Animal & Plant Health Agency

TECHNICAL STANDARD SUPPLEMENTS

These Technical Supplements specify the conditions which must be met by seed which is officially certified in England (Wales).

- Conditions to be examined mainly by field inspection - sets out the seed standards which must be examined mainly by crop inspection.
- Conditions to be examined by seed testing - specifies the standards which must be shown to be met by an Official Testing Station for seed which is to be officially certified in England (Wales).
- Conditions to be examined by inspection of control plots – post control of basic seed of hybrids of swede rape and cereals
- Other conditions – is a general requirement of seed health, e.g. diseases and harmful organisms.
- General provisions - Pre-basic seed standards, commercial seed standards.

Technical Supplement - Beet Seeds

CONDITIONS RELATING TO CROPS FROM WHICH SEED IS TO BE HARVESTED

Previous cropping
The previous cropping of the field must not be incompatible with the production of seeds of *Beta vulgaris* L. of the variety of the crop and the field must be sufficiently free from plants which are volunteers from previous cropping.

Varietal identity and varietal purity
Crops of beet covered by the regulations are required to have sufficient varietal identity and varietal purity.

Examination of seed and previous multiplications
Multiplication seed used to produce seed crops is normally examined in control plots. It will also have been subject to examination during all stages of its production.

Isolation requirements (Table 1)
The crop must conform to the following standards as regards distances from neighbouring sources of pollen:

Crop	Minimum distance
1	**2**
(1) For the production of basic seed – - from any pollen source of the genus *Beta*	1,000 metres
(2) For the production of CS seed of sugar beet -	
(a) From any pollen sources of the genus *Beta* not included below	1,000 metres
(b) the intended pollinator or one of the intended pollinators being diploid, from tetraploid sugar beet pollen sources	600 metres

Crop	Minimum distance
1	**2**
(c) the intended pollinator being exclusively tetraploid, from diploid sugar beet pollen sources	600 metres
(d) from sugar beet pollen sources, the ploidy of which is unknown	600 metres
(e) the intended pollinator or one of the intended pollinators being diploid, from diploid sugar beet pollen sources	300 metres
(f) the intended pollinator being exclusively tetraploid, from tetraploid sugar beet pollen sources	300 metres
(g) between two sugar beet seed production fields in which male sterility is not used	300 metres
(3) For the production of CS seed of fodder beet -	
(a) from any pollen sources of the genus *Beta* not included below	1,000 metres
(b) the intended pollinator or one of the intended pollinators being diploid, from tetraploid fodder beet pollen sources	600 metres
(c) the intended pollinator being exclusively tetraploid, from diploid fodder beet pollen sources	600 metres
(d) from fodder beet pollen sources, the ploidy of which is unknown	600 metres
(e) the intended pollinator or one of the intended pollinators being diploid, from diploid fodder beet pollen sources	300 metres
(f) the intended pollinator being exclusively tetraploid, from tetraploid fodder beet pollen sources	300 metres
(g) between two fodder beet seed production fields in which male sterility is not used	300 metres

The distances can be disregarded if there is sufficient protection from any undesirable foreign pollinator. They do not apply in the case of seed crops using the same pollinator.

The ploidy of seed bearing and pollen shedding components of a seed producing crop is established by reference to the Common Catalogue or a National List. If such information is not included on the Common Catalogue or a National List, the ploidy of the components is regarded as unknown for the purposes of isolation distances.

Crop inspection requirements
Seed crops must be inspected to determine whether they meet the requirements set out in this Technical Supplement and the seed standards which must be determined mainly by crop inspection.

A crop from which Basic seed is to be produced must be examined by an official crop inspector. At least two inspections must be carried out, one of stecklings and the other of seed producing plants.

CS seed crops in early multiplication must also be inspected by officials. A crop from which CS seed of a listed variety is to be produced may be examined by a licensed inspector, provided the seed sown to produce the crop is subject to satisfactory post control. A minimum of one crop inspection is required.

Crop inspections must be carried out at a time when the cultural condition of the field and stage of development of the crop permit identity and varietal purity to be adequately checked.

Pre-basic crop standards
Crops to produce Pre-basic seed must meet the standards for Basic seed

CONDITIONS TO BE SATISFIED BY THE SEED

CONDITIONS TO BE EXAMINED MAINLY BY FIELD INSPECTION

Varietal identity and varietal purity
The seed must have sufficient varietal identity and varietal purity. Examination of these seed standards through crop inspection is dealt with in exactly the same way as examination of the crop standards.

CONDITIONS TO BE EXAMINED BY SEED TESTING
This specifies those seed qualities which must be examined by seed testing (e.g. analytical purity, germination, moisture content) and the minimum standards which the seed must meet to be officially certified. Seed tests must be done on a representative sample drawn from the seed lot by an official or by a licensed seed sampler. All seed tests may be done by an Official Seed Testing Station.

Analytical purity
The minimum analytical purity of both Basic and CS seed shall be 97% by weight excluding, where appropriate, granulated pesticides, pelleting substances or other solid additives.

Moisture content
The prescribed maximum moisture content of seed for both Basic and CS seed is 15% by weight excluding, where appropriate, granulated pesticides, pelleting substances or other solid additives. The test for moisture content must be carried out by an Official Seed Testing Station.

Percentage by weight of other seeds

The percentage by weight of other seeds must not exceed 0.3.

Germination (Table 2)
A germination test is required to establish whether Basic seed meets the germination standard and CS seed meets the minimum percentage germination set out in column 2 of the table.

Species and category	Germination standard for basic seed/minimum germination for CS seed (% of clusters or pure seed)
1	**2**
Sugar beet -	
(i) monogerm seed	80
(ii) precision seed	75
(iii) multigerm seed of a variety with more than 85% diploids	73
(iv) other seed	68
Fodder beet -	
(i) multigerm seed of a variety with more than 85% diploids, monogerm seed and precision seed	73
(ii) other seed	68

In the case of monogerm seed -
(a) at least 90% of the germinated clusters shall give single seedlings, and
(b) clusters giving three or more seedlings shall not exceed 5% of the germinated clusters.

In the case of precision seed of sugar beet -
(a) at least 70% of the germinated clusters shall give single seedlings, and
(b) clusters giving three or more seedlings shall not exceed 5% of the germinated clusters.

In the case of precision seed of fodder beet -
(a) in the case of a variety with a percentage of diploids exceeding 85%, at least 58% of the germinated clusters shall give single seedlings, and
(b) in the case of any other variety, at least 63% of the germinated clusters shall give single seedlings.

In the case of precision seed of fodder beet, clusters giving three or more seedlings shall not exceed 5% of germinated clusters.

Inert matter

In the case of monogerm and precision seed, the weight of inert matter shall not exceed–

(a) 1.0% in the case of Basic seed, and

(b) 0.5% in the case of CS seed.

For the purposes of determining whether the pelleted seed of Basic or CS seed will satisfy these conditions, an official sample of seed drawn from processed seed which has undergone partial decortications (rubbing or grinding) but has not yet been pelleted shall be examined.

OTHER CONDITIONS

Diseases which reduce the usefulness of the seed shall be at the lowest possible level that can be achieved.

GENERAL PROVISIONS

Pre-basic seed must meet the standards for Basic seed.

LOT AND SAMPLE WEIGHTS (Table 3)

Maximum weight of a seed lot, the minimum weight of an official sample and the minimum weight of an official sample for a moisture test:

Maximum weight of a seed lot	20 tonnes
Minimum weight of a sample	500 grams or 7,500 pelleted seed
Minimum weight of a sample for a moisture test	50 grams

The maximum weight of a lot may be exceeded by up to 5%

These are the minimum sample weights specified in the directive. Where samples are drawn by licensed seed samplers, the minimum weight will normally be twice that shown, because of the need to provide for reserve portions. Moisture samples must be submitted in a sealed, moisture proof container from which as much air as possible has been excluded. Details are given in Instructions to Licensed Seed Samplers.

LIMITS OF VARIATION (Table 4)

The limits of variation prescribed for civil liabilities are as follows.

For germination or for clusters with a single seedling	
Stated minimum percentage of germination or clusters with a single seedling (expressed as an integer)	*Limit of variation %*
99-100	2
97-98	3
94-96	4
91-93	5
87-90	6
82-86	7
76-81	8
69-75	9
60-68	10
50-59	11

Analytical purity	
Stated minimum percentage of analytical purity (expressed to one decimal point)	*Limit of variation %*
99.9 - 100	0.2
99.8	0.3
99.6-99.7	0.4
99.3-99.5	0.5
99.0-99.2	0.6
98.5-98.9	0.7
98.3-98.4	0.8
97.5-98.2	0.9
97.0-97.4	1.0
96.5-96.9	1.1
95.5-96.4	1.2
95.0-95.4	1.3

Content of seeds of other species	
Stated maximum percentage of seeds of other species (expressed to one decimal point)	Limit of variation %
0.0	0.1
0.1-0.2	0.3
0.3-0.4	0.4
0.5	0.5

Clusters with three or more seedlings	
Stated maximum percentage of clusters with three or more seedlings (expressed as an integer)	*Limit of variation* *%*
0-2	2
3-4	3
5-6	4
7-9	5
10	6

Technical Supplement - Cereal Seeds

CONDITIONS RELATING TO CROPS FROM WHICH SEED IS TO BE HARVESTED

Previous cropping
The previous cropping of the field must not be incompatible with the production of seeds of the species and variety of the crop and the field must be sufficiently free from plants which are volunteers from previous cropping. Please refer to Annex 1 for further guidance.

Isolation requirements (Table 1)
In the case of *maize*, *rye (other than a hybrid variety or component of a hybrid variety of rye) and a self pollinating variety of triticale* the crop must conform to the following standards as regards distances from neighbouring sources of pollen which may result in undesirable foreign pollination:

Crop	Minimum distance
1	**2**
Maize, for the production of basic or CS seed	200 metres
Rye (other than a hybrid component or hybrid variety): - for the production of basic seed - for the production of CS seed	 300 metres 250 metres
Self-pollinating varieties of triticale: - for the production of basic seed - for the production of C1 and C2 seed	 50 metres 20 metres

In the case of a ***hybrid*** *variety or component of a* ***hybrid*** *variety of rye*, the crop must conform to the following standards as regards distances from neighbouring sources of pollen which may result in undesirable foreign pollination:

Crop	Minimum distance
1	**2**
Barley (hybrid variety or component of a hybrid	
- for the production of basic seed	100 metres
for the production of CS seed	50 metres
Rye (hybrid variety or component of a hybrid variety)	
- for the production of basic seed:	
where male sterility is used	1,000metres
where male sterility is not used	600 metres
- for the production of CS seed	500 metres

In the case of *a crop to produce a* ***hybrid*** *of durum wheat, oats, self pollinating triticale, spelt wheat or wheat,* the female component of the crop must be at least 25 metres from a crop of any other variety of the same species, except from a crop of the male component.

The distances do not apply if there is sufficient protection from any undesirable foreign pollination.

Species purity (Table 2)
Species purity standards apply only to *barley, oats, wheat, durum wheat and spelt wheat, other than hybrids in each case*, where the crop is verified at Higher Voluntary Standards (HVS).

Crops to produce	Higher Voluntary Standard (percentage by number)
Basic Seed	99.99
C1 seed	99.99
C2 seed	99.99

Varietal identity and varietal purity
Crops of <u>all</u> species covered by the regulations are required to have sufficient varietal identity and varietal purity.

In the case of an inbred line, a crop is required to have sufficient varietal identity and purity as regards its characteristics.

For the production of seed of a hybrid variety, the requirement for sufficient varietal identity and purity also applies to the characteristics of the components including male sterility or fertility restoration.

These general requirements are supplemented by specific standards for *non hybrid and hybrid rye*, *maize* and *hybrids of barley, durum wheat, oats, self pollinating triticale, spelt wheat and wheat*.

Specific minimum varietal purity standards for non hybrid varieties of *barley, durum wheat, oats, self pollinating triticale, spelt wheat and wheat* are prescribed as seed standards.

Specific standards for rye, other than a hybrid of rye

In the case of *rye, other than a hybrid,* the number of plants of the crop species which are recognisable as obviously not being true to the variety must not exceed–

(a) one per 30 square metres for the production of basic seed; and

(b) one per 10 square metres for the production of CS seed.

Specific standards for hybrids of rye

In the case of *hybrid rye*, the crop must have sufficient identity and purity as regards the characteristics of the components, including male sterility.

The number of plants of the crop species which are recognisable as obviously not being true to the component must not exceed –

(a) in the case of a crop for the production of basic seed, one per 30 square metres, and

(b) in the case of a crop for the production of CS seed, 1 per 10 square metres –

in an official field inspection, this standard applies only to the female component.

In the case of basic seed, where male sterility is used, the level of sterility of the male-sterile component must be at least 98%.

Where appropriate, CS seed must be produced in mixed cultivation of a female male-sterile component with a male component which restores male fertility.

Specific standards for maize

In the case of *maize*, the percentage by number of plants which are recognisable as obviously not being true to the variety, the inbred line or the component must not exceed –

(a) for the production of basic seed:
  - (i) in the case of an inbred line, 0.1%;
  - (ii) in the case of each component of a simple hybrid, 0.1%; and
  - (iii) in the case of an open pollinated variety, 0.5%

(b) for the production of CS seed:
  - (i) a component of a hybrid variety:
    - (a) in the case of an inbred line, 0.2%;
    - (b) in the case of a simple hybrid, 0.2%;
    - (c) in the case of an open pollinated variety, 1%; and
  - (ii) in the case of an open pollinated variety, 1%.

The following additional conditions also apply to production of seed of a *hybrid variety of maize*:

(a) sufficient pollen must be shed by the plants of the male component while the plants of the female component are in flower;
(b) where appropriate emasculation must be carried out; and
(c) where 5% or more of the female component plants have receptive stigmas, the percentage of female component plants which have shed pollen or are shedding pollen must not exceed:

(i) 1% at any official field inspection; and
(ii) 2% at the total of the official field inspections.

For the purposes of plants that are considered as having shed pollen or to be shedding pollen where, on 50 mm or more of the central axis or laterals of a panicle, the anthers have emerged from their glumes and have shed or are shedding pollen.

Specific standards for hybrids of barley, durum wheat, oats, self-pollinating triticale, spelt wheat and wheat
In the case of *hybrids of barley, durum wheat, oats, self-pollinating triticale, spelt wheat and wheat*, the crop must have sufficient identity and purity as regards the characteristics of the components.

Where seed is produced using a chemical hybridisation agent, the crop must conform to the following standards or other conditions:

(a) the minimum varietal purity of each component is:
(i) in the case of barley, durum wheat, oats, spelt wheat or wheat, 99.7%, and
(ii) in the case of self-pollinating triticale, 99.0%

(b) the minimum hybridity is 95%.

Where hybrid barley seed is produced by means of Cytoplasmic Male Sterility (CMS), the crop must conform to the follow standards or conditions:

(a) the minimum varietal purity of each component is:
(i) for the production of basic seed
Maintainer and restorer line 99.9%
CMS female component 99.8%
(ii) for the production of certified seed
Restorer and CMS female component 99.7%
Hybrid CMS female component 99.5%.

(b) the minimum level of male sterility of the female component is:
(i) for the production of basic seed 99.7%
(ii) for the production of certified seed 99.5%

In cases where the hybridity is determined during seed testing prior to certification, the determination of the hybridity during a field inspection need not be done.

Freedom from wild oat contamination (Table 3)
The maximum number of wild oats permitted per hectare shall be as follows:

Crops to Produce	Basic Seed		CS Seed	C1 seed		C2 seed	
Level (where applicable)	HVS	Minimum	Minimum	HVS	Minimum	HVS	Minimum
Oats	Nil	Nil	N/A	Nil	Nil	Nil	Nil
Hybrid of Oats	N/A	Nil	Nil	N/A	N/A	N/A	N/A
Barley	7	7	N/A	7	20	7	20
Hybrid of Barley	N/A	7	20	N/A	N/A	N/A	N/A
Wheat, durum wheat and spelt wheat	7	7	N/A	7	50	7	50
Hybrid of wheat, durum wheat and spelt wheat	N/A	7	50	N/A	N/A	N/A	N/A
Rye and maize (including hybrids	N/A	7	50	N/A	N/A	N/A	N/A
Triticale	N/A	7	N/A	N/A	50	N/A	50
Hybrids of self-pollinating triticale	N/A	7	50	N/A	N/A	N/A	N/A

Harmful organisms
Harmful organisms which reduce the usefulness of the seed, in particular loose smut infection, must be at the lowest possible level. Specific standards for maximum

loose smut infection of barley, durum wheat, spelt wheat and wheat are prescribed as seed standards to be examined mainly in field inspection.

Crop inspection requirements
Seed crops must be inspected to determine whether they meet the requirements set out in this Technical Supplement and the seed standards which must be determined mainly by crop inspection.

A crop from which basic seed is to be produced must be examined by an UK official crop inspector. CS, C1 and C2 seed crops in early multiplication must also be inspected by officials. A crop from which CS, C1 or C2 seed is to be produced may be examined by a licensed inspector, provided the seed sown to produce the crop is subject to satisfactory post control.

Crop inspections must be carried out at a time when the condition and stage of development of the crop permit an adequate examination. Crops to produce HVS seed must not be more than one third lodged at the time of inspection.

A minimum of one crop inspection is required, except for maize where:

(a) at least three inspections must be carried out in the case of an inbred line or hybrid of maize; and
(b) where the maize crop to be examined follows a maize crop in either the preceding or current year, at least one special field inspection must be carried out to check that the field is sufficiently free from volunteers from previous cropping.

Pre-basic crop standards

Crops to produce Pre-basic seed must meet the standards for Basic seed. HVS does not apply to Pre-basic seed of barley, durum wheat, oats, spelt wheat and wheat. Pre-basic seed of these crops must therefore meet Basic seed minimum standards.

CONDITIONS TO BE SATISFIED BY THE SEED

CONDITIONS TO BE EXAMINED MAINLY BY FIELD INSPECTION

Varietal identity and varietal purity
The seed must have sufficient varietal identity and varietal purity.

The seed of an in-bred line must have sufficient varietal identity and purity as regards its characteristics.

In the case of seed of a hybrid variety, the requirement for sufficient varietal identity and purity also apply to the characteristics of the components.

Varietal purity standards for barley, durum wheat, oats, spelt wheat, wheat and self pollinating triticale, except hybrids in each case (Table 4)

The following minimum varietal purity standards apply to *barley, durum wheat, oats, spelt wheat and wheat* other than hybrids –

Category	Minimum standard (percentage by number)	Higher Voluntary Standard (percentage by number)
Basic seed	99.9	99.95
C1 seed	99.7	99.9
C2 seed	99.0	99.7

In the case of *self-pollinating triticale*, other than a hybrid, the minimum varietal purity standard is –

Category	Minimum standard (percentage by number)
Basic seed	99.7
C1 seed	99.0
C2 seed	98.0

In each case, the minimum varietal purity of seed must be examined mainly in crop inspections.

Varietal purity standards for hybrids of barley, durum wheat, oats, self pollinating triticale, spelt wheat and wheat

In the case of a hybrid *of durum wheat, oats, self pollinating triticale, spelt wheat and wheat* the minimum varietal purity of CS seed of the hybrid variety is 90%.

In the case of a hybrid of barley:

the minimum varietal purity of the CS seed of the hybrid variety is 85%
impurities other than the male restorer must not exceed 2%.

This cannot be assessed directly in seed producing crops, therefore it is require that the minimum varietal purity of CS seed be examined mainly in official post control tests on an “appropriate” proportion of samples.

Conditions applying to the production of CS seed of a hybrid maize variety
These require that where a female male-sterile component and a male component which does not restore male fertility are used for the production of CS seed of a hybrid variety of *maize*, the seed shall be produced –

(a) by blending seed lots in a proportion appropriate to the variety where, on the one hand a female male-sterile component has been used and, on the other, a female male-fertile component has been used, or
(b) by growing the female male-sterile component and the female male-fertile component in a proportion appropriate to the variety.

In the case of seed produced in the manner specified above) the proportion of the female male-sterile and female male-fertile components must be examined in crop inspections.

Loose smut standards for barley, durum wheat, spelt wheat and wheat (Table 5)

In the case of barley, wheat, durum wheat and spelt wheat, including hybrids, the maximum percentage by number of loose smut infection is as follows –

Category	Minimum standard	Higher Voluntary Standard (does not apply to hybrids)
Basic seed	0.5	0.1
C1 seed	0.5	0.2
C2 seed	0.5	0.2

The incidence of loose smut infection of seed to be examined mainly in crop inspections.

Seed which fails to meet the loose smut standards may be retrieved:
(a) if it has been adequately treated by any product approved by the Secretary of State for the control of loose smut under the Control of Pesticides Regulations (Amendment) 1997; or
(b) if an embryo test carried out by an Official Seed Testing Station (OSTS) on a sample submitted for seed testing shows that the seed meets the relevant standard.

CONDITIONS TO BE EXAMINED BY SEED TESTING

This specifies those seed qualities which must be examined by seed testing (e.g. analytical purity, germination, moisture content) and the minimum standards which the seed must meet to be officially certified. Seed tests must be done on a representative sample drawn from the seed lot by an official or by a licensed seed sampler. All seed tests except moisture tests may be done by an Official Seed Testing Station (OSTS) or officially Licensed Seed Testing Station (LSTS). Moisture

tests may be done by either a licensed seed sampler or an OSTS or LSTS. Refer to the Instructions to Licensed Seed Samplers.

Analytical purity (Table 6)

The analytical purity standards are:

Species and category **1**	**Level (where applicable)** **2**	**Minimum analytical purity (% by weight)** **3**
Basic seed of barley, durum wheat, oats, spelt wheat and wheat (hybrids or components of hybrid varieties – minimum level only)	HVS	99
	Minimum	99
CS seed of hybrids barley, durum wheat, oats, spelt wheat and wheat	-	98
C1 seed of barley, durum wheat, oats, spelt wheat and wheat	HVS	99
	Minimum	98
C2 seed of barley, durum wheat, oats, spelt wheat and wheat	HVS	99
	Minimum	98
Basic and CS seed of rye	-	98
Basic, CS, C1 and C2 seed of triticale and CS seed of hybrids of self-pollinating triticale	-	98
Basic and CS seed of maize	-	98

Maximum content by number of seeds of other plant species (Table 7)

The minimum standards are:

Species	**Category and Level (where applicable, see note (a))**	**Minimum standard - maximum content by number of seeds of other plant species in a 500 gram sample (all species except maize) or for maize 1,000 gram sample (or for basic seed of inbred lines of maize 250 gram sample)** **HVS (where applicable see note (a)) - maximum content by number of seeds of other plant species in a 1 Kg sample**					
		Total all other species	**Other cultivated cereal species**	**All species other than cultivated cereals**	**Wild oats or Darnel**	**Wild radish or corn cockle (minimum standard only)**	**Wild radish, corncockle, sterile brome or couch (HVS only)**
All species except maize	Basic HVS (a)	1	0	1	0	Not applicable	0 (d)
	Basic minimum	4	1 (b)	3	0 (c)	1	Not applicable
	CS, C1, C2 minimum	10	7	7	0(c)	3	Not applicable
	C1 HVS	2	1	1	0	Not applicable	1
	C2 HVS	4	3	2	0	Not applicable	1
Maize	Basic and CS	0	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

(a) HVS applies to barley, durum wheat, oats, spelt wheat and wheat, except hybrids or components of hybrids in each case.

(b) As regards seeds of other cereal species, a second seed in a 500 gram sample shall not be regarded as an impurity if a second 500 gram sample is free from any seeds of other cereal species.

(c) The presence of one seed of wild oats or darnel in a 500 gram sample shall not be regarded as an impurity where a second sample of the same weight is free from any seeds of these species.

(d) The nil standard applies only to wild radish or corncockle in Basic HVS seed

Germination (Table 8)
A germination test is required to establish whether seed meets the following minimum percentage germination:

Species and category	Minimum germination (% of pure seed)
a) Basic, CS, C1 and C2 seed of (i) Barley (other than seed officially classed as Naked barley) (ii) durum wheat (iii) oats (other than CS, C1 and C2 seed of oats officially classified as being of the naked oat type) (iv) spelt wheat (v) wheat	85
b) CS, C1 and C2 seed of oats officially classified as being of a naked oat type	75
c) Basic, CS, C1 and C2 seed of Naked barley	75
d) Basic and CS seed of maize	90
e) Basic and CS seed of rye	85
f) Basic, CS, C1 and C2 seed of triticale	80

The requirement for a germination test does not apply where seed viability is established using a tetrazolium test, unless the result casts doubt about whether the seed will satisfy the germination standard. The tetrazolium test must be carried out at an Official Seed Testing Station or officially Licensed Seed Testing Station, on the official seed sample taken from a seed lot and submitted by the licensed seed sampler. If a full germination test is undertaken in addition to the tetrazolium test, the results take precedence over the tetrazolium test result.

Ergot contamination (Table 9)

The number of sclerotia or fragments of sclerotia of Ergot (*Claviceps purpurea*) in a sample of the weight as specified in the table must not exceed the following –

Species	Category	Level (where applicable)	Sample size	Sclerotia or fragments of sclerotia
All Cereal species except hybrids of rye	Basic seed	HVS	1,000g	0
		Minimum	500g	1
	CS seed	Not applicable	500g	3
	C1 and C2 seed	HVS	1,000g	1
		Minimum	500g	3
Hybrids of rye	Basic seed	Not applicable	500g	1
	CS seed	Not applicable	500g	4 (a)

(a) The presence of 5 sclerotia or fragments of sclerotia of ergot in a sample of CS seed of a hybrid variety of rye is deemed to be in conformity with the requirements of regulations where a second sample of the same weight contains not more than 4 sclerotia or fragments of sclerotia.

Moisture content

The prescribed maximum moisture content of seed is 17% by weight (all species, categories and levels). The test for moisture content may be done by a licensed seed sampler at the time the official sample is drawn, in which case it is not necessary for an Official Seed Testing Station or officially Licensed Seed Testing Station to undertake a moisture test. If the licensed seed sampler does not do the moisture test, the test must then be done by the Official Seed Testing Station or officially Licensed Seed Testing Station.

CONDITIONS TO BE EXAMINED BY INSPECTION OF CONTROL PLOTS

Post control of CS seed of hybrids of barley, durum wheat, oats, self pollinating triticale and wheat

In the case of a hybrid of durum wheat, oats, spelt wheat, wheat and self-pollinating triticale, the minimum varietal purity shall be 90% in the case of CS seed.

In the case of a hybrid of barley:

Minimum varietal purity of CS seed shall be at least 85%

Impurities other than the male restorer must not exceed 2%.

The minimum varietal purity of seed shall be examined on an appropriate portion of samples.

Post control of Basic seed of hybrids of rye

Seed of a hybrid variety of rye cannot be certified as CS seed unless due account has been taken of the results of a post-control test on official samples of the Basic seed of its components. Post control of the Basic seed must be done in the same growing season as the CS seed is produced, to ascertain whether the Basic seed has met the requirements for Basic seed in respect of identity and purity of the characters of the components, including male sterility.

OTHER CONDITIONS

Harmful organisms

This requires harmful organisms which reduce the usefulness of the seed to be at the lowest possible level. There are no tests prescribed for harmful organisms. However, persons entering seed for certification must confirm that this condition is met.

GENERAL PROVISIONS

Pre-basic seed standards

Pre-basic seed must meet the standards for Basic seed. HVS does not apply to Pre-basic seed of barley, durum wheat, oats, spelt wheat and wheat. Pre-basic seed of these species must therefore meet Basic seed minimum standards.

LOT AND SAMPLE WEIGHTS (Table 10)

The table shows the maximum weight of a seed lot, the minimum weight of an official sample, the minimum weight of an official sample for a moisture test and the minimum weight of seed which must be examined to determine other seed content.

Species	**Maximum weight of a seed lot (tonnes)(a)**	**Minimum weight of a sample (grams)(b)**	**Minimum weight of sample for a moisture test***	**Weight of a sample for determining other seed content**
barley, durum wheat, oats, rye, spelt wheat, triticale and wheat	30 tonnes	1,000g	100g	HVS - 1,000g (c) Minimum – 500g
Maize, basic seed of inbred lines	40 tonnes	250g	100g	250g
Maize, basic seed other than inbred lines and CS seed	40 tonnes	1,000g	100g	1,000g
A mixture of seeds (excluding maize)	30 tonnes**	Not applicable	Not applicable	Not applicable
A mixture of seeds of maize	40 tonnes	Not applicable	Not applicable	Not applicable

(a) The maximum weight of a lot may be exceeded by up to 5%.

(b) These are the minimum sample weights specified in the directive. Where samples are drawn by licensed seed samplers, the minimum weight will normally be twice that shown, because of the need to provide for reserve portions. Details are given in instructions to licensed seed samplers.

(c) HVS applies to Basic, C1 and C2 seed of barley, durum wheat, oats, spelt wheat and wheat.

* Check with LSTS for sample size required.

****** If more than 50% of the mixture consists of a species where the maximum weight of a lot is higher or lower than 30 tonnes the weight of the majority species should be used for the lot.

LIMITS OF VARIATION (Table 11)

The limits of variation prescribed for civil liabilities are as follows:

Germination	
Stated minimum percentage of germination	*Limit of variation %*
99-100	2
97-98	3
94-96	4
91-93	5
87-90	6
82-86	7
76-81	8
69-75	9
65-68	10

Analytical purity	
Stated minimum percentage of analytical purity (expressed to one decimal point)	*Limit of variation %*
99.9 - 100	0.2
99.8	0.3
99.6-99.7	0.4
99.3-99.5	0.5
99.0-99.2	0.6
98.5-98.9	0.7
98.3-98.4	0.8
97.5-98.2	0.9
97.0-97.4	1.0
96.5-96.9	1.1
95.5-96.4	1.2
95.0-95.4	1.3

Content of seeds of other plant species	
Stated maximum number of seeds of other species	*Limit of variation number*
0	1
1	3
2	4
3 and 4	5
5 and 6	6
7 and 8	7
9 to 11	8
12 to 14	9
15 to 17	10
18 to 20	11

Technical Supplement - Fodder Plant Seeds

CONDITIONS RELATING TO CROPS FROM WHICH SEED IS TO BE HARVESTED

Previous cropping
The previous cropping of the field must not be incompatible with the production of seeds of the species and variety of the crop and the field must be sufficiently free from plants which are volunteers from previous cropping. Please see Annex 1for further guidance.

Isolation requirements (Table 1)
In the case of *fodder kale, swede and crops of all other species except field peas and apomictic uni-clonal varieties of smooth-stalked meadowgrass* (for which there are no specific standards) the crop must conform to the following standards as regards distances from neighbouring sources of pollen which may result in undesirable foreign pollination:

Crop	Minimum distance
1	**2**
Fodder kale and swede-	
- for the production of basic seed	400 metres
- for the production of CS seed	200 metres
Crops of all other species except field peas and apomictic uni-clonal varieties of smooth-stalked meadowgrass –	
- for the production of seed intended for multiplication, fields up to 2 hectares	200 metres
- for the production of seed intended for multiplication, fields over 2 hectares	100 metres
- for the production of seed intended for the production of fodder plants, fields up to 2 hectares	100 metres
- for the production of seed intended for the production of fodder plants, fields over 2 hectares	50 metres

The distances do not apply if there is sufficient protection from any undesirable foreign pollination.

Varietal identity and varietal purity

Crops of all species covered by the regulations are required to have sufficient varietal identity and varietal purity. These general requirements are supplemented by specific crop standards for the species. Seed standards for varietal purity examined mainly by field inspection are also prescribed for *fodder kale, apomictic uniclonal varieties of smooth-stalked meadowgrass, swede, field beans and field peas.*

Specific standards for grasses (except smooth-stalked meadowgrass) Alsike clover, birdsfoot trefoil, fodder radish, lucerne, lupins, red clover, sainfoin, trefoil, black medick, vetches and white clover.

In the case of *all grasses (except smooth-stalked meadowgrass) Alsike clover, birdsfoot trefoil, fodder radish, lucerne, lupins, red clover, sainfoin, trefoil, black medick, vetches and white clover,* the number of plants of the crop species which are recognisable as obviously not being true to the variety must not exceed –

(a) one per 30 square metres for the production of basic seed; and
(b) one per 10 square metres for the production of CS seed.

Specific standards for smooth-stalked meadowgrass

In the case of *smooth-stalked meadowgrass,* the number of plants which are recognisable as obviously not being true to the variety must not exceed -
(a) for the production of basic seed, one plant per 20 square metres, and
(b) for the production of CS seed –

(i) except in the case of an apomictic uni-clonal variety, four plants per 10 square metres; and
(ii) in the case of an apomictic uni-clonal variety, six plants per 10 square metres.

Species purity

Plants of other species, the seeds of which are difficult to distinguish from the crop seeds in a laboratory test, must be at a low level.

The following specific species purity standards apply to *festulolium* and *hybrid, Italian* and *perennial ryegrass.* In the case of these species, the number of plants of a *Lolium* species or *festulolium*, other than the crop species itself, must not exceed:
(a) one per 50 square metres for the production of Basic seed; and
(b) one per 10 square metres for the production of CS seed.

Number of harvest years (hybrid and Italian ryegrass only)

Crops to produce pre-basic, basic, or CS seed of *hybrid or Italian ryegrass* must not be used to produce a crop in the second harvest year unless –

(a) pre-basic seed was produced in the first harvest year in which case basic seed may be produced in the second harvest year,
(b) basic seed was produced in the first harvest year from a crop grown from officially certified pre-basic seed, in which case CS seed may be produced in the second harvest year, or
(c) for a tetraploid variety of hybrid ryegrass, CS seed was produced in the first harvest year from a crop grown from officially certified basic seed, in which case CS seed may be produced in the second harvest year.

Harmful organisms
Harmful organisms which reduce the usefulness of the seed must be at the lowest possible level.

Crop inspection requirements
Seed crops must be inspected to determine whether they meet the requirements set out in this Technical Supplement and the seed standards which must be determined mainly by crop inspection.

A crop from which basic seed is to be produced must be examined by an official crop inspector. CS, C1 and C2 seed crops in early multiplication must also be inspected by officials. A crop from which CS, C1 or C2 seed is to be produced may be examined by a licensed inspector, provided the seed sown to produce the crop is subject to satisfactory post control.

A minimum of one crop inspection is required. Crop inspections must be carried out at a time when the condition and stage of development of the crop permit an adequate examination.

Pre-basic crop standards

Crops to produce Pre basic seed must meet the standards for Basic seed.

CONDITIONS TO BE SATISFIED BY THE SEED

CONDITIONS TO BE EXAMINED MAINLY BY FIELD INSPECTION

Varietal identity and varietal purity
The seed must have sufficient varietal identity and varietal purity.

Varietal purity standards for fodder kale, apomictic uni-clonal varieties of smooth-stalked meadowgrass, swede, field beans and field peas (Table 2)

The following minimum varietal purity standards apply to *fodder kale, apomictic uni-clonal varieties of smooth-stalked meadowgrass, swede, field beans and field peas* –

Species and category	Minimum varietal purity standard (percentage by number)
Fodder kale, apomictic uni-clonal varieties of smooth-stalked meadowgrass and swede –	
(i) basic seed	99.7
(ii) CS seed	98.0
Field beans and field peas –	
(i) basic seed	99.7
(ii) C1 seed	99.0
(iii) C2 seed	98.0

In each case, the minimum varietal purity of seed must be examined mainly in crop inspections.

CONDITIONS TO BE EXAMINED BY SEED TESTING

This specifies those seed qualities which must be examined by seed testing (e.g. analytical purity, germination) and the minimum standards which the seed must meet to be officially certified. Seed tests must be done on a representative sample drawn from the seed lot by an official or by a licensed seed sampler. All seed tests may be done by an Official Seed Testing Station or officially Licensed Seed Testing Station.

Seed standards

Analytical purity (Table 3)

The analytical purity standards are as follows:

Species	Minimum analytical purity (% by weight) EU minimum standard	Minimum analytical purity (% by weight) HVS standard
	All categories	CS only
Fine grasses – (a) annual meadowgrass	85	Not applicable
(b) brown top	90	Not applicable
(c) creeping bent grass	90	Not applicable
(d) festulolium	96	98
(e) Fine leaved sheep's fescue	85	Not applicable
(f) Hard fescue	85	Not applicable
(g) red fescue (inc. Chewing's fescue)	90	95
(h) red top	90	Not applicable
(i) rough- stalked meadowgrass	85	Not applicable
(j) sheep's fescue	85	Not applicable
(k) smooth-stalked meadowgrass	85	90
(l) velvet bent	90	Not applicable
(m) wood meadowgrass	85	Not applicable

Species	Minimum analytical purity (% by weight) EU minimum standard	Minimum analytical purity (% by weight) HVS standard
	All categories	CS only
Fodder grasses –		
(a) Alaska brome-grass	97	Not applicable
(b) cocksfoot	90	90
(c) hybrid ryegrass	96	98
(d) Italian ryegrass	96	98
(e) meadow fescue	95	98
(f) perennial ryegrass	96	98
(g) rescue grass	97	Not applicable
(h) small Timothy	96	98
(i) tall fescue	95	98
(j) tall oatgrass	90	Not applicable
(k) Timothy	96	98
Small seeded legumes		
(a) Alsike clover	97	Not applicable
(b) birdsfoot trefoil	95	Not applicable
(c) lucerne	97	98
(d) red clover	97	98
(e) sainfoin	95	98
(f) trefoil, black medick	97	Not applicable
(g) white clover	97	98

Species	**Minimum analytical purity (% by weight)** EU minimum standard	**Minimum analytical purity (% by weight)** HVS standard
	All categories	CS only
Large seeded legumes		
(a) blue lupin	98	Not applicable
(b) common vetch	98	Not applicable
(c) field bean	98	Not applicable
(d) field pea	98	Not applicable
(e) hairy vetch	98	Not applicable
(f) Hungarian vetch	98	Not applicable
(g) white lupin	98	Not applicable
(h) yellow lupin	98	Not applicable
Crucifers (a) fodder kale	98	Not applicable
(b) fodder radish	97	Not applicable
(c) swede	98	Not applicable

Maximum content of seeds of other plant species (Table 4)

The seed has to meet the following standards or other conditions as regards the maximum content of seeds of other plant species

Species	**Basic seed**		**CS, C1 and C2 seed EU minimum standard level**		**CS seed HVS level**	
	Total (percentage by weight)	A single species (content by number in a sample of the weight)	Total (percentage by weight)	A single species (percentage by weight)	Total (percentage by weight)	A single species (percentage by weight)
1. Fine grasses		(notes (a) & (c))		(note (d))	Not applicable	Not applicable
(a) Fine grasses other than –	0.3	20	2.0	1.0		
(i) Festulolium						
(ii) Red fescue (inc. Chewing's fescue)						
(iii) Smooth-stalked meadowgrass						

Species	Basic seed		CS, C1 and C2 seed EU minimum standard level		CS seed HVS level	
	Total (percentage by weight)	A single species (content by number in a sample of the weight)	Total (percentage by weight)	A single species (percentage by weight)	Total (percentage by weight)	A single species (percentage by weight)
(b) Festulolium	0.3	20	1.5	1.0	1.5	Not applicable
(c) Red fescue (inc. Chewing's fescue)	0.3	20	1.5	1.0	1.5	0.5 (note (b) and (m))
(d) Smooth-stalked meadowgrass	0.3	20	2.0	1.0	1.5	0.5 (note (e))
2. Fodder grasses		(note (a))				(notes (f), (h) and (l))
(a) Fodder grasses other than -	0.3	20	1.5	1.0	1.5	0.5
(i) Alaska brome-grass (ii) Rescue grass (iii) Tall oatgrass						

Species	Basic seed		CS, C1 and C2 seed EU minimum standard level		CS seed HVS level	
	Total (percentage by weight)	A single species (content by number in a sample of the weight)	Total (percentage by weight)	A single species (percentage by weight)	Total (percentage by weight)	A single species (percentage by weight)
(b) Alaska brome-grass and rescue grass	0.4	20	1.5	1.0	Not applicable	Not applicable
(c) Tall oatgrass	0.3	20	3.0	1.0 (note (g))	Not applicable	Not applicable
3. Small seeded legumes						
(a) Alsike clover, and trefoil, black medick	0.3	20	1.5	1.0	Not applicable	Not applicable
(b) Birdsfoot trefoil	0.3	20	1.8	1.0 (note (i))	Not applicable	Not applicable
(c) Lucerne, red clover and white clover	0.3	20	1.5	1.0	1.5	0.5
(d) Sainfoin	0.3	20	2.5	1.0	1.5	0.5

Species	Basic seed		CS, C1 and C2 seed EU minimum standard level		CS seed HVS level	
	Total (percentage by weight)	A single species (content by number in a sample of the weight)	Total (percentage by weight)	A single species (percentage by weight)	Total (percentage by weight)	A single species (percentage by weight)
4. Large seeded legumes						
(a) Large seeded legumes other than vetches	0.3	20	0.5	0.3 (note (j))	Not applicable	Not applicable
(b) Vetches	0.3	20	1.0	0.5 (note (k))	Not applicable	Not applicable
5. Crucifers	0.3	20	1.0	0.5	Not applicable	Not applicable

The following notes apply:

a) For basic seed of *cocksfoot, festulolium, fine leaved sheep's fescue, hard fescue, hybrid ryegrass, Italian ryegrass, meadow fescue, perennial ryegrass, red fescue (inc. Chewing's fescue), sheep's fescue, tall fescue and tall oatgrass,* the maximum number of seeds of a single species must not exceed 20 in a sample of the weight specified for the sample search for other plant species. However a maximum total of 80 seeds of *Poa* spp. in a sample is not regarded as an impurity.

b) In the case of a sample of HVS level CS seed of *red fescue,* there must be no more than a total of 4 seeds of ryegrass, cocksfoot and meadow fescue in a sample of the weight specified for the sample search for other plant species.

c) In the case of basic seed of *annual meadowgrass, rough-stalked meadowgrass, smooth-stalked meadowgrass and wood meadowgrass*, the maximum total content of seeds of *Poa* spp, other than the species being examined, must not exceed one in a sample of 500 seeds.

d) In the case of a sample of CS seed of *annual meadowgrass, rough-stalked meadowgrass, smooth-stalked meadowgrass and wood meadowgrass*, a maximum total of 0.8% by weight of seeds of other *Poa* spp in the sample is not regarded as an impurity

e) In the case of a sample of HVS level CS seed of *smooth-stalked meadowgrass,* a maximum of 0.4% by weight of seed of other meadowgrasses is not regarded as an impurity.

f) In the case of a sample of HVS level CS seed of *meadow fescue and tall fescue*, there must be no more than –

(i) 0.3% by weight of rough-stalked meadowgrass, or

(ii) 0.3% by weight of ryegrass,

in the sample.

g) In the case of a sample of CS seed of *tall oatgrass,* the condition that the weight of a single plant species in the sample must not exceed 1.0% does not apply to seeds of *Poa* spp.

h) In the case of a sample of HVS level seed of *hybrid ryegrass, Italian ryegrass* and *perennial ryegrass*, there must be no more than –

(i) 0.4% by weight of annual meadowgrass, or

(ii) 0.3% by weight of rough-stalked meadowgrass,

in the sample.

i) In the case of a sample of CS seed of *birdsfoot trefoil*, a maximum total of 1% by weight of seeds of red clover in the sample is not regarded as an impurity.

j) In the case of a sample of C1 or C2 seed of a *lupin*, a maximum total of 0.5% by weight of seeds of field bean, field pea, or vetch seed or another species of lupin in the sample is not regarded as an impurity.

k) In the case of a sample of C1 seed of a *vetch*, a maximum total of 0.5% by weight of seeds of field bean, field pea or lupin seed or another species of vetch seed in the sample is not regarded as an impurity.

L) In the case of a sample of HVS level CS seed of *small Timothy* and *Timothy,* there must be no more than 0.3% by weight of *Agrostis* spp. in the sample.

m) In the case of a sample of HVS level CS seed of *red fescue,* there must be no more than 0.3% by weight of rough-stalked meadowgrass

Standards for *Rumex* spp. (docks and sorrels) (Table 5)

The seed is required to meet the following standards with regard to the content of seeds of *Rumex* spp. (commonly known as docks and sorrels) other than *Rumex acetosella* (commonly known as sheep's sorrel) and *Rumex maritimus* (commonly known as golden dock) –

Species	**Maximum permitted by number in a sample (see Table 9)**		
	Basic seed	**CS, C1 and C2 seed** EU minimum level	**CS seed** HVS level
Fine grasses (a) Fine grasses other than – (i) annual meadowgrass (ii) festulolium (iii) fine leaved sheep's fescue (iv) hard fescue (v) red fescue (inc. Chewing's fescue) (vi) sheep's fescue (vii) Smooth-stalked meadowgrass	1	2	Not applicable
(b) annual meadowgrass	1	5	Not applicable
(c) red fescue (inc. Chewing's fescue)	2	5	5
(d) fine leaved sheep's fescue, hard fescue, sheep's fescue and festulolium	2	5	Not applicable
(e) smooth-stalked meadowgrass	1	2	2

Species	Maximum permitted by number in a sample (see Table 9)		
	Basic seed	**CS, C1 and C2 seed** EU minimum level	**CS seed** HVS level
Fodder grasses	2	5	5
(a) fodder grasses other than– (i) Alaska brome-grass (ii) rescue grass (iii) small Timothy (iv) tall oatgrass (v) Timothy			
(b) Alaska brome-grass	5	10	Not applicable
(c) rescue grass	5	10	Not applicable
(d) small Timothy	2	5	4
(e) tall oatgrass	2	5	Not applicable
(f) Timothy	2	5	4
Small seeded legumes			
(a) Alsike clover	3	10	Not applicable
(b) birdsfoot trefoil	3	10	Not applicable
(c) lucerne	3	10	10
(d) red clover	5	10	10
(e) sainfoin	2	5	5
(f) trefoil, black medick	5	10	Not applicable
(g) white clover	5	10	10

Species	Maximum permitted by number in a sample (see Table 9)		
	Basic seed	**CS, C1 and C2 seed** EU minimum level	**CS seed** HVS level
Large seeded legumes	2	5	Not applicable
Crucifers – (a) fodder kale (b) fodder radish and swede	 3 2	 10 5	Not applicable Not applicable

Standards for *Alopecurus myosuroides* (blackgrass) and *Elytrigia repens* (couch) (Table 6)

The seed is required to meet the following standards with regard to the content of seeds of *Alopecurus myosuroides* (commonly known as blackgrass and called “blackgrass” in the following table) and *Elytrigia repens* (commonly known as couch and called “couch” in the following table).

Species	**Basic seed** Maximum content by number in a sample of the weight (see table 9)		**CS seed EU minimum standard level** Maximum percentage by weight		**CS seed HVS level** Maximum content by number in a sample of the weight (see table 9)	
	Couch	Blackgrass	Couch	Blackgrass	Couch	Blackgrass
1. Fine grasses –						
(a) fine grasses other than –	1	1	0.3	0.3	Not applicable	Not applicable
(a) festulolium						
(ii) fine leaved Sheep's fescue						
(iii) hard fescue						
(iv) red fescue (inc. Chewing's fescue)						
(vi) Sheep's fescue						
(vii)Smooth-stalked meadowgrass						
(b) festulolium	5	5	0.5	0.3	10	Not applicable
(c) fine leaved Sheep's fescue	5	5	0.5	0.3	Not applicable	Not applicable

Species	**Basic seed** Maximum content by number in a sample of the weight (see table 9)		**CS seed EU minimum standard level** Maximum percentage by weight		**CS seed HVS level** Maximum content by number in a sample of the weight (see table 9)	
	Couch	Blackgrass	Couch	Blackgrass	Couch	Blackgrass
(d) hard fescue	5	5	0.5	0.3	Not applicable	Not applicable
(e) red fescue (inc. Chewing's fescue)	5	5	0.5	0.3	10	10
(f) Sheep's fescue	5	5	0.5	0.3	Not applicable	Not applicable
(g) smooth-stalked meadowgrass	1	1	0.3	0.3	3	3

Species	**Basic seed** Maximum content by number in a sample of the weight (see table 9)		**CS seed EU minimum standard level** Maximum percentage by weight		**CS seed HVS level** Maximum content by number in a sample of the weight (see table 9)	
	Couch	Blackgrass	Couch	Blackgrass	Couch	Blackgrass
2. Fodder grasses (a) Fodder grasses other than - (i) Alaska brome-grass (ii) cocksfoot	5	5	0.5	0.3	10	10
(iii) rescue grass (iv) small Timothy (v) tall oatgrass (vi) Timothy (b) Alaska brome-grass, rescue grass and tall oatgrass	5	5	0.5	0.3	Not applicable	Not applicable
c) cocksfoot	5	5	0.3	0.3	10	10
(d) small Timothy and Timothy	1	1	0.3	0.3	10	10

Species	**Basic seed** Maximum content by number in a sample of the weight (see table 9)		**CS seed EU minimum standard level** Maximum percentage by weight		**CS seed HVS level** Maximum content by number in a sample of the weight (see table 9)	
	Couch	Blackgrass	Couch	Blackgrass	Couch	Blackgrass
3. Small seeded legumes as follows – (a) lucerne (b) red clover (c) sainfoin (d) white clover	Not applicable	Not applicable	Not applicable	Not applicable	10	10

Standards for *Melilotus* spp. (sweet clover) in seed of small and large seeded legumes

The basic seed of small and large seeded legumes is required to be free from seeds of *Melilotus* spp. (commonly known as sweet clover), in a sample of seed of the weight specified. However, in the case of Alsike clover, birdsfoot trefoil, lucerne, red clover, trefoil, black medick and white clover, one seed of sweet clover in a sample of the specified weight is not regarded as an impurity where a second sample of twice that weight is free from any sweet clover seed.

In the case of CS, C1 and C2 seed of small and large seeded legumes, any sweet clover seed in a sample must not exceed 0.3% by weight.

Standards for *Avena fatua*, *Avena sterilis* (includes seeds previously known as *Avena ludoviciana*) (commonly known as wild oats)

The seed of all fodder plant species is required to be free from seeds of wild oats, in a sample of seed of the weight specified in Table 9. However, in the case of basic and CS seed of Alaska brome-grass, rescue grass and tall oatgrass, a maximum of 2 wild oat seeds in a sample of the weight specified in is not regarded as an impurity where a second sample of the same weight is free from any wild oat seeds.

Standards for Cuscuta spp. (commonly known as dodder)

The seed of all fodder plant species is required to be free from seeds of dodder in a sample of seed, except –

(i) In the case of minimum level CS seed of fine grasses, fodder grasses, fodder kale and swede, the presence of one seed of dodder in a sample is not regarded as an impurity where a second sample of the same weight is free from any dodder seed.

(ii) In the case of minimum level CS seed of Alsike clover, birdsfoot trefoil, trefoil, black medick, lucerne, red clover and white clover, or C1 seed of Lucerne *Medicago sativa,* the presence of one seed of dodder is not regarded as an impurity where a second sample of the same weight is free from any dodder seed.

Additional standards for lupins

It is a requirement that the percentage by number of bitter lupins in a sample of seed of a sweet lupin variety must not exceed –
(a) 1% in the case of basic seed; and
(b) 2.5% in the case of C1 seed.

It is also a requirement that, in the case of C1 seed, the percentage by number of seeds of another colour in a sample of seed of a bitter lupin variety must not exceed 2%. In the case of C1 seed of lupins, other than bitter lupins, the percentage by number of seeds of another colour in a sample must not exceed 1%.

Standards for *Raphanus raphanistrum* (commonly known as wild radish) or *Sinapis arvensis* (commonly known as charlock) in seed of crucifer (*Brassicaceae*) species.
In the case of crucifers, the percentage by weight of wild radish or charlock in a sample of seed must not exceed 0.3%.

Germination (Table 7)
A germination test is required to establish whether seed meets the following minimum percentage germination:

Column 1 **Species** **(all categories)**	**Column 2** **Minimum germination** **(% of pure seed)**	**Column 3** **Maximum hard seed content** **(% pure seed)**
Fine grasses -		
(a) annual meadowgrass	75	Not applicable
(b) brown top	75	Not applicable
(c) creeping bent grass	75	Not applicable
(d) festulolium	75	Not applicable
(e) fine leaved sheep's fescue	75	Not applicable
(f) hard fescue	75	Not applicable
(g) red fescue (inc. Chewing's fescue)	75	Not applicable
(h) red top	80	Not applicable
(i) rough-stalked meadowgrass	75	Not applicable
(j) sheep's fescue	75	Not applicable
(k) smooth-stalked meadowgrass	75	Not applicable
(l) velvet bent	75	Not applicable
(m) wood meadowgrass	75	Not applicable
Fodder grasses –		
(a) Alaska brome-grass	75	Not applicable

(b) cocksfoot	80	Not applicable
(c) hybrid ryegrass	75	Not applicable
(d) Italian ryegrass	75	Not applicable
(e) meadow fescue	80	Not applicable
(f) perennial ryegrass	80	Not applicable
(g) rescue grass	75	Not applicable
(h) small Timothy	80	Not applicable
(i) tall fescue	80	Not applicable
(j) tall oatgrass	75	Not applicable
(k) Timothy	80	Not applicable
Small seeded legumes –		
(a) Alsike clover	80	20
(b) birdsfoot trefoil	75	40
(c) lucerne	80	40
(d) red clover	80	20
(e) sainfoin	75	20
(f) trefoil, black medick	80	20
(g) white clover	80	40
Large seeded legumes –		
(a) blue lupin	75	20
(b) common vetch	85	20
(c) field bean	80	5
(d) field pea	80	Not applicable
(e) hairy vetch	85	20
(f) Hungarian vetch	85	20
(g) white lupin	80	20

(h) yellow lupin	80	20
Crucifers – (a) fodder kale (b) fodder radish (c) swede	 75 80 80	 Not applicable Not applicable Not applicable

In order to determine whether seed satisfies the applicable germination standard set out in column 2 of the above table –

(a) any fresh and healthy seed which does not germinate after pre-treatment can be regarded as seed which has germinated; and
(b) any hard seed present not exceeding the amount shown in column 3 of the table can be regarded as seed which is capable of germination.

OTHER CONDITIONS

Harmful organisms

This requires harmful organisms which reduce the usefulness of the seed to be at the lowest possible level that can be achieved. There are no tests prescribed for harmful organisms. However, persons entering seed for certification must confirm that this condition is met.

GENERAL PROVISIONS

Pre-basic seed standards

Pre-basic seed must meet the standards for Basic seed.

Exceptions to the conditions prescribed for commercial seed of annual meadowgrass, Hungarian vetch and sainfoin (Table 8)

Commercial seed of annual meadowgrass, Hungarian vetch and sainfoin is required to meet the conditions that apply to CS seed except:

(a) The minimum analytical purity of Commercial Seed of Hungarian vetch is 97.0%.
(b) Commercial seed has to conform to the standards prescribed in the following table as regards the maximum content of seeds of other plant species.

	Total content of seed of other plant species (percentage by weight)	**A single species** (percentage by weight)
Annual meadowgrass	3.0	2.0
Hungarian vetch	2.0	1.5
Sainfoin	3.5	2.0

(c) For Hungarian vetch, a maximum total of 6% by weight of other species of vetch seed is not regarded as an impurity.

(d) For annual meadowgrass, a maximum total of 10% by weight of other species of meadowgrass is not regarded as an impurity.

LOT AND SAMPLE WEIGHTS (Table 9)

This table shows the maximum weight of a seed lot, the minimum weight of an official sample and the minimum weight of seed which must be examined to determine other seed content.

Species	Maximum weight of a lot	Minimum weight of a sample to be drawn from a lot	Weight of a sample for determining other seed content
	(tonnes)	(grams)	(grams)
Fine grasses –			
(a) annual meadowgrass	10*	50	10
(b) brown top	10*	50	5
(c) creeping bent grass	10*	50	5
(d)festulolium	10*	200	60
(e)fine leaved sheep's fescue	10*	100	30
(f)hard fescue	10*	100	30
(e) red fescue (inc. Chewing's fescue)	10*	100	30
(g) red top	10*	50	5
(h) rough-stalked meadowgrass	10*	50	5
(i) sheep's fescue	10*	100	30
(j) smooth-stalked meadowgrass	10*	50	5
(k) velvet bent	10*	50	5
(l) wood meadowgrass	10 *	50	5
Fodder grasses -			
(a) Alaska brome-grass	10*	200	200

(b) cocksfoot	10*	100	30
(c) hybrid ryegrass	10*	200	60
(d) Italian ryegrass	10*	200	60
(e) meadow fescue	10*	100	50
(f) perennial ryegrass	10*	200	60
(g) rescue grass	10*	200	200
(h) small Timothy	10*	50	10
(i) tall fescue	10*	100	50
(j) tall oatgrass	10*	200	80
(k) Timothy	10*	50	10
Small seeded legumes –			
(a) Alsike clover	10	200	20
(b) birdsfoot trefoil	10	200	30
(c) lucerne	10	300	50
(d) red clover	10	300	50
(e) sainfoin –			
(i) fruit	10	600	600
(ii) seed	10	400	400
(f) trefoil, black medick	10	300	50
(g) white clover	10	200	20
Large seeded legumes –			
(a) blue lupin	30	1,000	1,000
(b) common vetch	30	1,000	1,000
(c) field bean	30	1,000	1,000
(d) field pea	30	1,000	1,000
(e) hairy vetch	30	1,000	1,000

(f) Hungarian vetch	30	1,000	1,000
(g) white lupin	30	1,000	1,000
(h) yellow lupin	30	1,000	1,000
Crucifers –			
(a) fodder kale	10	200	100
(b) fodder radish	10	300	300
(c) swede	10	200	100

(a) The maximum weight of a lot may be exceeded by up to 5%

(b) These are the minimum sample weights specified in the directive. Where samples are drawn by licensed seed samplers, the minimum weight will normally be twice that shown, because of the need to provide for reserve portions. Details are given in Instructions to Licensed Seed Samplers.

(c) The maximum weight of a seed lot of a mixture is 10 tonnes, except where more than 50% of the mixture consists of a species of seed for which the maximum weight of a seed lot is 30 tonnes, then the maximum lot weight is 30 tonnes. *See also (d) below.

(d) For fodder grass species (*Poaceae (Gramineae*)) a maximum seed lot weight of 25T may apply.
To market at the higher (25T) lot weight you must have prior approval from Animal and Plant Health Agency (APHA).

LIMITS OF VARIATION (Table 10)

The limits of variation prescribed for civil liabilities are as follows.

Germination	
Stated minimum percentage of germination	*Limit of variation %*
99-100	2
97-98	3
94-96	4
91-93	5
87-90	6
82-86	7
76-81	8
69-75	9
65-68	10
Analytical purity - grasses	
Stated minimum percentage of analytical purity (expressed to one decimal point)	*Limit of variation %*
99.9 - 100	0.2
99.7 -99.8	0.4
99.5-99.6	0.5
99.3-99.4	0.6
99.0-99.2	0.7
98.8-98.9	0.8
98.3-98.7	0.9
98.0-98.2	1.0
97.5-97.9	1.1
97.0-97.4	1.2
96.5-96.9	1.3
96.0-96.4	1.4
95.0-95.9	1.5
94.0-94.9	1.6
93.0-93.9	1.7
92.0-92.9	1.9
91.0-91.9	2.0
90.0-90.9	2.1
88.0-89.9	2.2
86.0-87.9	2.4
84.0-85.9	2.5
82.0-83.9	2.6
80.0-81.9	2.8

Analytical purity – legumes and crucifers	
Stated minimum percentage of analytical purity (expressed to one decimal point)	*Limit of variation %*
99.9 - 100	0.2
99.8	0.3
99.6-99.7	0.4
99.3-99.5	0.5
99.0-99.2	0.6
98.5-98.9	0.7
98.3-98.4	0.8
97.5-98.2	0.9
97.0-97.4	1.0
96.5-96.9	1.1
95.5-96.4	1.2
95.0-95.4	1.3
94.0-94.9	1.4
93.0-93.9	1.5
92.0-92.9	1.6
91.0-91.9	1.7
90.0-90.9	1.8

Contents of seeds of other species in grasses	
Stated maximum percentage of seed of other species (expressed to one decimal point)	*Limit of variation %*
0.0	0.2
0.1	0.3
0.2	0.4
0.3 – 0.4	0.5
0.5 – 0.6	0.6
0.7 – 0.9	0.7
1.0 – 1.2	0.8
1.3 – 1.7	0.9
1.8 – 1.9	1.0
2.0 – 2.4	1.1
2.5 – 2.9	1.2
3.0 – 3.4	1.3
3.5 – 3.9	1.4
4.0 – 4.9	1.5
5.0	1.6

Contents of seeds of other species or varieties in legumes and crucifers	
Stated maximum percentage of seeds of other species (expressed to one decimal place)	*Limit of variation Per cent*
0.0	0.1
0.1 – 0.2	0.3
0.3 – 0.4	0.4
0.5 – 0.6	0.5
0.7 – 0.9	0.6
1.0 – 1.4	0.7
1.5 – 1.7	0.8
1.8 – 2.4	0.9
2.5 – 2.9	1.0
3.0 – 3.4	1.1
3.5 – 4.4	1.2
4.5 – 4.9	1.3
5.0 – 5.9	1.4
6.0 – 6.9	1.5
7.0 – 7.9	1.6
8.0 – 8.9	1.7
9.0 – 9.9	1.8
10.0	1.9

Number of seeds of other plant species	
Stated maximum number of seeds of other species	*Limit of variation Number*
0	1
1	3
2	4
3 and 4	5
5 and 6	6
7 and 8	7
9 to 11	8
12 to 14	9
15 to 17	10
18 to 21	11
22 to 25	12
26 to 29	13
30 to 34	14
35 to 40	15
41 to 45	16
46 to 51	17
52 to 57	18
58 to 64	19
65 to 71	20
72 to 79	21
80 to 87	22
88 to 95	23
96 to 100	24

PROCEDURES FOR CERTIFICATION OF HYBRID SWEDE

1. Introduction

Seed of hybrid swede varieties can be certified under The Seed Marketing Regulations. The procedures for certification and early multiplication have the same basis as conventional varieties, with additional requirements for parental lines following those for hybrid oilseed rape.

2. Certification of a seed lot

Seed lots are certified in the same way as conventional varieties.

3. Control plots

Samples of all multiplication seed lots should be sent to NIAB for control plots. NIAB will acknowledge the receipt of samples of breeders' seed. Samples are needed of:

- The male sterile line (female line) FM
- Maintainer of the male sterile line MT
- Restorer/male pollinator RE

Cert 5s should be annotated FM, MT or RE as appropriate to identify samples of parental lines of hybrid varieties.

The closing date for receipt of samples is **15 August.**

Control plots will be drilled in late August and again in May/June, allowing both vegetative and flowering characters to be assessed. Male sterility will be assessed where appropriate.

4. Crop entries

Crop entries are made in the same way and to the same closing date as conventional varieties. The Cert2 forms should state 'hybrid swede' and be annotated FM, MT or RE as appropriate to identify parental lines in the same way as Cert5s.

5. Crop inspection

Crops entered to produce pre-basic/basic seed, and all crops of varieties in early multiplication, are inspected by official inspectors. CS crops of listed varieties are inspected by licensed inspectors. Full details are given in the crop inspection procedures.

Isolation distances for field grown crops are the same as for conventional varieties:

Crops entered to produce basic seed	400 metres
Crops entered to produce CS seed	200 metres

These isolation distances can be disregarded where seed is produced in glasshouses or polytunnels. They must be adequately sealed to protect against undesirable pollen and parent lines must be produced in separate glasshouses or polytunnels.

Crops will have a first inspection during late autumn and a second inspection during flowering. For CS crops, a final inspection is required to confirm removal of the pollinator.

The varietal purity standard for crops entered for basic seed is 99.7%. Any male fertile plants present in the male sterile crop are counted as varietal impurities. Male sterility is assessed during flowering.

For crops entered to produce CS seed, the varietal purity standard is 98.0% but this cannot be assessed directly in the seed crop. Instead, strips of the two parent lines are assessed against the standard for 99.7% standard for basic seed. Samples of CS seed may be grown in post-control plots as part of the 5% check carried out on final generation seed.

6. Labelling of seed

Seed should be labelled in the same way as hybrid oilseed rape varieties.

Technical Supplement - Oil and Fibre Plant Seed

CONDITIONS RELATING TO CROPS FROM WHICH SEED IS TO BE HARVESTED

Previous cropping

The previous cropping of the field must not be incompatible with the production of seeds of the species and variety of the crop and the field must be sufficiently free from plants which are volunteers from previous cropping. Please see Annex 1 for further guidance.

Isolation requirements (Table 1)

The crop must conform to the following standards as regards distances from neighbouring sources of pollen which may result in undesirable foreign pollination:

Crop	Minimum distance
1	**2**
(a) Black mustard, brown mustard, dioecious hemp, turnip rape and white mustard – For the production of basic seed For the production of CS seed	 400 metres 200 metres
(b) Swede rape (not hybrids) - For the production of basic seed For the production of CS seed	 200 metres 100 metres
(c) Hybrids of swede rape – For the production of basic seed For the production of CS seed	 500 metres 300 metres

Crop	Minimum distance
1	**2**
(d) Sunflower – For the production of basic seed of hybrids For the production of basic seed of varieties other than hybrids For the production of CS seed (hybrids and non-hybrids)	 1500 metres 750 metres 500 metres
(e) Monoecious hemp - For the production of basic seed For the production of C1 and C2 seed	 5000 metres 1000 metres

These distances do not apply if there is sufficient protection from any undesirable foreign pollination.

Varietal identity and varietal purity

Crops of all species covered by the regulations are required to have sufficient varietal identity and varietal purity.

In the case of an inbred line, a crop is required to have sufficient varietal identity and purity as regards its characteristics.

For the production of seed of a hybrid variety, the requirement for sufficient varietal identity and purity also applies to the characteristics of the components including male sterility or fertility restoration.

These general requirements are supplemented by specific crop standards for *black mustard, brown mustard and dioecious hemp*, *monoecious hemp*, *hybrids of sunflower and hybrids of swede rape.* Specific minimum varietal purity standards for *flax, linseed, soya bean, white mustard and non hybrid varieties of sunflower and swede rape* are prescribed as seed standards.

Specific standards for black mustard, brown mustard and hemp

In the case of *black mustard, brown mustard, monoecious hemp and dioecious hemp,* the number of plants of the crop species which are recognisable as obviously not being true to the variety must not exceed –

(a) one per 30 square metres for the production of basic seed;
(b) one per 10 square metres for the production of CS seed (except monoecious hemp);
(c) one per 10 square metres for the production of C1 and C2 seed (monoecious hemp only).

Specific standards for hybrids of sunflower

In the case of *hybrids of sunflower,* the percentage by number of plants which are recognisable as obviously not being true to the variety must not exceed –

(a) for the production of basic seed –

(i) in the case of an inbred line, 0.2%;
(ii) in the case of a male parent of a simple hybrid which has shed pollen while 2% or more of the female plants have receptive flowers, 0.2%; and
(iii) in the case of a female parent, 0.5%;

(b) for the production of CS seed –

(i) in the case of a male component which has shed pollen while 5% or more of the female plants have receptive flowers, 0.5%; and
(ii) in the case of a female component, 1%.

In the case of the production of seed of a hybrid variety of *sunflower* –

(a) sufficient pollen must be shed by the plants of the male component while the plants of the female component are in flower;
(b) where the female component plants have receptive stigmas, the percentage by number of female component plants which have shed pollen or are shedding pollen must not exceed 0.5%;
(c) for the production of basic seed, the total percentage by number of plants of the female component which are recognisable as obviously not being true to the component and which have shed pollen or are shedding pollen must not exceed 0.5%; and
(d) where a female male sterile component and a male component which contains a specific restorer line or lines which restore male fertility has been used for the production of CS seed, at least one third of the plants grown from CS seed of the resulting hybrid must produce pollen which appears normal in all respects.

Specific standards for hybrid varieties of swede rape produced using male sterility

In the case of the production of *hybrids of swede rape* produced using male sterility the percentage by number of plants which are recognisable as obviously not being true to the inbred line or the component must not exceed–

(a) for the production of basic seed –

(i) in the case of an inbred line, 0.1%
(ii) in the case of a male component of a simple hybrid, 0.1%; and
(iii) in the case of a female component of a simple hybrid, 0.2%

(b) for the production of CS seed –

(i) in the case of a male component, 0.3% and
(ii) in the case of a female component, 1.0%

In the case where a male-sterile component is used for the production of seed of *a hybrid variety of swede rape* male sterility must be at least 99% for the production of basic seed and at least 98% for the production of CS seed. The level of male sterility is assessed by examining flowers for the absence of fertile anthers.

Harmful organisms

Harmful organisms which reduce the usefulness of the seed, in particular, in the case of soya bean, *Pseudomonas syringae* pv. *glycinea, Diaporthe phaseolorum* var. *caulivora* and var. *sojae*, *Phialophora gregata* and *Phytophthora megasperma* f.s.p *glycinea* must be at the lowest possible level.

Crop inspection requirements

Seed crops must be inspected to determine whether they meet the requirements set out in this Technical Supplement and the seed standards which must be determined mainly by crop inspection.

A crop from which basic seed is to be produced must be examined by an official crop inspector. CS, C1, C2 and C3 seed crops in early multiplication must also be inspected by officials. A crop from which CS, C1, C2 or C3 seed is to be produced may be examined by a licensed inspector, provided the seed sown to produce the crop is subject to satisfactory post control.

Crop inspections must be carried out at a time when the condition and stage of development of the crop permit an adequate examination.

A minimum of one crop inspection is required, except:

(a) at least two inspections must be carried out in the case of a hybrid of sunflower; and
(b) at least three inspections must be carried out in the case of a hybrid of swede rape as follows -

(i) the first inspection must be carried out before the flowering stage;
(ii) the second inspection must be carried out at the early flowering stage; and
(iii) the third inspection must be carried out at the end of the flowering stage.

Pre-basic crop standards

Crops to produce Pre-basic seed must meet the standards for Basic seed.

CONDITIONS TO BE SATISFIED BY THE SEED

CONDITIONS TO BE EXAMINED MAINLY BY FIELD INSPECTION

Varietal identity and varietal purity

The seed must have sufficient varietal identity and varietal purity.

In the case of seed of a hybrid variety of swede rape, the requirement for sufficient varietal identity and purity also apply to the characteristics of the components, including restoration of male sterility or fertility.

Varietal purity standards for flax, linseed, soya bean, sunflower, swede rape, turnip rape and white mustard and components and hybrid varieties of swede rape produced using male sterility (Table 2)

The following minimum varietal purity standards apply:

Species and category	Minimum varietal purity (percentage)
Flax –	
Basic seed	99.7
C1 seed	98.0
C2 seed	97.5
C3 seed	97.5
Linseed –	
Basic seed	99.7
C1 seed	98.0
C2 seed	97.5
C3 seed	97.5
Soya bean –	
Basic seed	99.5
C1 seed	99.0
C2 seed	99.0
Sunflower except hybrid varieties and components of hybrid varieties –	
Basic seed	99.7
CS seed	99.0
Swede rape and turnip rape **except** hybrid varieties, components of hybrid varieties and varieties to be used solely for fodder purposes-	
Basic seed	99.9
CS seed	99.7
Swede rape and turnip rape varieties to be used solely for fodder purposes except hybrid varieties and components of hybrid varieties –	
Basic seed	99.7
CS seed	99.0

Species and category	Minimum varietal purity (percentage)
Components of hybrid varieties of swede rape and hybrid varieties produced using male sterility –	
Basic seed, female component	99.0
Basic seed, male component	99.9
Certified seed, winter swede rape varieties	90.0
Certified seed, spring swede rape varieties	85.0
White mustard –	
Basic seed	99.7
CS seed	99.0

In each case, the minimum varietal purity of seed must be examined mainly in crop inspections carried out in accordance with the conditions.

See also the minimum varietal purity of CS seed of *swede rape*.

Conditions applying to the production of CS seed of a hybrid sunflower variety

These require that where a female male-sterile component and a male component which does not restore male fertility are used for the production of CS seed of a hybrid variety of *sunflower*, the seed shall be produced by blending the seed produced by the female male-sterile component with seed produced by the male component. The ratio of seed produced by the female male-sterile component to seed produced by the male fertile component must not exceed two to one.

CONDITIONS TO BE EXAMINED BY SEED TESTING

This specifies those seed qualities which must be examined by seed testing (e.g. analytical purity, germination, harmful organisms) and the minimum standards which the seed must meet to be officially certified. Seed tests must be done on a representative sample drawn from the seed lot by an official or by a licensed seed sampler. All seed tests for analytical purity, content of seeds of other plant species, germination and the harmful organism *Sclerotinia sclerotiorum* may be done by an Official Seed Testing Station or officially Licensed Seed Testing Station. Seed tests for other harmful organisms must currently be carried out only by an Official Seed Testing Station (because there are no LSTSs qualified in the tests).

Components of hybrid varieties of swede rape

This paragraph permits biochemical assessment of the varietal purity of Basic seed of a component of a hybrid variety of swede rape, where official post control of the Basic seed has not been carried out in accordance with the requirements. (Please note that seed cannot be entered to produce CS seed of swede rape unless a control plot has been sown. The provisions, allow the

CS seed to be certified on the basis of biochemical assessment if, for example, the control plot fails).

Analytical purity and content of seed of other plant species (Table 3)

The standards are :

Species and category	**Minimum analytical purity (% by weight)**	**Maximum content of seed of other plant species (% by weight)**	**Maximum content by number of seeds of other plants species in a sample of the weight (see Table 6).**						
			All other plant species (including seeds of the species specified in columns 5 to 10)	Wild oat *(Avena fatua*, *Avena sterilis* inc. *Avena ludoviciana)*	Dodder (*Cuscuta* spp.)	Wild radish *Raphanus raphanistrum*	Docks (*Rumex* spp. other than *R. acetosella*)	Blackgrass (*Alopecurus myosuroides*)	*Lolium remotum*
1	2	3	4	5	6	7	8	9	10
Black mustard, brown mustard, white mustard, swede rape and turnip rape -									
(a) basic seed	98	0.3	Not applicable	0	0	10	2	Not applicable	Not applicable
(b) CS seed	98	0.3	Not applicable	0	0	10	5	Not applicable	Not applicable

Species and category	**Minimum analytical purity (% by weight)**	**Maximum content of seed of other plant species (% by weight)**	**Maximum content by number of seeds of other plants species in a sample of the weight (see Table 6).**						
			All other plant species (including seeds of the species specified in columns 5 to 10)	Wild oat *(Avena fatua*, *Avena sterilis* inc. *Avena ludoviciana)*	Dodder (*Cuscuta* spp.)	Wild radish *Raphanus raphanistrum*	Docks (*Rumex* spp. other than *R. acetosella*)	Blackgrass (*Alopecurus myosuroides*)	*Lolium remotum*
1	2	3	4	5	6	7	8	9	10
Hemp – basic, CS, C1 and C2 (see note (a))	98	Not applicable	30	0	0	Not applicable	Not applicable	Not applicable	Not applicable
Flax and Linseed - basic, C1, C2 and C3 seed	99	Not applicable	15	0	0	Not applicable	Not applicable	4	2
Soya bean - basic, C1 and C2 seed	98	Not applicable	5	0	0	Not applicable	Not applicable	Not applicable	Not applicable
Sunflower - basic and CS seed	98	Not applicable	5	0	0	Not applicable	Not applicable	Not applicable	Not applicable

(a) Hemp seed must be free from *Orobanche* spp. However, the presence of one seed of *Orobanche* spp. in a sample of 100 grams is not regarded as an impurity where a second sample of 200 grams is free from any such seeds.

(b) The presence of one seed of dodder (*Cuscuta* spp.) in a sample of black mustard, brown mustard, flax, linseed, swede rape, turnip rape and white mustard is not regarded as an impurity where a second sample of the same weight is free from any seeds of dodder.

Germination (Table 4)

A germination test is required to establish whether seed meets the following minimum percentage germination:

Species and category	Minimum germination (% of pure seed)
Basic, C1, C2, and C3 seed of flax	92
Basic, CS, C1 and C2 seed of hemp	75
Basic, C1, C2 and C3 seed of linseed	85
Basic and CS seed of black mustard, brown mustard, swede rape and turnip rape	85
Basic and CS seed of white mustard	85
Basic, C1 and C2 seed of soya bean	80
Basic and CS seed of sunflower	85

Harmful organisms contamination (Table 5)

The number of seeds contaminated by harmful organisms in a sample of the size specified must not exceed the following –

Species	**Maximum percentage by number of seeds contaminated by harmful organisms (total per column)**		***Sclerotinia sclerotiorum* (maximum number of sclerotia or fragments of sclerotia in a sample of the weight) (see Table 6)**
	Botrytis	***Alternaria* spp., *Ascochyta linicola* (syn. *Phoma linicola*), *Colletotrichum lini*, *Fusarium* spp.**	
Flax	5	5	Not applicable
Hemp	5	Not applicable	Not applicable
Linseed	5	5	Not applicable
Sunflower	5	Not applicable	10
Swede rape	Not applicable	Not applicable	10
Turnip rape	Not applicable	Not applicable	5
White mustard	Not applicable	Not applicable	5

In the case of flax, the maximum percentage by number of seeds contaminated by *Ascochyta linicola* (syn *Phoma linicola*) must not exceed 1%.

In the case of seed of soya bean –

(a) the maximum number of sub-samples within a sample of 5000 seeds minimum per lot sub-divided into 5 sub-samples which have been found to be contaminated by *Pseudomonas syringae* pv. *glycinea* must not exceed 4.

(b) the maximum number of seeds contaminated by *Diaporthe phaseolorum* must not exceed 15%; and

(c) the percentage by weight of inert matter must not exceed 0.3%.

CONDITIONS TO BE EXAMINED BY INSPECTION OF CONTROL PLOTS

Post control of Basic seed of hybrids of swede rape

This is about official post control tests on samples of basic seed being multiplied for the production of CS seed. The seed cannot be certified as CS seed unless due account has been taken of the results of the post control tests on the Basic seed. The post control tests must be carried out during the growing season of the crop entered for the production of CS seed, to determine whether the basic seed has met the requirements for basic seed prescribed in respect of identity and purity as regards the characteristics of the components, including male sterility. (But see also notes, concerning the option of biochemical assessment of the basic seed).

OTHER CONDITIONS

Harmful organisms

This requires harmful organisms which reduce the usefulness of the seed to be at the lowest possible level that can be achieved.

GENERAL PROVISIONS

Pre-basic and Commercial seed standards

This paragraph prescribes that:

(a) Pre-basic seed must meet the standards for Basic seed; and

(b) Commercial seed of black mustard must meet the conditions for CS seed in the regulations insofar as these are relevant to Commercial seed.

LOT AND SAMPLE WEIGHTS (Table 6)

This table shows the maximum weight of a seed lot, the minimum weight of an official sample and the minimum weight of seed which must be examined to determine other seed content.

Species	Maximum weight of a seed lot (tonnes) (a)	Minimum weight of a sample to be drawn from a lot (grams) (b)	Weight of a sample for determination by number of other plant species and sclerotia (grams)
Flax	10	300	150
Hemp	10	600	600
Linseed	10	300	150
Black mustard	10	100	40
Brown mustard	10	100	40
White mustard	10	400	200
Soya bean	30	1,000	1,000
Sunflower	25	1,000	1,000
Swede rape	10	200	100
Turnip rape	10	200	70

(a) The maximum weight of a lot may be exceeded by up to 5%.

(b) These are the minimum sample weights specified in the directive. Where samples are drawn by licensed seed samplers, the minimum weight will normally be twice that shown, because of the need to provide for reserve portions. Details are given in Instructions to Licensed Seed Samplers.

LIMITS OF VARIATION (Table 7)

The limits of variation prescribed for civil liabilities are as follows:

Germination	
Stated minimum percentage of germination (expressed as an integer)	*Limit of variation %*
99-100	2
97-98	3
94-96	4
91-93	5
87-90	6
82-86	7
76-81	8
70-75	9

Analytical purity	
Stated minimum percentage of analytical purity (expressed to one decimal point)	*Limit of variation %*
99.9 - 100	0.2
99.8	0.3
99.6-99.7	0.4
99.3-99.5	0.5
99.0-99.2	0.6
98.5-98.9	0.7
98.3-98.4	0.8
97.5-98.2	0.9
97.0-97.4	1.0
96.5-96.9	1.1
95.5-96.4	1.2
95.0-95.4	1.3

Content of seed of other species	
Stated maximum percentage of seeds of other species (expressed to one decimal point)	*Limit of variation Per cent*
0.0	0.1
0.1 – 0.2	0.3
0.3 – 0.4	0.4
0.5	0.5

Number of seeds of other species	
Maximum number of seeds of other species	*Limit of variation number*
0	1
1	3
2	4
3 and 4	5
5 and 6	6
7 and 8	7
9 to 11	8
12 to 14	9
15 to 17	10
18 to 21	11
22 to 25	12
26 to 29	13
30 to 34	14
35 to 40	15
41 to 45	16
46 to 50	17

Technical Supplement - Vegetable Seeds

CONDITIONS RELATING TO CROPS FROM WHICH SEED IS TO BE HARVESTED

Varietal identity and varietal purity

Crops of vegetable species covered by the regulations are required to have sufficient varietal identity and varietal purity.

Isolation requirements (Table 1)

In the case of *Beta vulgaris,* Brassica species and cross fertilised species other than *Beta* and Brassica species the crop must conform to the following standards as regards distances from neighbouring sources of pollen which may result in undesirable foreign pollination:

Crop	Minimum distance
1	**2**
Beta vulgaris -	
(i) from any pollen source of the genus *Beta* other than those specified in (ii) and (iii) below:	1000 metres
(ii) from any pollen source of a variety of the same sub-species belonging to a different group of varieties-	
(a) for the production of basic seed	1000 metres
(b) for the production of CS seed.	600 metres
(iii) from any pollen source of a variety of the same sub species belonging to the same group of varieties-	
(a) for the production of basic seed	1000 metres
(b) for the production of CS seed	600 metres

Crop	Minimum distance
1	**2**
Brassica species from sources of foreign pollen liable to cause serious deterioration of varieties of *Brassica* species*: (i) for basic seed (ii) for CS seed from other sources of foreign pollen liable to cross with varieties of *Brassica* species**: (i) for basic seed (ii) for CS seed	 1000 metres 600 metres 500 metres 300tres

*e.g *Brassica rapa* from other *Brassica rapa* plants
** e.g *Brassica rapa Brassica napus* plants

The groups of varieties of the *Beta* species referred to in the above table must be those set out in the following table classified in groups according to their characteristics-

(a) Beetroot	
Group	**Characteristic**
1	Transverse narrow elliptic or transverse elliptic shape of root longitudinal section and root flesh red or purple
2	Circular or broad elliptic shape of root longitudinal section and root flesh white
3	Circular or broad elliptic shape of root longitudinal section and root flesh yellow
4	Circular or broad elliptic shape of root longitudinal section and root flesh red or purple
5	Narrow oblong shape of root longitudinal section and root flesh red or purple
6	Narrow obtriangular shape of root longitudinal section and root flesh red or purple
(b) Chard and spinach beet	
Group	**Characteristic**
1	White petiole and pale green leaf blade, without anthocyanin coloration
2	White petiole and medium or dark green leaf blade, without anthocyanin coloration
Group	**Characteristic**
3	Green petiole and medium or dark green leaf blade, without anthocyanin coloration
4	Pink petiole and medium or dark green leaf blade
5	Red petiole and leaf blade, with anthocyanin coloration

The distances in Table 1 do not apply if there is sufficient protection from any undesirable foreign pollination.

Diseases and harmful organisms

Diseases and harmful organisms which reduce the usefulness of the seed must be at the lowest possible level.

Crop inspection requirements

Seed crops must be inspected to determine whether they meet the requirements set out in this Technical Supplement and the seed standards which must be determined mainly by crop inspection.

All seed crops must be examined by an official crop inspector.

Crop inspections must be carried out at a time when the cultural condition of the field and stage of development of the crop permit the varietal identity, varietal purity and health status of the crop to be adequately checked.

A minimum of one crop inspection is required.

Pre-basic crop standards

Crops to produce Pre-basic seed must meet the standards for Basic seed

CONDITIONS TO BE SATISFIED BY THE SEED

CONDITIONS TO BE EXAMINED MAINLY BY FIELD INSPECTION

Varietal identity and varietal purity

The seed must have sufficient varietal identity and varietal purity.

In the case of turnips the minimum varietal purity is specified as –

(a) 99.7% in the case of basic seed, and
(b) 98.0% in the case of CS seed.

Examination of these seed standards through crop inspection is dealt with in exactly the same way as examination of the crop standards.

CONDITIONS TO BE EXAMINED BY SEED TESTING

This Part specifies those seed qualities which must be examined by seed testing (e.g. analytical purity, germination) and the minimum standards which the seed must meet to be officially certified. Seed tests must be done on a representative sample drawn from the seed lot by an official seed sampler. All seed tests must be done by an Official Seed Testing Station or officially Licensed Seed Testing Station.

Seed standards
Analytical purity and content of seeds of other plant species for Basic seed and CS seed (Table 2)

The analytical purity and maximum content of seeds of other plant species are:

Species	Minimum analytical purity (percentage by weight)	Maximum content of seeds of other plant species (percentage by weight)
(a) asparagus	96	0.5
(b) beans of the following species - (i) broad bean (ii) French bean (dwarf, climbing) (iii) runner bean	 98 98 98	 0.1 0.1 0.1
(c) beetroot inc. Cheltenham beet	97	0.5
(d) Brussels sprouts	97	1.0
(e) red, Savoy and white cabbage	97	1.0
(f) carrot, fodder carrot	95	1.0
(g) cauliflower	97	1.0
(h) celery	97	1.0
(i) chard and spinach beet	97	0.5
(j) Chinese cabbage	97	1.0
(k) cucumber and gherkin	98	0.1
(l) curly kale	97	1.0
(m) endive (curl-leaved, plain leaved)	95	1.0
(n) gourd	98	0.1
(o) kohlrabi	97	1.0
(p) large leaved (Italian) chicory and Witloof chicory	95	1.5
(q) leek	97	0.5
(r) lettuce	95	0.5
(s) marrow or courgette	98	0.1
(t) melon	98	0.1
(u) onion, Echalion	97	0.5
(v) parsley	97	1.0
(w) pea (wrinkled, round, sugar)	98	0.1
(x) radish, black radish	97	1.0
(y) spinach	97	1.0
(z) sprouting broccoli	97	1.0
(aa) sweetcorn, popcorn	98	0.1
(bb) tomato	97	0.5
(cc) turnip	97	1.0

Germination (Table 3)

The minimum percentage germination is as follows:

Species	Minimum germination (percentage clusters or pure seed)
(a) asparagus	70
(b) beans of the following species	
(i) broad bean	80
(ii) French bean (dwarf, climbing)	75
(iii) runner bean	80
(c) beetroot	
(i) all except the Cheltenham variety	70
(ii) the Cheltenham variety	50
(d) Brussels sprouts	75
(e) red, Savoy and white cabbage	75
(f) carrot, fodder carrot	65
(g) cauliflower	70
(h) celery, celeriac	70
(i) chard and spinach beet	70
(j) Chinese cabbage	75
(k) cucumber and gherkin	80
(l) curly kale	75
(m) endive (curled-leaved, plain-leaved)	65
(n) gourd	80
(o) kohlrabi	75
(p) large-leaved (Italian) chicory and Witloof chicory	65
(q) leek	65
(r) lettuce	75
(s) marrow or courgette	75
(t) melon	75
(u) onion, Echalion	70
(v) parsley	65
(w) pea (wrinkled, round, sugar)	80
(x) radish, black radish	70
(y) spinach	75
(z) sprouting broccoli	75
(aa) sweetcorn, popcorn (except super-sweet types)	85
(bb) sweetcorn (super-sweet types)	80
(cc) tomato	75
(dd) turnip	80

Mite contamination

The seed must not be contaminated by live *Acarina* (commonly known as mites).

Special requirements for legumes

Broad beans, French beans, runner beans and peas must not be contaminated by-

(a) *Acanthoscelides obtectus* Sag.;
(b) *Bruchus affinis* Froel.;
(c) *Bruchus atomarius* L.;
(d) *Bruchus pisorum* L.; or
(e) *Bruchus rufimanus* Boh.

OTHER CONDITIONS

Diseases and harmful organisms

This requires diseases and harmful organisms which reduce the usefulness of the seed to be at the lowest possible level that can be achieved. There are no tests prescribed for diseases and harmful organisms. However, persons entering seed for official certification must confirm that this condition is met.

GENERAL PROVISIONS

Pre-basic seed standards

Pre-basic seed must meet the standards for Basic seed.

LOT AND SAMPLE WEIGHTS (Table 4)

This table shows the maximum weight of a seed lot and the minimum weight of an official sample.

Species	Maximum weight of a lot (tonnes)	Minimum weight of a sample to be drawn from a lot (grams)
Asparagus	10	100
Broad bean	30	1000
French bean	30	700
Runner bean	30	1000
Beetroot inc. Cheltenham beet	20	100
Brussels sprouts	10	25
Red cabbage	10	25
Savoy cabbage	10	25
White cabbage	10	25
Carrot, fodder carrot	10	25
Cauliflower	10	25
Celery, Celeriac	10	25
Chard and spinach beet	20	100
Chinese cabbage	10	25
Cucumber and gherkin	20	25
Curly kale	10	25
Endive	10	25
Gourd	20	250
Kohlrabi	10	25
Large leaved chicory and Witloof chicory	10	25
Leek	10	25

Lettuce	10	25
Marrow or courgette	20	150
Melon	20	100
Onion, Echalion	10	25
Parsley	10	25
Pea	25	500
Radish, black radish	10	50
Spinach	10	75
Sprouting broccoli	10	25
Sweetcorn, popcorn	40	1000
Tomato	10	25
Turnip	10	25

Notes

(a) The maximum weight of a lot may be exceeded by up to 5%.

(b) These are the minimum sample weights specified in the directive (actual sample weights may be higher).

(c) In the case of F-1 hybrid varieties of the above species, the minimum weight of the sample may be decreased to a quarter of the specified weight. However, the sample must have a weight of at least 5g and consist of at least 400 seeds.

LIMITS OF VARIATION (Table 5)

The limits of variation prescribed for civil liabilities are as follows:

Germination	
Stated minimum percentage of germination (expressed as an integer)	*Limit of variation %*
99-100	2
97-98	3
94-96	4
91-93	5
87-90	6
82-86	7
76-81	8
69-75	9
60-68	10
50-59	11

Analytical purity	
Stated minimum percentage of analytical purity (expressed to one decimal point)	*Limit of variation %*
99.9 - 100	0.2
99.8	0.3
99.6-99.7	0.4
99.3-99.5	0.5
99.0-99.2	0.6
98.5-98.9	0.7
98.3-98.4	0.8
97.5-98.2	0.9
97.0-97.4	1.0
96.5-96.9	1.1
95.5-96.4	1.2
95.0-95.4	1.3

Content of seeds of other plant species	
Stated maximum percentage of seeds of other species (expressed to one decimal point) *%*	*Limit of variation*
0.0	0.1
0.1 – 0.2	0.3
0.3 – 0.4	0.4
0.5 – 0.6	0.5
0.7 – 0.9	0.6
1.0 – 1.4	0.7
1.5	0.8

Annex 1 - Guidance on previous cropping

NOTE: Where year (yr) or years (yrs) are mentioned this refers to seeds year (1 July – 30 June)

Species and category		**Good practice***	**Minimum compatibility**
Wheat, barley, oats, triticale	PB/B	No other variety of same species in previous 2 yrs No other cereal species in previous 2 yrs	No other variety of same species in previous year
	C1 & C2	No other variety of same species in previous 2 yrs No other cereal species in previous year	No other variety of same species in previous year
Rye		No other variety of rye or triticale in previous year	No other variety of same species in previous year
Field peas		No *Pisum sativum* or *Vicia faba* (or dredge corn containing these species) in previous 2 yrs	No crop containing the same species in previous year
Field beans		No *Pisum sativum* or *Vicia faba* (or dredge corn containing these species) in previous 2 yrs	No crop containing the same species in previous year
Ryegrass (perennial, Italian and hybrid)		No crop of same variety in previous year No other variety of same species in previous 4 yrs (CS) or previous 6 yrs (PB/B) No other ryegrass species in previous 4 yrs No cocksfoot, meadow or tall fescue in previous 3 yrs No other grass in previous 2 yrs	No other variety of same species in previous 4 yrs No other ryegrass species in previous 4 yrs No other grass in previous 2 yrs
Cocksfoot		No crop of same variety in previous year No other variety of same species in previous 4 yrs (CS) or previous 6 yrs (PB/B) No ryegrass in previous 4 yrs No meadow or tall fescue in previous 3 yrs No other grass in previous 2 yrs	No other variety of same species in previous 4 yrs No other grass in previous 2 yrs

Species and category	Good practice	Minimum compatibility
Meadow fescue	No crop of same variety in previous year No other variety of same species in previous 4 yrs (CS) or previous 6 yrs (PB/B) No ryegrass in previous 4 yrs No cocksfoot or tall fescue in previous 3 yrs No other grass in previous 2 yrs	No other variety of same species in previous 4 yrs No other grass in previous 2 yrs
Tall fescue	No crop of same variety in previous year No other variety of same species in previous 4 yrs (CS) or previous 6 yrs (PB/B) No ryegrass in previous 4 yrs No cocksfoot or meadow fescue in previous 3 yrs No other grass in previous 2 yrs	No other variety of same species in previous 4 yrs No other grass in previous 2 yrs
Red fescue	No crop of same variety in previous year No other variety of same species in previous 4 yrs (CS) or previous 6 yrs (PB/B) No ryegrass in previous 4 yrs No cocksfoot, meadow or tall fescue in previous 3 yrs	No other variety of same species in previous 4 yrs
Timothy and any other grass species	No crop of same variety in previous year No other variety of same species in previous 4 yrs (CS) or previous 6 yrs (PB/B)	No other variety of same species in previous 4 yrs
Red clover, white clover, lucerne, sainfoin and other small seeded legumes	No crop of same variety in previous year No other variety of same species in previous 4 yrs (CS) or previous 6 yrs (PB/B)	No other variety of same species in previous 4 yrs
Crucifers, oilseed rape except hybrids, fodder rape, turnip rape, brown mustard, black mustard, white mustard	No cruciferous crop in previous 5 yrs	No seed bearing cruciferous crop in previous 2 yrs. Soil sterilisation, soil replacement and transplanted crops will be considered on case by case basis.

Species and category	Good practice	Minimum compatibility
Hybrid oilseed rape	Statutory requirement for no cruciferous crop in previous 5 yrs	Statutory requirement for no cruciferous crop in previous 5 yrs
Flax and linseed	No flax or linseed crop in previous 5 yrs	No flax or linseed crop in previous 2 yrs
Soya bean	No peas or beans in previous 2 yrs No soya bean in previous 5 yrs	No crop of same species in previous year
Beet	No beet seed crop in previous 5 yrs No beet crop in previous 2 yrs	No crop of same species in previous 2 yrs. Soil sterilisation, soil replacement and transplanted crops will be considered on case by case basis
Turnips	No cruciferous crop in previous 5 yrs or for transplanted crops in previous 3 yrs	No cruciferous crop in previous 2 yrs. Soil sterilisation, soil replacement and transplanted crops will be considered on case by case basis
Broad bean	No bean (*Vicia faba* or *Phaseolus* spp), pea, lucerne, red clover, white clover, alsike or sainfoin crop in previous 4 yrs	No crop of same species in previous year
French bean	No pea or bean (*Vicia faba* or *Phaseolus* spp) crop in previous 4 yrs	No crop of same species in previous year
Lupins	No lupins in previous 2 yrs	No crop of lupins in previous year
Hemp	No hemp in previous 2 yrs	No crop of same species in previous 2 yrs

* Applies to all categories unless stated PB/B = pre-basic/basic

Annex 2 – Early Multiplication of seed

1. Early multiplication allows for seed to progress through the multiplication categories before the variety is added to a National List or the Common Catalogue. This enables seed stocks to be built up in advance of a variety being listed.
    - The variety must be entered for National Listing in the UK or another EU Member State.
    - If the variety fails or is withdrawn from National List testing, it ceases to be eligible for early multiplication.
    - **No marketing can take place until the variety is listed**.

2. **The application procedure mirrors the official seed certification requirements for a variety already on a National List or the EU Common Catalogue**:
    - Entry of the seed lot for multiplication and control plot (CERT 5)
    - Entry of a seed crop and application for official inspection (CERT 2)
    - Crop inspection and report (CERT 3)
    - Sampling and Testing (CERT 5)
    - Seed testing and report (CERT 10)
    - Notification of early multiplication (CERT 7/7Summ)

3. Marketing cannot take place until the variety is added to a National List or the Common Catalgue.

SEED LOT ENTRIES

4. A sample from the seed lot is submitted to NIAB accompanied by a CERT 5. This is to ensure that official samples of all seed lots, which are intended to be multiplied, are sent to NIAB for sowing in control plots.

CROP ENTRIES

5. Crops are entered for seed production using form CERT 2 (notification) and CERT 2A (payment). All crops entered for early multiplication are subject to official inspection.

CROP INSPECTION CERT 3

6. NIAB will arrange for **official** inspection of crops of varieties in early multiplication to produce CS, C1, C2 and C3 (where applicable). Earlier generation pre-basic and basic are always officially inspected.

CROP INSPECTION REPORTS CERT 3

7. Crop inspection reports are a lodged with NIAB on completion of the official inspection. Reports are copied to the applicant.

SEED SAMPLING AND SEED TESTING

8. Once seed is processed, divided into seed lots, sealed and labelled it must be sampled and tested to establish whether it meets the prescribed seed standards. An application for sampling and testing of a seed lot (CERT 5) must be completed.

9. The seed lot status is not confirmed until a seed test report CERT 10 has been issued detailing the test results.

COMPLETION OF SEED STAGE (CERT 7/7SUMM)

10. The seed stage is completed, when a CERT 7 or CERT 7Summ form is completed and submitted with the seed lot fee. This maintains pedigree records and allows the next stage of multiplication to continue. The seed test report should be lodged as soon as possible. Once the variety is added to the UK National List or EU Common Catalogue, the seed test report becomes automatically lodged and certification is completed in retrospect.

LABELLING OF EARLY MULTIPLIED SEED

11. All labels for seed of varieties under early multiplication should be over-printed ***'Seed Not Certified'*** by the applicant/processor. An official label appropriate to the category and level must be used.

Annex 3 – Guide to Statutory Tetrazolium testing for certification in England and Wales

1. BACKGROUND

The Seed Marketing Regulations 2011 (Schedule 4, Part 2, Regulation 6) allow the use of a statutory tetrazolium (STZ) test on all categories of certified cereals as an alternative to the full germination test. The STZ results will be reported on a CERT 10 as STZ% and the number of seeds examined must be stated under remarks. Both OSTSs and LSTSs can carry out the tetrazolium test for certification of cereal seed.

The tetrazolium test is a viability test where living tissue is stained red. The staining patterns are interpreted to categorise seeds into viable and non-viable. The STZ test correlates well with germination but under some situations will give an over-estimate. For example, the STZ test does not detect dormancy or any damage to germination that will occur due to the presence of seed-borne diseases, or from the adverse effects of chemicals, e.g. glyphosate damage.

If there is any doubt about whether a STZ test should be carried out (e.g. because of seed treatment, disease or where heat damage is present at 5% or more) then a germination test should be done.

The results of an official germination test will always take precedence over the STZ result.

When a derogation is in place a 400 STZ test must be carried out. Contact the OSTS for advice.

If seed lots are being certified using a STZ test they **cannot be early moved.** The applicant must wait for the STZ, purity and other seed count results, plus confirmation that the seed lot passes certification at the appropriate category and level before moving the seed lot.

All reserve portions that have been tested using STZ will be checked tested by STZ. Enforcement testing will always use a germination test.

2. SPECIES COVERED BY STZ

A STZ test can be carried out on all cereal species covered by the Regulations. Training and assessment will normally be on barley and wheat. Oats can be included on request. The assessment criteria for Triticale is the same as for wheat but the standards and therefore the tolerances are different. Candidates should discuss their requirements with the OSTS.

3. RESPONSIBILITY

It will be the responsibility of the Applicant /seed analysts to ensure seed is suitable for testing by STZ. Certification will be withdrawn if seed tested by STZ is subsequently found not to meet the prescribed germination standard. Please also note that seed must continue to meet the prescribed standard at the point of marketing. It is an offence to market seed which does not meet prescribed standards, even though those standards were met at the point of certification.

Annex 4 – Late entered seed lots and crops without control plots of the sown seed

SEED LOT ENTRY

The Seed Marketing Regulations make provision that seed lots may be accepted into the certification scheme after the closing date. These seed lots are known as late entered seed lots.

Seed lots accepted for multiplication under this provision, without an official sample for a control plot, will require an official inspection. The only exception being for seed lots entered to produce CS seed of hybrid rye and hybrid oilseed rape, for which there **must** always be a control plot.

Late Entered Seed Lot

NIAB, as soon as they are aware of a late entered sample, will inform the applicant stating:

- The sample was received after the closing date.
- The sample was received too late for drilling in control plots.
- An official inspection will be required.

NIAB will confirm whether or not a late entered seed lot will be accepted and that all crops entered for seed certification will require an official inspection.

CROP ENTRIES

An applicant who has sown or intends to sow a crop where a sample of the sown seed lot has not been submitted, or was submitted too late for sowing in control plots, should notify NIAB that they want the seed lot to be accepted as late entered. For late entered seed lots encountered at crop entry NIAB will inform the crop applicant and, if appropriate, the company that certified the seed from that crop can only be accepted if the seed lot is accepted as late entered.

For all rye crops entered for further multiplication where no standard sample exists, the crops are subject to an official inspection.

For hybrid crops where no standard sample exists the crop/s are subject to an official inspection.

Field Inspection of Crops - Late Entered Seed Lot Accepted

If a late entered seed lot is sown to produce seed, the regulations require that an official inspector inspect the crops. NIAB will arrange for official inspectors to carry out an official

inspection. This will apply to crops sown to produce CS, C1, C2 or C3 which would normally be inspected by licensed crop inspectors. Official inspections will be subject to the appropriate official inspection fee.

Confirmation of varietal identity without a control plot

For some species (e.g. grasses), varieties and circumstances (e.g. crops of varieties in early multiplication and sown with breeder's seed), a control plot is needed to confirm varietal identity.

Crops without control plots fall into two distinct types: -

(i) Varieties familiar to NIAB specialists

Any such entered seed lot without a standard should only be accepted under the following conditions.

- A standard sample from the Certifying Authority who carried out the DUS testing is needed, to assist in the establishment of varietal identity.
- A test to establish varietal identity is carried out and confirms that the varietal characteristics of the variety under test match those of the standard.
- Where no sample exists, the official crop inspector is satisfied that the variety in the field matches the description/their knowledge.

For PB and B crops

NIAB will organise an official inspection.

For Certified generations

An official inspection will be organised of representative crops.

(ii) Varieties that are not familiar to NIAB

A check for varietal identity, using laboratory examination, electrophoresis or DNA testing could be carried out. Providing the sample representing the seed lot matches that of the standard, then the seed lot can be accepted and an official inspection carried out.

- The applicant should formally accept responsibility for the risk and consequences arising from the limitations of establishing varietal identity without a control plot.
- An adequate description from the Testing Authority must be obtained to assist the crop inspector.

The crop inspector/s may be given a form of words to qualify the crop approval statement on the CERT 3, taking into account the limitations of inspecting an unfamiliar crop without the back up of control plots.

Testing

For most species it is possible to carry out a check for varietal identity, using laboratory examination, electrophoresis or DNA testing. Such a test must be sufficiently robust for the species. It should be recognised however that the laboratory examination, electrophoresis or DNA test may not be as reliable as a control plot for varietal identity and may not detect varietal purity problems.

If a varietal purity problem is identified during testing, then the decision to withdraw certification or leave it to the field inspection would be made.

Varietal Identity

There are situations where a control plot is necessary to confirm varietal identity, for example grasses and crops of varieties in early multiplication and sown with breeder's seed. NIAB will advise Animal and Plant Health Agency that the seed lot should **not** be accepted as late entered.

Restriction

A requirement of this provision is that an official inspection should be carried out. Limited resources may restrict the number of entries that can be accepted under this provision.

Late Entry Rejected

If a late entered seed lot is not accepted, then future crop inspection is not relevant as crops have to be produced from either an entered or a late entered seed lot.

Fee

A separate fee may be applied to late entered seed lots to cover:

- Extra work involved in handling the information.
- Any laboratory exam, electrophoresis or DNA testing.

Annex 5 – Seed imports from other member states and third countries

Part I: Seed Imported from other Member States

Legislation

The Seed Marketing Regulations and the relevant EU Directives.

Breeder's seed

1. Breeder's seed intended for multiplication to Pre-basic or Basic seed may be imported from another Member state. The procedures are the same as for Breeder's seed produced in the UK. The seed should be sampled after import, by a licensed seed sampler, for sowing in an official control plot.

Officially certified seed – variety listing requirements

2. Seed must be of a variety which is listed (i.e. on the UK National List or EU Common Catalogue) before it is officially certified, **except for:**

(a) Pre-basic or Basic seed of an unlisted component of a hybrid variety may be officially certified, provided the hybrid variety to be produced from the component is listed;

(b) Seed of a variety or component of a hybrid variety whose entry on a National List and EU Common Catalogue has expired, but for which a marketing extension granted by any Member State is in force, may be officially certified.

3. Categories of seed that may be imported

(a) Pre-basic, Basic, CS, C1, C2 or C3 (Flax and Linseed) seed certified and labelled in another Member State;

(b) that has achieved <u>all</u> certification requirements, except listing; or

(c) Seed Not finally certified (i.e. grey label 'certified for crop standards only').

For final certification in the UK as officially certified seed. The <u>original</u> country of production must be stated on the label.

Mixtures

4. Mixtures permitted by the the EU Seed Marketing Directives prepared, packed, sealed and labelled in another Member state, may be imported for marketing.

Standard Seed of vegetables

5. Standard Seed of vegetables packed, sealed and labelled in accordance with the Vegetable Seed Directive and imported from other Member States may be marketed. The seed must be of a variety which is on a National List or the EU Common Catalogue, unless it is marketed under an authorisation ***(see the authorisations section in this guide).***

Verification at HVS

6. Seed of cereal and fodder species officially certified by another Member State may be verified as meeting HVS, provided the HVS standard applies to the species. A sample from the seed lot must be submitted to NIAB for verification. NIAB will issue a certificate stating the results. If seed is verified as meeting HVS, it should be re-labelled, using Animal and Plant Health Agency official labels, overprinted with the HVS symbol or HVS letters. The original country of production must be stated.

Re-grading

7. Seed officially certified by another Member state may be re-graded in the UK, provided it meets the requirements for the new category. Seed which is re-graded should be re-labelled using official Animal and Plant Health Agency labels. The original country of production should be printed on the Animal and Plant Health Agency label. Applications to re-grade seed officially certified by another Member State should be made to NIAB.

Imported seed for early multiplication of varieties, which are not yet listed

8. Seed, which has met all the requirements for official certification by another Member state, except the listing requirement, may be imported from another Member state pending listing. The seed may be entered for early multiplication before listing, **but it cannot be marketed** until it is listed. The procedures for entering unlisted seed for early multiplication are the same as those for a listed variety. The seed should be labelled with an official label appropriate to the category and level and be overstamped ‘Seed Not Certified’.

Imports of Seed Not Finally Certified (grey label seed)

9. Seed of any category harvested in another Member State may be imported for final certification provided it is seed of a species eligible to be certified at that category in England and Wales.

10. The seed must have been crop inspected and achieved the standards for the category for which it had been entered.

Documents which must accompany the seed

11. The seed must be accompanied by an official document containing the information detailed in the Directives. This must be lodged with NIAB. This should be done before the seed is submitted for testing.

Packaging, sealing and labelling requirements

12. The seed must be packed and sealed in accordance with Directive requirements. It must be labelled with a grey label containing the information shown in the Regulations

Final certification as UK officially certified seed

13. The seed should be sampled, sealed, labelled and tested in the same way as UK produced seed. It must meet the same seed conditions for the category for which is has been entered. Provided it meets all requirements, it is certified as UK officially certified seed. The certified seed must be labelled with Animal and Plant Health Agency official labels. The original country of production must be printed on the label.

This seed may be officially certified for early movement in the same way as seed harvested from crops produced in the UK.

Verification at HVS and Re-grading

Seed imported as 'not finally certified' may be entered for HVS or re-graded.

Part II - Seed Imported From Third Countries

Please consult the OECD Seed Schemes - Varietal Certification and Control of Seed Moving in International Trade.

Genetically modified seed

Packing, sealing and labelling requirements should follow procedures for genetically modified seed (if applicable).

Breeder's seed (Not Certified)

1. Breeder's seed intended for multiplication to Pre-basic or Basic seed may be imported from any equivalent Third Country. The packing, sealing and labelling requirements, including chemically treated seed, are exactly the same as for Breeder's seed produced in England and Wales. The seed should be sampled after import, by a licensed seed sampler for sowing in an official control plot.

Equivalent arrangements and variety listing requirements

2. Seed can only be imported officially certified, or for final certification, from countries which the EU recognises as having crop inspection and seed production standards equivalent to those in the EU for the species concerned. These are called "equivalent Third Countries".

The equivalence arrangements only apply to agricultural species.

The seed is produced under the OECD scheme appropriate to the species and the variety must be on the OECD list of varieties eligible for certification. A variety subject to a marketing extension in the EU must also be entered on the OECD list of varieties eligible for certification.

Categories of seed

3. **Pre-basic** seed cannot be imported from a Third Country.

4. **Basic, CS, C1, C2 and C3** (Flax and Linseed) seed may be imported:

(a) after it has been finally certified by an equivalent Third Country; or

(b) after it has been found to meet all certification requirements by an equivalent Third Country, except listing.

5. **BS, CS, C1 and C2** seed may be imported as not finally certified (i.e. grey label seed) for certification as UK officially certified seed. Herbage seed mixtures may be imported subject to certain conditions. Other types of mixtures may not be imported.

Imports of officially certified seed

6. **BS, CS, C1, C2 or C3** seed which meets the variety listing requirements and which has been officially certified by an equivalent Third Country in accordance with the OECD scheme for the species may be imported and marketed. The seed must also meet the requirements of the appropriate Directive, equivalence decision and the Seed Marketing Regulations.

Early movement does not apply to Third Country officially certified seed.

Conditions which must be met:

Preceding generation

7. Officially certified Basic seed must have been produced from an earlier generation of seed, which was produced by or under the responsibility of the maintainer:

(a) in the EU, where a variety is exclusively maintained in the EU; or

(b) in the EU, or in a Third Country which the EU has recognised as having equivalence in variety maintenance, where a variety on the Common Catalogue is maintained outside the Community.

8. Officially certified CS, C1, C2 or C3 seed must have been produced from an earlier generation of Basic, C1 or C2 seed, which was produced and officially certified:

(a) in the EU; or

(b) in a Third Country with equivalence for the production of Basic seed of the species concerned - the Basic seed must have been produced from an earlier generation.

Crop and seed conditions

9. The crop and seed conditions, which have to be met, are those prescribed in the appropriate Directive. Basic seed crops produced in an equivalent Third Country must have been inspected by the Designated Authority. CS, C1, C2 or C3 crops may have been inspected by official or licensed inspectors. Seed must have been sampled and tested in accordance with International Seed Testing Association (ISTA) rules by an OSTS or an officially licensed LSTS in an equivalent Third Country. Sampling and testing in Canada and the USA is carried out by officially recognised seed testing laboratories according to the rules of the Association of Official Seed Analysis (AOSA).

Packaging, sealing and labelling requirements

10. The seed must have been packaged, sealed and labelled under the responsibility of the Designated Authority in the exporting Third Country in accordance with the appropriate OECD scheme, using OECD labels

11. OECD labels must be printed in one of the official languages (English or French). The following information must be on the OECD label or an additional official label, which gives the name of the relevant Designated Authority certifying the seed and the country of certification:

(a) a statement that the seed meets EU rules and standards;

(b) a statement that the seed has been sampled and tested according to ISTA rules for orange or green International Certificates, or AOSA rules for Canada and the USA, and name of seed testing station;

(c) date of sealing;

(d) country of production;

(e) declared net or gross weight or declared number of pure seeds (or clusters for beet seed);

(f) where weight is indicated and granulated pesticides, pelleting substances or other solid additives are used, the nature of the additive and the approximate ration between the weight of pure seed and the total weight;

(g) a genetically modified variety and chemically treated seed must be clearly labelled as such.

12. An official notice inside the package, which gives the seed lot reference number, species and variety, and for beet, whether the seed is monogerm or precision.

This notice is not necessary if the information is printed on the package or if the label is self adhesive or tear resistant.

Re-grading

13. Basic, CS, C1, C2 or C3 seed officially certified by an equivalent Third Country may be re-graded to UK officially certified seed, provided it meets the requirements for the relevant category. Seed, which is re-graded, should be re-labelled, using Animal and Plant Health Agency OECD official labels. The re-sealing/labelling must be done by or under the supervision of an official or licensed seed sampler The original country of production must printed on the label and the date of re-sealing stated. Applications to re-grade seed officially certified by an equivalent Third Country should be made to NIAB.

Documents which must accompany the seed

14. Seed must be accompanied by the following on import:

(a) an OECD certificate issued by the approved seed Designated Authority responsible for certification of the seed lot; and

(b) an orange or green international certificate issued under ISTA rules, or a lot inspection certificate issued under AOSA rules for seed officially certified in Canada or the USA, showing that the seed in the lot met the conditions in the appropriate Directive for the seed category.

Entry for further multiplication

15. Multiplication category seed officially certified by an equivalent Third Country may be entered for further multiplication. The seed should be sampled by a licensed seed sampler and sent to NIAB for sowing in an official control plot.

Verification at HVS

16. Seed of cereal and fodder species may be verified as meeting HVS. Seed which is verified as meeting HVS should be re-labelled using UK OECD labels. The fact that the seed meets HVS standards should be stated on the OECD label, below the information prescribed by the OECD scheme. Please contact NIAB for information on how to verify imported seed at HVS.

Imports of seed of varieties, which are not yet listed

17. Basic, CS, C1, C2 and C3 seed which has met all the requirements for official certification by an equivalent Third Country, except the listing requirement, may be imported prior to listing. Official certification occurs at the point at which the variety is listed. The seed is described as “Not Finally Certified Seed”. It may be entered for early multiplication before listing, but it cannot be marketed until it is listed and officially certified. In some cases grey label seed may enter the UK without the seed tests having been completed but it must be tested and pass before marketing can occur.

Conditions which must be met:

Crop and seed conditions

18. These are:

(a) Basic, CS, C1, C2 and C3 seed may have been harvested from a crop produced in an equivalent Third Country. CS, C1 or C2 seed may also have been harvested from a crop produced in an equivalent Third Country and exported as "Not Finally Certified Seed" to a Member State other than the UK, for packaging, sealing, labelling, sampling and seed testing, and subsequent import into the UK before listing;

(b) Basic seed crops must have been officially inspected. CS, C1, C2 or C3 seed crops may have been inspected by official or licensed inspectors. In either case, the crops must have been found to meet the crop conditions in the appropriate Directive;

(c) In all cases, except grey label seed, the seed must have been tested by an Official or Licensed Seed Testing Station in an equivalent Third Country, or a laboratory acting under the authority of the State Seed Testing Agency in Canada or the USA, and found to meet Directive seed conditions.

Packaging, sealing and labelling requirements

19. The packing and sealing requirements are as set out in the OECD Seed Schemes.

20. For seed sent to the examining country for the purpose of final certification, the seed shall be given a grey label in compliance with Appendix 10 of the OECD Seed Schemes indicating the provisional denomination of the variety and bearing the statement 'Not Finally Certified Seed – Variety Under Registration Testing'; or

For seed finally certified by the Designated Authority for the country of multiplication once the variety has been registered, in compliance with OECD Rules, the official name being that expressly indicated by the Designated Authority of the registering country. A grey label shall be used.

Documents which must accompany the seed

21. A certificate issued by the competent authority of the country of origin certifying its status must accompany the seed

Verification at HVS and re-grading

22. Seed imported pending listing may also be verified at HVS or re-graded.

Imports of Seed Not Finally Certified (grey label seed)

23. CS, C1, C2 and C3 seed may be imported for final certification (as UK officially certified seed) provided it is a category of seed that may be certified in England and

Wales.

24. Not Finally Certified seed of a variety which is the subject of a marketing extension in the EU may also be imported for final certification in England and Wales, provided the variety is on the OECD list of varieties eligible for certification.

Conditions which must be met:

25. Seed harvested in a third country may be certified if—

- it has been produced directly from—

  basic seed or certified seed of the first generation certified either in a member State or in a third country that has been granted equivalence under Council Decision 2003/17/EC on the equivalence of field inspections carried out in third countries on seed-producing crops and on the equivalence of seed produced in third countries; or

- the crossing of basic seed officially certified in a member State with basic seed certified in such a third country;
- it has undergone field inspection in accordance with Council Decision 2003/17/EC;
- examination has shown that the conditions for seed of that category are satisfied;
- it is accompanied by a certificate from the competent authority of the country of origin certifying its status.

The label must be grey.

The document confirming crop inspection standards must be lodged with NIAB. This should be done before the seed is tested for certification.

Final certification as UK officially certified seed

26. The seed should be sampled, sealed, labelled and tested in the same way as UK produced seed. It must meet the same seed conditions as seed harvested in England and Wales. Provided it meets all the requirements, it is certified as UK officially certified seed. The certified seed must be labelled with Animal and Plant Health Agency OECD official labels, amended to show the original country of production. This seed may be officially certified for early movement in the same way as seed harvested from crops produced in the UK.

Verification at HVS

27. Seed imported as Not Finally Certified seed may be verified at HVS. Applications to verify seed imported not finally certified at HVS should be made to NIAB.

Re-grading

28. Seed imported as Not Finally Certified seed may also be re-graded after certification. Decisions to re-grade may be taken in the same way as decisions to re-grade UK officially certified seed harvested from crops produced in the UK.

Mixtures

29. Mixtures of Herbage seed (Amenity and Agricultural) are permitted under the OECD Seed Schemes.

In all other circumstances seed officially certified in an equivalent Third Country may be mixed after import in accordance with the Seed Marketing Regulations.

These mixtures should be labelled with Animal and Plant Health Agency OECD official labels. All the original country(s) of production of the individual components must be shown on the label.

Vegetable Seed

30. Standard seed of vegetables can be imported from any Third Country. However, the equivalence decision does not provide for any Third Country imports of certified vegetable seed.

Requirement to provide information on imported seed from Third Countries

31. Anyone marketing more than 2Kg of seed imported from Third Countries must provide specific information to Animal and Plant Health Agency. This only applies to the first marketing in the Community. For example, where seed is imported into France from a Third Country, and first marketing takes place there, notification should be to the French authorities. If the seed is subsequently imported into England and Wales, it is not necessary to notify Animal and Plant Health Agency.

Annex 6 – Guide to applying for authorisation to market seed for:

- **Tests and Trials**
- **The purpose of gaining knowledge from practical experience during cultivation for vegetable varieties**
- **Scientific Purposes and Selection Work**

1. Introduction

There are exceptions to the Seed Marketing Regulations for England, which if certain conditions are met, allow an authorisation to be granted to market: -

(a) Appropriate quantities of uncertified seed of unlisted agricultural varieties for *tests or trials*;

(b) Uncertified seed of unlisted vegetable varieties for *the purpose of gaining knowledge from practical experience during cultivation;*

(c) Small quantities of uncertified seed of unlisted or listed agricultural or vegetable varieties, for *scientific purposes or selection work*.

1.2 Applicants wishing to use these arrangements must have **prior** authorisation from Animal and Plant Health Agency before marketing any seed.

1.3 Different arrangements may apply in Scotland and Northern Ireland and producers should consult the relevant Certifying Authority.

1.4 Animal and Plant Health Agency will handle applications on behalf of the National Assembly for Wales and these will be dealt with under the Welsh Seed Marketing Regulations 2004 and 2005. Animal and Plant Health Agency will maintain a central register of all authorisations issued in the UK.

1.5 Authorisations can permit Community wide marketing.

1.6 There are reciprocal arrangements between Member States (MSs) for reporting authorisations issued, withdrawn or rejected.

1.7 Applications for authorisation in England and Wales should be made to the Animal and Plant Health Agency Cambridge office.

2. MARKETING UNLISTED AGRICULTURAL VARIETIES FOR TESTS AND TRIALS

Granting of authorisations

2.1 Applicants must be producers established in England or Wales or their representatives.

2.2 There must be a current National List application for the variety in the UK and this application must not have been withdrawn or a final decision made.

2.3 For seed of a genetically modified (GM) variety, the applicant must have consent under Council Regulation (EC) No. 1829/2003 on genetically modified food and feed or under Part C of Directive 2001/18/EC on the deliberate release into the environment of genetically modified organisms.

Quantities

2.4 For agricultural varieties the maximum quantities of seed per variety that may be authorised are:

Species	% of Yearly Figure
Durum Wheat	0.05%
Field Pea, Field Bean, Oats, Barley, Wheat	0.3%
All other species	0.1%

If these quantities are not enough to sow 10 hectares in that MS then the specific amount needed may be authorised.

Trial Location

2.5 The location of the trial sites may be in England, Scotland, Northern Ireland, Wales or another EU Member State. Animal and Plant Health Agency will contact the relevant Devolved Administration or Member State for clearance before granting an authorisation.

Time Period

2.6 Authorisations will be granted for a period of not more than one year and can be renewed on application.

Cessation

2.7 An authorisation will become invalid once the variety is added to the National List or the National List application is withdrawn or rejected. An authorisation may be withdrawn for breach of conditions.

2.8 If a prohibition on the use of the variety is published in the Gazette then it will not be possible to continue marketing the seed.

How to apply for an authorisation and notification

2.9 Applications should be made in writing to Animal and Plant Health Agency providing the information outlined in the application letter which includes variety names or reference numbers, trial location, the nature of the intended trials and amounts of seed. These details are necessary for the application to proceed. Applicants will normally be notified within 14 days whether or not authorisation has been granted. This should be taken into account when deciding whether to apply for authorisation, as seed **cannot be marketed until authorisation has been granted.** NIAB will be informed of all successful applications.

Please note the following requirements: -

- The seed may only be used for the purposes of tests or trials carried out at agricultural enterprises to gather information on the cultivation or use of the varieties to which the application relates;
- The seed must have met the crop and seed standards and, if requested, copies of the relevant reports should be provided to Animal and Plant Health Agency within the time period specified;
- The seed is correctly labelled;
- To keep records of the results of the tests and trials, the amount of seed marketed and the name of the MS for which the seed was intended. These records should be made available on request to authorised officers of Animal and Plant Health Agency.

Technical Conditions

2.10 Test and trial seed of unlisted agricultural species must meet the crop and seed standards for the final generation of the species and crop type concerned, as set out in the Regulations.

Crop standards

2.11 For crop standards, it will be the applicant's responsibility to ensure that a satisfactory crop inspection report can be provided. The simplest way to do this is to produce the seed from a crop approved under the arrangements for early multiplication. This avoids the entry of a crop specifically to produce test and trial seed and gives much more flexibility.

Seed Standards

2.12 Seed must be sampled and tested and a Cert 10 test report produced. Test and trial seed can be re-entered from an early multiplication seed lot submitting a Cert7/7summ and fee in the usual way.

2.13 Test and trial seed must be packed, sealed and labelled with an orange *official* label in accordance with the Regulations.

3. MARKET TESTING OF UNLISTED VEGETABLE VARIETIES

3.1 The procedure to be followed is similar to that for the test and trial of agricultural species with the following exceptions:-

Application

3.2 A description of the variety and details of maintenance should be provided.

3.3 The authorisation will include a requirement that the seed may only be used for the purposes of gaining knowledge from practical experience during cultivation.

3.4 An authorisation will not be granted unless a National List application has been made for the variety in the UK or in another MS, which has not been withdrawn or a final decision made.

3.5 For seed of a genetically modified (GM) variety, the applicant must have consent under Council Regulation (EC) No. 1829/2003 on genetically modified food and feed or under Part C of Directive 2001/18/EC on the deliberate release into the environment of genetically modified organisms

Technical Conditions

3.6 There is no requirement to make a formal certification application.

3.7 For the market testing of unlisted vegetable species, seed must meet the standards required by the Seed Regulations.

Cessation

3.8 An authorisation will become invalid once the variety is added to the National List or the National List application is withdrawn or rejected. An authorisation may be withdrawn for breach of conditions.

3.9 If a prohibition on the use of the variety is published in the Gazette then it will not be possible to continue marketing the seed.

Time Period

3.10 Authorisations will be granted for a period of one year and are renewable twice for a period not exceeding one year each.

Quantities

3.11 There are no quantitative restrictions on the amount of seed that may be marketed under an authorisation.

Labelling

3.12 Packages must have an orange *supplier's* label and include the statement: ***'Variety not yet officially listed'***.

3.13 In other respects the labelling requirements are the same as for agricultural seed except that the name of the Certifying Authority and MS or their distinguishing abbreviation is not relevant for vegetable seed and need not be included on the label.

Samples and Records

3.14 A sample from each lot marketed to be retained for not less than two years.

3.15 Records of seed lots of the seed marketed should be kept for not less than 3 years. These records should be made available on request to authorised officers of Animal and Plant Health Agency.

3.16 Authorised officers may also ask for information gained from practical experience during cultivation of the variety, the quantity of seed marketed during the authorised period and which MS the seed was destined for.

4. MARKETING VARIETIES FOR SCIENTIFIC PURPOSES AND SELECTION WORK

4.1 The procedure to be followed is similar to that for the test and trial of agricultural species with the following exceptions:-

Application

4.2 An application to Animal and Plant Health Agency may be made whether or not the variety is listed in the National List.

Quantities

4.3 The Regulations do not define what is meant by a "small quantity" of seed for scientific purposes or selection work. This will be considered on a case-by-case basis and applicants should state the amount of seed they propose to market. As a guideline we would not expect to authorise marketing of more than the amount of seed required for DUS testing (e.g. 1 kg for winter oilseed rape, 3 kg for wheat, 3 kg for peas etc).

4.4 Authorisation is required for each individual marketing of seed but an application may cover more than one request for marketing. For example, a producer wishing to market two separate 1 kg "parcels" of wheat seed to different persons may request authority in one application.

Notification

4.5 The authorisation will include a requirement that the seed be used only for scientific purposes or selection work.

Cessation

4.6 The authorisation will not be limited in duration.

Labelling

4.7 Packages must have an orange *supplier's* label and include the statement: **'Not yet officially listed' (unlisted varieties only).**

4.8 All other labelling details are as specified in the Seed Marketing Regulations.

Annex 7 – Guide to applying for an authorisation to market preservation mixtures consisting of crop-grown or directly harvested uncertified fodder plant seed

INTRODUCTION

The requirements for marketing Fodder seed preservation mixtures in England have been revised following the introduction of new European legislation (Commission Directive 2010/60/EU) and corresponding English regulations. This guide explains the procedure for applying for an authorisation.

1. DEFINITIONS

a. Preservation Mixture

Means a mixture containing seed of prescribed (regulated) species of Fodder Plants covered by Schedule 1 of the Seed Marketing Regulations and is exempt from some of the usual requirements, in particular for variety registration and seed certification. The mixture may also contain seed of plants that are not covered by the legislation. Mixtures consisting entirely of non-prescribed species do not require authorisation.

Preservation mixtures are of species and ecotypes compatible with specific natural and semi-natural habitats and intended for use in preservation of the natural environment and the conservation of plant genetic resources.

Note: *'**Green hay**' harvested from a donor site and spread directly on a recipient site without processing is not considered to be seed and is therefore not covered by this legislation.*

b. Region of origin

This will be the UK unless Animal and Plant Health Agency or the Devolved Administrations have a specific reason to draw it more tightly. Seed of preservation mixtures may only be marketed in the region of origin.

c. Source area

Means an area within the region of origin designated as a special area for conservation or recognised as a UK Biodiversity Action Plan (BAP) priority habitat. The location of the BAP Priority Habitat can be defined at the National Character Area (NCA) level, County/Local Authority level, by Area of Outstanding Natural Beauty (AONB), or Site of Special Scientific Interest (SSSI) the seed is collected from.

d. Collection Site

Means a site within the source area from which the seed is collected. It must not have been sown with agricultural or amenity varieties in the 40 years prior to the date of the application by

the producer.

e. Crop-Grown seed

Means seed of individual species taken from a collection site and multiplied outside the site as single species. It may then be used to create a mixture typical for the habitat type of the collection site.

f. Directly harvested seed

Means a seed mixture marketed as harvested from the collection site with or without further cleaning.

g. Legislation:

Commission Directive 2010/60/EU
Fodder Plant Seed Marketing Directive 66/401/EEC
The Seed Marketing Regulations 2011

2. GENERAL REQUIREMENTS FOR APPLICATIONS FOR AN AUTHORISATION

a. Applicants wanting to market preservation mixtures of **crop-grown** or **directly harvested** uncertified fodder plant seed must be licensed for the purpose of seed marketing operations under the Seed Marketing Regulations.

b. Preservation mixtures may not be marketed until an authorisation has been approved and confirmed in writing (see Section 3 for details of how to apply). Authorisation conditions include the reporting requirements in paragraph 8 below.

c. Once the applicant has been licensed for seed marketing operations and an authorisation for preservation mixtures has been confirmed, the mixture may be marketed freely within the region of origin, subject to the conditions set out in the authorisation. The prescribed species in the mixtures must be those stated in the authorisation.

d. The authorisation will last for one year after which it can be renewed.

e. For crop-grown seed, multiplication after collection from the original site may take place for five generations.

f. For prescribed species in crop-grown mixtures, each batch of seed must be tested at an Official or Licensed Seed Testing Station to determine germination and ensure that certified seed standards for analytical purity and other seeds are met. Certified seed standards can be found in Annex II of the Fodder Plant Seed Marketing Directive 66/401/EEC. Ideally, seed should be sampled by a Licensed Seed Sampler (contact Seed Marketing Team at Animal and Plant Health Agency for information on Seed Sampler courses).

g. Visual inspection of the collection site of a directly harvested mixture may be necessary to assess some requirements in the legislation. Any inspections will be overseen by Natural England.

3. APPLYING FOR AN AUTHORISATION

The information required in an application for authorisation to market preservation mixtures is set out at the end of this Annex. It should be sent to the Seed Marketing Team at Animal and Plant Health Agency (preferably on an Excel spreadsheet) by email to seed.cert@apha.gsi.gov.uk. If you require advice or guidance about applying for an authorisation please email or telephone 0208 02 65718.

4. SEALING OF PACKAGES AND CONTAINERS

a) Preservation mixtures may only be marketed in closed and sealed packages or containers.
b) The sealing system shall be at least the label or a separate seal.
c) The packages or containers shall be sealed so they cannot be opened without damaging the seal or leaving evidence of tampering on the producer's label or on the package or container.

5. LABELLING - SUPPLIER'S OWN

Each package or container must be labelled with a pink label with the following information:

1. Inscribed 'EU rules and standards'
2. Name and address of the person responsible for labelling or his licensing number.
3. Harvesting method: whether directly harvested or crop-grown.
4. Year of sealing expressed as: 'sealed.....'(year)
5. Region of origin (as specified in the application)
6. Source area (as specified in the application)
7. Collection site(s). Alternatively, for crop-gown mixtures, if the number of collection sites is high, information about the sites can be provided separately.
8. Habitat type[1] of the collection site
9. The words 'preservation seed mixture'
10. Reference number of the lot
11. For crop grown mixtures, the percentage by weight of the components as species and, where relevant, subspecies. Alternatively, the mixture can be given a name and information about the components provided separately.
12. For directly harvested mixtures, the components as species and, where relevant, subspecies typical of the habitat type of the collection site with approximate percentage weights. Alternatively, the mixture can be given a name and information about the typical components provided separately.
13. Declared net or gross weight
14. For crop-grown mixtures, a specific germination rate for components which do not meet the relevant germination standard set out in the regulations. Where the number of required specific germination rates is more than five, an average can be given

[1] Habitat of intended use taken from the BAP classification. Suppliers may also add a less technical descriptor e.g. chalk downland mix (as well as Lowland Calcareous Grassland).

15. Any chemical treatment if applicable

6. COMPANY RECORDS

Information relating to marketing seed of preservation mixtures, including a list of all components and their source, must be retained for at least three years and made available for inspection by an official from Animal and Plant Health Agency.

7. SEED SAMPLES

A sample representing each seed lot must be kept for one year and made available to an official from Animal and Plant Health Agency.

8. REPORTING INFORMATION TO ANIMAL AND PLANT HEALTH AGENCY

At the beginning of each season, producers must provide Animal and Plant Health Agency (Seed Marketing Cambridge) with information on the size and location of their intended collection and seed multiplication sites together with an estimate of quantities for marketing in the coming year. Producers are required to provide details, no later than 30 June, of the amount of seed of preservation mixtures marketed in the previous season. This can be done at the same time as renewing authorisations.

REQUIRED INFORMATION

1. General

Crop-Grown and Directly Harvested

- Name and address of producer and licence number.
- Harvesting method (direct or crop grown)
- Region of origin (e.g. England, UK)
- Collection site, Rural Land Register reference, grid reference
- Source Area
- Source habitat type
- Year of collection
- Habitat of intended use (this should be the same as source habitat)

Crop-Grown

- For crop-grown seed, the application should list all of the prescribed species that have been or will be collected and subsequently bulked up as crop-grown seed for marketing in mixtures.
- Multiplication site(s)
- % by weight of components

Directly Harvested

- Species and sub-species typical of habitat type

2. Origin

Example of required information on origin of seed;

Name of collection site(s) (e.g. farm, nature reserve)	**RLR no**	**Grid ref (at least 6 fig)**	**Source habitat (habitat type on collection site) See Section 3 below.**	**Crop-Grown only: Species and sub-species if relevant (scientific & common name)**	**Crop-grown only: multiplication site(s) of each component**	**Directly Harvested applications only: Species/sub-species typical of habitat type**	**Year(s) of collection**	**Source Area**
Lower Farm	TQ12 34 5678	TQ12 3342	Lowland Meadow	Festuca rubra ssp rubra, Red fescue	Upper Farm, Long Road, Old Town. AB1 2CD		2010	East Sussex
As above	As above	As above	As above	Trifolium pratense, Red clover	As above		2009	East Sussex
High ground local nature reserve	TQ22 34 5678	TQ22 35 3425	Lowland Calcareous Grassland	Agrostis capillaris Common bent	As above		2010	East Sussex

3. Habitat(s) of intended use (i.e. the natural or semi-natural habitat for which the mixture is suitable)

UK BAP Priority Habitat types (Please tick as appropriate)	
Arable field margins	Machair
Blanket bog	Maritime cliff and slopes
Calaminarian grasslands	Mesotrophic lakes
Coastal and floodplain grazing marsh	Mudflats
Coastal saltmarsh	Native pine woodlands
Coastal sand dunes	Open mosaic habitats on previously developed land
Coastal vegetated shingle	Purple moor grass and rush pastures
Hedgerows	Reedbeds
Limestone pavements	Traditional orchards
Lowland beech and yew woodland	Upland calcareous grassland
Lowland calcareous grassland	Upland hay meadows
Lowland dry acid grassland	Upland heathland
Lowland fens	Upland mixed ashwoods
Lowland heathland	Upland oakwood
Lowland meadows	Upper birchwoods
Lowland mixed deciduous wood	Wet woodland
Lowland raised bog	Wood-pasture and parkland
	Other (if 'other' ticked, please provide additional notes - see below)

Append separate details describing any 'other' habitats for which mixtures will be marketed and describe how the re-creation of these habitats will contribute to the conservation of genetic resource. (Note: this can be explained in terms of rarity of past destruction of habitat type and likely associated loss of genetic diversity).

NOTES ON REQUIRED INFORMATION:

2. Origin

Name of collection site(s)	e.g. farm name, specified local nature reserve. For crop-grown applications, please specify the collection site for each component.
RLR number	Rural Land Register (RLR) number of the site of wild origin and NOT the site where the species was multiplied-on and subsequently cropped. If you do not have an RLR number, please give grid reference (below)
Grid reference	Centroid grid reference of wild collection site (Useful even with RLR as the OS referencing system tends not to change frequently).
Source habitat type	Taken from the UK Biodiversity Action Plan (BAP) classification.
For crop-grown applications only: Species/sub-species (common name & scientific)	The prescribed species/sub-species collected from the wild site.
Directly Harvested applications only: Species/sub-species typical of habitat type	Components as species and, where relevant, subspecies which are typical for the habitat type as per the UK BAP priority habitat classification. http://jncc.defra.gov.uk/page-5706
Year(s) of collection	The year or years the species were collected.
Source Area	This is given for the location of the BAP Priority habitat collection site and can be defined at the National Character Area (NCA) level, or County/Local Authority level and, where applicable, state the AONB, SSSI etc the seed is collected from. For NCA details see: http://www.naturalengland.org.uk/ourwork/landscape/englands/character/areas/default.aspx For crop-grown mixtures this should be given for each of the species listed. If for each species, collections from several sites has been bulked/merged, the source area should be given as the area that best represents the geographic range of collection sites e.g. single NCA, County/Local Authority or England. For directly harvested mixtures, the source area should be given as NCA or County and, where applicable state the AONB, SSSI etc.

3. Habitats of intended use

This requires identification of the target habitats (by ticking the relevant habitat) where mixtures will be marketed using the UK BAP Priority Habitat classification list. The habitat of intended use for each mixture should be the same as the source habitat.

If the mixtures to be marketed are collected and intended for use in non-BAP habitats, tick the 'Other' category and provide information on how the restoration of this habitat will contribute to the conservation of genetic resources. There is no one way in which this can be explained but it can be done, for example, by reference to rarity of habitat type and likely associated loss of genetic diversity.

Annex 8 – Guidelines for marketing seed of agricultural conservation varieties in England and Wales

These guidelines are for the marketing of seed of agricultural conservation varieties in accordance with The Seed Marketing Regulations and corresponding legislation in Wales. A Conservation Variety is defined as a landrace or plant variety that is naturally adapted to local and regional conditions and is threatened by genetic erosion.

1. Conditions for seed marketing

1.1 Companies and individuals producing or marketing seed of conservation varieties in England and Wales must be licensed with Animal and Plant Health Agency;

1.2 Animal and Plant Health Agency will issue a licence number that must be used on all correspondence relating to an application;

1.3 The variety must have been accepted onto the UK National List as an agricultural conservation variety;

1.4 The seed must be produced from a crop grown in the region of origin specified for the variety at National Listing. Additional regions for crop and seed production may be authorised by Animal and Plant Health Agency;

1.5 The seed may only be marketed and used in the stated region of origin.

2. Notification of seed crops

The following information should be forwarded to Animal and Plant Health Agency for each seed crop by 30 April in the year of production:

- Species
- Variety
- Field identification
- Field area
- Address of crop
- Address of company responsible for the crop and marketing of seed produced from it

3. Quantitative restrictions

3.1 Marketing of conservation varieties is subject to quantitative restrictions. For each conservation variety no more than 0.3% or 0.5% (depending on species) of the UK's total for that species or a quantity necessary to sow 100ha, whichever is the greater.

3.2 For all conservation varieties of a species, no more than 10% of the total UK seed requirement.

3.3 Animal and Plant Health Agency will estimate seed production from the crops registered by 30 April each year. It may be necessary to restrict the seed crop areas approved for production.

4. Seed marketing procedures

4.1 The seed must, with the exception of varietal purity, meet the standards specified in the technical sections of this guide for the end generation of the species concerned.

4.2 Seed must be produced in homogenous lots and not exceeding the maximum weight specified in the technical sections of this guide. For cereals, this is 30 tonnes.

4.3 A sample from every seed lot marketed must be taken and retained for two years and kept available for official monitoring. The retained sample must meet the minimum weight specified in the technical sections of this guide. For cereals, this is 1 kg.

4.4 Seed must be marketed in sealed packages or containers.

4.5 Each package or container must be labelled with a *supplier's* label coloured brown. The information required on the label is:

- The words 'EU rules and standards'
- Name and address, or registration number, of the company responsible for the seed or its identification mark
- Year of sealing, expressed as 'sealed...' (year)
- Species
- Name of the conservation variety
- The words 'conservation variety'
- The region of origin
- Region of seed production where this is different from region of origin
- Reference number of the seed lot
- The declared net or gross weight or declared number of seeds
- Where weight is indicated and granulated pesticides, pelleting substances or other solid additives are used, the nature of the chemical treatment or additive and the approximate ratio between the weight of clusters of pure seeds and the total weight.

5. Reporting, record keeping and official monitoring

5.1 By 30 April of each year, applicants must supply Animal and Plant Health Agency with the amount of seed of each conservation variety marketed in the preceding 12 months.

5.4 Applicants are required to retain records for a minimum of three years of their transactions in seeds and of the treatment, testing and other operations undertaken in relation to the marketing of conservation varieties. Samples of seed must be retained for two years.

5.3 Plant Health and Seed Inspectors may, as part of their enforcement duties, visit applicants to audit records and to take samples from seed marketed.

5.4 Seed crops of a conservation variety may be check inspected by officials.

Annex 9 – Guidelines for marketing seed of vegetable conservation varieties and amateur vegetable varieties in England and Wales

These guidelines are for the marketing of seed of vegetable conservation and amateur varieties, in accordance with Commission Directive 2009/145/EC and the England Seed Marketing Regulations.

A Conservation Variety - is defined as a landrace or plant variety which has been traditionally grown in particular localities and regions and is threatened by genetic erosion.

An Amateur Variety - is defined as a variety with no intrinsic value for commercial crop production but developed for growing under particular conditions.

If you have any queries or would like assistance before proceeding with seed production and marketing, please contact Animal and Plant Health Agency's Cambridge office.

CONSERVATION VARIETIES

Can be marketed as Certified or Standard Seed.

1 Conditions for seed marketing

1.1 Companies and individuals producing or marketing seed of vegetable conservation varieties in England and Wales must be licensed with Animal and Plant Health Agency.

1.2 Animal and Plant Health Agency will issue a licence number that must be used on all correspondence relating to an application.

1.3 The variety must have been accepted onto the UK National List as a vegetable conservation variety.

1.4 The seed must be produced from a crop grown in the region of origin specified for the variety at **the time of** National Listing. Additional regions for crop and seed production may be authorised by Animal and Plant Health Agency.

1.5 The seed may only be marketed and used in the stated region of origin, in most cases, this will be the UK although national authorities may set boundaries at national or regional level**.**

2 Notification of seed crops

Please write to Animal and Plant Health Agency's Cambridge Office with the following information for each seed crop to be produced by 30 April in the year of production or 'before the beginning of each production season':

- Region of origin
- Species
- Variety
- Field identification
- Crop area (Hectares)
- Address of crop
- Address of company responsible for the crop and marketing of seed produced from it

3 Quantitative restrictions

Marketing of conservation varieties is subject to the quantitative restrictions (maximum number of hectares) set out in the Regulations.

Animal and Plant Health Agency will keep a record of hectares entered from the information supplied by 30 April each year or 'before the beginning of each production season'. It may be necessary to restrict the seed crop areas approved for production **if national quantitative limits are likely to be exceeded.**

4 Seed marketing procedures

4.1 The seed may be marketed as Certified or Standard Seed and must meet the corresponding standards specified in the Seed Marketing Regulations. The seed must have sufficient varietal purity.

4.2 Seed must be produced in homogenous lots, not exceeding the maximum lot weight specified in the Seed Marketing Regulations.

4.3 A sample of every seed lot must be taken and retained for two years and kept available for official monitoring. The retained sample must meet the minimum weight specified in the Seed Marketing Regulations.

4.4 Seed must be marketed in sealed packages or containers.

4.5 Each package or container must be labelled with a supplier's label. The information required on the label is:

- The words 'EU rules and standards'
- Name and address, or licence number, of the company responsible for the seed or its identification mark
- Year of sealing, expressed as 'sealed...' (year)
- Species
- Name of the conservation variety
- The words 'certified seed of a conservation variety' or 'standard seed of a conservation variety'
- The region of origin
- Region of seed production where this is different from region of origin

- Reference number of the seed lot
- The declared net or gross weight or declared number of seeds
- Where weight is indicated and granulated pesticides, pelleting substances or other solid additives are used, the nature of the chemical treatment or additive and the approximate ratio between the weight of clusters of pure seeds and the total weight.
- Supplier's label colour yellow

5 Reporting, record keeping and official monitoring

5.1 By 30 April of each year applicants must provide Animal and Plant Health Agency's Seed Marketing team with **information about** the amount of seed of each conservation variety marketed in the preceding 12 months.

5.2 Applicants are required to retain records for a minimum of three years of their transactions in seeds and of the treatment, testing and other operations undertaken in relation to the marketing of conservation varieties. Samples of seed must be retained for two years.

5.3 Plant Health and Seed Inspectors may, as part of their enforcement duties, visit applicants to audit records and to take samples from seed marketed.

5.4 Seed crops of a conservation variety may be check inspected by officials.

AMATEUR VARIETIES

To be marketed as Standard Seed.

1 Conditions for seed marketing

1.1 Companies and individuals producing or marketing seed of vegetable amateur varieties in England and Wales must be licensed with Animal and Plant Health Agency.

1.2 Animal and Plant Health Agency will issue a licence number that must be used on all correspondence relating to an application.

1.3 The variety must have been accepted onto a UK National List as a vegetable amateur variety.

2 Quantitative restrictions

Marketing of amateur varieties is subject to the quantitative restrictions (maximum weight of small packages) set out in the Regulations.

3 Seed marketing procedures

3.1 The seed must have sufficient varietal purity and meet the standards specified in the Seed Marketing Regulations for Standard seed.

3.2 Seed must be produced in homogenous lots, not exceeding the maximum lot weight specified in the Seed Marketing Regulations.

3.3 A sample of every seed lot must be taken and retained for two years and kept available for official monitoring. The retained sample must meet the minimum weight specified in the Seed Marketing Regulations.

3.4 Seed must be marketed in sealed packages or containers.

3.5 Each package or container must be labelled with a supplier's label. The information required on the label is:

- The words 'EU rules and standards'
- Name and address, or licence number, of the company responsible for the seed or its identification mark
- Year of sealing, expressed as 'sealed...' (year)
- Species
- Variety name
- The words 'amateur variety'
- Reference number of the lot given by the person responsible for affixing the label.
- The declared net or gross weight or declared number of seeds
- Where weight is indicated and granulated pesticides, pelleting substances or other solid additives are used, the nature of the chemical treatment or additive and the approximate ratio between the weight of clusters of pure seeds and the total weight.
- Supplier's label colour yellow

4 Reporting, record keeping and official monitoring

4.1 Companies are required to maintain a record of the amount of seed marketed under this arrangement and make this available to an official from the Certifying Authority.

4.2 Applicants are required to retain records for a minimum of three years of their transactions in seeds and of the treatment, testing and other operations undertaken in relation to the marketing of conservation varieties.

4.3 Samples of seed must be retained for two years.

4.4 Plant Health and Seed Inspectors may, as part of their enforcement duties, visit applicants to audit records and to take samples from seed marketed.

Annex 10 – Guidelines for marketing Green Cover Mixtures in England and Wales

1 Green cover crop mixtures can be used as spring sown for summer usage, autumn sown for over-winter usage, intercropping and longer term fertility improvement. Green cover crops can significantly improve the output of agricultural rotations by improving the health of the soil.

2 Legislation

Mixtures for marketing in the UK can contain seed of species covered by the regulations and those not regulated. For those green cover mixtures containing seed of species covered by the regulations, the seed must be fully certified according to the standards set out in the Seed Marketing Regulations, which will include having achieved the purity and germination standards.

i) Large Packages

Labelled with a Green Official Mixture Label (weights more than 10 kg).

ii) Small Packages

EU 'A' up to 2kg and EU 'B' packages up to 10kg would have a supplier's label.

3 Labelling a mixture

i) Official Labels

Information required as defined in the Seed Marketing Regulations, Schedule 3, Part 2, regulation 9. The labels must contain the words 'Mixture of Seed for Green Cover'.

ii) Supplier's Labels

Information required as defined in the Seed Marketing Regulations, Schedule 3, Part 4, regulations 21 and 23. The labels must contain the words 'Mixture of Seed for Green Cover'.

Note

Mixtures containing non-regulated black oats (*Avena strigosa Schreb* - Black or Bristle oats) would be acceptable in the UK, but **not** in the EU as black oats are a species listed in the Cereal Directive.

Mixtures for environmental use - please refer to the procedure for Preservation Mixtures in Annex 7.

This procedure does not cover wild bird seed.

Annex 11 – Supplementary guidance on seed marketing regulations and seed certification scheme in England and Wales

(previously issued as Seed Certification Information letters)

SEED CERTIFICATION FEES

OFFICIAL SEED CERTIFICATION FEES IN ENGLAND AND WALES

Current fees for seed certification in England and Wales have been agreed following a review of costs and consultation with the seed trade and other interested parties. The fees are given in Table 1. Table 2 gives the activities covered by the fee in each category.

The fees apply from 1 January 2014.

There is a reduced fee for on-line (ESP) applications compared to paper applications.

Table 1
Crop and seed lot application fees

CROP ENTRY FEE	**Paper**	**ESP on-line**
	Per hectare (£)	***Per hectare (£)***
Licensed inspection (except early multiplication and late entered crops) (CS, C1, C2 and C3)	5.50	4.50
Official Inspections Pre-Basic, Basic, early multiplication and late entered crops Cereal, Pulses, Linseed and Herbage (One inspection) **Note:** There is a reduced official fee when a PB or B crop is officially inspected by a Licensed inspector	62.00	60.00
Beet, Oilseed Rape, Mustard, Fodder Rape, Beet and Kale (Two inspections)	97.00	95.00
Hybrid rape (Three inspections)	132.00	130.00
Additional official inspection, all species	35.00	35.00

SEED LOT FEES:	***Per seed lot (£)***	
Seed lot fee: final generation (**including re-grades/re-samples**) 2H, 2L, CH, CL, C2 and C3 (when applicable)	42.00	34.00
Seed lot fee: multiplication seed lots PB, B, 1H, 1L, C1, C2 (**including re-grades/re-samples**)	165.00	155.00
Verification of imported seed at Higher Voluntary Standard (HVS)	14.70	14.70

SEED TESTING FEES:	**£**
Fee for an official examination of seed for:	
(a) loose smut infection in wheat, durum wheat, spelt wheat and barley (per thousand embryos examined)	73.00
(b) *Botrytis* spp in sunflower	55.00
(c) *Alternaria* spp*, Phoma exigua* var*. Linicola, Colletotrichum lini, Fusarium* spp and *Botrytis* spp in flax and linseed	45.00
(d) *Pseudomonas syringae* pv. *glycinea* spp in soya bean	
for one sub-sample test	77.00
for five sub-sample tests	257.00
(e) *Diaporthe phaseolorum* spp in soya bean	48.00
(f) *Botrytis* spp in hemp	55.00
(g) *Orobanche* spp in hemp	47.00

OTHER FEES:

Representations by and hearings of, a licensed seed company:

(i)	fee for making written representations to the Minister	£30.00
(ii)	fee for being heard by a person appointed by the Minister	£60.00

Licensed Seed Testing Stations*:*

Annual fee payable during the currency of the Licence (or a proportion thereof in respect of a part of a year)	£1745.00

Table 2

ACTIVITIES COVERED BY THE FEE IN EACH CATEGORY

Crop Entry fee: Licensed Inspection

Applies to:
Crops entered to produce CS, C1, C2 or C3 seed, except for varieties in early multiplication and crops sown with seed lots accepted as late entered.
Crops entered to produce seed of unlisted varieties under authorisation from APHAunless specifically entered to produce pre-basic or basic seed.

Specific costs:
Data handling for crop entry and crop inspection reports.
Monitoring licensed crop inspectors through check inspections (5% of crops inspected by licensed personnel are check inspected by officials).
Training official inspectors to carry out check inspections.

Costs allocated proportionately across crop entry and seed lot fees:
Maintenance of seed pedigree data and certification records.
Varieties and Seeds administration.
PHSI company audits

Crop Entry fee: Official Inspection

Applies to:
All crops entered to produce pre-basic and basic seed. If PB or B crops are to be officially inspected by a Licensed inspector you should contact NIAB.
All crops of varieties in early multiplication and sown with seed lots accepted as late entered.

Specific costs:
Data handling for crop entry and crop inspection reports.
Official inspection (higher fee for species requiring two or three inspections).
Lodging the official inspection report.
Training official inspectors to carry out official inspections.
Control plots of breeder's seed (allocated across all officially inspected crops).

Costs allocated proportionately across crop entry and seed lot fees:
As for 'Crop entry fee: licensed inspections' above.

Additional Official Inspection fee

Applies to:
Additional official inspections requested by the applicant when an earlier official inspection failed the crop at the category entered and where the applicant has taken remedial action.

Specific costs:
Organising and carrying out an additional official inspection.
Lodging the official inspection report.
Training official inspectors to carry out official inspections.

Costs allocated proportionately across crop entry and seed lot fees:
As for 'Crop entry fee: licensed inspections' above.

Seed Lot fee: Final generation

Applies to:
Final generation seed lots marketed to grow a commercial crop.
Already certified multiplication seed lots re-entered at a new category.

Specific costs:
Data handling for seed test report and lodging of seed test report.
Post-control of final generation seed (5% of final generation seed lots are grown in post-control plots to monitor quality).
Monitoring LSTSs through testing of reserve portions (official tests are carried out on 5% of samples tested by LSTSs).

Costs allocated proportionately across crop entry and seed lot fees:
As for 'Crop entry fee: licensed inspections' above.

Seed Lot fee: Multiplication seed lots

Applies to:
All seed lots certified in England and Wales and entered for further multiplication. This fee now includes hybrid barley seed lots.
Already certified final generation seed lots re-entered for further multiplication.

Specific costs:
Data handling for seed test report and lodging of seed test report.
Control plot.
Monitoring LSTSs through testing of reserve portions (official tests are carried out on 5% of samples tested by LSTSs).

Costs allocated proportionately across crop entry and seed lot fees:
As for 'Crop entry fee: licensed inspections' above.

LSTS Annual Licence fee

Management of LSTSs including annual audit and reports.
Seed analyst re-assessment.
Update and provision of technical papers.
Follow up of reserve portion results.
Routine advice.

Seed Test fees

Official Disease Testing.

Official Examination fees

The cost of exams for licensed crop inspectors, seed samplers and seed analysts is charged by NIAB directly to applicants.

Other fees

Fee for making a representation to the Minister.
Fee for being heard by a person appointed by the Minister.

OFFICIAL SEED CERTIFICATION LABELLING

SUPPLY OF OFFICIAL SEED CERTIFICATION LABELS

From 1 January 2016 the label supplier is Integrity Print:

The preferred method of ordering is using the on-line system. To register for this please contact Integrity (preferably by email):

Label orders/Customer Service –
Rachel Quick (APHA contact)
Sales Office
T: 01761 409590
E: apha@integrity-print.com

There is also an order form available.

The schedule of labels available and **prices that will apply from 1 January 2016** follow:

Item code	Category	Colour	Price per 1000 (£)
Tear resistant			
DEF 1020	Pre-Basic (PB)	White / Violet stripe	120.62
DEF 1031	Basic (B)	White	120.62
DEF 1048	Certified Seed (CS)	Blue	63.89
DEF 1003	Certified Seed 1st Generation (C1)	Blue	49.80
DEF 1004	Certified Seed ….Generation	Red	61.33
DEF 1049	Mixture	Green	70.89
DEF 1005	Mixture **DOUBLE LENGTH**	Green	79.80
DEF 1050	Certified Seed (Varietal Association)	Blue/diagonal green stripe	POD
DEF1032	Commercial (not certified as to variety)	Brown	POD
Self Adhesive			
DEF 1011	Pre Basic (PB)	White / Violet stripe	179.98
DEF 1012	Basic (B)	White	179.98
DEF 1013	Certified Seed (CS)	Blue	28.80
DEF 1022	Certified Seed 1st Generation (C1)	Blue	48.67
DEF 1023	Certified Seed …..Generation	Red	61.49
DEF 1014	Mixture	Green	49.00

DEF 1015	Mixture **DOUBLE LENGTH**	Green	95.79
DEF 1016	Not Finally Certified	Grey	POD
DEF 1054	Variety Not Yet Officially Listed: Test and Trials only	Orange	POD
OECD LABELS (only available in tear-resistant material)			
DEF 1007	Pre-Basic (PB)	White/Violet stripe	POD
DEF 1008	Basic (B)	White	POD
DEF 1001	Certified Seed 1st Generation (C1)	Blue	POD
DEF 1002	Certified Seed …. Generation	Red	POD
DEF 1009	Not Finally Certified	Grey	POD
DEF 1010	Herbage Seed Mixture	Green	POD

Notes
POD – Price on Demand
VAT is applicable
Bespoke labels designs must be pre-approved by APHA
Labels are provided fan-folded, head first, two to a view, lowest number first

Delivery
England, Wales and Scotland - labels will be supplied within 10 working days of the order being placed for companies based in England, Wales and Scotland.

Northern Ireland - labels will be supplied within 12 working days of the order being placed for companies based in Northern Ireland.

Although in most instances labels may be supplied sooner than these lead times you should ensure you allow enough time when ordering for the labels to be supplied. There is no delivery charge.

Specification
The size and layout of the labels has not changed.

Bespoke labels
Requests for bespoke labels (those not covered by the statutory range) must be approved by APHA in advance of production. Please send the full details of requirements, including draft design, using the bespoke label order form (available from APHA) to Seed Marketing Team, APHA by email to: seed.cert@apha.gsi.gov.uk or post.

PLANT PASSPORT INFORMATION ON OFFICIAL LABELS

Arrangements for the use of official seed certification labels to act as plant passports for certified seed of Sunflower, French Beans, Tomato and Lucerne are set out below.

Under the Plant Health Directive (2000/29/EC), certain material traded *within and between* Member States must be accompanied by a 'plant passport'. Plant passports provide confirmation that material is free from quarantine pests and diseases when traded or moved and that certain conditions laid down in the Directive have been complied with.

Commission Directive 2005/16/EC extended the plant passporting arrangements to certified seeds of Sunflower - *Helianthus annuus* L. (all categories), Tomato - *Solanum lycopersicum* L. (all categories), French Beans - *Phaseolus* L. (all categories) and Lucerne - *Medicago sativa* L. (all categories). These seeds already have an official label as part of the certification arrangements under the Seed Marketing Directives; for these *species only* this label can also be deemed to be the plant passport subject to the addition of the words **'EU Plant Passport'.** In the case of Lucerne - *Medicago sativa* L, as **all** categories of seeds are covered by the plant passporting arrangements, any seed that is traded or moved that does not have an official certification label must have the required information added to the accompanying trade documentation.

If you are involved in the marketing of the seeds mentioned above, please contact your local Plant Health and Seeds Inspector (PHSI) who will explain the plant passporting requirements to you.

CHEMICAL TREATMENT STATED ON SEED LABELS

If any seed has been subjected to any chemical treatment, this fact and the nature of the treatment or proprietary name of the chemical used must be stated on the label. This includes any samples of seed, that comprise all or a proportion of treated seed and are being sent to a Seed Testing Station.

OFFICIAL SEED CERTIFICATION SEALING

SUPPLY OF OFFICIAL SEALS

Following the completion of a competitive tendering and evaluation exercise by Defra procurement team and representatives from APHA, Scottish Government and Agricultural Industries Confederation (AIC), a contract for the supply of official seals from 1 February 2015 until December 2017 has been awarded to Universeal (UK).

The contract is for **Pull Tight plastic seals in two lengths** for use on all types of seed bags. The seals are Yellow embossed with the words UNITED KINGDOM.

The two types of yellow plastic pull-tight seals are:

Code: UV412L 310mm (not including end tab)
Code: UV002 190mm (not including end tab)

Please quote these codes when placing your orders.

The price of the seals for the duration of the contract is £44.25 per thousand excluding VAT with, in most cases, no delivery charge.

Contact: Louise Mason Blything
Universeal (UK) Ltd
9 Portal Business Park, Eaton Lane, Tarporley, Cheshire CW6 9DL
T: 01829 760000
E: defra@universeal.co.uk

W: www.universeal.co.uk

Orders must be for a minimum of 1000 seals.

Universeal will ensure that orders for England and Wales are delivered within 2-3 working days and for Northern Ireland mostly within 3 working days.

If there is a problem with delivery Universeal will ensure that customers are notified of the delay within one working day and will provide an estimated delivery date.

Universeal will accept orders on-line as well as by email and telephone. An invoice will be issued on receipt of the order.

If you encounter any problems with the supply, delivery or quality of the seals please contact Universeal in the first instance. If the problem is not resolved please contact APHA.

CROP INSPECTION

LICENSED INSPECTION OF PRE-BASIC AND BASIC SEED CROPS IN E&W

1. Introduction

1.1 The European Commission has introduced legislation allowing licensed crop inspectors to inspect and approve crops entered to produce pre-basic and basic seed of all species except potatoes. This is a 'temporary experiment' implemented by Commission Decision 2012/340/EU and a temporary licence 2013/01 issued under the Seed Marketing Regulations 2011 and The Seed Marketing (Wales) Regulations 2012.

1.2 Use of licensed crop inspectors for pre-basic and basic seed crops is optional and applicants may continue to request official inspection by NIAB and PHSI.

1.3 The experiment came into effect on 1 January 2013 and ends on 31 December 2017. If monitoring during the five year period shows that the quality of pre-basic and basic seed and subsequent generations of certified seed has been maintained this may result in the legislation being changed permanently.

2. Conditions

Commission Decision 2012/340/EU has the following relevant requirements for implementation in England and Wales:

2.1 Licensed inspectors must have the 'necessary qualifications' and derive 'no private gain'. They must be licensed by APHA.

2.2 Licensed inspections must be carried out under official supervision by APHA and NIAB (acting on APHA's behalf). Commission Decision 2012/340/EU requires at least 20% check inspection for species covered by the Vegetable Seed Marketing Directives 2002/55/EC and 5% for other species. The European Commission has clarified that it expects Member States to use a range of check inspection rates and this is reflected in these instructions.

2.3 Before a crop can be approved by a licensed inspector, NIAB must assess a control plot of the seed used to sow the pre-basic or basic seed crop. The results must show that the sown seed meets the standards specified in the relevant seed marketing

Directives. If material is not available for a control plot to be sown, the crop cannot be inspected by a licensed inspector and must be officially inspected.

2.4 A proportion of seed lots from pre-basic and basic crops inspected by licensed inspectors must be selected for post-control for varietal identity and purity.

2.5 Pre-basic and basic seed from crops approved by licensed inspectors must be clearly identified.

2.6 APHA must report results annually to the European Commission and other Member States.

3. Licensing of Crop Inspectors

3.1 The criteria for licensed inspectors of crops entered to produce pre-basic and basic seed are:

- Minimum of three years' experience as a licensed inspector for CS/C1/C2 crops of the relevant species.

- Assessment every two years with pass marks of 70% for the practical examination and 80% for the theory examination (the same as for NIAB and PHSI official inspectors).

3.2 Companies are asked to nominate licensed inspectors intending to inspect pre-basic and basic crops in the forthcoming season.

3.3 Those licensed inspectors examined in the previous two years meeting the above agreed pass marks will be considered by NIAB through a review of Cert 3 reports for CS/C1/C2 crops and the results of check inspections. Based on NIAB's recommendation, APHA will issue a letter of variation which will add the inspection of pre-basic and basic crops to the licence. These inspectors will be required to attend for re-examination in one or two years (depending on date of last examination).

- Inspectors last examined over two years ago must attend for re-examination by NIAB in the current year and gain the higher pass marks before licences can be amended.

- Inspectors approved in the current year to undertake inspections of pre-basic and basic crops will be eligible the following year for the same species providing their assessments are up to date. Those inspectors should contact NIAB to register their participation **each** year.

3.4 The licensed inspector training and examinations have been changed to accommodate the higher level required for inspection of pre-basic and basic crops.

4 Crop entry

4.1 Crop entries should be registered on ESP or manually as usual.

Attach a letter to the payment sheet listing any official pre-basic and basic crops you intend to inspect using Licensed Official Inspectors.

Adjust the ESP/Cert2A payment sheet to reflect the change in price for a licensed official

inspection.

NOTE

- Licensed official inspections will be charged at £16 per hectare
- For crops less than one hectare there will be a minimum charge of £16 per crop
- Forward payment sheet and letter to NIAB (ACC) Cambridge.

Any crops sown with late samples or for crops of imported varieties or varieties which are unfamiliar to NIAB and where no standard reference sample exists in a control plot, the inspection must be carried out by an official inspector from NIAB or PHSI.

Crop entries should be made in the usual way on ESP or manually. You must inform NIAB if you intend to use licensed inspectors to inspect higher grade crops. NIAB will deal with applications and fees manually.

4.2 When a pre-basic and basic crop has been accepted by NIAB for licensed inspection, it is the applicant's responsibility to ensure that the crop is inspected by an appropriately qualified inspector. It will not be possible to certify seed from crops which are not inspected.

4.3 As part of the crop entry procedure, NIAB will verify whether there is a control plot of the sown seed. If there is no control plot, crops sown with the seed can only be approved by an **official inspector.**

4.4 Where the sown seed lot has been imported and there is no standard sample to authenticate the variety, any pre-basic and basic crops sown with the seed must be **officially inspected.**

5. Information from control plots

5.1 Control plots are an important part of the certification process and a requirement for approval of pre-basic and basic crops by licensed inspectors. When a varietal identity or significant varietal purity issue is identified in a control plot, crops sown with the seed will automatically require official inspection by NIAB or PHSI. However, it is essential that the licensed inspection continues to ensure sufficient monitoring of the temporary experiment.

5.2 NIAB will continue to send plot reports to applicants.

6. Official Check Inspection

6.1 Initially, pre-basic and basic crops of cereals and oilseeds will be subject to a 10% official check inspection rate by NIAB and PHSI. It is hoped that the level of check inspection can be reduced systematically over subsequent years if the results of first and second years are favourable.

6.2 Other species will be subject to a 20% check inspection rate. Species covered by the Vegetable Seed Marketing Directives remain at 20%.

6.3 The objective of official check inspections is to monitor the performance of licensed inspectors. NIAB will select crops to ensure that check inspections are carried out over a range of species, locations, companies and inspectors. The primary comparison will be between the official and licensed inspector's Cert 3 reports.

Licensed inspectors should send crop inspection reports to NIAB by email or fax as soon as possible.

6.4 Official inspectors will aim to undertake check inspections at the optimum time for the crop, and although NIAB will communicate with applicants about roguing, this may mean check inspections are carried out before roguing is complete.

Where the official check inspection finds that the crop does not meet the standard for basic seed, NIAB will inform the applicant in outline but will not provide details until the licensed inspector's report has been received. This will allow the check inspection to achieve its purpose of monitoring the performance of licensed inspectors while alerting applicants to the need for remedial action or possible downgrading of the crop.

6.5 In some circumstances, it may be necessary for NIAB to use the results of check inspections to determine crop approval, over-riding the results of the licensed inspector. This will be done in discussion with the applicant and where necessary the inspector, allowing for the possibility of further official or licensed inspection.

6.6 NIAB will monitor the performance of individual inspectors through check inspections and Cert3 reports, involving APHA as necessary. APHA will address unsatisfactory performance which may lead to the licence being withdrawn.

7. Post-control

7.1 Commission Decision 2012/340/EU requires that a proportion of seed lots from pre-basic and basic crops inspected by licensed inspectors must be selected for post-control for varietal identity and purity. Since control plots of pre-basic and basic seed are routinely grown as part of certification in England and Wales, this requirement does not lead to any change. However, the results from control plots will provide information to assess the effectiveness of licensed inspections, to help decide reductions in the check inspection rate and to report to the European Commission and Member States.

8. Identification of seed lots

8.1 APHA requires that pre-basic and basic seed produced from crops approved by licensed inspectors will be identified as such on the invoice or delivery note. This will be monitored by PHSI during seed company audits.

9. Fees

9.1 A lower crop entry fee of £16 per hectare will apply for pre-basic and basic crops to be inspected by licensed inspectors

10. Reporting and criteria for reducing check inspection rates

10.1 APHA will report annually to the European Commission. The report will be based on the number of pre-basic and basic crops inspected by licensed inspectors, check inspection rates, comparison between official and licensed inspections of the same crop, post-control of seed produced from the crops, and training and assessment of inspectors.

Where necessary comparisons will be made with crops inspected only by officials, either from the same year or in recent years before 2014.

10.2 The most important factors for reducing check inspection rates will be the level of agreement between official and licensed inspections of the same crop and the quality of resulting pre-basic and basic seed as measured through subsequent control plots.

The requirement will be consistently good agreement and no change in the quality of seed. The information will be used to decide on reductions in check inspection rates, but if the experiment is not successful, it may lead to higher inspection rates or a return to an entirely official inspection.

MIXTURES OF SEED

STANDARD VEGETABLE SEED MIXTURES

The Seed Marketing Regulations and the EU Directives permit the marketing of a mixture of different varieties of standard seed of the ***same species***. The vegetable species for which a mixture of varieties is permitted and the relevant packet weights for seed are defined in regulation 18 of the Seed Marketing Regulations 2011.

If you want to include other species, including those outside the Regulations, these may be included but **must be separated** from the Regulated vegetable species e.g. in a **separate** foil packet. The proportion of any non-Regulated species included in the packet should be stated, along with Regulated species, as part of the labelling information (see below).

Labelling

The labelling requirements for mixtures of vegetable species is defined in Schedule 3, Part 4, 25 (5) of the regulations and includes:

- The words 'mixture of varieties of...[name of species]';
- Varieties;
- The proportion of the varieties, expressed as net weight or as number of seeds;
- Name, address and identification number of the person attaching the label; and
- Reference number of the lot /batch from which the seed was packed.

MIXTURES – GENERAL

A table showing mixtures of all species (including vegetables) permitted under the Seed Marketing Regulations.

	Cereals	**Oil & Fibre**	**Beet**	**Fodder**	**Vegetable**	**Seeds outside the scope of any seed regulations**
Cereals	Yes (note i.)	No	No	Yes	No	No
Oil & Fibre	No	No	No	Yes	No	No
Beet	No	No	No	No	No	No
Fodder	Yes	Yes	No	Yes	Yes	Yes
Vegetable	No	No	No	Yes	Yes (note ii.)	No

Notes

i. Mixtures of species of cereal seed only where a specific mixture of various varieties of one species of seed that as a mixture is effective against the propagation of a harmful organism and mixtures of different species the components of which all complied with the Regulations prior to mixing.

ii. A mixture of different varieties of standard seed of the same species.

Please note - no other combinations of mixtures are permitted.

SEED CERTIFICATION ENTRIES

LATE CROP ENTRIES

Applicants are reminded of the importance of meeting the closing dates for crop entries. The purpose of a crop entry is to give notification to NIAB that seed has been sown and to provide details of the crops sown and from which seed lot. This information is a requirement of the Seed Marketing Regulations. Closing dates by which crop entries and fees must be sent to NIAB are given in Appendix 2 of this Guide. Only in exceptional circumstances will late entries be accepted e.g. due to extreme weather conditions or other conditions outside the applicant's control. Late entries cause more work for NIAB which results in additional costs.

If NIAB are unable to register a crop entry as acceptable because of a delay in making the entry or paying the fees this has the effect of delaying the processing of high category crops for official inspection.

APHA will take a firm line against companies who persistently fail to submit crop entries by the required closing date and will write to applicants whose entry has not been accepted.

SEED LOT WEIGHTS

MAXIMUM WEIGHT OF A SEED LOT OF CERTAIN FODDER PLANT SPECIES

Commission Implementing Directive 2012/37/EU amends the Fodder Plant Seed Directive with regard to the maximum seed lot weight for *Poaceae (Gramineae)* (Grasses) species. The maximum weight may be increased to 25 tonnes if the supplier has been authorised for this purpose by the Certifying Authority (APHA).

TEMPORARY LICENCE FOR THE MARKETING OF POPULATIONS OF WHEAT, BARLEY, OATS AND MAIZE

Commission Implementing Decision 2014/150/EU details the temporary experiment providing for certain derogations for the marketing of populations of plant species of wheat, barley, oats and maize. A temporary licence no. 2014/01 has been issued.

IMPORTS OF SEED

IMPORTS OF SEED WEIGHING OVER 2KG FROM THIRD COUNTRIES

If you import seed, even occasionally, from a Third Country (non-EU) for first marketing in England and Wales and the package weighs over 2kg then you are obliged, under the Seed

Marketing Regulations 2011, to provide specific information relating to the seed you have imported. You should therefore:-

1) Complete a current ITC1 form information sheet to supply the following details -

Species; Variety; Category; Country of production and the official inspection authority; Country of despatch; Importer; and Quantity of seed.

This information should be supplied on a monthly basis. If no seed has been imported in any month a Nil response is required. Please note that the form is in Excel format for ease of completion and should be sent to the Seed Marketing Team by email (not as a PDF) to (seed.cert@apha.gsi.gov.uk).

Where Third Country seed is imported into another Member State first and then marketed to England or Wales, it is not necessary to provide APHA with information as the company in the other Member State should make a return to their Certifying Authority.

Standard Vegetable Seed - Standard vegetable seed must be included in the return. If 'Country of Production' is not known, this should be marked 'not known' or 'n/k' and the 'Country of Despatch' column completed with the name of the country exporting the seed into England or Wales.

Seed In Large Outer Containers - Packages under 2kg contained within a larger outer packet which exceeds 2kg must be included regardless of whether each small packet is of different seed. Details of the contents of each small packet must be entered.

1) Complete the ITC2 consent form (consent is voluntary, however providing the import data is a requirement).

2) If you consent, the information collected by the seed marketing team of APHA may be released to other sections of APHA including the GM team which monitors Third Country imports of conventional seed for adventitious GM presence**.**

Please contact APHA if you need the ITC 1 or 2 form.

IMPORTED SEED FROM 3RD COUNTRIES – EQUIVALENCE REQUIREMENTS

The European Commission has raised concerns regarding the imports of agricultural seed into the UK from third (non-EU) countries.

I am writing to remind all companies which import seed from third countries of their obligations under EU Directives and the Seed Marketing Regulations 2011:-

- Seed being imported from outside the EU, officially certified or for final certification, can only be brought into the UK from countries which the EU recognises as having crop inspection and seed production standards equivalent to those in the EU i.e. 'Equivalent Third Countries'.

- Equivalence arrangements only apply to agricultural species and for vegetable seed marketing only.

- The seed must be produced under the OECD Seed Scheme appropriate to the species and the variety must be on the OECD list of varieties eligible for certification.

The Plant Health and Seeds Inspectors (PHSIs) will be checking any third country seed, during their visits to licensed seed companies, to ensure that the seed has been imported from an Equivalent country and a return has been made to APHA for any seed over 2Kg in weight.

The following table gives a summary of the species eligible for importation from countries under the Equivalence arrangements:

THIRD COUNTRY EQUIVALENCE				
Country	**Beet (2002/54/EC)**	**Oil and Fibre (2002/57/EC)**	**Cereal (66/402/EEC)**	**Fodder (66/401/EEC)**
Argentina		Y	Y	Y
Australia		Y	Y	Y
Canada		Y	Y	Y
Chile	Y	Y	Y	Y
Israel		Y	Y	Y
Morocco		Y	Y	Y
New Zealand	Y	Y	Y	Y
Serbia	Y	Y	Y	Y
South Africa		Y	Y*	Y
Turkey	Y	Y	Y	Y
Uruguay		Y	Y	Y
USA	Y	Y	Y	Y

Y = Equivalence Status to EU
*Only in respect of *Zea mays* and *Sorghum* spp.

IMPORTED BLENDED SEED LOTS – SAMPLING AND TESTING

There have been some recent cases of imported seed lots being blended in the UK and entered for certification without being sampled or tested. Seed officially certified in another EU Member State or an Equivalent third country and imported for further multiplication, must be sampled by a Licensed seed sampler or an Official seed sampler. The sample must be submitted direct to NIAB with the form CERT 5 attached. The CERT 5 should be marked 'For verification only'.