | | |
| **Cruciferous Kinds** (except kale) | **For all areas** | |
| To produce Basic Seed | 400m | |
| To produce 1st Generation Seed | 200m | |
| | | |
| **Kale** | **For all areas** | |

| | | |
|---|---|---|
| To produce Basic Seed | 700m | |
| To produce 1st Generation Seed | 400m | |

**Note:** More detailed isolation requirements are included under individual species from section 3.0.

### *1.3.9 Freedom from specific diseases and weeds*

Nodding Thistle (*Carduus nutans*)
Yellow Gromwell (*Amsinckia calycina*)
Any area or seed lot found to contain nodding thistle or yellow gromwell will be rejected from certification (see Note below).

Wild Oat (*Avena fatua, A. sterilis* spp. *ludoviciana*)
Any Cereal, Tetraploid Ryegrass and Brome grass found to contain Wild Oat at field inspection will be rejected from certification.
All other herbage species **EXCEPT** White and Red Clover, Lotus, Lucerne, Browntop, Timothy and Crested Dogstail sown to produce either Breeders or Basic Seed will be downgraded to 1st generation, if wild oats are found at field inspection.
Any seed lot will be rejected if wild oat is found at laboratory examination.

Before rejecting or downgrading because of Nodding Thistle, Yellow Gromwell or Wild Oats at field inspection the grower may be given the opportunity to rogue the area.

**Note:** Any seed lot containing Nodding Thistle, Yellow Gromwell or Wild Oat and rejected from certification at laboratory examination may be redressed and if it is then found to be free of contamination may be passed as certified in its original class.

### *1.3.10 Inspections:*

All Cereals, Chicory, Caucasian / Strawberry / White Clovers (unless change of variety), Grasses, Linseed, Lucerne, Maize (open pollinated) and Plantain, are inspected at least once during the growing season.

All Brassica, Hybrid Clover, Red Clover and Pea, are inspected at least twice during the growing season.

All Change of Variety Strawberry Clover, White Clover and Hybrid Maize, are inspected at least three times during the growing season.

If it is considered that an area can be rogued satisfactorily the grower may be given this opportunity, which may require a further inspection.

### *1.3.11 Identification of Seed after Harvest:*

All certified seed must be identified before leaving the paddock from which it was harvested. The SCB will issue a Growers Harvest Declaration and Field Dressed Seed Labels to the grower. The grower must use these labels to identify the seed at harvest. Before such seed is accepted for processing at the cleaning plant, the grower must supply the completed Growers Harvest Declaration form to the cleaning plant or the SCB. Unused labels must be destroyed.

### *1.3.12 Bulk Storage of Seed:*

Bulk storage of certified seed either on the farm or in the merchant's store is permitted, provided the seed is identified to the satisfaction of AsureQuality Limited.

### *1.3.13 Seed Cleaning:*

Cleaning of certified seed must be carried out by MPI approved seed cleaning organisations. Please contact the SCB for details.

### *1.3.14 Sampling for Analysis:*

After cleaning, all certified seed must be sampled by a licensed sampling officer according to the rules of the International Seed Testing Association (ISTA). The AsureQuality SCB runs a seed sampling training course which must be successfully completed before prospective samplers are issued with a sampling license number. Samples are submitted for laboratory testing to obtain a certificate of analysis. Seed testing procedures are set in accordance with the rules of ISTA. Seed must meet purity standards appropriate to the kind and class of seed. Seed failing to meet the required standards is either downgraded or rejected, but may be re-cleaned and provided the requirements are met, can be re-certified in the class in which it originally passed field inspection. Germination standards are not applied. Seed is not finally certified until an analysis certificate issued by the National Seed Laboratory, Palmerston North, has been completed indicating that the standards for the appropriate class have been met.

***(Purity of the resultant crop:*** as determined by the laboratory examination of an officially drawn sample).

### *1.3.15 Labelling and Sealing:*

All certified seed must be labelled and sealed before sale. Labels show the species, variety, official reference number, region of production number and paddock identification where the seed was grown, label processing date and container weight. These details, together with purity and germination results are also reported on seed analysis certificates for every seed lot that is finally certified.

| **Label Type** | **Label Colour** | | |
|---|---|---|---|
| | **NZ** | **OECD** (all have a black strip along one side) | **AOSCA** |
| Breeders (Pre-Basic - OECD) (Experimental – AOSCA) | Buff | White with Purple Diagonal Stripe | White |
| Basic (Registered – AOSCA) | White | White | Light Purple |
| 1st Generation (Certified – AOSCA) | Blue | Blue | Light Blue |
| 2nd Generation | Red | Red | |

1.3.16 Post Harvest Control:

As a further check on the efficient working of the seed certification scheme, samples from lots of seed that have been finally certified are tested for varietal purity (trueness to type). The main test used involves comparison of a seed lot sample against the standard variety sample growing in field plots. Laboratory methods appropriate for the particular species (eg root exudate UV fluorescence in perennial ryegrass, electrophoresis of seed proteins and chromosome counts in red clover) are also used.

## 1.4 OECD:

New Zealand participates in the Organization for Economic Co-operation and Development (OECD) Herbage and Oil Seed, Cereal Seed, Maize and Beet Seed Certification Schemes. The Ministry for Primary Industries is the Designated Authority for New Zealand.

## 1.5 ISTA:

The rules of the International Seed Testing Association are used for the seed testing component of seed varietal certification in New Zealand. The contracted seed laboratory for seed varietal certification must be ISTA accredited. The Ministry for Primary Industries is the Designated Authority for New Zealand.

## 1.6 AOSCA:

New Zealand is a member of the Association of Official Seed Certifying Agencies, the principal members of which are the United States and Canada. Varieties to be certified must meet the minimum standards of AOSCA and can either be listed as eligible for certification in New Zealand, or imported and produced solely for multiplication and re-export. The Seed Quality Management Authority is the designated member for AOSCA. Further information on the AOSCA Scheme is available from the Seed Certification Bureau.

## 1.7 VARIETY REGISTRATION CONDITIONS

**(for the Acceptance of Agricultural Varieties (Arable And Herbage) into the New Zealand Seed Certification Scheme):**

All applications are to be made on the form "Application for Acceptance of Cultivars into the New Zealand Seed Certification Scheme" available from the SCB and sent to:

Seed Certification Bureau
AsureQuality Limited
PO Box 609
Palmerston North 4440

The following information is required:

a) **Names**

Name of variety
Common name of species
Botanical name of species
Name and address of breeder
Name and address of breeder's agent (if applicable).

b) **Origin**
Give details of origin and breeding history of variety.

c) **Uniformity and Stability**
Evidence must be provided of the uniformity and stability of the variety having regard to the species concerned and the breeding systems used. An acceptable way of providing this evidence would be to indicate the period over which the generations of seed multiplication have been observed as being uniform and stable. If off-types have been observed, state their frequency and supply a description of them.

d) **Morphological Description**
A morphological description of the variety is required. Comparative information with other varieties of the same species currently in use should be included. The description of characters must agree with those given in respect of any Plant Variety Rights application and be in English.

e) **Agronomic Value**
There are no standards for agronomic value but applicants are required to indicate the anticipated use or place in New Zealand agriculture.

f) **Variety Maintenance (for varieties maintained in NZ)**
Describe the system followed for the production of Pre-Basic seed. The system must ensure the authenticity of the seed and may be subject to audit from time to time.

g) **Field and Laboratory Standards**
Indicate whether any special standards are required. Standards for field inspection and laboratory analysis of certified seed lots normally apply to all varieties of a particular species. However, some special variety characteristics (eg ultra-violet light fluorescence, seed weight) may justify the application of special standards or tolerances.

h) **Overseas Varieties**

- **Varieties for listing and further marketing in New Zealand.**

An authority from the overseas breeder giving permission for the variety to be listed in New Zealand must be obtained. Also required is a statement as to how the variety is to be maintained in New Zealand (e.g. Importation of Basic or Pre Basic Seed), the classes to be produced and the number of harvest seasons allowed.

1. The overseas description (in English) of the variety must accompany the application. A further description of the variety based on New Zealand conditions may be required after the first growing season.

2. A standard sample must be supplied (see point i below).

- **Varieties solely for multiplication and re-export.**

Entries for varieties in this category will be accepted for certification provided the following requirements are met:

1. An authority from the overseas breeder to multiply the variety in New Zealand must be supplied giving specific instructions as to the class of seed to be produced and the number of harvest seasons allowed.

2. A morphological description (in English) of the variety must accompany the application.

3. If the variety is to be certified under the OECD Scheme a letter from the designated authority in the country of origin agreeing to the multiplication may need to be provided to MPI, Plant Exports, P O Box 2526, Wellington, New Zealand.

4. Seed containers must be identified by official labels issued by the certifying authority in the country or state of origin.

**Note:** All information for both categories above must be lodged with the Seed Certification Bureau by the closing date for certification of the species concerned.

i) **Standard Samples**

A sample of seed of the variety, known as the standard reference sample must be supplied and will be held by AsureQuality Limited, Lincoln. Each year a portion of each sample will be used as a comparison against commercial certified seed lots of the variety in official plot tests. The standard sample should comprise seed of Breeders/Pre-Basic class.

Size and quality of samples

| **Species** | **Minimum size of standard sample (grams)** | **Minimum germination when supplied%** |
|---|---|---|
| Beet | 200 | |
| Brassicas | 200 | 90 |
| Brome | 500 | 90 |
| Cereals | 500 | 95 |
| Clover & Lucerne | 200 | 90 (includes hard seed) |
| Cocksfoot | 200 | 85 |
| Fescue | 500 | 90 |
| Festulolium | 500 | 90 |
| Linseed | 200 | 90 |
| Peas | 500 | 95 |
| Ryegrass | 1,000 | 90 |
| Other Grasses | 200 | 90 |

## 1.8 DATE STAMPING OF PUBLIC VARIETIES (maintained by AgResearch Grasslandz):

At the request of AgResearch Grasslandz the following information is included for growers of public varieties:
"Non-proprietary AgResearch varieties of Basic class are eligible for entry into the NZ Seed Certification Scheme **only if sown within 3 harvest seasons of the date on the certification label.** This arrangement commenced with labels dated 1 January 1994. If lines of Basic Seed are blended from different years of harvest, the oldest seed line in the blend determines the date on the label"

| | | |
|---|---|---|
| Grasslands Huia | Grasslands Kahu | |
| Grasslands Moata | Grasslands Nui | |
| | Grasslands Ruanui | Grasslands Tama |
| | Grasslands Wairau | |

## 1.9 APPLICATION FORMS AVAILABLE TO DOWNLOAD FROM THE WEB:

The following application forms can be downloaded from the AsureQuality web site:

1. Application for Acceptance of Cultivars into the New Zealand Seed Certification Scheme
2. Application For Certification Of Overseas Cultivars For Multiplication And Re-Export
3. Grower Application
4. Machine Dress Label / Seed Test Application

The web address is:
http://www.seedlab.co.nz

## 2.0 CLOSING DATES: OVERSEAS VARIETIES FOR MULTIPLICATION AND RE-EXPORT

Overseas varieties of species for which there is a set closing date should, where possible, be entered by that date, otherwise within 14 days of sowing. For other species where there is no set closing date the crop must be entered within 14 days of sowing. Agents should ensure that all necessary information concerning the variety has been lodged with the Seed Certification Bureau prior to entry to avoid having the entry returned to the grower as being not eligible for certification in New Zealand.

WHITE CLOVER - STRAWBERRY CLOVER - In the case of a change of variety, applications for certification must be submitted by the first Monday in May. Subsequent entries for the same area will be accepted at the normal time.

Note: Where a public holiday falls on the Monday specified, the closing date is extended one day to the Tuesday immediately following.

Late entries may incur a late fee and will be accepted only if convenient to AsureQuality Limited.

**Closing Dates for Applications: NOTE CHANGES EFFECTIVE JANUARY 2014**
These are advertised in local newspapers prior to the closing date for each species.

| Month | Date | Species |
|---|---|---|
| **March** | **First Monday** | Kale<br>Beet (for Spring sown crops) |
| **June** | **First Monday** | Rape<br>Swede<br>Turnip<br>Fodder radish (Autumn sown crops)<br>Beet (for Autumn sown crops)<br>White clover (Change of variety see over)<br>Strawberry clover (Change of variety see over)<br>Red Clover (Autumn sown crops, Change of variety) |
| **July** | **First Monday** | Cocksfoot<br>Red Clover (Autumn sown)<br>Serradella<br>Pea (Sown prior to 1 July) |
| **September** | **First Monday** | Browntop<br>Chicory<br>Caucasian Clover<br>Dorycnium<br>Dogstail<br>Fescue<br>Grazing Brome<br>Lentil<br>Lotus<br>Lupins<br>Phalaris<br>Plantain<br>Prairie Grass<br>Ryegrass<br>Strawberry Clover<br>Timothy<br>Upland Brome<br>White Clover* (see page over)<br>Yorkshire Fog |
| **November** | **First Monday** | Barley<br>Bean<br>Fodder radish (Spring sown )<br>Linseed<br>Lucerne<br>Pea (Sown after 1 July)<br>Oat<br>Red Clover (Spring sown)<br>Ryecorn<br>Triticale<br>Wheat |

**Any sowing after the nominated closing date will need to be entered for certification within 14 calendar days to register for field inspections.**

*****White Clover/Strawberry Clover – If sowing is a change of cultivar in nucleus, breeders or basic class, the application for certification MUST be made by the first Monday in May.

Where a public holiday falls on a Monday specified, the closing date is extended one day to the Tuesday immediately following.

Overseas cultivars of species for which there is a set closing date should, where possible, be entered by that date, otherwise within 14dyas of sowing. For other species where there is no set closing date the crop must be entered within 14 days of sowing.

## 3.0 SEED SPECIES FIELD AND LABORATORY STANDARDS – 2012

### 3.1 Barley (*Hordeum vulgare* L.)

***Previous Cropping History***
**NZ Domestic Scheme:** An area must not have grown any other cereal in the previous harvest season but successive crops of the same variety and certification class may be grown on the same area without any time interval, provided that satisfactory varietal purity is maintained.
**NB.** Any crop grown under the NZ Domestic scheme rule will **not** be eligible for OECD certification.

**OECD Scheme:** An area must not have grown any other cereal in the previous **two** harvest seasons but successive crops of the same variety and certification class may be grown on the same area without any time interval, provided that satisfactory varietal purity is maintained.

***Closing Date for Applications***
Applications for certification must be submitted by the First Monday of November.

***Field Inspection***
Areas are to be inspected once, when in full ear.

***Contamination and Isolation requirements***

| Class of seed produced | Contaminants (Any other variety, any other cereal, Loose smut) | Isolation requirements |
|---|---|---|
| Basic | None | Only a space sufficient to prevent mixture during harvest is required. |
| 1st Generation | 1 per 10 quadrats | |
| 2nd Generation | 1 per quadrat | |

**Note**: Any crop found to contain wild oat, nodding thistle or yellow gromwell at field inspection will be rejected from certification.

***Purity Standards***

| | Basic Seed | 1st Generation | 2nd Generation |
|---|---|---|---|
| Minimum pure seed | 98.0% | 98.0% | 98.0% |
| Maximum other cereal | 0.1% | 0.1% | 0.3% |

**3.2 Bean** (*Phaseolus vulgaris* L.)

***Previous Cropping History***
Areas must not have grown any crop of beans during the previous two harvest seasons.

***Closing Date for Applications***
Application for certification must be submitted by the First Monday of November.

***Field Inspection***
Areas will be inspected twice -

1) First inspection at flowering stage.
2) Second inspection at green pod stage.

***Contamination and Isolation Requirements***

| Class of seed produced | Contaminants (Any other variety, including off-types Lupins, Peas) | *Isolation requirements |
|---|---|---|
| Basic | None | 100m |
| 1st Generation | 1 per 10 quadrats | 100m |
| 2nd Generation | 1 per quadrat | 100m |

* From any other crop of a different bean variety.

Note: Any crop infected with Halo Blight or Common Blight will be rejected.

***Purity Standards***

| | Basic Seed | 1st Generation | 2nd Generation |
|---|---|---|---|
| Minimum pure seed | 98.0% | 98.0% | 98.0% |
| Maximum other Bean Varieties | 0.1% | 0.1% | 0.3% |

Note: In addition to the normal M.D. Sample a 1.5kg sample is to be sent to National Seed Laboratory Palmerston North for Blight testing. The sample should be enclosed in a plastic bag to prevent contamination from other samples.

**3.3 Beet** - Sugar Beet, Fodder Beet and Mangels (*Beta vulgaris* L.)

The following requirements cover the certification of Sugar Beet, Fodder Beet and Mangels in New Zealand:

***Areas Eligible***
Areas sown with Pre-Basic and Basic monogerm, precision, or natural seed of varieties certified in the country of origin.

***Cropping History***
The minimum previous cropping requirements are:

- No beet seed crop in previous five years.
- No beet crop in previous two years.
- A crop, which failed to establish after sowing, must be counted.
- Only one variety may be grown on any one farm in the same season.

***Closing Dates***
For Spring sown crops - 1st Monday in March
For Autumn sown crops - 1st Monday in June

***Field Inspections***
All areas must be inspected twice. First inspection when plants are in the early leaf stage. Second inspection is at flowering stage.

***Isolation Requirements***
The following minimum distances from any other beet seed crops are normally required and must be maintained throughout the flowering period of the crop.

| a) **Sugar Beet** | **Basic Seed** | **Certified Seed** |
|---|---|---|
| Monogerm varieties of Sugar Beet from other varieties of Sugar Beet | 1000m | 600m |
| Varieties of Sugar Beet other than monogerms from other varieties of Sugar Beet | 600m | 300m |
| Sugar Beet from Fodder Beet and other sub-species of *Beta vulgaris* | 1000m | 1000m |

| b) **Fodder Beet and Mangel** | **Basic Seed** | **Certified Seed** |
|---|---|---|
| Monogerm varieties of Fodder Beet and Mangel from other varieties of Fodder Beet and Mangel | 1000m | 600m |
| Varieties of Fodder Beet and Mangel other than monogerms from other varieties of Fodder Beet and Mangel | 600m | 300m |
| Fodder Beet and Mangel from Sugar Beet and other sub-species of *Beta vulgaris* | 1000m | 1000m |

The above distances also apply to isolation from plants or fields of beet grown for root production and flowering at the same time as the plants in the seed production fields.

The distances can be disregarded if there is sufficient protection from any undesirable foreign pollination. All sub-species of *Beta vulgaris* will cross-fertilise, viz: Sugar Beet, Fodder Beet, Mangels, Red Beet, Wild (Sea) Beet, Spinach Beet, Seakale Beet or Swiss Chard (Silver Beet).

Contaminants
Any other variety of the same sub-species or other sub-species of *Beta vulgaris*.

Crop condition - The cultural condition of the field and the stage of development of the crops as well as that of health and contamination by weeds, must be such that an adequate inspection can be carried out.

***Purity Standards***

| | **All Classes** |
|---|---|
| Minimum pure seed | 97.0% |
| Other seed | 0.3% |

***Special Conditions for Monogerm Seed and Precision Seed.***
Monogerm Seed: At least 90% of the germinated clusters shall give single seedlings and no more than 5% shall give three or more seedlings.

Precision Seed:

| | |
|---|---|
| a) Sugar Beet: | At least 70% of the germinated clusters shall give single seedlings and no more than 5% shall give three or more seedlings. |
| b) Fodder Beet (including Mangel) | In seed of varieties with more than85%diploids, at least 58% of the germinated clusters shall give single seedlings. In other seed, at least 63% of the germinated. clusters shall give single seedlings. In both, no more than 5% shall give three or more seedlings |

***Labelling***
Labels will give the following information:

Kind
Variety
Reference No.
Date of Sealing
Region of Production
For Monogerm seed - Overstamped ‘Monogerm’
For Precision seed - Overstamped ‘Precision’
Net Weight

**3.4 Brome Grass** (*Bromus* species)

**Prairie grass** (*Bromus willdenowii* Kunth)
**Grazing brome (***Bromus stamineus* Desv.)
**Upland brome** (*Bromus sitchensis* Trin.)

***Previous Cropping History***
An area must not have grown any other Brome grass during the previous two harvest seasons but successive crops of the same variety and certification class may be grown on the same area without any time interval.

***Closing Date for Applications***
Applications for certification must be submitted by the first Monday of September.

***Field Inspections***
Areas are to be inspected once, at flowering

***Contamination and Isolation Requirements***

| Class of seed produced | Contaminants (Any other Brome Grass including off-types. *Smut) | Isolation requirements |
|---|---|---|
| Breeders | None | Must be isolated from any other crop of a different Bromus variety by 20 metres |
| Basic | None | |
| 1st Generation | 1 per quadrat | |

***Head Smut**: A minimum of 20 quadrats must be examined and the following standards apply:

| | | |
|---|---|---|
| Areas to produce | Breeders and Basic | No smutted plants in 20 quadrats |
| | 1st Generation | Not more than 1 smutted plant in 20 quadrats |
| | All classes | More than 1 smutted plant - Reject |

***Degrading of Areas***
Areas are eligible to produce -

Breeders for 1 harvest season - then degraded to Basic for 1 harvest season.
Basic for 1 harvest season - then degraded to 1st Generation for 1 harvest season.
1st Generation for 2 harvest seasons.

**Note:** A grower may take a second crop of Grasslands Lakota, Grasslands Matua and Grasslands Hakari in the same harvest season without degrading. If taking a second crop the area must be re-entered and re-inspected.

***Purity Standards***

| | **Basic Seed** | **1st Generation** |
|---|---|---|
| Minimum pure seed | 97.0% | 96.0% |
| Other seed | 0.3% | 0.5% |

**Note:** All seed should be treated with a mixture of Thiram and Benlate to prevent smut infestation, at the rate of 1kg per 100kg of seed.

### 3.5 Browntop (*Agrostis capillaris* L.)

***Previous Cropping History***
An area must not have grown any other Browntop during the previous two harvest seasons, but successive crops of the same variety and certification class may be grown on the same area without any time interval.

***Closing Date for Applications***
Applications for certification must be submitted by the first Monday of September.

***Field Inspection***
Areas are to be inspected once, at flowering

***Contamination and Isolation Requirements***

| Class of seed produced | Contaminants (Any other Browntop including off-types) | Isolation requirements | |
|---|---|---|---|
| | | Less than 2ha | More than 2ha |
| Breeders | None | 200m | 100m |
| Basic | None | 200m | 100m |
| 1st Generation | 1 per quadrat | 100m | 50m |

***Degrading of Areas*** - Areas are eligible to produce -
Breeders for 2 harvest seasons - then degraded to basic for 4 harvest seasons.
Basic for 2 harvest seasons - then degraded to 1st Generation for 4 harvest seasons.
1st Generation for 6 harvest seasons.

**Note:** An area is degraded once only and is not eligible for re-entry into certification at the end of the degraded period.

**Punawai** is a local variety. The following conditions apply:-

- Any crop within the prescribed area is eligible for entry into certification to produce Basic or 1st Generation Seed.
- Any area sown with Basic Seed outside the prescribed area is eligible for certification to produce 1st Generation Seed.
- The prescribed area is defined as: ***That farm area situated at Ashburton Forks in the Ashburton County, Region of Production No. A1602.***

***Purity Standards***

| | Basic Seed | 1st Generation |
|---|---|---|
| Minimum pure seed | 98.0% | 98.0% |
| Other seed | 0.3% | 0.5% |

### 3.6 Chicory (*Cichorium intybus* L.)

***Previous Cropping History***
An area must not have grown any other chicory crop during the previous three harvest seasons, but successive crops of the same variety and certification class may be grown on the same area without any time interval.

***Closing Date for Applications***
Applications for certification must be submitted by the first Monday in September.

***Field Inspections***
Areas are to be inspected once, at flowering.

***Contamination and Isolation Requirements***

| Class of seed produced | Contaminants (Any other chicory including off-types) | Isolation requirements |
|---|---|---|
| Breeders | None | 100m from any other chicory |
| Basic | None | |
| 1st Generation | 1 per quadrat | |

***Degrading of Areas*** - Areas are eligible to produce -

Breeders for 2 harvest seasons then degraded to Basic for 4 harvest seasons.
Basic for 2 harvest seasons then degraded to 1st Generation for 4 harvest seasons.
1st Generation for 6 harvest seasons.

**Note:** An area is degraded once only and is not eligible for re-entry into certification at the end of the degraded period.

***Purity Standards***

| | Basic Seed | 1st Generation |
|---|---|---|
| Minimum pure seed | 98.0% | 95.0% |
| Other seed | 0.2% | 0.5% |

**3.7 Clover, Caucasian** (*Trifolium ambiguum* Bieb)

***Previous Cropping History***
An area must not have grown any other Caucasian Clover during the previous five harvest seasons but successive crops of the same variety and certification class may be grown on the same area without any time interval.

***Closing Date For Applications***
Applications for certification must be submitted by the first Monday in September.

***Field Inspections***
Areas will be inspected once at flowering.

***Contamination and Isolation Requirements***

| **Class of seed produced** | **Contaminants (Any other Caucasian clover including off-types)** | ***Isolation requirements** | |
|---|---|---|---|
| | | **Less than 2ha** | **More than 2 ha** |
| Breeders | None | 200 m | 100 m |
| Basic | None | 200 m | 100 m |
| 1st Generation | 1 per quadrat | 100 m | 50 m |

* Between different varieties of Caucasian clover.

***Degrading of Areas*** - Areas are eligible to produce -

Breeders for 1 harvest season, then degraded to Basic for 3 harvest seasons.
Basic for 2 harvest seasons - then degraded to 1st Generation for 2 harvest seasons.
1st Generation for 4 harvest seasons.

Note: An area is degraded once only and is not eligible for re-entry into certification at the end of the degraded period.

***Purity Standards***

| | **Basic Seed** | **1st Generation Seed** |
|---|---|---|
| Minimum pure seed | 99.0% | 97.0% |
| Other seed | 0.3% | 1.0% |

**3.8 Clover, Hybrid** (*Trifolium repens* L. *x Trifolium ambiguum* Bieb)

***Previous Cropping History***

**If the sowing is a different variety from that previously sown on the area -**
The area must not have grown hybrid clover during the previous FIVE harvest seasons. In addition any hybrid clover, which may establish from buried seed during this period must be eradicated annually by either cultivation or herbicide.

A minimum width between rows of 30 cm is required and it is recommended that areas be drilled up and down the paddock with headlands at each end. If the area is drilled round and round, corners should not be drilled out. This will facilitate roguing and spraying and assist in field inspections.

A grower may elect to undersow a spring crop or alternatively sow in the autumn with a companion grass but provision must be made to allow field inspection of the area to be carried out. Crops must be in a condition suitable for field inspection by August of the year immediately preceding harvest by either spraying and clearing companion crop residues and/or weeds from whole area, or by creating the required number of gaps (see below).

Where a grower elects to create gaps (quadrats) they must be an area of at least 12 square metres, the number required being as follows - 'In crops of 2 ha or less a minimum of 5 gaps is required and for areas larger than 2 ha one gap must be left for each .5 ha with a maximum of 20'. The gaps created should be randomly spaced and marked by a white stick or stake.

Failure to observe any of the above requirements may result in the area being rejected from certification at the first inspection.

**Note:** Paddocks which have been accepted for entry and fail to establish satisfactorily, are withdrawn, or rejected at field inspection and **not** subsequently harvested as uncertified or allowed to pass through a reproductive season may be resown with the same variety and re-entered the following or subsequent seasons but will be subject to change of variety rules as above.

Paddocks failing to meet the standards of variety change field inspection, which are subsequently taken as an uncertified seed crop in that season will **not** be eligible for the growing of any certified hybrid clover crop for a further five years.

**If the sowing is the same variety as that previously sown on the area -**
Successive crops of the same variety and certification class may be sown on the same area without any time interval. If sowing the same variety but of a higher certification class than that previously sown on the area, a time interval of three harvest seasons must be observed.

***Closing Date for Applications***
Applications for certification must be submitted by the First Monday in June.

***Field Inspections***
For first entries of Breeders and Basic sown areas where there has been a change of variety, there will be **2** inspections.

First inspection spring
Second inspection early flowering stage

**Note: Crops withdrawn of rejected**
Paddocks withdrawn or rejected in the first year of variety change will not qualify as change of variety paddocks until a crop of that variety has passed.

A change of variety does not occur until a paddock has had two inspections in the course of one growing season and has passed field inspection.

***Contamination and Isolation Requirements***

| **Class of seed produced** | **Contaminants (Any other red clover including off-types)** | ***Isolation requirements** | |
|---|---|---|---|
| | | **Less than 2ha** | **More than 2ha** |
| Basic | None | 1000m | 1000m |
| 1st Generation | 1 per quadrat | 500m | 500m |

* Between different varieties of Hybrid Clover and White Clover.

***Degrading of Areas***
Hybrid Clover is to be treated like an annual and degrading does not apply. It is eligible for one harvest only under certification and is not eligible for re-entry.

***Purity Standards***

| | **Basic Seed** | **1st Generation** |
|---|---|---|
| Minimum pure seed | 99.0% | 97.0% |
| Other seed | 0.3% | 0.7%* |

*Other than suckling clover

**3.9 Clover, Red** (*Trifolium pratense* L.)

***Previous Cropping History***

**If the sowing is a different variety from that previously sown on the area -**
The area must not have grown red clover during the previous FIVE harvest seasons. In addition any red clover, which may establish from buried seed during this period must be eradicated annually by either cultivation or herbicide.

A minimum width between rows of 30 cm is required and it is recommended that areas be drilled up and down the paddock with headlands at each end. If the area is drilled round and round, corners should not be drilled out. This will facilitate roguing and spraying and assist in field inspections.

A grower may elect to undersow a spring crop or alternatively sow in the autumn with a companion grass but provision must be made to allow field inspection of the area to be carried out. Crops must be in a condition suitable for field inspection by August of the year immediately preceding harvest by either spraying and clearing companion crop residues and/or weeds from whole area, or by creating the required number of gaps (see below).

Where a grower elects to create gaps (quadrats) they must be an area of at least 12 square metres, the number required being as follows - 'In crops of 2 ha or less a minimum of 5 gaps is required and for areas larger than 2 ha one gap must be left for each .5 ha with a maximum of 20'. The gaps created should be randomly spaced and marked by a white stick or stake.

Failure to observe any of the above requirements may result in the area being rejected from certification at the first inspection.

**Note:** Paddocks which have been accepted for entry and fail to establish satisfactorily, are withdrawn, or rejected at field inspection and **not** subsequently harvested as uncertified or allowed to pass through a reproductive season may be resown with the same variety and re-entered the following or subsequent seasons but will be subject to change of variety rules as above.

Paddocks failing to meet the standards of variety change field inspection, which are subsequently taken as an uncertified seed crop in that season will **not** be eligible for the growing of any certified red clover crop for a further five years.

**If the sowing is the same variety as that previously sown on the area -**
Successive crops of the same variety and certification class may be sown on the same area without any time interval. If sowing the same variety but of a higher certification class than that previously sown on the area, a time interval of three harvest seasons must be observed.

***Closing Date for Applications***
For Spring sown crops - 1st Monday in June.
For Autumn sown crops - 1st Monday in July.
.

***Field Inspections***
Areas will be inspected twice.
First inspection Spring
Second inspection Early flowering stage

**Note:** All areas must be closed to stock prior to the first field inspection. As the closure to stock will vary from district to district, the local crop inspector will notify growers when areas should have stock removed. Growers will be required to advise the local crop inspector when this has been carried out and they will be notified as soon as field inspections are completed to enable the areas to be restocked. Failure of advice by growers will result in the area being rejected from certification.

***Contamination and Isolation Requirements***

| **Class of seed produced** | **Contaminants (Any other red clover including off-types)** | ***Isolation requirements** | |
|---|---|---|---|
| | | **Less than 2ha** | **More than 2ha** |
| Breeders | None | 200m | 100m |
| Basic | None | 200m | 100m |
| 1st Generation | 1 per quadrat | 100m | 50m |

* Between different varieties of red clover

***Degrading of Areas***
Sensation and Grasslands Broadway areas are eligible to produce -
Breeders for 1 harvest season - then degraded to Basic for 3 harvest seasons.
Basic for 2 harvest seasons - then degraded to 1st Generation for 2 harvest seasons.
1st Generation for 4 harvest seasons.

Sensation areas are eligible to produce -
Breeders for 2 harvest seasons - then degraded to Basic for 3 harvest seasons.
Basic for 2 harvest seasons - then degraded to 1st Generation for 3 harvest seasons.
1st Generation for 5 harvest seasons

**Note:** An area is degraded once only and is not eligible for re-entry into certification at the end of the degraded period.

***Purity Standards***

| | **Basic Seed** | **1st Generation** |
|---|---|---|
| Minimum pure seed | 99.5% | 98.0% |
| Other seed | 0.3% | 0.5% |

**3.10 Clover, Strawberry** (*Trifolium fragiferum* L. )

***Previous Cropping History***

**If the sowing is a different variety from that previously sown on the area -**
The area must not have grown strawberry clover during the previous FIVE harvest seasons. In addition any strawberry clover, which may establish from buried seed during this period must be eradicated annually by either cultivation or herbicide.

A minimum width between rows of 30 cm is required and a minimum sowing rate of 3kg/ha is strongly recommended. Sowing in the autumn as a pure stand is also recommended as this will allow an adequate inspection to be carried out and also facilitate any roguing which may be required. A further recommendation is that areas be drilled up and down the paddock with headlands at each end. If the area is drilled round and round, corners should not be drilled out. This will facilitate roguing and spraying and assist in field inspections.

**Undersown spring crops.** The area must be in a condition suitable for field inspection by the first Monday in May following sowing. Crop residues and weeds must be sprayed or cleared from the whole area, or the required number of gaps must be created similarly. (See below).

**Autumn sown crops.** Areas must be suitable for field inspection by 1 August following sowing. Clover rows must be distinguishable and grass and weed growth (where it may hinder inspection) controlled. Where a grower elects to create gaps (quadrats) they must be an area of at least 12 square metres, the number required being as follows - in crops of 2 ha or less, a minimum of five gaps is required and for areas larger than 2 ha one gap must be left for each 0.5 ha with a maximum of 20. The gaps created should be randomly spaced and marked by a white stick or stake.

Failure to observe these conditions may result in the area being either downgraded or rejected.

**Note:** Paddocks which have been accepted for entry and fail to establish satisfactorily, are withdrawn, or rejected at field inspection and **not** subsequently harvested as uncertified or allowed to pass through a reproductive season may be resown with the same variety and re-entered the following or subsequent seasons but will be subject to change of variety rules, i.e. minimum 30 cm between rows and three inspections.

Paddocks failing to meet the standards of variety change field inspection, which are subsequently taken as an uncertified seed crop in that season will **not** be eligible for the growing of any certified strawberry clover crop for a further five years.

**If the sowing is the same variety as that previously sown on the area -**
Successive crops of the same variety and certification class may be sown on the same area without any time interval. If sowing the same variety but of a higher certification

class than that previously sown on the area, a time interval of three harvest seasons must be observed.

***Closing Date of Application***
Applications for certification must be submitted by the first Monday of June for change of variety and the first Monday of September for non change of variety.

**Change of Variety Crops**
Applications for certification for both spring and autumn sown crops must be submitted by the first Monday in May. Subsequent entries for the same area will be accepted at the normal time.

***Field Inspections***
For the first entries where there has been a change of variety, there will be **3** inspections:

| | |
|---|---|
| First Inspection | Seedling Stage |
| Second Inspection | Prior to Flowering |
| Third Inspection | At Flowering |

For subsequent entries in this category, one inspection at flowering.

**Note: Crops Withdrawn or Rejected**
Paddocks withdrawn or rejected in the first year of variety change will not be treated as change of variety paddocks until a crop of that variety has passed field inspection.

A change of variety does not occur until a paddock has had three inspections in the course of one growing season and has passed field inspection.

***Standards and Isolation Requirements***

| Class of seed produced | Contaminants (Any other strawberry clover including off-types) | *Isolation requirements | |
|---|---|---|---|
| | | Less than 2ha | More than 2ha |
| Breeders | None | 200m | 100m |
| Basic | None | 200m | 100m |
| 1st Generation | 1 per quadrat | 100m | 50m |

* Between different varieties of strawberry clover.

***Degrading of Areas*** - Areas are eligible to produce –
Breeders for one harvest season - then degraded to Basic for four harvest seasons.
Basic for two harvest seasons - then degraded to 1st Generation for three harvest seasons.
1st Generation for five harvest seasons.

***Purity Standards***

| | Basic Seed | 1st Generation |
|---|---|---|
| Minimum pure seed | 99.0% | 97.0% |
| Other seed | 0.3% | 0.5% |

**3.11 Clover, White** (*Trifolium repens* L.)

***Previous Cropping History***

**If the sowing is a different variety from that previously sown on the area -**
If sowing to produce basic or breeders seed the area must not have grown white clover during the previous FIVE harvest seasons. If sowing to produce 1st generation seed the area must not have grown white clover during the previous FOUR harvest seasons. In addition any white clover that may establish from buried seed during this period must be eradicated annually by either cultivation or herbicide.

A minimum width between rows of 30cm is required and a minimum sowing rate of 3kg/ha is strongly recommended. Sowing in the autumn as a pure stand is also recommended as this will allow an adequate inspection to be carried out and also facilitate any roguing which may be required. A further recommendation is that areas be drilled up and down the paddock with headlands at each end. If the area is drilled round and round, corners should not be drilled out. This will facilitate roguing and spraying and assist in field inspections.

**Undersown spring crops.** By the first Monday in May following sowing, the area must be in a condition suitable for field inspection by either spraying and clearing crop residues and weeds from whole area, or creating the required number of gaps similarly (see below).

**For autumn sown crops.** Areas must be suitable for field inspection by 1 August following sowing. Clover rows must be distinguishable and grass and weed growth (where it may hinder inspection) controlled. Where a grower elects to create gaps (quadrats) they must be an area of at least 12 square metres, the number required being as follows - 'In crops of 2 ha or less a minimum of 5 gaps is required and for areas larger than 2 ha one gap must be left for each .5 ha with a maximum of 20'. The gaps created should be randomly spaced and marked by a white stick or stake.

Failure to observe these conditions may result in the area being either downgraded or rejected.

**Note:** Paddocks which have been accepted for entry and fail to establish satisfactorily, are withdrawn, or rejected at field inspection and **not** subsequently harvested as uncertified or allowed to pass through a reproductive season may be resown with the same variety and re-entered the following or subsequent seasons but will be subject to change of variety rules, i.e. minimum 30 cm between rows and three inspections.

Paddocks failing to meet the standards of variety change field inspection, which are subsequently taken as an uncertified seed crop in that season will **not** be eligible for the growing of any certified white clover crop for a further five years.

**If the sowing is the same variety as that previously sown on the area -**

Successive crops of the same variety and certification class may be sown on the same area without any time interval. If sowing the same variety but of a higher certification class than that previously sown on the area, a time interval of three harvest seasons must be observed.

***Closing Date of Application***
Applications for certification must be submitted by the first Monday of June for change of variety and the first Monday of September for non change of variety.

**Change of variety crops.**
(i) Applications for certification where there has been a change of variety, must be submitted by the first Monday in May. Subsequent entries for the same area will be accepted at the normal time.

(ii) For crops undersown in the autumn and not intended for harvest in the next harvest season, the closing date will be the first Monday in May prior to the season of harvest.

***Field Inspections***
For first entries of Nucleus, Breeders and Basic sown areas where there has been a change of variety, there will be **3** inspections.

| | |
|---|---|
| First Inspection | Seedling stage |
| Second Inspection | Prior to flowering |
| Third Inspection | At flowering |

For subsequent entries of areas in this category one inspection at flowering.

**Note: Crops withdrawn or rejected:**
Paddocks withdrawn or rejected in the first year of variety change will not qualify as change of variety paddocks until a crop of that variety is passed.

A change of variety does not occur until a paddock has had three inspections in the course of one growing season and has passed field inspection.

***Standards and Isolation Requirements***

| **Class of seed produced** | **Contaminants (Any other white clover including off-types)** | ***Isolation requirements** | |
|---|---|---|---|
| | | **Less than 2ha** | **More than 2ha** |
| Breeders | None | 200m | 100m |
| Basic | None | 200m | 100m |
| 1st Generation | 1 per quadrat | 100m | 50m |

***** Between different varieties of white clover

***Degrading of Areas*** **-** Areas are eligible to produce -
Breeders for 1 harvest season - then degraded to Basic for 3 harvest seasons.
Basic for 2 harvest seasons - then degraded to 1st Generation for 2 harvest seasons.
1st Generation for 4 harvest seasons.

An area is degraded once only and is not eligible for re-entry into certification at the end of the degraded period.

***Purity Standards***

| | **Basic Seed** | **1st Generation** |
|---|---|---|
| Minimum pure seed | 99.0% | 97.0% |
| Other seed | 0.3% | 0.7%* |

*Other than suckling clover

**3.12 Cocksfoot** (*Dactylis glomerata* L.)

***Previous Cropping History***
An area must not have grown any other cocksfoot during the previous two harvest seasons but successive crops of the same variety and certification class may be grown on the same area without any time interval.

***Closing Date for Application***
Applications for certification must be submitted by the First Monday of July.

***Field Inspection***
Areas are to be inspected once at flowering.

***Contamination and Isolation Requirements***

| **Class of seed produced** | ***Contaminants (Off-types, ryegrass)** | ****Isolation requirements** | |
|---|---|---|---|
| | | **Less than 2ha** | **More than 2ha** |
| Breeders | None | 200m | 100m |
| Basic | None | 200m | 100m |
| 1st Generation | 1 per quadrat | 100m | 50m |

*For areas to produce 1st Generation, ryegrass contamination may be disregarded at field inspection.

**Between different varieties of cocksfoot

***Degrading of Areas*** **-** Areas are eligible to produce -

Breeders for 3 harvest seasons - then degraded to Basic for 5 harvest seasons.
Basic for 3 harvest seasons - then degraded to 1st Generation for 5 harvest seasons.
1st Generation for 8 harvest seasons.

Note: An area is degraded once only and is not eligible for re-entry into certification at the end of the degraded period.

***Purity Standards***

| | **Basic Seed** | **1st Generation** |
|---|---|---|
| Minimum pure seed | 90.0% | 85.0% |
| Other seed | 0.3% | 2.0% |

Note: For Basic seed no more than a trace of ryegrass is allowed in the working sample.

### 3.13 Crested Dogstail (*Cynosurus cristatus* L.)

***Previous Cropping History***
Two harvest seasons between different varieties of dogstail.

***Closing Date for Applications***
Applications for certification must be submitted by the first Monday of September.

***Field Inspection***
Areas are to be inspected once at flowering.

***Contamination and Isolation Requirements***

| Class of seed produced | Contaminants (Off-types) | Isolation requirements | |
|---|---|---|---|
| | | Less than 2ha | More than 2ha |
| Breeders - Basic | Nil | 200m | 100m |
| 1st Generation | 1 per quadrat | 100m | 50m |

***Degrading of Areas***

**Grasslands Aspiring** - Areas are eligible to produce -

Breeders for one harvest season then degraded to Basic for one harvest season.
Basic for one harvest season then degraded to 1st Generation for one harvest season.
1st Generation for two harvest seasons.

**Southland Crested Dogstail** is classified as an annual and down-grading does not apply.

Southland Crested Dogstail is a local variety. The following conditions apply -

- Any crop within the prescribed area is eligible for entry into certification to produce Basic or 1st Generation Seed.
- Any area sown with Basic seed OUTSIDE the prescribed area is eligible for certification to produce 1st Generation Seed.
- The prescribed area is defined as: ***That area bounded by the Clutha River from its mouth to Beaumont then along State Highway 8 to the Moa Seed Farm Junction and the area of Southland Land District.***

***Purity Standards***

| | Basic Seed | 1st Generation |
|---|---|---|
| Minimum pure seed | 99.5% | 96.0% |
| Other seed | 0.3% | 2.0% |

### 3.14 Fescue, Tall (*Festuca arundinacea* Schreber)

***Previous Cropping History***
An area must not have grown any other Fescue, Festulolium or Ryegrass during the previous two harvest seasons but successive crops of the same variety and certification class may be grown on the same area without any time interval.

***Closing Date for Applications***
Applications for certification must be submitted by the First Monday in September.

***Field Inspection***
Areas are to be inspected once at flowering.

***Contamination and Isolation Requirements***

| **Class of seed produced** | **Contaminants (Off-types, ryegrass)** | **Isolation requirements** | | | | | |
|---|---|---|---|---|---|---|---|
| | | **Less than 2ha** | | | **More than 2ha** | | |
| | | ***Fescue Festulolium*** | ***Ryegrass*** | ***Fine Fescue*** | ***Fescue Festulolium*** | ***Ryegrass*** | ***Fine Fescue*** |
| Breeders | None | 200m | 200m | 5m | 100m | 100m | 5m |
| Basic | None | 200m | 200m | 5m | 100m | 100m | 5m |
| 1st Generation | 1 per quadrat | 100m | 20m | 5m | 50m | 20m | 5m |

***Degrading of Areas*** **-** Areas are eligible to produce -

Breeders for 2 harvest seasons - then degraded to Basic for 4 harvest seasons.
Basic for 2 harvest seasons - then degraded to 1st Generation for 4 harvest seasons.
1st Generation for 6 harvest seasons.

Note: An area is degraded once only and is not eligible for re-entry into certification at the end of the degraded period.

***Purity Standards***

| | **Basic Seed** | **1st Generation** |
|---|---|---|
| Minimum pure seed | 99.0% | 98.0% |
| Other seed | 0.3%* | 1.5% |

* Maximum permitted ryegrass and/or cocksfoot seed is Trace %.

**3.15 Fescue Fine** (*Festuca rubra* L.)
(Amenity Types)

***Previous Cropping History***
An area must not have grown any other fescue during the previous two harvest seasons, but successive crops of the same variety and certification class may be grown on the same area without any time interval.

***Closing Date for Applications***
Applications for certification must be submitted by the first Monday in September.

***Field Inspection***
Areas are to be inspected once at flowering.

***Contamination and Isolation Requirements***

| **Class of seed produced** | **Contaminants (Off-types, ryegrass)** | **Isolation requirements** | | | |
|---|---|---|---|---|---|
| | | **Less than 2ha** | | **More than 2ha** | |
| | | ***Fine Fescue*** | ***Tall Fescue, Ryegrass and Festulolium*** | ***Fine Fescue*** | ***Tall Fescue Ryegrass and Festulolium*** |
| Breeders | None | 200m | 5m | 100m | 5m |
| Basic | None | 200m | 5m | 100m | 5m |
| 1st Generation | 1 per quadrat | 100m | 5m | 50m | 5m |

***Degrading of Areas*** - Areas are eligible to produce -

Breeders for 2 harvest seasons - then degraded to Basic 4 harvest seasons.
Basic for 2 harvest seasons - then degraded to 1st Generation for 4 harvest seasons.
1st Generation for 4 harvest seasons.

**Note:** An area is degraded once only and is not eligible for re-entry into certification at the end of the degraded period.

***Purity Standards***

| | **Basic Seed** | **1st Generation** |
|---|---|---|
| Minimum pure seed | 99.0% | 98.0% |
| Other seed | 0.3%***** | 1.0%****** |

***** Maximum permitted ryegrass and/or cocksfoot seed is trace %.
****** Maximum permitted ryegrass and/or cocksfoot seed is 0.2%.

## 3.16 Festulolium Spp

***Previous Cropping History***
An area must not have grown any other Festulolium, Ryegrass or Fescue during the previous two harvest seasons but successive crops of the same variety and certification class may be grown on the same area without any time interval.

***Closing Date for Applications***
Applications for certification must be submitted by the first Monday of September.

***Field Inspection***
Areas are to be inspected once at flowering.

***Contamination and Isolation Requirements***

| **Class of seed produced** | **Contaminants (Off-types, ryegrass)** | **Isolation requirements** | | | |
|---|---|---|---|---|---|
| | | **Less than 2ha** | | **More than 2ha** | |
| | | ***Tall Fescue, Ryegrass and Festulolium*** | ***Fine Fescue*** | ***Tall Fescue, Ryegrass and Festulolium*** | ***Fine Fescue*** |
| Breeders | None | 200m | 5m | 100m | 5m |
| Basic | None | 200m | 5m | 100m | 5m |
| 1st Generation | 1 per quadrat | 100m | 5m | 50m | 5m |

***Degrading of Areas*** **-** Areas are eligible to produce -

Breeders for 1 harvest season - then degraded to Basic for 3 harvest seasons.
Basic for 2 harvest seasons - then degraded to 1st Generation for 2 harvest seasons.
1st Generation for 4 harvest seasons.

**Note:** An area is degraded once only and is not eligible for re-entry into certification at the end of the degraded period.

***Purity Standards***

| | **Basic Seed** | **1st Generation** |
|---|---|---|
| Minimum pure seed | 99.0% | 98.0% |
| Other seed | 0.3% | 0.7% |

### 3.17 Fodder Radish (*Raphanus sativus L.*)

***Previous Cropping History***
An area must not have grown any other cruciferous crop in the past 5 harvest seasons but successive crops of the same variety and certification class may be sown on the same area without any time interval.

***Closing Date for Applications***
Applications for certification of Autumn sown areas must be submitted by the first Monday in June and for all other areas by the first Monday in November.

***Field Inspection***
Areas will be inspected twice –
Inspection at early leaf stage
Second inspection at flowering

***Contamination and Isolation requirements***

| **Class of seed produced** | **Contaminants (Any other variety, any other crucifer)** | ***Isolation requirements** |
|---|---|---|
| Basic | None | 400m |
| 1st Generation | 1 per quadrat | 200m |

*Must be isolated from other fodder radish varieties. There is normally no cross pollination with the other commonly grown cruciferous crops.

***Purity Standards***

| | **Basic Seed** | **1st Generation** |
|---|---|---|
| Minimum pure seed | 99.0% | 98.0% |

**3.18 Kale** (*Brassica oleracea L.*)

***Previous Cropping History***
An area must not have grown any other brassica crop during the past 5 harvest seasons but successive crops of the same variety and certification class may be grown on the same area without any time interval.

***Closing Date for Applications***
Applications for certification must be submitted by the First Monday of March.

***Field Inspections***
Areas will be inspected twice
First Early leaf stage
Second Flowering

***Contamination and Isolation Requirements***

| Class of seed produced | Contaminants (Any other variety, any other brassica) | *Isolation requirements |
|---|---|---|
| Basic | None | 700m |
| 1st Generation | 1 per quadrat | 400m |

* Kale crops may be grown without isolation from crops of rape, turnips and swedes, but must be isolated from different varieties of kale. No isolation is required between kale crops of the same variety.

***Purity Standards***

| | Basic Seed | 1st Generation |
|---|---|---|
| Minimum pure seed | 99.0% | 99.0% |

**3.19 Lentil** (*Lens culinaris* Medicus)

***Previous cropping history***
An area must not have grown any crop of lentils during the previous three harvest seasons.

***Closing date for applications***
Applications for certification must be submitted by the first Monday in September.

***Field inspection***
Areas will be inspected once at flowering

***Contamination and isolation requirements***

| Class of seed Produced | Contaminants (Any other variety, off types, vetches or peas) | *Isolation requirements |
|---|---|---|
| Basic | None | 50m |
| 1st Generation | 1 per 10 quadrats | 50m |
| 2nd Generation | 1 per quadrat | 50m |

* From any other lentil variety

***Purity standards***

| | Basic Seed | 1st Generation | 2nd Generation |
|---|---|---|---|
| Minimum pure seed | 98.0% | 98.% | 98.0% |
| Maximum other crop seeds | 0.2% | 0.5% | 0.5% |

**3.20 Linseed** (*Linum usitatissimum* L.)

***Previous Cropping History***
An area must not have grown any flax or linseed crop in the previous 5 years.

***Closing Date for Applications***
First Monday in November.

***Field Inspection***
Areas are to be inspected once at flowering.

***Contamination and Isolation Requirements***

| Class of seed produced | Contaminants (Any other varieties) | Isolation requirements |
|---|---|---|
| Breeders | None | Must be isolated by a definite barrier or a space sufficient to prevent mixture during harvest. |
| Basic | None | |
| 1st Generation | 1 per 10 quadrats | |
| 2nd Generation | 1 per quadrat | |

***Purity Standards***

| | Basic Seed | 1st Generation | 2nd Generation |
|---|---|---|---|
| Minimum pure seed | 99.0% | 99.0% | 99.0% |
| Other seed | 0.1% | 0.1% | 0.1% |

**3.21 Lotus** (*Lotus uliginosus* Schk.)

**Birdsfoot Trefoil** (*Lotus corniculatus* L.)

***Previous Cropping History***

**If the sowing is a different variety from that previously sown on the area -**
The area must not have grown lotus during the previous FIVE harvest seasons. In addition any lotus, which may establish from buried seed during this period must be eradicated annually by either cultivation or herbicide.

A minimum width between rows of 30cm is required and it is recommended that areas be drilled up and down the paddock with headlands at each end. If the area is drilled round and round, corners should not be drilled out as this will facilitate roguing and spraying and assist in field inspections.

A grower may elect to undersow a spring crop or alternatively sow in the autumn with a companion grass but provision must be made to allow field inspection of the area to be carried out. Crops must be in a condition suitable for field inspection by August of the year immediately preceding harvest by either spraying and clearing companion crop residues and/or weeds from whole area, or by creating the required number of gaps (see below).

Where a grower elects to create gaps (quadrats) they must be an area of at least 12 square metres, the number required being as follows - 'In crops of 2 ha or less a minimum of 5 gaps is required and for areas larger than 2 ha one gap must be left for each .5 ha with a maximum of 20'. The gaps created should be randomly spaced and marked by a white stick or stake.

Failure to observe any of the above requirements may result in the area being rejected from certification at the first inspection.

Note: Paddocks which have been accepted for entry and fail to establish satisfactorily, are withdrawn, or rejected at field inspection and **not** subsequently harvested as uncertified or allowed to pass through a reproductive season may be resown with the same variety and re-entered the following or subsequent seasons but will be subject to change of variety rules as above.

Paddocks failing to meet the standards of variety change field inspection, which are subsequently taken as an uncertified seed crop in that season will **not** be eligible for the growing of any certified lotus crop for a further five years.

**If the sowing is the same variety as that previously sown on the area -**
Successive crops of the same variety and certification class may be sown on the same area without any time interval. If sowing the same variety but of a higher certification

class than that previously sown on the area, a time interval of three harvest seasons must be observed.

***Closing Date for Applications***
Applications for certification must be submitted by the First Monday of September.

***Field Inspection***
Areas are to be inspected once at flowering.

***Contamination and Isolation Requirements***

| **Class of seed produced** | ***Contaminants (Any other lotus - including off-types)** | ***Isolation requirements** | |
|---|---|---|---|
| | | **Less than 2ha** | **More than 2ha** |
| Breeders | None | 200m | 100m |
| Basic | None | 200m | 100m |
| 1st Generation | 1 per quadrat | 100m | 50m |

*Between different lotus varieties of the same species. No isolation is required between *L.uliginosus* and *L.corniculatus*.

***Degrading of Areas*** **-** Areas are eligible to produce -

Breeders for 2 harvest seasons - then degraded to Basic for 3 harvest seasons.
Basic for 2 harvest seasons - then degraded to 1st Generation for 3 harvest seasons.
1st Generation for 5 harvest seasons.

Note: An area is degraded once only and is not eligible for re-entry into certification at the end of the degraded period.

***Purity Standards***

| | **Basic Seed** | **1st Generation** |
|---|---|---|
| Minimum pure seed | 99.0% | 97.0% |
| Other seed | 0.3% | 0.5%* |

* Other than White Clover and Suckling Clover.

**3.22 Lucerne** (*Medicago sativa* L.)

***Previous Cropping History***
An area must not have grown any other lucerne during the previous three harvest seasons but successive crops of the same variety and certification class may be grown on the same area without any time interval.

***Closing Date for Applications***
Applications for certification must be submitted by the first Monday of November.

***Field Inspection***
Areas are to be inspected once at flowering.

***Contamination Requirements***

| Class of seed produced | Contaminants (Off-types. Any other lucerne variety) |
|---|---|
| Breeders | None |
| Basic | None |
| 1st Generation | 1 per quadrat |

***Isolation Requirements*** - *distances must not be less than the specifications below:*

| Areas to produce: | Less than 2ha | More than 2ha |
|---|---|---|
| Seed for further multiplication | 200m | 100m |
| Seed not for further multiplication (i.e. seed for fodder production) | 100m | 50m |

No isolation is required between areas of the same variety.

**Note:** Notwithstanding the isolation provisions shown, a grower may elect to create isolation by -
i) Mowing or grazing a strip wide enough to create the specified distance, or
ii) Erecting a temporary fence across the area at a similar distance from the cross-fertilising crop.
Where the grower elects to mow the isolation zone the action should, if taken in the area entered for certification, be delayed until after flowering. If the isolation zone is taken from an adjacent cross fertilising crop the action must be taken before flowering.
If a grower elects to erect a temporary fence the two portions of the crop are to be treated as part paddocks. The isolation zone may then be harvested as uncertified seed.

***Degrading of Areas***
Areas will be eligible to produce -

| | |
|---|---|
| Nucleus sown | Breeders for two harvest seasons, then degraded to Basic for three harvest Seasons. |

| | |
|---|---|
| Breeders Sown | Basic for two harvest seasons, then degraded to 1st Generation for four harvest seasons. |
| Basic Sown | 1st Generation for six harvest seasons. |

Where the stage of growth is such that visual symptoms of Bacterial Wilt are unlikely to be detected at field inspection a sample of 100 grams of seed is to be sent to the National Seed Laboratory, Palmerston North for a serological test. The sample should be enclosed in a plastic bag to prevent contamination from other samples.

**Note:** All areas of Wairau will be rejected if Bacterial Wilt is found either at field inspection or as a result of the serological test.

***Purity Standards***

| | **Basic Seed** | **1st Generation** |
|---|---|---|
| Minimum pure seed | 98.0% | 98.0% |
| Other seed | 1.0%* | 1.0%* |

* Including a maximum of 0.5% red clover.

### 3.23 Lupin (*Lupinus* spp.)

***Previous Cropping History***
An area must not have grown any other Lupin during the previous 2 harvest seasons but successive crops of the same variety and certification class may be grown on the same area without any time interval.

***Closing Date for Applications***
Applications for certification must be submitted by the First Monday in September.

***Field Inspection***
Areas are to be inspected once at flowering.

***Contamination and Isolation Requirements***

| Class of seed produced | Contaminants (Any other variety, including off-types, peas, beans) | *Isolation requirements |
|---|---|---|
| Basic | None | 100m |
| 1st Generation | 1 per 10 quadrats | 100m |
| 2nd Generation | 1 per quadrat | 100m |

* Must be isolated from any other crop of a different lupin variety.

***Purity Standards***

| | Basic Seed | 1st Generation | 2nd Generation |
|---|---|---|---|
| Minimum pure seed | 98.0% | 98.0% | 98.0% |
| Maximum other crop seeds | 0.1% | 0.1% | 0.3% |

**3.24 Maize** (*Zea mays* L.)

**Types**
Hybrid and open pollinated varieties.

**Classes and Areas Eligible**
Areas sown with Pre-Basic and Basic Seed of varieties certified in the country of origin.

**Note:** If foreign varieties are to be certified under the OECD Maize Scheme, technical conditions must be agreed in advance of sowing with the Designated Authority in the country of origin.

**Definition of Terms**

***Inbred Line:*** A sufficiently uniform and stable line, obtained either by artificial self-fertilisation accompanied by selection over several successive generations or by equivalent operations.

***Single Cross Hybrid:*** The first generation of a cross between two inbred lines.

***Double Cross Hybrid:*** The first generation of a cross between two single cross hybrids.

***Three-way Cross Hybrid:*** The first generation of a cross between an inbred line and a single cross hybrid.

***Top Cross Hybrid:*** The first generation of a cross between an inbred line or single cross hybrid and an open-pollinated variety.

***Intervarietal Hybrid:*** The first generation of a cross between plants grown from Basic Seed of two open-pollinated varieties.

***Open Pollinated:*** Seed produced as a result of natural pollination which when reproduced retains its distinguishing characters.

**Rules For The Production Of Hybrid Maize**

***Closing Date for Applications***
There is no set closing date but applications for certification must be lodged within 14 days of sowing.

***Previous Cropping History***
There are no requirements as to previous cropping but where maize follows maize one additional inspection must be carried out to determine the freedom of the seed crop from plants, which have volunteered from the preceding crop.

***Isolation Requirements***

Seed crops must be isolated from any possible source of contaminating pollen.

| | |
|---|---|
| To produce Basic Seed | 400m |
| To produce 1st Generation Seed | 200m |

The above isolation distances may be reduced by the sowing of additional border rows of the pollen parent immediately adjacent to the seed crop. These must be sown at the same time as the pollen parent rows within the crop and on the side from which contamination is expected. Each such additional row will equal 10 metres of distance.

Isolation by time will be considered if there are no receptive silks on the seed parent during the period pollen is being shed by the contaminating crop.

***Seed Crop Inspection***

A minimum of three inspections must be made when the silks of the seed parent are receptive, to determine whether detasselling and isolation requirements have been carried out in a satisfactory manner.

Where maize is sown following another maize crop at least one additional inspection must be made to determine the freedom of the seed crop from plants that have volunteered from the preceding crop. Volunteer plants must not exceed 0.05% immediately prior to detasselling or the commencement of the pollination period of the crop.

The crop must be in a fit state to permit accurate determination of varietal purity. Crops will be rejected from certification in which more than 0.1% of off-type plants in the pollen parent have shed pollen. At the time of last inspection the seed parent shall not contain more than 0.1% of off-type plants.

***Detasselling for the Production of Hybrid Varieties***

The following applies when 5% or more seed parent plants have receptive silks.

A crop will be rejected from certification if on any one inspection more than 1% of the seed parent plants possess tassels, which have shed or are shedding pollen, or if the total for three inspections on different dates exceeds 2%. Sucker tassels, portions of tassels or tassels on the main plants will be counted as shedding pollen when 50 mm or more of the central stem, the side branches or a combination of the two have their anthers extended from their glumes and are shedding pollen.

Where shedders are observed counts are to be taken throughout the area.

Each count will consist of 200 consecutive plants in a seed parent row or 100 consecutive plants in each of two adjacent seed parent rows.

In crops of 2 ha or less a minimum of 5 counts must be carried out and for areas larger than 2 ha 1 additional count must be made for each 0.5 ha with a maximum of 20.

Inspection must confirm that both the seed bearing and pollen shedding plants are true to the description supplied to the certifying authority.

***Male Sterile Seed Parent***
A male sterile seed parent can be used to produce Certified Seed by two methods.

a) By blending seed produced by the sterile seed parent with seed produced by the fertile seed parent. The ratio of male sterile seed to male fertile parent seed shall not exceed 2 to 1

or

b) By using a pollen parent that contains a specific restorer line or lines so that not fewer than one-third of the plants grown from the resulting hybrid will produce pollen, which appears normal in all respects.

**Rules For The Production Of Open Pollinated Maize**

***Closing Date for Applications***
There is no set closing date but applications must be lodged within 14 days of sowing.

***Previous Cropping History***
There are no requirements as to previous cropping but where maize follows maize one additional inspection must be carried out to determine the freedom of the seed crop from plants that have volunteered from the preceding crop.

***Isolation Requirements***

| | |
|---|---|
| To produce Basic Seed | 400m |
| To produce 1st Generation Seed | 200m |

***Seed Crop Inspection***
One inspection at flowering.

When maize is sown following maize an additional inspection must be made to ensure freedom from plants that may volunteer from the previous crop.

***Field Standards***
Not more than 0.05% off-types or other varieties. (Counts as for hybrid varieties.)

**Sampling And Post-Control. Basic and Certified Seed**

The applicant is responsible for ensuring that harvested seed is identified by labels supplied by the certifying authority and kept separate from other seed during harvesting and processing.

Seed lots will not be finally certified until a Certificate of Analysis issued by the National Seed Laboratory on an officially drawn sample confirms that the required purity standard has been met.

One seed lot will not exceed 40,000 kg.

A part of every sample submitted for analysis will be retained by the Official Seed Testing Station for post-control plot testing in the next growing season following sampling.

***Seed Purity Standards***

| | **Basic Seed** | **1st Generation** |
|---|---|---|
| Minimum pure seed | 99.5% | 99.5% |

***Labelling***

All classes of certified seed offered for sale must have an official certification label issued by the certifying authority attached to each container. Labels must give the following information:

Name and address of Certifying Authority.
Class: Pre Basic/Basic/1st Generation
Species: *Zea mays*
Variety name:
Open pollinated/cross/inbred line.
Reference No: NZ
Region of Production: (Farm number and paddock letter)
Date
Weight

**3.25 Oat** (*Avena sativa* L.)

***Previous Cropping History***
**NZ Domestic Scheme:** An area must not have grown any other cereal in the previous harvest season but successive crops of the same variety and certification class may be grown on the same area without any time interval, provided that satisfactory varietal purity is maintained.
**NB.** Any crop grown under the NZ Domestic scheme rule will **not** be eligible for OECD certification.

**OECD Scheme:** An area must not have grown any other cereal in the previous **two** harvest seasons but successive crops of the same variety and certification class may be grown on the same area without any time interval, provided that satisfactory varietal purity is maintained.

***Closing Date for Applications***
Applications for certification must be submitted by the First Monday of November.

***Field Inspection***
Areas are to be inspected when in full ear.

***Contamination and Isolation Requirements***

| Class of seed produced | Contaminants (Any other variety, any other cereal, Loose smut) | Isolation requirements |
|---|---|---|
| Basic<br>1st Generation<br>2nd Generation | None<br>1 per 10 quadrats<br>1 per quadrat | Only a space sufficient to prevent mixture during harvest is required. |

**Note:** Any crop found to contain wild oats, yellow gromwell or nodding thistle at field inspection will be rejected from certification.

***Purity Standards***

| | Basic Seed | 1st Generation | 2nd Generation |
|---|---|---|---|
| Minimum pure seed | 98.0% | 98.0% | 98.0% |
| Maximum other cereal seeds | 0.1% | 0.1% | 0.3% |

**3.26 Pea** (*Pisum sativum* L.)

***Previous Cropping History***
Areas must not have grown any crop of peas during the previous 2 harvest seasons.

***Closing Dates for Applications***
Applications for certification of areas sown prior to July 1 must be submitted by the First Monday in July and for all other areas by the First Monday in November.

***Field Inspections*** - Two inspections

| **Field Peas** | **Garden Peas** |
|---|---|
| 1st when plants are 25cm high | 1st at flowering |
| 2nd at flowering. | 2nd following pod formation |

***Contamination Requirements***

| **Class of seed produced** | **Contaminants (Any other variety, including off-types, lupins, beans)** |
|---|---|
| Basic | None |
| 1st Generation | 1 per 10 quadrats |
| 2nd Generation | 1 per quadrat |

***Isolation Requirements***

| | **Autumn Sown (prior 1 August)** | **Spring Sown (after 1 August)** |
|---|---|---|
| Garden Peas and White Flowered Field Peas | 100 metres from each other and all other pea crops. | **A.** Must be isolated from each other by a definite barrier or a space sufficient to prevent mixture during harvest. |
| | | **B.** Must be isolated by 50 metres from Maple pea crops (purple flowered field peas). |
| | | **C.** Must be isolated by 100 metres from all autumn sown pea crops. |
| Maple Peas (Purple flowered field types) | 100 metres from each other and all other pea crops. | 100 metres from Autumn sown pea crops and 50 metres from any other pea crops. |

***Purity Standards***

| | **Basic Seed** | **1st Generation** | **2nd Generation** |
|---|---|---|---|
| Minimum pure seed | 98.0% | 98.0% | 98.0% |
| Maximum other pea varieties | 0.1% | 0.1% | 0.3% |

**NOTE: Crops must be free of bacterial blight at field inspection.**

**3.27 Phalaris** (*Phalaris aquatica* L.)

**Reed Canary Grass** (*Phalaris arundinacea* L.)

***Previous Cropping History***
An area must not have grown any other Phalaris during the previous 2 harvest seasons, but successive crops of the same variety and certification class may be grown on the same area without any time interval.

***Closing Date for Applications***
Applications for certification must be submitted by the First Monday of September.

***Field Inspection***
Areas are to be inspected once at flowering.

***Contamination and Isolation Requirements***

| Class of seed produced | Contaminants (Any other Phalaris species and off-types) | Isolation requirements |
|---|---|---|
| Breeders<br>Basic<br>1st Generation | None<br>None<br>1 per quadrat | 100 metres from any other variety of *Phalaris aquatica* or other *Phalaris* species. |

***Degrading of Areas*** - Areas are eligible to produce -

Breeders for 1 harvest season - then degraded to Basic for 9 harvest seasons.
Basic for 2 harvest seasons then degraded to 1st Generation for 8 harvest seasons.
1st Generation for 10 harvest seasons.

Note: An area is degraded once only and is not eligible for re-entry into certification at the end of the degrading period.

***Purity Standards***

| | Basic Seed | 1st Generation |
|---|---|---|
| Minimum pure seed | 99.0% | 98.0% |
| Other seed | 0.3% | 1.0% |

### 3.28 New Zealand Poa (*Poa imbecilla* Spreng)

***Previous Cropping History***
An area must not have grown any other New Zealand Poa during the previous two harvest seasons, but successive crops of the same variety and certification class may be grown on the same area without any time interval.

***Closing Date for Applications***
Applications for certification must be submitted by the first Monday of September.

***Field inspection***
Areas are to be inspected once, at flowering

***Contamination and Isolation Requirements***

| **Class of seed produced** | **Contaminants (Any other NZ Poa including off-types)** | **Isolation requirements** | |
|---|---|---|---|
| | | **Less than 2ha** | **More than 2ha** |
| Breeders | None | 200m | 100m |
| Basic | None | 200m | 100m |
| 1st Generation | 1 per quadrat | 100m | 50m |

***Degrading of Areas***
Areas are eligible to produce
Breeders for 2 harvest seasons - then degraded to basic for 4 harvest seasons.
Basic for 2 harvest seasons - then degraded to 1st Generation for 4 harvest seasons.
1st Generation for 6 harvest seasons.
Note: An area is degraded once only and is not eligible for re-entry into certification at the end of the degraded period.

***Purity Standards***

| | **Basic Seed** | **1st Generation** |
|---|---|---|
| Minimum pure seed | 99.0% | 98.0% |
| Other seed | 0.3%* | 1.0%** |

* Maximum permitted *Poa annua* seed is trace %.
** Maximum permitted *Poa annua* seed is 0.2 %.

**3.29 Plantain** *(Plantago lanceolata* L.)

***Previous Cropping History***
An area must not have grown any other Plantain crop during the previous three harvest seasons, but successive crops of the same variety and certification class may be grown on the same area without any time interval.

***Closing Date for Applications***
Applications for certification must be submitted by the first Monday in September.

***Field Inspections***
Areas are to be inspected once, at flowering.

***Contamination and Isolation Requirements***

| Class of seed produced | Contaminants (Any other plantain including off-types) | Isolation requirements |
|---|---|---|
| Breeders | None | 100m from any other plantain variety |
| Basic | None | |
| 1st Generation | 1 per quadrat | |

***Degrading of Areas*** **-** Areas are eligible to produce -

Breeders for 2 harvest seasons then degraded to Basic for 4 harvest seasons.
Basic for 2 harvest seasons then degraded to 1st Generation for 4 harvest seasons.
1st Generation for 6 harvest seasons.

**Note:** An area is degraded once only and is not eligible for re-entry into certification at the end of the degraded period.

***Purity Standards***

| | Basic Seed | 1st Generation |
|---|---|---|
| Minimum pure seed | 98.0% | 96.0% |
| Other seed | 0.2% | 0.5% |

**3.30 Rape** (*Brassica napus* L.)

***Previous Cropping History***
An area must not have grown any other brassica crop during the past 5 harvest seasons but successive crops of the same variety and certification class may be grown on the same area without any time interval.

***Closing Date for Applications***
Applications for certification must be submitted by the First Monday in June.

***Field Inspection***
Areas will be inspected twice
First inspection Early leaf stage.
Second inspection Flowering.

***Contamination and Isolation Requirements***

| Class of seed produced | Contaminants (Any other variety, any other Brassica) | *Isolation requirements |
|---|---|---|
| Basic | None | 400m |
| 1st Generation | 1 per quadrat | 200m |

* Must be isolated from other Rape varieties, Turnips, Swedes and infestations of other Brassica plants including Wild Turnip, sufficient to be a source of cross pollination. Need not be isolated from Kale and crops of the same variety.

***Purity Standards***

| | Basic Seed | 1st Generation |
|---|---|---|
| Minimum pure seed | 99.0% | 99.0% |

**3.31 Ryecorn** (*Secale cereale* L.)

***Previous Cropping History***
**NZ Domestic Scheme:** An area must not have grown any other cereal in the previous harvest season but successive crops of the same variety and certification class may be grown on the same area without any time interval, provided that satisfactory varietal purity is maintained.
**NB.** Any crop grown under the NZ Domestic scheme rule will **not** be eligible for OECD certification.

**OECD Scheme:** An area must not have grown any other cereal in the previous **two** harvest seasons but successive crops of the same variety and certification class may be grown on the same area without any time interval, provided that satisfactory varietal purity is maintained.

***Closing Date for Applications***
Applications for certification must be submitted by the First Monday of November.

***Field Inspection***
Areas are to be inspected when in full ear.

***Contamination and Isolation Requirements***

| Class of seed produced | Contaminants (Any other variety, any other cereal) | *Isolation requirements |
|---|---|---|
| Basic | None | 100m |
| 1st Generation | 1 per 10 quadrats | 100m |
| 2nd Generation | 1 per quadrat | 100m |

*Must be isolated from any other crop of a different ryecorn variety and Triticale. For crops of the same variety, only a space sufficient to prevent mixture during harvest is required.

Note: Any crop found to contain wild oat, yellow gromwell or nodding thistle at field inspection will be rejected from certification.

***Purity Standards***

| | Basic Seed | 1st Generation | 2nd Generation |
|---|---|---|---|
| Minimum pure seed | 98.0% | 98.0% | 98.0% |
| Maximum other cereal seeds | 0.1% | 0.1% | 0.3% |

### 3.32 Ryegrass, Hybrid (*Lolium x boucheanum*)

***Previous Cropping History***
An area must not have grown any other Ryegrass during the previous 2 harvest seasons but successive crops of the same variety and certification class may be grown on the same area without any time interval.

***Closing Date for Applications***
Applications for certification must be submitted by the First Monday of September.

***Field Inspection***
Areas are to be inspected once at flowering.

***Contamination and Isolation Requirements***

| **Class of seed produced** | **Contaminants (Off-types, ryegrass)** | ***Isolation requirements** | | | | | |
|---|---|---|---|---|---|---|---|
| | | **Less than 2ha** | | | **More than 2ha** | | |
| | | ***Ryegrass and Festulolium*** | ***Fescue*** | ***Fine Fescue*** | ***Ryegrass and Festulolium*** | ***Fescue*** | ***Fine Fescue*** |
| Breeders | None | 200m | 200m | 5m | 100m | 100m | 5m |
| Basic | None | 200m | 200m | 5m | 100m | 100m | 5m |
| 1st Generation | 1 per quadrat | 100m | 20m | 5m | 50m | 20m | 5m |

***Isolation** – Diploid / Tetraploid Ryegrass – The isolation requirement between a Diploid and a Tetraploid Ryegrass shall be 5 meters (there is a small risk of cross pollination between a Diploid and Tetraploid Ryegrass therefore it is recommended to leave the first outside header run out of the certified seed lot).

**Wild oats -** Any Tetraploid Ryegrass found to contain wild oat at field inspection will be rejected from certification. In the case of light infestations the grower may be given the opportunity to rogue the area.

***Degrading of Areas*** **-** Areas are eligible to produce -
Breeders for 1 harvest season - then degraded to Basic for 3 harvest seasons.
Basic for 2 harvest seasons - then degraded to 1st Generation for 2 harvest seasons.
1st Generation for 4 harvest seasons.

Note: An area is degraded once only and is not eligible for re-entry into certification at the end of the degraded period.

***Purity Standards***

| | **Basic Seed** | **1st Generation** |
|---|---|---|
| Minimum pure seed | 99.0% | 98.0% |
| Other seed | 0.3% | 0.7% |

**Note:** Grasslands Greenstone must meet a minimum 1000 seed weight of 3.5g.

**3.33 Ryegrass, Italian** (*Lolium multiflorum* Lam.)

***Previous Cropping History***
An area must not have grown any other ryegrass during the previous two harvest seasons but successive crops of the same variety and certification class may be grown on the same area without any time interval.

***Closing Date for Applications***
Applications for certification must be submitted by first Monday of September.

***Field Inspection***
Areas are to be inspected once at flowering.

***Contamination and Isolation Requirements***

| **Class of seed produced** | **Contaminants (Off-types, ryegrass)** | ***Isolation requirements** | | | | | |
|---|---|---|---|---|---|---|---|
| | | **Less than 2ha** | | | **More than 2ha** | | |
| | | ***Ryegrass and Festulolium*** | ***Fescue*** | ***Fine Fescue*** | ***Ryegrass and Festulolium*** | ***Fescue*** | ***Fine Fescue*** |
| Breeders | None | 200m | 200m | 5m | 100m | 100m | 5m |
| Basic | None | 200m | 200m | 5m | 100m | 100m | 5m |
| 1st Generation | 1 per quadrat | 100m | 20m | 5m | 50m | 20m | 5m |

***Isolation** – Diploid / Tetraploid Ryegrass – The isolation requirement between a Diploid and a Tetraploid Ryegrass shall be 5 meters (there is a small risk of cross pollination between a Diploid and Tetraploid Ryegrass therefore it is recommended to leave the first outside header run out of the certified seed lot).

**Wild oats** - Any Tetraploid Ryegrass found to contain Wild Oat at field inspection will be rejected from certification. In the case of light infestations the grower may be given the opportunity to rogue the area.

***Degrading*** **-** Degrading procedures do not apply.

**Note:** Grasslands Tama only. A grower may harvest a second crop in the same harvest season without degrading. If taking a second crop the area must be re-entered and re-inspected.

***Purity Standards***

| | **Basic Seed** | **1st Generation** |
|---|---|---|
| Minimum pure seed | 99.0% | 98.0% |
| Other seed | 0.3% | 0.7% |

**Note:** Grasslands Moata - Seed cleaning must be such that a minimum 1000 seed weight of 3.5g is obtained.

**3.34 Ryegrass, Perennial, Forage** (*Lolium perenne* L.)
**(Forage Types)**

***Previous Cropping History***
An area must not have grown any other ryegrass during the previous two harvest seasons but successive crops of the same variety and certification class may be grown on the same area without any time interval.

***Closing Date for Applications***
Applications for certification must be submitted by the first Monday of September.

***Field Inspection***
Areas are to be inspected once at flowering.

***Contamination and Isolation Requirements***

| **Class of seed produced** | **Contaminants (Off-types, ryegrass)** | ***Isolation requirements** | | | | | |
|---|---|---|---|---|---|---|---|
| | | **Less than 2ha** | | | **More than 2ha** | | |
| | | ***Ryegrass and Festulolium*** | ***Fescue*** | ***Fine Fescue*** | ***Ryegrass and Festulolium*** | ***Fescue*** | ***Fine Fescue*** |
| Breeders | None | 200m | 200m | 5m | 100m | 100m | 5m |
| Basic | None | 200m | 200m | 5m | 100m | 100m | 5m |
| 1st Generation | 1 per quadrat | 100m | 20m | 5m | 50m | 20m | 5m |

***Isolation** – Diploid / Tetraploid Ryegrass – The isolation requirement between a Diploid and a Tetraploid Ryegrass shall be 5 meters (there is a small risk of cross pollination between a Diploid and Tetraploid Ryegrass therefore it is recommended to leave the first outside header run out of the certified seed lot).

**Wild oats -** Any Tetraploid Ryegrass found to contain Wild Oat at field inspection will be rejected from certification. In the case of light infestations the grower may be given the opportunity to rogue the area.

***Degrading of Areas*** **-** Areas are eligible to produce -
Breeders for 1 harvest season - then degraded to Basic for 3 harvest seasons.
Basic for 2 harvest seasons - then degraded to 1st Generation for 2 harvest seasons.
1st Generation for 4 harvest seasons.

**Note:** An area is degraded once only and is not eligible for re-entry into certification at the end of the degraded period.

***Purity Standards***

| | **Basic Seed** | **1st Generation** |
|---|---|---|
| Minimum pure seed | 99.0% | 98.0% |
| Other seed | 0.3% | 0.7% |

**3.35 Ryegrass, Perennial, Amenity** (*Lolium perenne* L.)
(***Amenity Types***)

***Previous Cropping History***
An area must not have grown any other Ryegrass during the previous two seasons but successive crops of the same variety and certification class may be grown on the same area without any time interval.

***Closing Date for Applications***
Applications for certification must be submitted by the first Monday of September.

***Field Inspection***
Areas are to be inspected once at flowering.

***Contamination and Isolation Requirements***

| **Class of seed produced** | **Contaminants (Off-types, ryegrass)** | ***Isolation requirements** | | | | | |
|---|---|---|---|---|---|---|---|
| | | **Less than 2ha** | | | **More than 2ha** | | |
| | | ***Ryegrass and Festulolium*** | ***Fescue*** | ***Fine Fescue*** | ***Ryegrass and Festulolium*** | ***Fescue*** | ***Fine Fescue*** |
| Breeders | None | 200m | 200m | 5m | 100m | 100m | 5m |
| Basic | None | 200m | 200m | 5m | 100m | 100m | 5m |
| 1st Generation | 1 per quadrat | 100m | 20m | 5m | 50m | 20m | 5m |

***Isolation** – Diploid / Tetraploid Ryegrass – The isolation requirement between a Diploid and a Tetraploid Ryegrass shall be 5 meters (there is a small risk of cross pollination between a Diploid and Tetraploid Ryegrass therefore it is recommended to leave the first outside header run out of the certified seed lot).

**Wild oats -** Any Tetraploid Ryegrass found to contain Wild Oat at field inspection will be rejected from certification. In the case of light infestations the grower may be given the opportunity to rogue the area.

***Degrading of Areas*** **-** Areas are eligible to produce -
Breeders for 1 harvest season - then degraded to Basic for 3 harvest seasons.
Basic for 2 harvest seasons - then degraded to 1st Generation for 2 harvest seasons.
1st Generation for 4 harvest seasons.

**Note:** An area is degraded once only and is not eligible for re-entry into certification at the end of the degraded period.

***Purity Standards***

| | **Basic Seed** | **1st Generation** |
|---|---|---|
| Minimum pure seed | 99.0% | 98.0% |
| Other seed | 0.3% | 0.7% |
| Maximum fluorescence | 1.0% | 2.0% |

**3.36 Swede** (*Brassica napus* L. var. *napobrassica*)

***Previous Cropping History***
An area must not have grown any other Brassica crop during the past 5 harvest seasons but successive crops of the same variety and certification class may be grown on the same area without any time interval.

***Closing Date for Applications***
Applications for certification must be submitted by the First Monday in June.

***Field Inspection***
Areas will be inspected twice:
First Early leaf stage.
Second Flowering.

***Contamination and Isolation Requirements***

| **Class of seed produced** | **Contaminants (Any other variety, any other Brassica)** | ***Isolation requirements** |
|---|---|---|
| Basic | None | 400m |
| 1st Generation | 1 per quadrat | 200m |

* Must be isolated from other Swede varieties, Rape, Turnips, and infestations of other Brassica plants, including Wild Turnip, sufficient to be a source of cross pollination. Need not be isolated from Kale and crops of the same variety.

***Purity Standards***

| | **Basic Seed** | **1st Generation** |
|---|---|---|
| Minimum pure seed | 99.0% | 99.0% |

**3.37 Timothy** (*Phleum pratense* L.)

***Previous Cropping History***
An area must not have grown any other timothy during the previous 2 harvest seasons but successive crops of the same variety and certification class may be grown on the same area without any time interval.

***Closing Date for Applications***
Applications for certification must be submitted by the First Monday of September.

***Field Inspection***
Areas are to be inspected once at flowering.

***Contamination and Isolation Requirements***

| **Class of seed produced** | **Contaminants (Early flowering types)** | ***Isolation requirements** (Must be isolated from any other crop of a different timothy variety). | |
|---|---|---|---|
| | | **Less than 2ha** | **More than 2ha** |
| Breeders | None | 200m | 100m |
| Basic | None | 200m | 100m |
| 1st Generation | 1 per quadrat | 100m | 50m |

***Degrading of Areas*** **-** Areas are eligible to produce -

Breeders for 2 harvest seasons - then degraded to Basic for 6 harvest seasons.
Basic for 2 harvest seasons - then degraded to 1st Generation for 6 harvest seasons.
1st Generation for 8 harvest seasons.

**Note:** An area is degraded once only and is not eligible for re-entry into certification at the end of the degraded period.

***Purity Standards***

| | **Basic Seed** | **1st Generation** |
|---|---|---|
| Minimum pure seed | 99.5% | 98.0% |
| Other seed | 0.3% | 1.0% |

**3.38 Triticale** (X *Triticosecale Wittm.*)

***Previous Cropping History***
**NZ Domestic Scheme:** An area must not have grown any other cereal in the previous harvest season but successive crops of the same variety and certification class may be grown on the same area without any time interval, provided that satisfactory varietal purity is maintained.
**NB.** Any crop grown under the NZ Domestic scheme rule will **not** be eligible for OECD certification.

**OECD Scheme:** An area must not have grown any other cereal in the previous **two** harvest seasons but successive crops of the same variety and certification class may be grown on the same area without any time interval, provided that satisfactory varietal purity is maintained.

***Closing Date for Applications***
Applications for certification must be submitted by the first Monday in November.

***Field Inspection***
Areas are to be inspected when in full ear.

***Contamination and Isolation Requirements***

| Class of seed produced | Contaminants (Any other variety, any other cereal) | Isolation requirements |
|---|---|---|
| Basic<br>1st Generation<br>2nd Generation | None<br>1 per 10 quadrats<br>1 per quadrat | 50m from other triticale varieties, 100m from Ryecorn. |

**Note:** Any crop found to contain Nodding Thistle, Wild Oat or Yellow Gromwell at field inspection will be rejected from certification.

***Purity Standards***

| | Basic Seed | 1st Generation | 2nd Generation |
|---|---|---|---|
| Minimum pure seed | 98.0% | 98.0% | 98.0% |
| Maximum other cereal seeds | 0.1% | 0.1% | 0.3% |

**3.39 Turnip** (*Brassica rapa* L.)

***Previous Cropping History***
An area must not have grown any other brassica crop during the past 5 harvest seasons but successive crops of the same variety and certification class may be grown on the same area without any time interval.

***Closing Date for Applications***
Applications for certification must be submitted by the First Monday in June.

***Field Inspection***
Areas will be inspected twice:-
First Early leaf stage.
Second Flowering.

***Field Inspection - Standards and Isolation Requirements***

| Class of seed produced | Contaminants (Any other variety, any other brassica) | *Isolation requirements |
|---|---|---|
| Basic | None | 400m |
| 1st Generation | 1 per quadrat | 200m |

*Must be isolated from other Turnip varieties, Rape, Swedes and infestations of other Brassica plants, including Wild Turnip, sufficient to be a source of cross pollination. Need not be isolated from Kale and crops of the same variety.

***Purity Standards***

| | Basic Seed | 1st Generation |
|---|---|---|
| Minimum pure seed | 99.0% | 99.0% |

**3.40 Wheat** (*Triticum aestivum* L.)

***Previous Cropping History***
**NZ Domestic Scheme:** An area must not have grown any other cereal in the previous harvest season but successive crops of the same variety and certification class may be grown on the same area without any time interval, provided that satisfactory varietal purity is maintained.
**NB.** Any crop grown under the NZ Domestic scheme rule will **not** be eligible for OECD certification.

**OECD Scheme:** An area must not have grown any other cereal in the previous **two** harvest seasons but successive crops of the same variety and certification class may be grown on the same area without any time interval, provided that satisfactory varietal purity is maintained.

***Closing Date for Applications***
Applications for certification must be submitted by the First Monday in November.

***Field Inspection***
Areas are to be inspected when in full ear.

***Contamination and Isolation Requirements***

| Class of seed produced | Contaminants (Any other variety, any other cereal, Loose smut) | Isolation requirements |
|---|---|---|
| Basic<br>1st Generation<br>2nd Generation | None<br>1 per 10 quadrats<br>1 per quadrat | Only a space sufficient to prevent mixture during harvest is required (See **Notes** below). |

**Note 1:** 50 metres isolation required for Monad, Norseman, Regency, Sapphire and Tribute from any other variety of wheat.

**Note 2:** 100 metres isolation required for Torlesse (Breeders, Basic and 1st Generation only) and Karamu from any other variety of wheat.

**Note 3:** There is no 2nd Generation class for Monad, Caprimus and Torfrida.

Any crop found to contain wild oat, yellow gromwell or nodding thistle at field Inspection will be rejected from certification.

***Purity Standards***

| | Basic Seed | 1st Generation | 2nd Generation |
|---|---|---|---|
| Minimum pure seed | 98.0% | 98.0% | 98.0% |
| Maximum other cereal seeds | 0.1% | 0.1% | 0.3% |

### 3.41 Yorkshire Fog (*Holcus lanatus* L.)

***Previous Cropping History***
An area must not have grown any other Yorkshire fog during the previous 2 harvest seasons, but successive crops of the same variety and certification class may be grown on the same area without any time interval.

***Closing Date for Applications***
Applications must be submitted by the First Monday of September.

***Field Inspection***
Areas are to be inspected once at flowering.

***Contamination and Isolation Requirements***

| Class of seed produced | Contaminants (Any other Yorkshire Fog including off-types) | Isolation requirements |
|---|---|---|
| Breeders<br>Basic<br>1st Generation | None<br>None<br>1 per quadrat | Must be isolated by 100m from any other crop of a different Yorkshire fog variety. |

***Degrading of Areas*** **-** Areas are eligible to produce -

Breeders for 1 harvest season, then degraded to Basic for 1 harvest season.
Basic for 1 harvest season, then degraded to 1st Generation for 1 harvest season.
1st Generation for 2 harvest seasons.

***Purity Standards***

| | Basic Seed | 1st Generation |
|---|---|---|
| Minimum pure seed | 99.0% | 98.0% |
| Other seed | 0.5% | 1.0% |