



Animal &  
Plant Health  
Agency

## **Instructions to Licensed and Official Seed Samplers in England and Wales**

**April 2016**

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This document/publication is also available on our website at:

<http://www.apha.defra.gov.uk/plants/seeds/seedCertification>

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# Chapter 1: Introduction

*This instruction booklet is intended for a licensed seed sampler (LSS), to assist them in their official duties. It also serves as a reference guide for official samplers.*

The marketing of the main species of agricultural and some horticultural seed is controlled by:

- **European Community Directives on the Marketing of Seed**
- **The Plant Varieties and Seeds Act 1964**
- **The Seed Marketing Regulations 2011**

**Note:** *The above Regulations have subsequently been amended by Statutory Instrument and you are advised to check details on the APHA/Seed Certification webpage.*

## **The Seed Marketing Regulations:**

- Define the categories (including HVS) of seed (i.e. Pre-Basic, Basic, CS, C1, C2 and C3), which may be marketed and the standards which must be achieved before seed can be legally marketed.
- Provide for the official certification of most categories of seed and the marketing of seed mixtures.
- Provide for the sealing and labelling of packages of seed.
- Cover the licensing of seed samplers, crop inspectors, seed testing stations and companies marketing seed.
- Define the methods by which seed must be officially sampled for official examination for certification purposes.

Copies of the Regulations are available from The Stationery Office - <http://www.legislation.gov.uk/uksl> .

## **Data Protection Act 1998 – Fair Processing Notice**

The purpose of this Fair Processing Notice is to inform you of the use that will be made of your personal data, as required by the Data Protection Act 1998. APHA, as part of Defra, is the data controller in respect of any personal data that you provide when you complete seed certification forms.

Applicants should note that APHA, or APHA's technical contractor NIAB acting on APHA's behalf, will use your personal data supplied on the seed certification forms primarily for the purposes of: determining eligibility of your application for seed certification; for monitoring purposes; and for statistical purposes.

## **Legislation**

The Plant Varieties and Seeds Act 1964

The England Seed Marketing Regulations 2011

Council Directives: 66/401/EEC Marketing of Fodder Plant Seed  
66/402/EEC Marketing of Cereal Seed  
2002/54/EC Marketing of Beet Seed  
2002/55/EC Marketing of Vegetable Seed  
2002/57/EC Marketing of Oil and Fibre Plant Seed

Under the legislation listed above, the data provided to APHA/NIAB is used to compile statistics about certified seed. The information which APHA publishes in Seed Statistics relates only to the hectares of seed crops entered for certification and the tonnage harvested by variety. Personal data enabling persons to be identified is not included in the statistics.

Personal data is released to the APHA GM team under a voluntary consent by seed importers under an agreement PVS has with the GM team to monitor the presence of adventitious GM organisms in seed imports.

Seed Certification data for British Society of Plant Breeders (BSPB) sub-licence holders is released under a legal agreement between BSPB and Defra for the purposes of royalty collection. The BSPB is the representative body for the UK plant breeding industry and the Plant Varieties and Seeds Act 1964 established the framework for collecting seed royalties on protected varieties.

***Certification Data is released to a third parties in the following two areas***

1. The Directives /Regulations require that we collect details of exports of seed over 2kg from countries outside the EU to England and Wales. This information is collected for the European Commission. We forward this data to the APHA GM team, but only if the companies supplying the data sign a form consenting to this data transfer.
2. Certification data relating to varieties certified is released to the British Society of Plant Breeders to enable them to collect royalties. Data is released under a specific legal agreement signed with BSPB and for those companies for which BSPB acts as licensee.

APHA may also be required to release information, including personal data and commercial information, on request under the Environmental Information Regulations 2004 or the Freedom of Information Act 2000. However, APHA will not permit any unwarranted breach of confidentiality nor will we act in contravention of our obligations under the Data Protection Act 1998.

APHA or its appointed agents may use the name, address and other details on your application form to contact you in connection with occasional customer surveys or research aimed at improving the services that APHA and its contractors provides.

Defra's Information Charter (which also covers APHA) - Public Service Guarantee on Data Handling, which gives details of your rights in respect of the handling of your personal data, is on the Defra Gov.uk website at <https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs/about/personal-information-charter#what-our-standards-are-for-requesting-or-storing-your-personal-information>. A document explaining the Guarantee is also on this website.

If you believe that any of the information we hold concerning you is incorrect or out of date, please provide us with the accurate information in writing together with supporting evidence (if appropriate). You should address your correspondence to Seed Marketing Team, APHA, Eastbrook, Shaftesbury Road, Cambridge. CB2 8DR. Telephone 0208 026599397. Email: [seed.cert@apha.gsi.gov.uk](mailto:seed.cert@apha.gsi.gov.uk)

# Chapter 2: The Functions and Conditions of a Licensed Seed Sampler (LSS)

Licensed Seed Samplers (LSSs) are licensed under the Seed Marketing Regulations 2011.

**When taking a sample for certification the LSS is acting on behalf of the Certifying Authority.**

## **A. FUNCTIONS OF A LICENSED SEED SAMPLER**

1. To sample seed in accordance with the Seed Marketing Regulations and to submit sealed samples of such seed for an official examination or examination under official supervision.
2. To keep records of seed lots sampled by him and the methods of sampling used.
3. To keep records of the use by him of labels issued or authorised by the Secretary of State.
4. To ensure that packages of seed are labelled or re-labelled and sealed or re-sealed in accordance with the Seed Marketing Regulations.
5. To ensure that mixtures of seed are labelled or re-labelled and sealed or re-sealed in accordance with the Seed Marketing Regulations.
6. To ensure that sampling equipment, including automatic sampling devices, operated by him in carrying out his functions operates correctly at all times.

Note: For varietal associations under Oil & Fibre, the records of the details of the constituent varieties of the varietal association seed lot, including the names and percentage weights, the seed lot reference numbers of the constituent lots and the weight of each of the constituent lots must be kept.

## **B. CONDITIONS OF A LICENSED SEED SAMPLER'S LICENCE**

1. To carry out his functions subject to supervision by authorised officers.
2. To carry out his functions in accordance with any instructions relating thereto issued by or on behalf of the Secretary of State.
3. To attend such training courses and undergo such examinations as the Secretary of State may, from time to time, require.
4. To notify the Secretary of State within 21 days of any change in his residential address.

An LSS is required to maintain their expertise by carrying out the duties described above on a regular basis.

# Chapter 3: Preparation before sampling

## 1. BEFORE SAMPLING

**Before sampling can take place a CERT 5 (Request for Sampling and Testing and to Enter a Seed Lot) form must be completed.**

- a. The CERT 5 has several uses and is a key document because it creates and identifies the seed lot to be sampled. All the seed in a seed lot must be in the same state at the time of sampling. Where seed is to be sampled from containers, all the containers in the lot must be of the same size and type and contain approximately the same weight of seed. It may all be untreated or it may all be chemically treated with the **same** chemicals.
- b. If different chemical treatments are applied to different parts of the seed lot before sampling, a separate seed lot must be created for each chemical treatment. Each of these seed lots must be treated as a separate entity and sampled separately.
- c. When a seed lot has been created and is ready for sampling, the nominated person/deputy or person who has authority within the company will complete form **CERT 5** and pass it to the licensed seed sampler. A seed sampler **must not** sample a seed lot until they have received this form and checked it to ensure that it is correctly completed (apart from the 'For sampler's use' box).

## 2. CHECKING THE CERT 5

**The CERT 5 check is vital because any error at this stage could affect the certification of the seed lot.**

### (a) What to look for

- i. Any amendments to the CERT 5 must be initialled by the person signing the form.
- ii. A Seed Testing Station will not accept a sample that is underweight, not sealed correctly or where the CERT 5 has been incorrectly completed.
- iii. Check the CERT 5, using the checklists to ensure that it has been fully completed.
- iv. Then check the CERT 5 against the label to ensure that the details correspond. If the CERT 5 has missing details, or if there is any discrepancy between the information on the label and the CERT 5, **DO NOT SAMPLE** and return the CERT 5 to the person who signed the form.

### (b) CERT 5 – Check list

It is important to check that the following details have been completed:

- i. Applicant has completed GM declaration, signed and dated form.
- ii. Alternative address for sampling if applicable.
- iii. Applicant's name, address and telephone details;
- iv. Applicant's Licence no.
- v. Seed Lot Reference Number (SLRN)
- vi. Category (for imported seed)
- vii. Species
- viii. Variety (except for Commercial seed category)
- ix. GM Variety tick box YES or NO
- x. Moisture test tick box (for cereal seed: YES or NO?) beet seed can only be sampled by an

- LSS and the test is done at an LSTS or the OSTs
- xi. Seed Testing Station number (Licensed = LSTS no./Official = OSTs no. 999)
  - xii. Number and type of containers
  - xiii. Label numbers (the numbers issued should correspond with the number of containers). If there is any discrepancy DO NOT SAMPLE and contact the applicant.
  - xiv. Net weight of seed lot (to check the weight of the seed lot, multiply by the number of containers shown on the CERT 5, by the net weight of the individual containers shown on the label)
  - xv. Seed treatment, if appropriate (proprietary names should be used)
  - xvi. Additional information (information in this box is for requesting testing such as STZ, 3kg Wild oat search or for noting that the request is for RESAMPLE or 'Verification Only').
  - xvii. Verification tick box (for imported seed, ensure category is stated)
  - xviii. Preliminary germination information (for pre-basic and basic state percentage)

**Note:** A Seed Testing Station will not accept a sample that is underweight, not sealed correctly or where the CERT 5 has been incorrectly completed.

### (c) Label check list

Check that the following details on the label agree with details on the CERT 5:

- i. Correct colour label for the seed category (pre-basic, basic, certified seed, certified seed 1<sup>st</sup>, 2<sup>nd</sup> or 3<sup>rd</sup> generation, commercial).
- ii. Correct level - EU minimum or UK HVS.
- iii. Label number is part of the label run(s) shown on CERT 5.
- iv. Species  
The Latin (Botanical) name **must** be used for all species of seed except for Vegetable and Beet species where the common name, Latin name or both can be used.
- v. Variety (except for Commercial Seed).
- vi. Seed lot reference number.
- vii. Net (or gross) weight of seed.
- viii. Date of sealing.
- ix. Chemical treatment. The nature or the proprietary name of the treatment must be shown on the label.

### 3. SAMPLING OF IMPORTED SEED FOR VERIFICATION

All imported seed for further multiplication under certification must have a sample drawn for verification. This must be taken by a Licensed or Official sampler and the sample sent to Agricultural Crop Characterisation (ACC) Team, NIAB, Huntingdon Road, Cambridge CB3 0LE where it will be checked for varietal purity and grown on.

- i. A licensed company that enters imported seed for verification should complete a CERT 5 in the usual manner with the words 'For verification purposes only'. Check for a tick in the 'Additional Information box'.
- ii. At the time of sampling the seed lot must be correctly labelled and sealed with the official labels

and seals by the exporting country. The whole seed lot **must** be present and available for sampling.

- iii. A sample should be drawn using an approved method and size as for certification samples.
- iv. For each seed lot sampled one of the original official labels should be removed and submitted with the sample to the Certifying Authority. A UK Official OECD label should be used as a substitute, with the originating country entered as the country of production.
- v. The label should be marked 'Re-sealed' with the month and year of re-sealing.
- vi. The sample, with the original official label should be sent to ACC Team, NIAB, Huntingdon Road, Cambridge CB3 0LE.

#### **4. INSTANCES WHERE LICENSED SEED SAMPLERS ARE NOT PERMITTED TO DRAW SAMPLES**

LSSs are **not** permitted to draw samples of the following:

- Where seed is to be tested for the issue of an ISTA Orange International Certificate (OIC) (i.e. normally for export purposes) unless approved to do so \*(see below).
- Where seed is to be tested for the issue of a phytosanitary certificate.

***\*Note:** Seed for export under ISTA Orange International Certificate (OIC) arrangements, which also requires the issue of a phytosanitary certificate, must only be sampled by an official sampler unless a Licensed Seed Sampler has been approved and is qualified to do so. An 'official sampler' is an authorised officer of the Secretary of State.*

*For LSSs approved to undertake sampling of seed lots for export that require ISTA OIC certificates, samplers must ensure compliance with ISTA sampling procedures by reference to the current ISTA Rules. Contact the Chief Officer at the Official Seed Testing Station for England and Wales for advice and information on becoming approved to sample for ISTA export purposes.*

# Chapter 4: Sampling of seed lots – procedures

## A. DRAWING THE SAMPLE

*The methods for drawing official samples are specified in the Seed Marketing Regulations. A LSS needs to check that the sampling equipment complies with the Regulations. This applies equally to both manual and automatic sampling methods.*

### 1. Automatic sampler

Automatic sampling equipment must uniformly sample the entire cross-section of the seed stream when a sample is taken. *The correct installation of the automatic sampler is essential. Technical advice on this is available from the OSTs.*

It is a requirement that a LSS monitors the operation of the automatic sampling equipment and that the sample is drawn in accordance with the Regulations and guidance in these instructions. Manual sampling on stream is not permitted.

**If the sample is not drawn in accordance with the procedures set out in the Regulations it will be regarded as invalid and will affect the certification of the seed lot.**

### 2. Spear sampling

When sampling by spear from paper sacks, seal the spear holes after taking a **primary** sample using 'pink patches' supplied by seed companies to an approved format. Having drawn the primary samples in an approved manner these are combined to make up the **composite** sample. This is mixed and divided down to obtain the **submitted** sample. This must not be less than the appropriate minimum weight stated in Annex F.

### 3. Sample weights

- a. Submission of underweight samples will mean a delay until a further sample is taken and tested. Certification of the seed lot will therefore be delayed.
- b. The composite sample may be submitted for testing intact. However it should be reduced in weight by using a riffle divider or a centrifugal divider, to give just above the submitted sample weight, see Annex F.
- c. Good practice is to aim for samples 5-10% above the weights stipulated to allow for any changes in moisture.

### 4. Primary sample size

When sampling a seed lot all primary samples should be of approximately equal size.

## 5. Condition of the seed lot

The seed lot to be sampled must have been subject to appropriate mixing and blending techniques so that it is as uniform as practicable. There must be no evidence of heterogeneity (lack of uniformity), if there is, sampling must not continue and should be referred back to the applicant. If a seed lot is presented for sampling in more than one container, the containers must be of the same size and type and contain approximately the same weight of seed.

## 6. Sampling from containers from 15kg up to 100kg

When the seed lot is in bags, sacks or similar sized containers each containing at least 15kg of seed and not more than 100kg of seed, the minimum number of primary samples required and containers to be sampled must be in accordance with the following table:

Number of Containers in the lot	Minimum Number of Containers to be sampled
1 – 4	3 primary samples from each container.
5 – 8	2 primary samples from each container.
9 – 15	1 primary sample from each container.
16 – 30	15 primary samples with each sample being taken from a different container.
31 – 59	20 primary samples with each sample being taken from a different container.
60 or more	30 primary samples with each sample being taken from a different container.

If not all containers are to be sampled the containers to be sampled must be selected systematically or at random and primary samples drawn from the top, middle and the bottom of containers. The position from which the seed is taken must also be varied from container to container, i.e. the top, middle or bottom of a sack.

## 7. Sampling from small containers (less than 15kg)

For sampling seed lots in containers holding less than 15kg of seed, a theoretical 100kg weight of seed must be taken as the basic unit and the small containers must be combined to form sampling units not exceeding this weight (for example, eight packages of 12kg or twenty packages of 5kg). For sampling purposes each unit must be regarded as one container and prescribed sampling procedures must be used. When seed is in moisture-proof containers the opened or pierced container must be adequately closed or the residues from sampling transferred to new containers. When seeds are in packets of 100g or less each packet may be considered as a primary sample and sufficient must be taken at random to obtain a submitted sample of the prescribed minimum weight.

## 8. Sampling from large containers or seed in bulk (more than 100kg)

For the sampling of containers holding more than 100kg of seed, and for the sampling of seed in bulk, primary samples must be taken from different horizontal and vertical positions selected at random or systematically and the following must be regarded as the minimum requirement.

Lot Weight	Number of Primary Samples to be taken
Up to 500kg	At least five primary samples
501 to 3,000kg	One primary sample for each 300kg but not less than 5
3,001 to 20,000kg	One primary sample for each 500kg but not less than 10
20,001kg plus	One primary sample for each 700kg but not less than 40

(Note: 1,000kg = 1 tonne)

When sampling a lot of up to 15 containers, regardless of their size, the same number of primary samples shall be taken from each container.

## 9. Sampling from a seed stream

Samples may be drawn from a seed stream during processing using an automatic sampling device, which must uniformly sample the entire cross-section of the seed stream when a sample is taken. Portions of seed must be taken at regular intervals throughout the processing of the lot using the same sampling intensity as for seed in bulk.

### B. SAMPLING INSTRUMENTS

Sampling instruments must be capable of sampling all parts of the seed lot. A dynamic spear sampler, stick sampler, cargo sampler or seed stream sampler of the type defined in the regulations and in these instructions must be used. The choice of instrument will depend on the lot size and container. Where it is not practicable to use a sampling instrument of the type referred to in these Instructions, another instrument or method may be used at the discretion of the Certifying Authority.

#### 1. Dynamic spear sampler

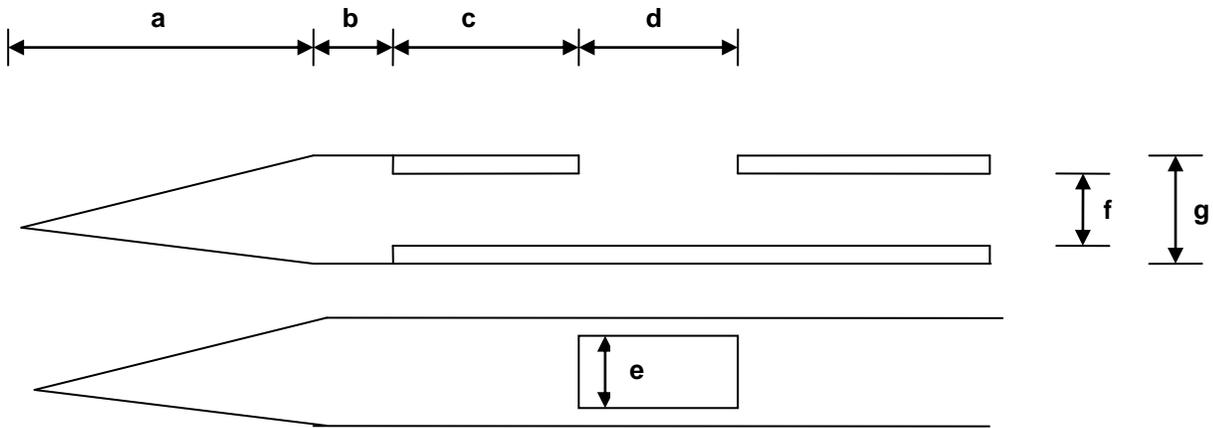
A dynamic spear sampler may be used, in accordance with the method described in these instructions, for sampling seed in sacks or small containers. It must be a hollow, cylindrical, solid-pointed metal spear. It must be long enough to reach beyond the middle of the sack from the side and must have an aperture positioned so that portions of seed of equal volume are removed from each part of the sack through which it travels.

**See Annex F for correct size of spear to be used**

*A larger spear may be used to assist seed flow but in no circumstances may a smaller spear be used.*

Size of Instrument	Point length (a)	Shoulder length (b)	Boss length (c)	Aperture length (d)	Aperture width (e)	Bore width (f)	Outside diameter (g)
A	42	7	8	20	8	10	12
B	85	12	10	33	11	13	15
C	82	12	13	40	15	17	19
D	78	15	15	40	18	20	22

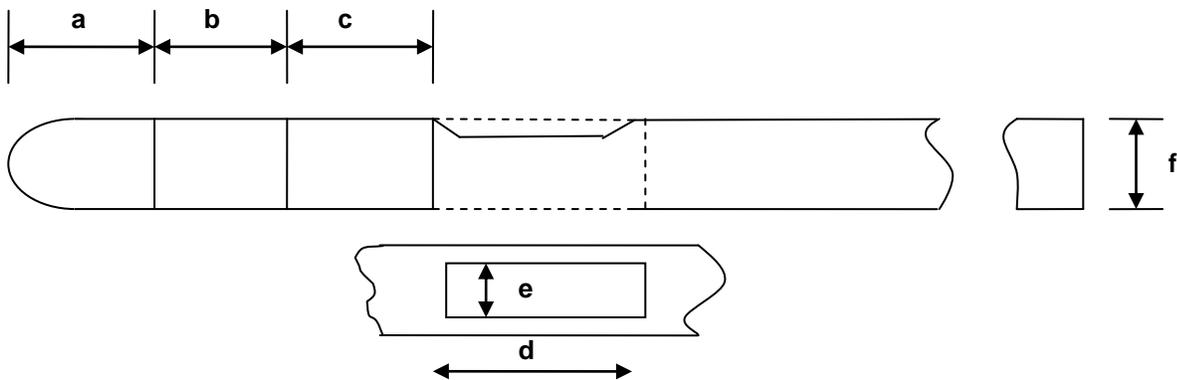
Dimensions (mm)



## 2. Cargo samplers (bulk sampler) including single chamber (Neate) samplers

A cargo sampler may be used to draw primary samples of seed in accordance with the approved sampling method for sampling seed in open sacks, large containers or bulk. It must only be used in the vertical position. It must have an aperture of sufficient size to allow the unrestricted entry of seed or other particles and be capable of being opened and closed during the sampling procedure. The cargo sampler consists of a special type of chamber that is fixed to a shaft. The lower part is cone shaped with a pointed end. To reach a greater depth, the shaft may be lengthened by screwing on successive extensions. There is a closing system in the chamber that may be a collar on the outside of the instrument, a wing connected to a door or a valve with a spring. Some cargo samplers can be closed before they are drawn back from the sampling position; others such as the single chamber (Neate) sampler cannot be closed, so that the filled chamber is open during withdrawal.

Single chamber (Neate) sampler dimensions (mm)



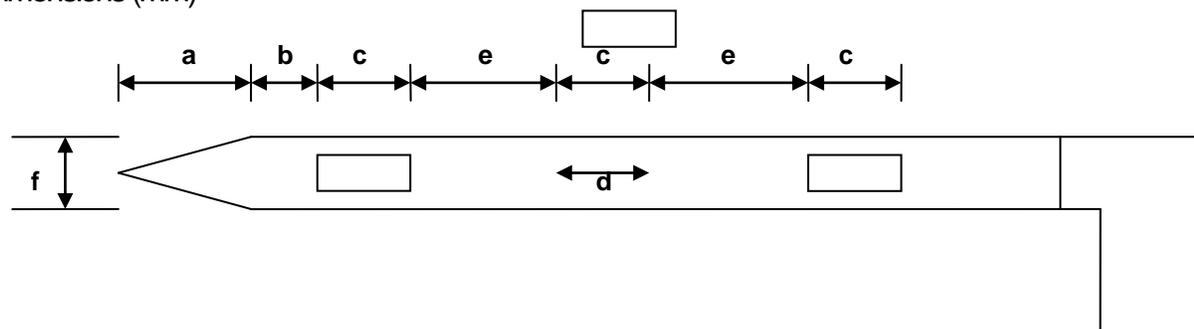
For sampling:	Point (a)	Shoulder (b)	Sliding sleeve (c)	Aperture length (d)	Aperture width (e)	Bore (f)
Seeds in sacks	55	25	75	50	22	25
Seeds in large containers or in bulk	100	390	63	50	22	30

### 3. Stick samplers (e.g. stick trier including walking stick trier, sleeve type trier) type

The sampling stick consists of two parts, one of which fits loosely inside the other, but tightly enough so that seed or impurities do not slip between them. The outer part has a solid pointed end. Both parts have slots in their walls so that the cavity of the inner part can be opened and closed by moving the two parts against each other by either a twisting or a push-pull motion. The sampling stick may be used horizontally, diagonally or vertically, however when used vertically or diagonally downwards the sampling stick must either have partitions dividing the instrument into a number of compartments or have slots in a spiral arrangement. The minimum inside diameter should be about 25mm for all species.

A **multi-chamber type stick sampler** may be used to sample seed in sacks or any other containers. The apertures must open into chambers that must be separated from one another by transverse partitions. The contents of all chambers are regarded as one primary sample (as it is one sampling operation).

Dimensions (mm)



For sampling:	Point (a)	Shoulder (b)	Sliding sleeve (c)	Aperture length (d)	Aperture width (e)	Bore (f)
All species	55	25	75	50	22	25

### Automatic seed stream sampler

An automatic seed stream sampler may be used to draw primary samples only if it uniformly samples the cross section of the seed stream without any loss of the seed that enters the sampler, in accordance with approved sampling methods. Timing devices **must** be attached so that the frequency and duration of sampling can be adjusted.

## C. SAMPLING EQUIPMENT AND METHODS OF USE

All sampling instruments **must** be clean before use. Containers used to collect primary samples, composite samples and during mixing and dividing, must be static-free to avoid chaff or small seeds adhering to the inside of the containers.

### 1. Dynamic spear sampler

*1a. A dynamic spear sampler in which the aperture reaches only to the centre of the sack or small container:*

- i. Must be inserted into the sack in an upward direction at an angle of approximately 30° to the horizontal with its aperture downwards until the aperture reaches the centre of the sack or container.
- ii. Must be lightly tapped to remove any seed taken in and then rotated to bring the aperture uppermost.
- iii. Must be withdrawn immediately with a vibratory or oscillatory motion and at a decreasing speed, so that the quantity of seed obtained from successive locations increases progressively from the centre to the side of the sack.
- iv. Seed passing through the instrument must be collected in a clean container.

*1b. In the case of a dynamic spear sampler in which the aperture reaches to the far side of the sack or small container:*

- i. The spear must be inserted in the manner described until the aperture reaches nearly to the far side of the sack or container but before the point of the spear pierces it.
- ii. It must be tapped and rotated in the manner described and then withdrawn at a uniform speed.
- iii. The seed passing through the instrument must be collected in a clean container.

### 2. Cargo samplers (bulk sampler) including single chamber (Neate) samplers

*2a. In the case of a single chamber (Neate) type sampler:*

- i. The sleeve must move freely.
- ii. The instrument must be inserted vertically downwards until the aperture reaches the appropriate primary sampling position ensuring that the sleeve covers the aperture as it enters the seed.
- iii. The instrument must be withdrawn sufficiently to uncover the aperture.
- iv. The instrument must be left in position until the primary sample has been collected.
- v. The instrument must be withdrawn and the contents emptied into a clean container.

*2b. In the case of other types of cargo sampler:*

- i. The lid or opening must open and close easily.
- ii. The instrument must be inserted vertically downwards with the lid/opening closed, to the appropriate primary sampling position, which must be at least 300 mm below the surface of the seed.

- iii. The handle must be raised sufficiently to open the lid/opening.
- iv. The instrument must be left in position until the primary sample has been collected in some cases it may be necessary to agitate the sampler to fill the chamber.
- v. Close the chamber if possible depending on the closing system.
- vi. The instrument must be withdrawn and the contents must be emptied into a clean container.

### **3. Stick samplers (e.g. stick trier including walking stick trier, sleeve type trier)**

*In the case of a multi-chamber type stick sampler with compartments:*

- i. The apertures must be closed before insertion.
- ii. The instrument must be inserted diagonally into sacks or vertically or horizontally into the container so that all apertures are fully covered.
- iii. The apertures must be opened.
- iv. The instrument must be agitated so that seed enters.
- v. The apertures must be closed gently to ensure that trapped seed is not broken or damaged.
- vi. The instrument must be withdrawn and if the chambers are full the contents must be emptied onto a clean surface or into a clean container.
- vii. If all the chambers are not full, the contents must be discarded and procedures at i. to vi. must be repeated.

### **4. Automatic seed stream samplers**

- i. In the case of an automatic sampler the instrument must take the required number of primary samples necessary for the weight of the seed lot being sampled.
- ii. The primary samples are taken from the seed lot at regular intervals.
- iii. The resultant composite sample must be of a weight not less than the prescribed minimum weight and not so large that it cannot easily be reduced.
- iv. Automatic sampling equipment must be installed in such a way that the composite sample can be readily identified with the seed lot from which it was taken.

## **D OBTAINING A SUBMITTED SAMPLE - COMPOSITE SAMPLE DIVISION INSTRUMENTS**

### **Composite sample**

Provided the composite sample is of at least the prescribed minimum weight for the relevant species of seed, it may be used as the submitted sample. Where the composite sample exceeds the prescribed minimum weight for the submitted sample, a riffle divider or a centrifugal divider can be used to obtain a submitted sample. Approved equipment is described below, other instruments and methods may be used at the discretion of the Certifying Authority.

### **Riffle divider - method of use**

The riffle divider must consist of a rectangular hopper leading to a series of evenly spaced chutes, arranged so that seed is distributed equally on two sides. There must be a minimum of 18 chutes (chute

size depends on type of seed), each discharging in the opposite direction to its immediate neighbour. A tipping riffle divider that has fixings for the collecting vessels (pans) along the length so that the seed can be tipped into the hopper along the length of the hopper may also be used. Collecting vessels (usually metal pans) of sufficient depth to prevent seed bouncing out must be used.

a. *The method of using a riffle divider must be as follows:*

- i. The divider must be placed on a firm level surface.
- ii. The divider and pans must be clean.

b. *Sample mixing*

- i. An empty pan must be placed on each side of the divider to receive the discharge from the chutes.
- ii. The entire composite sample must be poured into the other pans. The seed must then be poured from the pans evenly along the entire length of the hopper.
- iii. The two pans into which the seed has passed must then be replaced with empty pans.
- iv. This procedure must be carried out a total of three times to mix the sample thoroughly.

c. *Sample reduction*

Before reduction, the composite samples must have been thoroughly mixed using the procedures described above. The contents of one of the two receiving pans must then be set aside. If the seed in the second pan is of at least the prescribed minimum weight for a submitted sample of a particular species of seed, it may be used as the submitted sample. If the weight of seed in the second pan is greater than the appropriate prescribed minimum weight for a submitted sample, it should be reduced.

d. *Weight in collection pan **greater** than prescribed minimum weight*

- i. An empty pan must be placed on each side of the divider to receive the discharge from the chutes.
- ii. The contents of the second pan must be poured evenly along the entire length of the hopper.
- iii. The contents of one of the two pans into which the seed has been passed must then be set aside. If the weight of seed in the other pan is still greater than the appropriate prescribed minimum weight for the submitted sample, it may be submitted intact or it may be reduced further using the correct reduction procedure.
- iv. If the weight of seed in either of the two pans is less than the appropriate prescribed minimum weight for a submitted sample, the procedures set out below should be followed.

e. *Weight in collection pan **less** than prescribed minimum weight*

- i. An empty pan must be placed on each side of the divider to receive the discharge from the chutes.
- ii. The contents of one of the pans must be set aside. The contents of the other pan must be poured evenly along the entire length of the hopper.
- iii. One receiving pan and its contents must then be removed and replaced with an empty pan. The other pan, with its contents, must be left in place.
- iv. The contents of the pan removed must be poured evenly along the entire length of the

hopper so that two sub-samples of different weight shall be produced.

The procedures described above when repeated, constitute the process of continuous halving, and must be repeated using whichever sub-sample is appropriate until sufficient seed is obtained in one pan, which when added to the seed set aside produces a submitted sample of at least the appropriate prescribed minimum weight.

*f. Obtaining more than one sample*

- i. First mix the sample three times. When two submitted samples are required they must be obtained from a composite sample by first obtaining a sample of at least twice the appropriate prescribed minimum weight for a submitted sample. The 'sample reduction' procedures should be used. The submitted sample is then divided into two parts by passing it once through the divider.
- ii. When three submitted samples are required from one composite sample, one sample of at least the appropriate prescribed minimum weight for a submitted sample must be obtained using the sample mixing and reduction procedures. All portions of seed, which have been set aside must then be recombined and the residue of the composite sample so obtained can then be divided again as necessary.

**Centrifugal divider - method of use**

The centrifugal divider must consist of a hopper from which the seed flows on to a cup that is then rotated by an electric motor. The seed must be distributed by centrifugal force on to a stationary baffle that divides it into two equal parts that are then discharged through separate spouts. Collecting vessels (usually metal pans) of sufficient depth to prevent seed bouncing out must be used to collect the seed.

*a. The method of using a centrifugal divider must be as follows:*

- i. The divider must be level prior to use.
- ii. The divider and pans must be clean.

*b. Sample mixing*

- i. An empty pan must be placed under each spout of the divider.
- ii. The entire composite sample must be poured into the centre of the hopper.
- iii. The motor must be operated so that the seed passes into the pans.
- iv. The motor must be switched off.
- v. The two pans containing seed must be removed and replaced by empty ones. The contents of both pans removed must be poured together into the centre of the hopper, the seed being allowed to blend as it flows in. This procedure must be carried out a total of three times to mix the sample thoroughly.

*c. Sample reduction*

- i. Before reduction, the composite sample must have been thoroughly mixed using the sampling mixing procedures. The contents of one of the two receiving pans must then be set aside. If the seed in the second pan is of at least the prescribed minimum weight for a submitted sample of a particular species of seed, it may be used as the submitted sample. If the weight of seed in the second pan is greater than the appropriate prescribed minimum weight for a submitted sample, it may be reduced using sample reduction procedures.

- ii. Empty pans must be placed under the spouts.
- iii. The contents of the second pan must be poured into the hopper and the procedure must be repeated.
- iv. The contents of one of the two pans into which the seed has passed must then be set aside. If the weight of seed in the other pan is still greater than the appropriate minimum prescribed weight for a submitted sample, it may be submitted intact or it may be reduced.
- v. If the weight of seed in either of the two pans is less than the appropriate prescribed minimum weight for a submitted sample, the following procedures must be used:
- vi. Empty pans must be placed under the spouts.
- vii. The contents of one of the pans must be set aside, the contents of the other pan must be poured into the centre of the hopper and the machine turned on.
- viii. One receiving pan and its contents must then be removed and replaced with an empty pan; the other pan, with its contents, must be left in place.
- ix. The contents of the pan removed must be poured into the centre of the hopper and the procedures must be repeated so that two sub-samples of different weight must be produced.
- x. The procedures specified above, when repeated, constitute the process of continuous halving, and must be repeated using whichever sub-sample is appropriate until sufficient seed is obtained in one pan, which when added to the seed set aside produces a submitted sample of at least the appropriate prescribed minimum weight.

*d. Obtaining more than one sample*

- i. First mix the seed. Two submitted samples must be obtained from a composite sample by first obtaining a sample of at least twice the appropriate prescribed minimum weight for a submitted sample. When two submitted samples are required they must be obtained from a composite sample by first obtaining a sample of at least twice the appropriate prescribed minimum weight for a submitted sample. The 'sample reduction' procedures should be used, then divide the sample into two parts by passing it once through the divider.
- ii. When three submitted samples are required from one composite sample, one sample, of at least the appropriate prescribed minimum weight for a submitted sample, must be obtained using the sample mixing and reduction procedures. All portions of seed, which have been set aside must then be re-combined and the residue of the composite sample so obtained can then be divided again as necessary.

## **E. MOISTURE SAMPLES FOR CEREAL AND BEET SEED**

Primary samples of seed for moisture tests must be drawn in such a way as to minimise exposure to the atmosphere. A LSS can test the composite moisture sample. In practice this means a LSS can **only** test cereal moisture content. In any other case the sample must be submitted intact to a Seed Testing Station in a sealed, airtight container from which as much air as possible has been excluded and must not be passed through a seed divider. Seed for moisture tests must be kept separate from seed on which other tests are to be made. Moisture testing must be by use of a suitably calibrated electronic moisture meter when carried out by the licensed seed sampler. Where moisture testing is done by a Seed Testing Laboratory it can be by either a suitably calibrated electronic moisture meter or the ISTA oven method.

The Seed Marketing Regulations require moisture testing of all cereal seed lots entered for certification.

**For Cereals only** the test can be carried out either by the licensed seed sampler at the time of drawing the certification sample, or by the Seed Testing Laboratory (LSTS or OSTs) to which the certification sample is sent. If the sampler does not do the cereal moisture testing then they must send a moisture sample to the Seed Testing Laboratory.

**For Beet** the moisture sample **MUST** be sent to and tested at the Seed Testing Laboratory (LSTS or OSTs). For Beet seed a minimum 50g moisture sample is required.

## **MONITORING**

Monitoring of LSS moisture testing will be carried out by the PHSI. They will observe the taking of moisture samples and inspect calibration records and moisture test results. Moisture control samples may be drawn if required.

### **1. TESTING BY LICENSED SEED SAMPLER**

The CERT 5 form (request for Sampling and Testing and to enter a Seed Lot) should be ticked in the “No” box for “Moisture testing to be done by the Seed Testing Station”. The licensed seed sampler (LSS) must use an approved method to take a moisture sample from the seed lot. For example, if the composite sample is derived from an automatic sampler, the composite sample should be given a brief stir and a sub-sample taken by drawing a container through the seed. The moisture sub-sample needs to be a minimum of 100g or of suitable size for the meter in use. This sub-sample (first replicate) is immediately inserted into the moisture meter and the value recorded. The whole operation is then repeated (second replicate). If the difference between the two replicate results does not exceed 0.2% the results can be averaged and reported to one decimal place on the CERT 5 before the certification sample is despatched to the Seed Testing Laboratory. At the Seed Testing Laboratory the result will be transferred to the CERT 10. If the difference is greater than 0.2%, a retest is required.

Retest procedure for Moisture testing

- Repeat the moisture test and obtain results for two retest replicates, a separate record of the retest data must be kept.
- If the two replicate results of the retest are within 0.2% of each other, their average can be reported as the result for the moisture test.
- If the replicates of the retest are out of tolerance as well, check if the averages of the two tests are in tolerance (0.2%)
- If the average of the two tests has a difference of 0.2% or less, the average of the two test results can be reported as the moisture test result.
- If the replicates of both tests are out of tolerance **and** the difference between the two test averages is also greater than 0.2%, no moisture test result can be reported. It is recommended that the company reviews its calibration and performance of its sampling and measuring equipment to determine possible cause for the discrepant results and despatches an appropriately drawn moisture sample for testing at the Seed Testing Station of choice. At the Seed Testing Laboratory the result will be transferred to the CERT 10.

### **2. RECORDS**

A record of samples tested and results obtained shall be retained by the licensed seed sampler. The meter used must be calibrated at least annually by a qualified independent body, and the certificate of calibration retained for inspection; good practice is to have meters checked every 100 samples.

### **3. MOISTURE SAMPLE TAKEN BY LICENSED SEED SAMPLER FOR DESPATCH TO A SEED TESTING LABORATORY**

- i. The CERT 5 should be ticked in the "Yes" box for "Moisture test to be done by Seed Testing Station".
- ii. The licensed seed sampler (LSS) must use an approved method to take a moisture sample from the seed lot. Either in the form of primary samples from the containers or taken from the composite sample derived from an automatic sampler.
- iii. If derived from the automatic sampler, the composite sample should be given a brief stir and a subsample taken by drawing a suitably sized container through the seed. The sample must be a minimum of 100g and may need to be larger depending on the type of moisture meter being used at the Seed Testing Laboratory. The LSS needs to check the weight required with the Seed Testing Laboratory before despatch of the moisture sample. The moisture sample container is then sealed and the remainder of the composite sample mixed and divided in the usual way to give a submitted sample of at least 2kg for LSTs, or 1kg for the OSTs.
- iv. The moisture sample container is then placed inside an outer cotton sample bag with the separately sealed certification sample and the outer bag sealed. In this way, the seed for moisture content tests are separate from the rest of the seed in the outer bag on which the other certification tests have to be carried out. The outer bag has a CERT 5 label attached.
- v. The samples must be submitted for testing as soon as possible. Seed Testing Laboratories must complete moisture content tests within 5 days of the seed lot being sampled or the test will be considered invalid and another moisture content sample will be required.

### **4. TESTING BY LICENSED (OR OFFICIAL) SEED TESTING STATION**

#### **Testing by moisture meter**

On receipt of the moisture sample from the LSS the Seed Testing Laboratory needs to mix or stir the sample, then if testing by moisture meter a sub-sample needs to be taken of suitable size for the meter in use. The sample is immediately inserted into the moisture meter and the value recorded. The whole operation is then repeated. If the difference between the two results does not exceed 0.2% the results can be averaged and reported to one decimal place on the CERT 10. If the difference is greater than 0.2%, a retest is required.

#### **Testing by oven method**

If testing by the ISTA oven method the LSTS procedure paper (TP/MS/10) for moisture testing should be followed. Duplicate moisture determinations are required. If the difference between the two results does not exceed 0.2%, the results can be averaged and reported to one decimal place on the CERT 10. If the difference is greater than 0.2%, a retest is required.

#### **Retest procedure for Moisture testing**

- Repeat the moisture test and obtain results for the two retest replicates, a separate record of the retest data must be kept.
- If the two replicate results of the retest are within 0.2% of each other, their average can be reported as the result for the moisture test.
- If the replicates of the retest are out of tolerance as well, check if the averages of the two tests are in tolerance (0.2%).

- If the average of the two tests has a difference of 0.2% or less, the average of the two test results can be reported as the moisture test result.
- If the replicates of both tests are out of tolerance **and** the difference between the two test averages is also greater than 0.2%, no moisture test result can be reported. It is recommended that the company reviews the calibration and performance of its moisture meter to determine possible cause for the discrepant results and contacts the client LSS if testing by the ISTA oven method is not an available option. A separate record of the duplicate data and reported result needs to be kept by the Seed Testing Laboratory. When an electronic moisture meter is used, it must be calibrated at least annually by a qualified independent body, and the certificate of calibration retained for inspection. Good practice is to have moisture meters checked every 100 samples.

Normal monitoring of LSTSs is by officers of the OSTs, who may require the staff of the LSTS to demonstrate their competence in moisture testing. Moisture Licensed Station Reserve Portions (LSRPs) are not required.

Note: To pass certification testing the moisture content of cereal seed lots must be 17.0% or below. 17.1% is not below 17.0%, so seed at 17.1% would fail.

## **F. COMPLETION OF SAMPLER'S INFORMATION ON THE CERT 5 AND DESPATCH OF SAMPLE**

When the sample is taken and divided down, the LSS must \*sign the CERT 5, enter the method of sampling used, enter their licence number and date of sampling in the spaces provided.

**CERT 5 electronic format** When using the electronic Cert 5, the information, when entered, must be printed onto self-adhesive labels for use on the sample bags.

### **\*LSS Signature on Cert 5**

The LSS completing an electronic Cert 5 should **type** their name in the Print Name box.

All paper Cert 5s must have the **handwritten** signature of the LSS.

**This would also apply to the applicant's signature on the Cert 5**

**N.B. The Cert 5 and sample will not be accepted by OSTs/LSTS if there is no typed (on the electronic form) or manual signature (paper) on the form.**

Then:

- Place the sample in the appropriate sized sample bag, tie drawstrings and seal with an official pink seal.
- Stick one completed CERT 5 adhesive label to the sample bag flap.
- Despatch the sample immediately to the Seed Testing Station or to the OSTs, include another duplicate, **signed/dated** CERT 5 adhesive label if required (this will depend upon your/the applicant's arrangements) for use by the LSTS or OSTs.
- Ensure the applicant has a complete record of the CERT 5 information.
- Send a copy to the local PHSI (if required) and retain copies electronically or manually.
- Keep a record of samples taken, the method of sampling used in each case and the certification labels used on the containers.

# Chapter 5: Sealing seed lots

1. Seed lots must be sealed not later than the time of sampling and sealed in such a way that when the container is opened the seal will be broken and cannot be re-used. This includes seed in bins and bulk bags. Sealing of Pre-basic, Basic, Certified seed, Certified seed of the 1st and 2nd generations and, where appropriate, 3rd generation and commercial seed must be done by, or under the supervision of, a licensed seed sampler.

This means:

- a. When seed is to be sampled from bags, the bags must be sealed before sampling starts.
  - b. When seed is to be sampled from bins or bulk bags, they must be sealed immediately after the sample has been taken.
  - c. When seed is to be sampled by an automatic sampler, the container into which the processed seed is fed must be sealed as soon as it is full.
2. Suitable methods of sealing are as follows:
    - a. An official label when placed at the top of the bag must be stitched through. If the label is not stitched through, an official pink seal must be placed over the end of the tie strings or stitching.
    - b. Bins must be covered and sealed by the use of an official pink seal or adhesive official labels in such a way that the contents cannot be added to or removed without breaking the seal.
    - c. Non-reusable sealing systems that require no further sealing, for instance:
      - i. Paper or plastic bags, provided that they have no opening other than the filling device. The filling device must be equipped with a self-adhesive or heat-sealing system closing the filling device after filling in such a way that it cannot be opened without damage.
      - ii. Bags of non-woven material, which are closed by stitching, provided that there is, at least at one side of the opening, an indelible imprint of a number scale, beginning with number 1 or A at the upper edge, or a similar imprint (letters, design), which shows that the bags have retained their original dimensions.
      - iii. Valve packs.

## **Bulk bags**

- d. These bags should be sealed using the tear-resistant, pre-punched hole label which are available for use with bulk bags. The use of these labels is **recommended** with an official pink seal and a plastic tie.
- e. **The access/opening point for bulk bags should not be at the base for Health and Safety reasons.**

# Chapter 6: Labelling of seed lots

*It is a Licensed Seed Sampler's responsibility to ensure that all officially certified seed is correctly labelled in accordance with the Seed Marketing Regulations.*

## 1. OFFICIAL LABELS

Where the regulations define an official or supplier's label for use on a seed package this is the label that must be used.

Seed covered by the Regulations must be sold in packages, which are labelled in accordance with the Regulations. All seed lots, which are to be sampled for the purposes of official certification, must be labelled with official labels not later than the time of sampling. Labelling must take place by, or under the supervision of, a licensed seed sampler. The types of official label available are:-

- Tear resistant
- Self adhesive

Details of the information to be entered on the official labels and label colours for the different categories of seed - Basic, Pre-Basic, Certified Seed, Certified Seed of the 1st, 2nd and 3rd generations, and Commercial Seed are shown at Annexes D and E. Information entered onto the label must be clear and legible and in the correct place. Seed, which is marketed as meeting the Higher Voluntary Standard (HVS), should bear a label, which has the HVS symbol or the letters HVS. Labels bearing the HVS symbol or letters **must not** be used on seed, which **does not** meet this standard, or on seed for which HVS does not exist.

## WHOLE BAG LABELS (CEREALS, FODDER, OIL AND FIBRE)

Whole bag labelling is permitted on a package of Cereal, Fodder Plant or Oil and Fibre Plant seed as defined in the Seed Marketing Regulations. The label may be stamped or indelibly printed directly on to the bag instead of using separate official labels.

Any company interested in using this system should contact APHA Seed Marketing Team. If APHA approval is given, a series of label numbers is issued for processors to print within the official label areas of their bags using a sequential numbering printer. It is the responsibility of the LSS to ensure that the information on whole bag labels is correct and legible.

## 2. CHEMICALLY TREATED SEED

Where seed is chemically treated this fact must be stated, together with the proprietary name of the chemical, on either:-

- a separate supplier's label attached to the package; or
- the official label or supplier's label.
- if seed is chemically treated **after** being sampled for certification purposes, the purchaser must be told at or before time of delivery. The information must also be stamped on the outside of the package, or included on a notice inside the package, except where information on chemical treatment is given on a tear resistant label.

## 3. LABELLING OF SEED SUBJECT TO EARLY MULTIPLICATION

Seed may be progressed through the multiplication chain PB, BS, CS, C1, C2 and C3 (Final Generation). There are specific conditions that apply where the earlier generations are PB or BS. Each generation of crop and seed must have achieved the required standards for certification. Seed cannot

be certified until the variety has been added to a National List. This means **no marketing** can take place until the variety has been listed.

The LSS must indicate in the label records the label numbers used on early-multiplied seed.

#### **4. LABELLING FOR VARIETIES NOT YET ON THE NATIONAL LIST:**

- Official labels supplied by the label contractor authorised by the Secretary of State.
- The label must contain the information required by the regulations, except that the variety name may be an AFP number if the name has not been approved. If the approved name is known this also should be included.
- The label must include the words: **'variety not yet officially listed – for tests and trials only'**
- The label is coloured orange.

#### **5. SEED FOR EXPORT WHICH HAS MET FIELD STANDARDS BUT IS 'SEED NOT FINALLY CERTIFIED'**

Seed, which has met certification standards in the field and for which a satisfactory crop inspection report has been lodged with the Certifying Authority but has not yet been tested for seed standards, may be moved to another Member State. The seed is packed and sealed in accordance with the requirements of the regulations and labelled with official 'grey' labels available from the approved label contractor.

# Chapter 7: Re-sampling

*A Licensed Seed Sampler may, as appropriate, be asked to re-sample seed from any category/ level. The circumstances under which a re-sample may be required vary. The most common case is where the analytical purity or germination of the original sample has failed to meet the prescribed standard and the processor thinks it is likely that a further sample sent for re-test may meet certification standards.*

## 1. COMPLETION OF CERT 5

When an applicant requires a seed lot to be re-sampled they must submit a CERT 5 to the licensed seed sampler. If the seed lot is still in precisely the same state as when the original sample was taken, and if all the seed present when the original sample was taken is still available for re-sampling, the CERT 5 submitted for the re-sample will be identical to that submitted for the original sample EXCEPT:

- The word 'Re-sample' should be inserted against 'Additional Information';
- The date the sample is requested may be different;
- The sampling method may be different.

## 2. CERT 5 CHECK LIST

a. When a licensed seed sampler receives a request to draw a re-sample, they must be able to answer 'YES' to the following questions before starting to re-sample:

- Is the complete seed lot available for re-sampling?
- Does the net weight of the seed lot shown on the CERT 5 correspond with the actual weight of seed available for re-sampling?

and 'No' to this question

- Has the seed been re-processed or chemically treated since it was first sampled? Therefore, the original seed lot is available for re-sampling and it is all in precisely the same state it was in when originally sampled, the LSS can proceed with sampling after conducting the normal CERT 5 and label check.

b. In circumstances where:

- Not all the seed is present for re-sampling;
- The seed lot has been re-processed;
- Chemical treatment has been applied to part but not all of the seed lot. If, however, the whole seed lot has been chemically treated the SLRN need not change but new labels with the name of the treatment will be required;
- Individual parts of the same seed lot have been subjected to different chemical treatments (i.e. the seed has been split dressed).

It will be necessary for the applicant to create one or more new seed lots, each with a new seed lot reference number. In these circumstances, re-sealing and re-labelling will be necessary.

### 3. TAKING A RE-SAMPLE

A LSS should proceed in exactly the same way as when taking an original sample, i.e.

- Check the CERT 5 and the labels.
- Take the sample by one of the approved methods.
- Mix and divide the composite sample to obtain the submitted sample by an approved method.
- Carry out the procedures described, complete the CERT 5 and despatch the sample;
- Keep records of actions.

Where new lots have been created, a separate sample must be taken from each lot. **IT IS NOT PERMITTED** to obtain a re-sample from any residue, which remains from the original sample.

# Chapter 8: Re-labelling and sealing

*A licensed seed sampler is authorised to ensure that packages of seed and/or mixtures of seed are labelled or re-labelled and sealed or re-sealed in accordance with the Seed Marketing Regulations.*

**This part of the instructions relates to *all* containers except small packages.**

## 1. RE-LABELLING AND RE-SEALING

Re-labelling and re-sealing occurs when certified seed of any category is transferred from one container to another (e.g. from bulk bins to 25kg sacks). Re-labelling and re-sealing of all categories of seed (except small packages) must be carried out by or under the supervision of a LSS. The procedure is as follows:

- Ensure that the labels and seals on the original containers are intact.
- New official labels are required. They should contain all the original information except that the month and year of sealing becomes the month and year of **re-sealing**, and the net weight may change. The word 're-sealed' must be inserted on the new labels.
- Record the new label numbers on the label usage records (records must be kept for a minimum of 3 years).
- Supervise the removal of the original labels and record their numbers before they are destroyed.
- Supervise the re-packing, ensuring that no contamination occurs during the process.
- Supervise the immediate attachment of new labels and the re-sealing process.

## 2. RE-PACKING IMPORTED SEED

### a. *EU Member State*

Where seed imported from another Member State needs to be re-packed (e.g. by breaking down into smaller packages or blending) APHA official seed certification labels must be used for re-labelling and details of the country of production entered i.e. where the seed was grown e.g. The Netherlands.

### b. *Third Country - OECD*

Where seed imported from an OECD Third Country needs to be re-packed and re-sealed, UK OECD labels should be used for re-labelling. However, where seed imported from a Third Country is blended with seed produced in a Member State to improve germination, the resulting blend is re-labelled using standard England and Wales official labels.

## 3. VERIFICATION TO HVS

### a. *Seed imported from an EU Member State*

Where Higher Voluntary Standards apply, i.e. seed of cereal and fodder species, officially certified by another Member State may be verified as meeting the standards for HVS. Seed verified as meeting HVS must be re-sealed and re-labelled using England and Wales official labels overprinted with the HVS letters or symbol.

*The official label must be overprinted to show the seed has been re-sealed and the original country of production must be printed on the label.*

### b. *Seed imported from an OECD Third Country with equivalent arrangements*

- i. Where Higher Voluntary Standards apply, i.e. seed of specified cereal and fodder species officially certified by an OECD Third Country that has equivalent arrangements with the EU may be verified as meeting the standards for HVS. Seed verified as meeting HVS should be re-sealed and re-labelled using **UK OECD Official labels**.

The official label must be overprinted to show the seed has been re-sealed and the country of production must be printed on the label. The fact that the seed meets HVS may be stated on the OECD label.

- ii. Seed imported pending addition to the National List or Common Catalogue may be verified at HVS after National Listing.
- iii. Seed imported as Not Finally Certified may be verified at HVS. An application to verify not finally certified seed must be made to ACC Team, NIAB, Huntingdon Road, Cambridge CB3 0LE.

#### **4. RE-GRADING**

Seed may be re-graded to another generation and/or level in certain circumstances. For example C1 cereal seed may be downgraded to C2. HVS seed may be downgraded to minimum standard. The reasons for re-grading vary. It may be a purely commercial decision, or it may be that the seed has not met the appropriate standards for the higher generation and/ or HVS at which it was originally labelled. There are strict rules governing the re-grading of seed which the applicant must adhere to. A LSS must ensure that the seed is correctly re-labelled and re-sealed once the decision to re-grade has been taken. The procedure to be followed is the same as for re-labelling and re-sealing, **EXCEPT** that the sampler must also ensure that:

- A new seed lot reference number has been allocated.
- The new labels are correct for the category and/or level.
- The new date of sealing is included on the label.

#### **5. RE-GRADED SEED LABELLED WITH WHOLE BAG LABELS**

When cereal, fodder plant, and oil and fibre plant seed is in containers labelled with whole bag labels it can only be re-labelled following re-grading, or any other reason, by destroying the original package and placing the seed in new bags.

# Chapter 9: Dual sampling

Dual sampling autumn sown C1 and C2 cereals is permitted in England and Wales and applies **only** during periods of high seed borne disease.

1. The official germination result of untreated seed samples may be affected by seed-borne diseases, particularly *Microdochium nivale* (previously known as *Fusarium*) and *Septoria* and because of this processors are currently permitted to draw more than one sample of autumn sown cereals;
  - The first prior to chemical treatment
  - The second after treatment.

This is known as dual sampling. **Both samples must be taken on the same day.**

2. To meet their obligations under the regulations processors must, when using the dual sampling provision, arrange for CERT 5s to be issued as follows:
  - a. initial CERT 5 for a sample to be taken and tested is of untreated seed.
  - b. subsequent CERT 5(s) marked against the 'Additional Test required' entry as follows:
    - i. A single CERT 5 will be issued marked DUAL SAMPLE RE-SAMPLE where the whole seed lot has been treated with **ONLY ONE TYPE** of chemical treatment.
    - ii. Where two or more parts of a seed lot have received different chemical treatments, a separate CERT 5 marked 'PART DUAL SAMPLE RE-SAMPLE\*' of original seed lot ref. no. (abbreviated to 'PDS RE-SAMPLE' of original seed lot ref. no.) must be issued to cover each part of the chemically treated seed lot.
    - iii. A copy of dual sampled seed CERT 5s should be sent to the local PHSI or retained for inspection later.
    - iv. Each PDS Re-sample CERT 5 must quote a new seed lot reference number preferably from a separate series of sequential lot numbers reserved for this purpose.
3. Always check the accuracy of the CERT 5 in relation to the label, numbers of containers and quantity of seed available for sampling.
4. Samples requested on a CERT 5 marked DUAL SAMPLE RE-SAMPLE or PDS RE-SAMPLE must be taken **IMMEDIATELY** following the treatment.
  - a. The first sample from the untreated seed must be sent immediately to a Seed Testing Station.
  - b. The applicant must hold the DUAL SAMPLE RE-SAMPLE or PART DUAL SAMPLE RE-SAMPLE samples in a secure place in case the untreated sample does not meet the germination standards.
  - c. A copy of **all** the CERT 5s covering the dual sampling of each seed lot must be sent to the local PHSI immediately after sampling or retained for inspection later.
5. Where the lot has been subjected to different chemical treatments and the original untreated sample has failed certification, the CERT 5 for each differently treated part becomes active for certification purposes. A LSS must ensure that the new seed lot reference number is quoted on the CERT 5.

# Chapter 10: Mixtures

*The licensed seed sampler is responsible for ensuring that mixtures are labelled, re-labelled, sealed and re-sealed in accordance with the Seed Marketing Regulations. This part of the instructions describes how to prepare mixtures. It also describes how mixtures, other than those which are broken down into small packages, must be sealed and labelled.*

## 1. THE SEED REGULATIONS PERMIT THE MARKETING OF MIXTURES OF THE FOLLOWING TYPES:

- Mixtures of varieties of a species of Cereal seed where the mixture is effective against the propagation of a harmful.
  - A mixture of species or varieties of Fodder Plant seed and any other seeds (**except species of Beet seed**) meeting the requirements of the seed regulations covering those seeds.
  - Seed of Fodder Plant seed may be mixed with seeds not covered by seed regulations, provided that the fodder component(s) covered by the regulations are certified in accordance with The Seed Marketing Regulations.
- a. Certified Oil and Fibre Plant seed and Vegetable seed can only be sold as a mixture if seed of Fodder Plant seed species is included in the mixture and provided that the seed complied with the provisions of the Seed Marketing regulations before mixing with the Fodder Plant seed.
- b. **Mixtures of Standard Seed of Vegetable species.** The Seed Marketing Regulations permit the sale, in small packages NOT exceeding the maximum weight for a small package (as defined in the regulations), of mixtures of different varieties of Standard seed of the same species. Mixing vegetable species is not permitted.
- c. Seed of any category and level may be included in a mixture (except vegetable species where only Standard seed may be used). All components covered by the seed regulations must be **officially certified**, and must meet the standards laid down in the appropriate seed regulations at the time of mixing. Seed certified in other Member States, or seed certified in a Third Country and imported under equivalence arrangements may also be included in mixtures.
- d. Where higher voluntary standards are prescribed for **all** the constituents of a mixture, and **all** the constituents have been officially certified as meeting HVS before mixing, the mixture may be marketed at HVS.

## 2. MAXIMUM WEIGHT OF A SEED LOT MIXTURE (FODDER AND CEREALS)

Mixtures, like all other species of seed, must be marketed in seed lots or part lots, not exceeding the maximum permitted weights.

For **cereals** (excluding maize) the maximum weight is 30 tonnes, for maize it is 40 tonnes. For **fodder** excluding large seeded legumes the maximum weight is 10 tonnes. The exception is where more than 50% of the mixture consists of a species of seed for which the maximum weight of a seed lot is higher, in which case the higher weight allowed for that species will apply. See also \*note below.

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 APHA.**

### 3. SEED LOT REFERENCE NUMBER OF MIXTURES

**FODDER and CEREAL:** A unique seed lot reference number must be allocated to each seed lot of a mixture of seed. The reference number can be constructed in any way provided it contains the company's licence number as a suffix. For example licensed company 9999 would construct the reference number as *2015/mixture name/lot code/9999, e.g.*

*2015/ABC/0001/9999* or

*ABC/0001/9999.*

**VEGETABLE:** for mixtures of varieties Standard seed of one Vegetable species, the reference number given by the person responsible for affixing the labels, i.e. the reference number of the lot/batch from which the seed was packed.

### 4. THE MIXING PROCESS

The responsibility of the LSS is to ensure that mixtures of seed are labelled or re-labelled and sealed or re-sealed in accordance with the Seed Marketing Regulations. The mixing process is not the responsibility of a LSS; however, they need to be aware of what the process involves.

- a. Only certified seed (or Standard seed in the case of vegetables) meeting the prescribed seed standards for the individual constituents may be included in the mixture. The labels of the straights should therefore be checked before proceeding. The mixing equipment must be thoroughly cleaned to prevent contamination and the mixture should be as uniform as possible. The mixture must be correctly labelled and the bags or containers sealed.
- b. A record of the following should be maintained by the LSS:
  - i. Reference number of the mixture and brand name, if any.
  - ii. Species and varieties (except for Commercial seed) of constituents.
  - iii. Seed lot reference numbers of constituent lots.
  - iv. Percentage by weight of each constituent.
  - v. Label numbers of the official labels used on mixtures.
  - vi. Total weight of mixture.
- c. The record must be kept in such a form that it is possible to identify quickly the individual straights that have been included in each mixture and to link this information with the records of constituents in the possession of the firm when the mixture was made up.

The records must be kept on the premises on which the mixing takes place and be made available to authorised officers of the Certifying Authority on their visits to these premises.

## 5. OFFICIAL AND SUPPLIER'S LABELLING OF MIXTURES OF SEED

**Official labels** are required on **mixtures** of the following types and sizes; the statement that must appear on the label differs for the size of package and the section of the seed Regulations under which the species is covered.

Species/type of mixture	Weight	Statement of intended use
cereal mixture of varieties of one species*	More than 15kg	"Mixture of ..." [species and variety names]
A fodder mixture of seed not intended for agricultural use (e.g. amenity)	More than 10kg	"Mixture of seed for..." [intended use]
Agricultural fodder mixtures	More than 10kg	"Mixture of seed for..." [intended use]

**Supplier's labels** are used for **mixtures** described as:

Cereal - small packages of a mixture of varieties (one species)

Fodder - small EU 'A' package of a mixture of seeds

Fodder - small EU 'B' package of a mixture of seeds

Vegetable – small packages of a mixture of varieties (one species) of Standard Seed

Species/type of mixture	Weight	Statement of intended use
A cereal mixture of varieties of one species*	Not exceeding 15kg	"Mixture of..." [variety names]
Fodder EU 'A' i.e. Mixture of seed not intended to produce fodder plants (e.g. amenity use)	Not exceeding 2kg	"Seed mixture for..." [intended use]
Fodder EU 'B' i.e. Mixture of seed other than small EC 'A' not intended to produce fodder plants (e.g. amenity use)	Not exceeding 10kg (minimum 2kg)	"Seed mixture for..." [intended use]
Fodder EU 'B' i.e. Mixture of seed intended for use as fodder plants (e.g. agricultural use)	Not exceeding 10kg	"Seed mixture for..." [intended use]
A vegetable mixture of varieties of one species	Small package size dependent on species	"Mixture of varieties of..." [name of species]

\*Has a qualifying statement in the Regulations that as a mixture, it is effective against the propagation of a harmful organism.

## 6. OFFICIAL LABELLING OF CEREAL AND FODDER MIXTURES (NOT SMALL PACKAGES)

### a *Mixture packages over 15 kg - Cereal*

The package must be labelled, not later than the time of sealing, on the outside with an official label (see note ii.), which has not previously been used, containing the details required in The Seed Marketing Regulations .

The label should also include a qualifying statement that as a mixture, it is effective against the propagation of a harmful organism

- The label must be coloured green
- HVS is permitted if all components that make up the mixture met the HVS standard

### b *Mixture packages over 10kg - Fodder*

The package must be labelled, not later than the time of sealing, on the outside with an official label (see note ii.), which has not previously been used containing the details required in The Seed Marketing Regulations.

- In the case of a mixture registered with the Certifying Authority (see Para.8) provided the label shows:
    - the registered name of the mixture
    - the percentage by weight of each of the components may be omitted provided that –
    - a) this information is supplied to the customer on request, and
  - customers are informed that they can request these details. In the case of a mixture *other than a registered mixture* of seeds the percentage by weight of each of the components shown by species and, where appropriate by variety (see note iii), both indicated at least in Roman characters (see note i.).
  - The label must be coloured green.
- HVS is permitted if all components that make up the mixture met the HVS standard.

## 7. SUPPLIER'S LABEL FOR A SMALL EU 'A' AND EU 'B' PACKAGE OF A MIXTURE OF FODDER PLANT SEEDS

The package must be labelled not later than the time of sealing with a label, a printed notice or stamp (see note ii.) containing the details required in The Seed Marketing Regulations.

- In the case of a package of a mixture of seeds that has been produced in the United Kingdom and registered with the Certifying Authority (see Para. 8), provided the label shows:
  - the registered name of the mixture
  - the percentage by weight of each of the components may be omitted provided that –
  - a) this information is supplied to the customer on request, and
  - b) customers are informed that they can request these details.
- In the case of a package of a mixture of seeds, *other than a package of a registered mixture* of seeds that has been produced in the United Kingdom, the percentage by weight of each of the components shown by species, and, where appropriate, by

variety (see note iii), both indicated at least in Roman characters (see note i).

- The label, notice or stamp referred to must be coloured green.
- HVS is permitted if all components that make up the mixture have met HVS.

#### **Note**

- i. Roman characters means the English alphabet.
- ii. If the packaging material is transparent the label, notice or stamp referred to may be placed inside the package provided it can be read through the packaging (see Annex E).
- iii. 'Where appropriate, by variety' – variety/ies must be stated unless the category is 'Commercial' in which case the variety is not applicable.

#### **8. SUPPLIER'S LABEL FOR A SMALL PACKAGE OF STANDARD VEGETABLE SEED MIXTURE OF VARIETIES**

The label for a small package of vegetable mixtures (one species/different varieties) should include:

the words "mixture of varieties of...[name of species]"

and state the proportion of the varieties, expressed as net weight or as the number of seeds.

The label must be coloured dark yellow

Refer to the Seed Marketing Regulations for full details.

#### **9. REGISTRATION OF AGRICULTURAL AND AMENITY FODDER MIXTURES**

There is a provision in The Seed Marketing Regulations that allows for the registration of mixtures with the Certifying Authority.

When a mixture is registered it permits specific information to be **omitted** from the official label.

- a. *For packages over 10kg - Agricultural and Amenity*
  - Registered name and components (species and varieties)

##### **Label can omit**

- The percentage by weight of each of the components.

##### **Note**

Customers must be informed on a despatch note or invoice of the details omitted.

- b. *For a Small EU 'A' Package (up to and including 2kg) - Amenity and Small EU 'B' Package (over 2kg up to 10kg) - Agricultural and Amenity*

- Registered name, components and the percentage by weight.

##### **Label must include**

- Species and variety names.

##### **Label can omit**

- The percentage by weight of the components\*.

##### **\*Note**

This information is supplied to customers only on request; but customers must be informed that they can request these details.

For details of the registration procedure contact APHA Seed Marketing Team.

# Chapter 11: Small packages

For all other Seed Regulations species (but not mixtures) supplier's labels are used on small packages, e.g. small EU 'A' packages and small EU 'B' packages of officially certified seed and officially certified commercial seed.

## 1. Role of a seed sampler

The role of the LSS in the preparation of small packages (except in the case of small packages of vegetable seed, as defined in the Seed Marketing Regulations, when the use of an LSS is not required) is summarised as follows:

- To be responsible for ensuring that large containers are properly re-sealed and re-labelled when they are only partly used during the re-packing operation.
- To ensure that small packages are sealed, re-sealed, labelled and re-labelled.

It is recommended that anyone marketing small packages for the first time should consult the Certifying Authority, APHA for advice.

## 2. Sealing of small packages

Small packages must be sealed in such a way that when they are opened the seal is broken and cannot be re-used.

## 3. Labelling of small packages

Small packages may be labelled with the supplier's own labels which should be of the appropriate colour for the category of seed e.g. blue for Certified Seed, green for mixtures, dark yellow for Standard vegetables. Alternatively, all the required information may be indelibly printed on the outside of the package.

## 4. Types of small package and maximum weights

The types of small package and the maximum weight of seed they may contain by regulation species group are:

CROP GROUP	TYPE	MAXIMUM WEIGHT OF SEED
CEREALS	Small package of Pre-basic, Basic, Certified, Certified Seed of the First and Second generations or a mixture of seeds.	Not exceeding 15kg
FODDER (All weights given exclude granulated pesticides, pelleting substances or other solid additives).	i) Small EU 'A' package mixture of seeds - Amenity	Net weight not exceeding 2kg
	ii) Small EU 'B' package of seeds - Basic, CS, C1, C2, Commercial seed.	Net weight not exceeding 10kg
	iii) Small EU 'B' package mixture of seeds - Amenity.	Net weight not exceeding 10kg (minimum 2kg)
	iv) Small EU 'B' package Mixture – Agricultural	Net weight not exceeding 10kg
OIL AND FIBRE	Small package of Pre-basic, Basic, Certified, Certified Seed of the First, Second or Third generation, or Commercial Seed.	Not exceeding 15kg

REGULATION	TYPE	MAXIMUM WEIGHT OF SEED
<p>BEEET (Excluding, where appropriate, granulated pesticides, pelleting substances or other solid additives).</p>	<p>Small EU package of Basic and Certified Seed</p>	<p>i. Not more than 100,000 clusters or grains or a net weight of 2.5 kg for precision and monogerm seeds ii. Not more than a net weight of 10kg for seeds other than precision or monogerm seeds</p>
<p>VEGETABLE and MIXTURES OF VEGETABLE</p>	<p>Small package of Certified or Standard Seed*</p>	<p>Net weight of not more than 5kg for legume seed</p> <p>Net weight of not more than 500g for onion, asparagus, spinach beet, chard, red beet or beetroot, turnip, gourd, marrow, carrot, spinach, radish</p> <p>Net weight of not more than 100g for all other kinds of vegetables specified in the Seed Marketing Regulations.</p> <p>Mixtures of varieties of one species dependent on the small package weight allowed for the species concerned.</p>

# Chapter 12: Standard Seed of vegetables

## **STANDARD SEED OF VEGETABLES (OTHER THAN IN SMALL PACKAGES)**

1. Standard Seed of vegetables is not officially certified. Nevertheless, it does have to meet minimum standards of purity and germination, which are laid down in The Seed Marketing Regulations. It is up to the seller to ensure that these standards are met. The Regulations also state that Standard Seed must be sold in lots or part lots. Maximum lot weights are the same as for certified categories of vegetable seed. The person in charge is responsible for allocating the reference number(s) to lots of Standard Seed. These must be constructed in such a way that each one is unique to a lot, so the lot can be identified.

### **2. Records of Transactions in Standard Seed**

A person who labels packages of Standard Seed (other than small packages) must keep records for a period of three years of the seed lots of Standard Seed marketed by them. They must also keep records of:

- The dates on which labels were affixed to packages.
- The packages on which they were affixed.

### **3. The Seed Marketing Regulations require that:**

- A representative sample of appropriate weight from any seed lots of Standard seed must be taken by the company and must be retained by the company for a period of at least two years. This does not require a LSS.
- The company shall keep and retain for a period of at least three years a record of the seed lots of standard seed marketed by them. These records and any samples must be made available, on request, to an officer authorised by the Certifying Authority.

# Chapter 13: Seed lot reference number (SLRN)

Seed marketing regulations state that seed must be sold in seed lots bearing a unique seed lot reference number.

## **Construction of a Seed Lot Reference Number**

All the containers in the lot to be sampled should have labels bearing the same seed lot reference number. A sample drawn from two or more lots, or part of lots, is of no value and unacceptable as an official sample. Each seed lot should have its own reference number made up as follows:

**Harvest Year/Category/Registered Applicant's Number/Sequential number of lot produced from the current harvest year**

2 or 4 digits/ 2 digits or characters/ maximum 5 digits/ maximum 4 digits

**Examples: 2015/2L/9999/101**

**15/CH/9999/046**

**Please note there is a slightly different SLRN format required for a mixture of seeds (see Chapter 10).**

# Annex A

## GENERATION CONTROL

Certified Category	Beet	Cereals	Vegetable	Fodder	Oil & Fibre
Pre-Basic (PB)	Yes	Yes	Yes	Yes	Yes
Basic (BS)	Yes	Yes	Yes	Yes	Yes
Certified (CS)	Yes	Yes - <b>only</b> maize, rye, triticale and hybrids of barley, oats, wheat, durum wheat and spelt wheat	Yes	Yes - All kinds <b>except</b> field peas, field beans, Lucerne ( <i>Medicago sativa</i> ), lupins and vetches	Yes - All kinds <b>except</b> monoecious hemp, soya bean, flax and linseed
Certified 1st (C1)	N/A	Yes – <b>not</b> rye, maize or hybrids (as above)	N/A	Yes - <b>only</b> field peas, field beans, Lucerne, ( <i>Medicago sativa</i> ), lupins and vetches	Yes – <b>only</b> monoecious hemp, soya bean, flax and linseed
Certified 2nd (C2)	N/A	Yes – <b>not</b> rye, maize or hybrids (as above)	N/A	Yes - <b>only</b> field peas, field beans, Lucerne ( <i>Medicago sativa</i> ), lupins and vetches	Yes – <b>only</b> monoecious hemp, soya bean, flax and linseed
Certified 3rd (C3)	N/A	N/A	N/A	N/A	Yes – Flax and linseed
Commercial (CM)	N/A	N/A	N/A	Yes - <b>only</b> annual meadow-grass, Sainfoin and Hungarian vetch (must be identifiable as to its species)	Yes – <b>only</b> black mustard (must be identifiable as to its species)
Standard (ST)	N/A	N/A	Yes	N/A	N/A

### Notes

The LSS should always refer to the Seed Marketing Regulations for details of what is included and excluded from specific categories.

N/A = Not applicable

# Annex B

## INFORMATION REQUIRED ON OFFICIAL LABELS (EXCEPT MIXTURES)

THIS TABLE IS DESIGNED FOR QUICK REFERENCE ONLY YOU **MUST** REFER TO THE SEED REGULATIONS FOR DETAILED INFORMATION REQUIRED ON OFFICIAL LABELS

**Pre-Basic, Basic, Certified Seed, Certified Seed of the 1st, 2nd and 3rd Generations (applies to Flax and Linseed only) and Commercial Seed**

Note: Packages should be labelled no later than at the time of sealing

Pre-Basic Seed	Basic Seed	Certified Seed (CS), C1, C2 and C3	Commercial
No requirement for EU Rules and Standards statement	EU Rules and Standards statement	EU Rules and Standards statement	EU Rules and Standards statement
Certifying Authority and Member State or Commonly used initials	Certifying Authority and Member State or Commonly used initials	Certifying Authority and Member State or Commonly used Initials	Certifying Authority and Member State or Commonly used initials
Seed Lot Reference Number (SLRN) of lot	Seed Lot Reference Number (SLRN) of lot	Seed Lot Reference Number (SLRN) of lot	Seed Lot Reference Number (SLRN) of lot
Country of production	Country of production	Country of production	Country of production or region of production within a country
Category	Category	Category	Commercial Seed (not certified as to variety)
Month and year when officially sealed or sampled	Month and year when officially sealed or sampled	Month and year when officially sealed or sampled	Month and year when officially sealed or sampled
Variety	Variety (for inbred lines or hybrids include the name and the word "component" and/or "hybrid" as appropriate)	Variety (for inbred lines or hybrids include the name and the word "component" and/or "hybrid" as appropriate or "varietal association" - its name and the percentages by number of the various components shown by variety).	N/A

<b>Pre-Basic Seed</b>	<b>Basic Seed</b>	<b>Certified Seed (CS), Cl. C2 and C3</b>	<b>Commercial</b>
Species	Species (common name may be used for beet (specify whether fodder or sugar) and vegetable species)	Species (common name may be used for beet (specify whether fodder or sugar) and vegetable species)	Species
Declared net or gross weight or declared number of seeds (or declared number of clusters or pure seed for beet)	Declared net or gross weight or declared number of seeds (or declared number of clusters or pure seed for beet)	Declared net or gross weight or declared number of seeds (or declared number of clusters or pure seed for beet)	Declared net or gross weight or declared number of pure seed
Where granulated pesticides, pelleting substances or other solid additives are used, the nature of the additive and the approximate ratio between the weight of seed and the total weight (or between the weight of clusters or pure seed and the total weight for beet)	Where granulated pesticides, pelleting substances or other solid additives are used, the nature of the additive and the approximate ratio between the weight of seed and the total weight (or between the weight of clusters or pure seed and the total weight for beet)	Where granulated pesticides, pelleting substances or other solid additives are used, the nature of the additive and the approximate ratio between the weight of seed and the total weight (or between the weight of clusters or pure seed and the total weight for beet)	Where granulated pesticides, pelleting substances or other solid additives are used, the nature of the additive and the approximate ratio between the weight of seed and the total weight
Number of generations preceding the category "Certified Seed" or "Certified 1 <sup>st</sup> generation seed"	N/A	N/A	N/A
N/A	For beet seed only: "monogerm" or "precision"	For beet seed only: "monogerm" or "precision"	N/A
N/A	For seeds of grass varieties only in respect of which no official examination of their value for cultivation and use has been carried out: "Not intended for fodder production"	For seeds of grass varieties only in respect of which no official examination of their value for cultivation and use has been carried out: "Not intended for fodder production"	N/A
N/A	N/A	For fodder plant seed CS, C1 and C2 seed the number of generations after Basic Seed	N/A

Pre-Basic Seed	Basic Seed	Certified Seed (CS), Cl. C2 and C3	Commercial
N/A	N/A	For fodder plant CS, C1 and C2 seed the number of generations after Basic Seed	N/A
N/A	<p>For Basic seed of oil and fibre in the case of varieties which are hybrids or inbred lines:</p> <p>a) where hybrid or inbred line is accepted on a National List or the Common Catalogue – the word “component” accompanied by the name of this component.</p> <p>b) for Basic seed in other cases the name of the component to which the basic seed belongs, which may be given in code form, accompanied by a reference to the final variety with or without reference to its function (male or female) and accompanied by the word “component”.</p>	<p>a) For certified seed of oil and fibre varieties, which are hybrids or inbred lines – the name of the variety to which the seed belongs, accompanied by the word “hybrid”.</p> <p>b) For certified seed of oil and fibre varietal associations which are to be mechanically joined, the function of each component (pollinator dependent hybrid or pollinator) accompanied by the word “component” and the name of the final varietal association must be given</p>	N/A

#### Notes

- C1 and C2 seed of Barley and Oats officially classified as being of a ‘Naked’ type the words “minimum germination capacity 75%” must be included.
- The species and variety must be printed in English characters.

# Annex C

## MIXTURES – POSSIBLE COMBINATIONS

	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. A mixture of different varieties of one species of cereal seed is permitted only if it is effective against the propagation of a harmful organism.
- ii. A mixture of **different varieties of one species** of Standard vegetable seed can be marketed in a small package, weight as defined for that species. If more than one species is to be included in a small packet of standard vegetable seed each species must be in a separate inner foil packet.

# Annex D

## INFORMATION REQUIRED ON SUPPLIER'S LABELS - EXCEPT MIXTURES

Small packages of officially Certified Seed and small packages of Standard Seed (except mixtures)

Information to be given on supplier's labels or by indelible printing on bag	Vegetable	Beet		Cereal	Fodder Plants		Oil & Fibre Plants
	Certified and Standard Seed	Basic Seed	Certified Seed	All Small Packages	Basic, CS, C1 and C2 seed	Commercial Seed	CS, C1. C2. C3 and Commercial seed
"EU Rules and Standards"	Yes	No	Yes	Yes	No	Yes	Yes
"Small EU Package"	N/A	Yes	Yes	N/A	No	No	No
"Small EU 'B' Package"	N/A	No	No	N/A	Yes	Yes	No
Name, address and identification number of the person affixing the label	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Member State name or initials of the service that assigned the serial number	N/A	Yes	Yes	No	Yes	Yes	No

	Vegetable	Beet		Cereal	Fodder Plants		Oil & Fibre Plants
Information to be given on supplier's labels or by indelible printing on bag	Certified and Standard Seed	Basic Seed	Certified Seed	All Small Packages	Basic, CS, C1 and C2 seed	Commercial Seed	CS, C1, C2, C3 and Commercial seed
Marketing year of sealing or of the last examination of germination (note i.)	Yes	No	No	No	No	No	No
For beet state whether "sugar beet" or "fodder beet"	N/A	Yes	Yes	N/A	N/A	N/A	N/A
Species and Variety indicated in Roman characters	Yes	Yes	Yes	Yes	Yes	Yes or words "commercial seed (not certified as to variety)"	Yes or words "commercial seed (not certified as to variety)"
Category (note i.)	Yes – the words "certified seed" or the letters 'C' or 'Z'; or the words "standard seed" or the letters 'ST'	Yes	Yes	Yes	Yes	No	Yes
Declared net or gross weight or number of clusters or pure seeds (note iii.)	Yes – except for small packages up to 500g	Yes	Yes	Yes	Yes	Yes	Yes – except in relation to small packages not exceeding 15g
Reference number of the seed lot	Yes	Yes	Yes	Yes	Yes	Yes	Yes

	Vegetable	Beet		Cereal	Fodder Plants		Oil & Fibre Plants
Information to be given on supplier's labels or by indelible printing on bag	Certified and Standard Seed	Basic Seed	Certified Seed	All Small Packages	Basic, CS, C1 and C2 seed	Commercial Seed	CS, C1, C2, C3 and Commercial seed
'Monogerm' or 'Precision' as applicable	N/A	Yes	Yes	N/A	N/A	N/A	N/A
Officially assigned serial number	N/A	Yes	Yes	No	Yes	Yes	No
For hybrid varieties of maize the word "hybrid"	N/A	N/A	N/A	Yes	N/A	N/A	N/A

## Notes

### *Vegetable*

- i. Marketing year of sealing or the marketing year of the last examination of germination, which may be given by reference to the end of the marketing year. The word 'Standard' or the letters 'ST' may be used. For small packages of officially certified seed the words 'certified seed' or the letters 'C or Z.
- ii. A reference number given by the person responsible for affixing the label which enables the seed lot from which the seed in the package has been taken to be identified.

### *Beet, Fodder and Vegetable*

- iii. For Vegetable (in the case of small packets not exceeding 500g), Certified Beet, Certified and Commercial Fodder plant seeds where weight is indicated and granulated pesticides, pelleting substances or other solid additives are used, the nature of the additive and the approximate ratio between the weight of seed and the total weight or between the weight of clusters or pure seeds and the total weight for beet.

### *Cereal*

- In the case of C1 and C2 seed of barley and oats officially classified as being of a 'Naked' type the words 'minimum germination capacity 75%'.

### *Grasses*

- Grass variety for which examination of its value for cultivation and use is not required the words 'not intended for the production of fodder plants'.

### *Oil and Fibre*

- The declared weight or declared number of seeds except in the case of packages not exceeding 15g net weight.

### *Species of Beet and Fodder only*

- An officially Assigned Serial Number consists of the licence number of the packer being added to a seed lot reference number e.g. 2012/CS/9999/1/500. This applies to Beet categories Basic (BS) or Certified Seed (CS) and small EU B packages of Fodder for categories Commercial (CM), Basic (BS), Certified Seed (CS), Certified Seed 1st generation (C1), Certified Seed 2nd generation (C2) only.

# Annex E

## INFORMATION REQUIRED ON AN OFFICIAL LABEL FOR MIXTURES NOT CLASSIFIED AS SMALL PACKAGES AND ON SUPPLIER'S LABELS FOR SMALL PACKAGES OF MIXTURES

Official labelling of Cereal and Fodder mixtures (not small packages), i. e. Cereal mixtures over 15kg and Fodder mixtures over 10kg

	Cereal	Fodder
The package must be labelled, not later than the time of sealing, on the outside with an <b>official</b> label (note ii.), which has not previously been used, containing the following particulars:-	Yes	Yes
The authority responsible for sealing the package and the Member State or their commonly used initials	Yes	Yes
The words "Mixture of" followed by the species and varieties (note iii.)	Yes	N/A
The words "Mixture of seed for" followed by words indicating the intended end use	N/A	Yes
The reference number of the lot	Yes	Yes
The word "sealed" followed by the month and year of sealing	Yes	Yes
The species variety, category, country of production and proportion by weight of each of the components which in the case of the name of the species and of the varieties shall be indicated at least in Roman characters (note i)	Yes	N/A
In the case of a mixture registered with the certifying authority <ul style="list-style-type: none"> <li>The registered name of the mixture or</li> <li>The percentage by weight of each of the components shown by species, and where appropriate by variety both indicated at least in Roman characters (note i)</li> </ul>	N/A	Yes
In the case of a mixture <i>other than a registered mixture of seeds</i> the percentage by weight of each of the components shown by species and, where appropriate by variety both indicated at least in Roman characters (note i)	N/A	Yes
The declared net or gross weight or declared number of seeds	Yes	Yes
Where the weight is indicated and granulated, pelleting substances or other solid additives are used, the nature of the additive and also the approximate ratio between the weight of the pure seeds and the total weight	Yes	Yes
Where the germination of all components of a mixture have been retested, the words "retested" followed by the month and year of testing	Yes	Yes
The label, of a minimum size 110 mm x 67 mm shall be coloured green	Yes	Yes
HVS is permitted if all components that make up the mixture have achieved HVS standard	Yes	Yes

Notes:

- i. Roman characters means the English Alphabet
- ii. If the packaging material is transparent, the label, notice or stamp referred to may be placed inside the package provided it can be read through the packaging.
- iii. Cereals - a mixture of varieties of one species must have a qualifying statement that as a mixture, it is effective against the propagation of a harmful organism

### Supplier's labels for small packages of mixtures

Information to be given on a supplier's label, or by indelible printing on bag	Cereal	Fodder Plant		Vegetable
	Small Package (Not Exceeding 15kg)	Small EU 'A' Amenity	Small EU 'B' Amenity or Agricultural Certified seed	Small Package (Size depending on species)
Small Package	No	N/A	N/A	No
Small EU 'A' Package	N/A	Yes	No	N/A
Small EU 'B' Package	N/A	No	Yes	N/A
Statement "EU Rules and Standards"	Yes	No	No	Yes
Name of Authority responsible for sealing and the Member State or commonly used initials	No	Yes	Yes	No
Name and address of supplier responsible for marking or his licence number or identification mark	Yes	Yes	Yes	Yes
The word "sealed" followed year of sealing or the word "sampled" followed by the year of last germination test.	No	No	No	Yes
Country of Production	No	No	No	No
Category	No	No	No	No
Officially assigned serial number	No	No	Yes	No
Reference number that enables the seed lots from which the seed in the mixture was taken to be identified	Yes	Yes	Yes	Yes
Net or gross weight or number of pure seeds	Yes	Yes	Yes	Yes
Weight/Pesticides (note i.)	Yes	Yes	Yes	Yes

	<b>Cereal</b>	<b>Fodder Plant</b>	<b>Vegetable</b>
<b>Cereals</b> "mixture of..." (the species and varieties) indicated in at least Roman characters	Yes	N/A	N/A
<b>Fodder</b> "Seed mixture for..." (description of intended use) (note ii. and note iii.)	N/A	Yes	Yes
<b>Vegetable (same species only)</b> "Mixture of varieties of...[species]" The variety names The proportion of the varieties by net weight or number of seeds	N/A	N/A	N/A

### Notes

- i. Where weight is indicated and granulated pesticides, pelleting substances, or other solid additives are used, the nature of the additive and also the approximate ratio between the weight of the seeds and the total weight.
- ii. In the case of a package of a mixture of seeds that has been produced in the UK-
  - a. The components by species and where applicable the variety should be stated; and
  - b. The percentage by weight of each of the components shown by species and where appropriate by variety, both indicated in at least Roman characters.
- iii. If a mixture is registered with APHA, the registered name should be stated. The percentage by weight of each component may be omitted but species and varieties must still be included on the label and the omitted information provided to customers on request.

# Annex F

## SPECIES OF SEEDS, RELEVANT REGULATIONS, MINIMUM WEIGHT OF SAMPLE AND MAXIMUM WEIGHT OF LOT

Species of Seed	Crop Group	Minimum Weight of a Submitted Sample (this may be in excess of that stated in the regulations) for dispatch to:				Maximum Weight of Seed Lot (tonnes)	Recommended size of dynamic spear sampler
		Licensed Station (LSTS)		OSTS			
		PB and BS	Cert	PB and BS	Cert		
Alaska brome-grass	Fodder (Grasses)	600g	400g	300g	200g	10*	B
Alsike clover	Fodder (Legumes)	600g	400g	300g	200g	10	A
Annual meadowgrass	Fodder (Grasses)	300g	100g	150g	50g	10*	A
Asparagus (note 1)	Vegetable	1kg	1kg	1kg	1kg	10	B
Barley (note 2)	Cereal	2kg	2kg	1kg	1kg	30	B
Beetroot (note 1)	Vegetable	500g	500g	500g	500g	20	B
Birdsfoot trefoil	Fodder (Legumes)	600g	400g	300g	200g	10	A
Black medick	Fodder (Legumes)	600g	600g	300g	300g	10	A
Black mustard	Oil & Fibre	200g	200g	100g	100g	10	A
Blue (narrow leaved) lupin	Fodder (Legumes)	4kg	3kg	3kg	2kg	30	C
Borecole (note 1)	Vegetable	100g	100g	100g	100g	10	A
Broad bean (note 1)	Vegetable	1kg	1kg	1kg	1kg	30	D
Brown mustard	Oil & Fibre	200g	200g	100g	100g	10	A
Brown Top	Fodder (Grasses)	300g	100g	150g	50g	10*	A

Species of Seed	Crop Group	Minimum Weight of a Submitted Sample (this may be in excess of that stated in the regulations) for dispatch to:				Maximum Weight of Seed Lot (tonnes)	Recommended size of dynamic spear sampler
		Licensed Station (LSTS)		OSTS			
		PB and BS	Cert	PB and BS	Cert		
Brussels sprouts (note 1)	Vegetable	100g	100g	100g	100g	10	A
Cabbage (white, Savoy and red) (note 1)	Vegetable	100g	100g	100g	100g	10	A
Calabrese (note 1)	Vegetable	100g	100g	100g	100g	10	A
Carrot (note 1)	Vegetable	30g	30g	30g	30g	10	A
Cauliflower (note 1)	Vegetable	100g	100g	100g	100g	10	A
Celeriac (note 1)	Vegetable	25g	25g	25g	25g	10	A
Celery (note 1)	Vegetable	25g	25g	25g	25g	10	A
Chard (note 1)	Vegetable	500g	500g	500g	500g	20	A
Cheltenham beet (note 1)	Vegetable	500g	500g	500g	500g	20	B
Chicory (note 1)	Vegetable	40g	40g	40g	40g	10	A
Chinese cabbage (note 1)	Vegetable	70g	70g	70g	70g	10	A
Cocksfoot	Fodder (grasses)	600g	400g	300g	200g	10*	B
Common Vetch	Fodder (Legumes)	2kg	2kg	1kg	1kg	30	C
Courgette (inc. Marrow) (note 1)	Vegetable	1kg	1kg	1kg	1kg	20	C
Creeping bent	Fodder (Grasses)	300g	100g	150g	50g	10*	A
Cucumber (note 1)	Vegetable	150g	150g	150g	150g	20	B

Species of Seed	Crop Group	Minimum Weight of a Submitted Sample (this may be in excess of that stated in the regulations) for dispatch to:				Maximum Weight of Seed Lot (tonnes)	Recommended size of dynamic spear sampler
		Licensed Station (LSTS)		OSTS			
		PB and BS	Cert	PB and BS	Cert		
Curly kale (note 1)	Vegetable	100g	100g	100g	100g	10	A
Durum wheat (notes 1 and 4)	Cereals	2kg	2kg	1kg	1kg	30	B
Endive (note 1)	Vegetable	40g	40g	40g	40g	10	A
Festulolium	Fodder (Grasses)	400g	400g	200g	200g	10*	B
Field bean	Fodder (Legumes)	4kg	3kg	3kg	2kg	30	C
Field pea	Fodder (Legumes)	4kg	3kg	3kg	2kg	30	C
Fine leaved Sheep's fescue	Fodder (Grasses)	600g	400g	300g	200g	10*	B
Flax	Oil & Fibre	600g	600g	600g	600g	10	B
Fodder beet (including mangel) (note 2)	Beet	1kg	1kg	500g	500g	20	B
		(or 15,000 pellets)		(or 7,500 pellets)			
Fodder kale	Fodder (Crucifers)	600g	400g	300g	200g	10	A
Fodder radish	Fodder (Crucifers)	600g	600g	300g	300g	10	A
Fodder rape	Oil & Fibre	400g	400g	200g	200g	10	A
French bean (note 1)	Vegetable	1kg	1kg	1kg	1kg	30	D
Gherkin (note 1)	Vegetable	150g	150g	150g	150g	20	B
Gourd (note 1)	Vegetable	1kg	1kg	1kg	1kg	20	C
Hairy vetch	Fodder (Legumes)	2kg	2kg	1kg	1kg	30	C
Hard fescue	Fodder (Grasses)	600g	400g	300g	200g	10*	B
Hemp (note 4)	Oil and Fibre	1200g	1200g	600g	600g	10	B

Species of Seed	Crop Group	Minimum Weight of a Submitted Sample (this may be in excess of that stated in the regulations) for dispatch to:				Maximum Weight of Seed Lot (tonnes)	Recommended size of dynamic spear sampler
		Licensed Station (LSTS)		OSTS			
		PB and BS	Cert	PB and BS	Cert		
Hungarian vetch	Fodder (Legumes)	2kg	2kg	1kg	1kg	30	C
Hybrid ryegrass (note 1)	Fodder (Grasses)	600g	400g	300g	200g	10*	B
Italian ryegrass (including Westerwolds)	Fodder (Grasses)	600g	400g	300g	200g	10*	B
Kohl rabi (note 1)	Vegetable	100g	100g	100g	100g	10	A
Leaf beet (note 1)	Vegetable	500g	500g	500g	500g	20	B
Leek (note 1)	Vegetable	70g	70g	70g	70g	10	A
Lettuce (note 1)	Vegetable	30g	30g	30g	30g	10	A
Linseed	Oil & Fibre	600g	600g	600g	600g	10	B
Lucerne	Fodder (Legumes)	600g	600g	300g	300g	10	A
Maize (note 2)	Cereal	2kg	2kg	1kg	1kg	40	C
Maize -inbred lines (note 2)	Cereal	500g	500g	250g	250g	40	C
Marrow (inc. courgette) (note 1)	Vegetable	1kg	1kg	1kg	1kg	20	C
Meadow fescue	Fodder (Grasses)	600g	400g	300g	200g	10*	B
Melon (note 1)	Vegetable	150g	150g	150g	150g	20	B
Naked oats	Cereal	2kg	2kg	1kg	1kg	30	B

Species of Seed	Crop Group	Minimum Weight of a Submitted Sample (this may be in excess of that stated in the regulations) for dispatch to:				Maximum Weight of Seed Lot (tonnes)	Recommended size of dynamic spear sampler
		Licensed Station (LSTS)		OSTS			
		PB and BS	Cert	PB and BS	Cert		
Narrow-leaved (blue) lupin	Fodder (Legumes)	4kg	3kg	3kg	2 kg	30	C
Oats (notes 2 & 3)	Cereal	2kg	2kg	1kg	1kg	30	B
Oilseed rape	Oil & Fibre	400g	400g	200g	200g	10	A
Onion (note 1)	Vegetable	80g	80g	80g	80g	10	A
Parsley	Vegetable	40g	40g	40g	40g	10	A
Pea (vegetable)	Vegetable	2kg	2kg	2kg	2kg	30	C
Perennial ryegrass	Fodder (Grasses)	600g	400g	300g	200g	10*	B
Popcorn	Vegetable	2kg	2kg	1kg	1kg	40	C
Radish (note 1)	Vegetable	300g	300g	300g	300g	10	A
Red beet (Beetroot) (note 1)	Vegetable	500g	500g	500g	500g	20	B
Red cabbage (note 1)	Vegetable	100g	100g	100g	100g	10	A
Red clover	Fodder (Legumes)	600g	600g	300g	300g	10	A
Red fescue	Fodder (Grasses)	600g	400g	300g	200g	10*	B
Red top	Fodder (Grasses)	300g	100g	150g	50g	10*	A
Rescue grass	Fodder (Grasses)	600g	400g	300g	200g	10*	B
Rough-stalked meadowgrass	Fodder (Grasses)	300g	100g	150g	50g	10*	A

Species of Seed	Crop Group	Minimum Weight of a Submitted Sample (this may be in excess of that stated in the regulations) for dispatch to:				Maximum Weight of Seed Lot (tonnes)	Recommended size of dynamic spear sampler
		Licensed Station (LSTS)		OSTS			
		PB and BS	Cert	PB and BS	Cert		
Runner bean (note 1)	Vegetable	1kg	1kg	1kg	1kg	30	D
Rye (note 2)	Cereal	2kg	2kg	1kg	1kg	30	B
Sainfoin: – fruit – seed	Fodder (Legumes)	1200g 800g	1200g 800g	600g 400g	600g 400g	10 10	B
Savoy cabbage (note 1)	Vegetable	100g	100g	100g	100g	10	A
Sheep's fescue	Fodder (Grasses)	600g	400g	300g	200g	10*	B
Small timothy	Fodder (Grasses)	400g	200g	200g	100g	10*	A
Smooth-stalked meadowgrass	Fodder (Grasses)	300g	100g	150g	50g	10*	A
Soya bean	Oil & Fibre	2kg	2kg	1kg	1kg	30	C
Spelt wheat (note2)	Cereal	2kg	2kg	1kg	1kg	30	B
Spinach (note 1)	Vegetable	250g	250g	250g	250g	10	B
Spinach beet (note 1)	Vegetable	500g	500g	500g	500g	20	B
Sprouting Broccoli (note 1)	Vegetable	100g	100g	100g	100g	10	A
Squash (note 1)	Vegetable	1kg	1kg	1kg	1kg	20	C
Sugar beet (note 2)	Beet	1kg	1kg	500g	500g	20	B
		(or 15,000)		(or 7,500 pellets)			
Sunflower	Oil & Fibre	2kg	2kg	1kg	1kg	25	C
Swede	Fodder (Crucifers)	600g	400g	300g	200g	10	A

Species of Seed	Relevant Seed Regulations	Minimum Weight of a Submitted Sample (this may be in excess of that stated in the regulations) for dispatch to:				Maximum Weight of Seed Lot (tonnes)	Recommended size of dynamic spear sampler
		Licensed Station (LSTS)		OSTS			
		PB and BS	Cert	PB and BS	Cert		
Swede rape (including oilseed rape and fodder rape)	Oil & Fibre	400g	400g	200g	200g	10	A
Sweetcorn	Vegetable	2kg	2kg	1kg	1kg	40	C
Tall fescue	Fodder (Grasses)	600g	400g	300g	200g	10*	B
Tall oatgrass	Fodder (Grasses)	600g	400g	300g	200g	10*	B
Timothy	Fodder (Grasses)	600g	400g	300g	200g	10*	A
Tomato (note 1)	Vegetable	25g	25g	25g	25g	10	A
Trefoil	Fodder (Legumes)	600g	600g	300g	300g	10	A
Triticale (note 2)	Cereal	2kg	2kg	1kg	1kg	30	B
Turnip (note 1)	Vegetable	100g	100g	70g	70g	10	A
Turnip rape	Oil & Fibre	400g	400g	200g	200g	10	A
Velvet bent	Fodder (Grasses)	300g	100g	150g	50g	10*	A
Wheat (note2)	Cereal	2kg	2kg	1kg	1kg	30	B
Wood meadowgrass	Fodder (Grasses)	300g	100g	150g	50g	10*	A
White lupin	Fodder (Legumes)	4kg	3kg	3kg	2kg	30	C
White clover	Fodder (Legumes)	600g	400g	300g	200g	10	A
White mustard	Oil & Fibre	800g	800g	400g	400g	10	A
Yellow lupin	Fodder (Legumes)	4kg	3kg	3kg	2kg	30	C

## Notes

See Annex G for the species allowed at HVS.

1. In the case of F1 hybrid varieties of these kinds of seed and their inbred parent lines the minimum weight of the sample may be reduced to a quarter of the weight specified for the variety subject to the sample consisting of at least 800 seeds.
2. Moisture Samples
  - a) *Cereals*

For Cereal seed the minimum weight of seed for a moisture test is 100g. For electronic moisture testing the weight required will often be in excess of 100g. The LSS should check with the Seed Testing Laboratory before dispatching the samples in sealed, moisture proof containers, i.e. plastic bags from which as much air as possible has been excluded.
  - b) *Beet*

For beet seed the minimum weight of seed for a separate moisture test is 50g. Moisture samples need to be dispatched in sealed, moisture proof containers, i.e. plastic bags from which as much air as possible has been excluded.
3. Wild Oats

Where samples are required to be tested for freedom from wild oats for Northern Ireland, samples must weigh 6kg - i.e. 3kg for test and 3kg for reserve portion.
4. Hemp

A separate 300g sample for the Orobanchae examination is required. Where the sample is to be tested at an LSTS then 600g (2 x 300g) is required. Specific envelopes for this purpose are provided by the Plant Health and Seeds Inspectorate.
5. \* 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 APHA.**

## Spear size

In the table above references to type A, B, C and D instruments refer to instruments having a point length (a), shoulder length (b), boss length (c), aperture length (d), aperture width (e), bore width (f) and outside diameter (g) as shown in the diagram at Chapter 4, para. B. 1. of the dimensions specified in the corresponding entries in the table which follows the diagram. NB: *A larger spear may be used to assist seed flow but in no circumstances may a smaller spear be used.*

**See Chapter 4, B. for further details on sampling instruments**

# Annex G

## SEED CATEGORIES, GRADE CODES AND LABEL COLOURS

The table below shows which categories are applicable to different kinds of seed, together with the appropriate grade code for the purpose of constructing seed lot reference numbers and the label colours. **NB: Breeder's Seed is not a certification category.**

### CEREALS

CATEGORY	COLOUR CODE	SPECIES OF SEED
Breeder's (BR)	Buff	All seed
Pre-basic (PB)	White with a diagonal violet stripe	All seed
Basic (BS)	White	Hybrids of barley, durum wheat, oats, self-pollinating triticale, spelt wheat and wheat
Basic minimum standard (BL)	White	All seed (other than hybrids) except rye, triticale and maize
Basic HVS (BH) *	White	All seed (other than hybrids) except rye, triticale and maize
Certified (CS)	Blue	Rye, maize and hybrids of oats, barley, wheat, durum wheat, spelt wheat and self-pollinating triticale
Certified 1st generation minimum standard (1L or C1)	Blue	Barley, wheat, durum wheat, spelt wheat, oats and triticale other than hybrids
Certified 1st generation HVS (1H)*	Blue	Barley, wheat, durum wheat, spelt wheat, oats and triticale other than hybrids
Certified 2nd generation minimum standard (2L or C2)	Red	Barley, wheat, durum wheat, spelt wheat, oats and triticale other than hybrids
Certified 2nd generation HVS (2H)*	Red	Barley, wheat, durum wheat, spelt wheat, oats and triticale other than hybrids
Mixtures (minimum)	Green	All seed +
Mixtures HVS * (All individual constituents must meet HVS)	Green	All seed
Seed for export which has met field standards but has not been finally certified	Grey	All seed

\* Seed marketed at HVS must bear a label with the HVS symbol or the HVS letters

+ Stipulation for cereal mixtures statement

## FODDER PLANT

CATEGORY	COLOUR CODE	SPECIES OF SEED
Breeder's (BR)	Buff	All seed
Pre-basic (PB)	White with diagonal violet stripe	All seed
Basic (BS)	White	All seed
Certified (CS)	Blue	All seed except field beans and field peas, Lucerne ( <i>Medicago sativa</i> ), lupins and vetches
Certified minimum (CL)	Blue	All seed except field beans and field peas, Lucerne ( <i>Medicago sativa</i> ), lupins and vetches
Certified HVS standards (CH)*	Blue	All seed for which there is a Higher Voluntary Standard except field beans and field peas, Lucerne ( <i>Medicago sativa</i> ), lupins and vetches
Certified 1st generation (C1) *	Blue	Field beans, field peas Lucerne ( <i>Medicago sativa</i> ), lupins and vetches
Certified 2nd generation (C2)	Red	Field beans, field peas, Lucerne ( <i>Medicago sativa</i> ), lupins and vetches
Commercial (CM)	Brown	Grasses: Annual Meadowgrass Legumes: Sainfoin and Hungarian Vetch identifiable as to species
Mixtures	Green	All seed
Mixtures HVS * (All individual constituents must meet HVS)	Green	All seed mixtures for which HVS are appropriate
Seed for export which has met field standards but has not been finally certified	Grey	All seed

\* Seed marketed at HVS must bear a label with the HVS symbol or the HVS letters

## OIL AND FIBRE, BEET AND VEGETABLE

CATEGORY	COLOUR CODE	SPECIES OF SEED
Breeder's (BR)	Buff	All seed
Pre-basic (PB)	White with diagonal violet stripe	All seed - other than a hybrid of vegetable and other than a component of a hybrid of sunflower, swede rape or turnip rape.
Basic (BS)	White	All seed – other than a hybrid of sunflower, swede rape and turnip rape and other than a component of hybrid (beet) (vegetable)
Certified (CS)	Blue	<b>Oil and Fibre</b> - turnip and swede rape; brown, black and white mustard, dioecious hemp and sunflower (including hybrids of sunflower, swede rape and turnip rape) <b>Beet</b> - All seed <b>Vegetable</b> - All seed
Certified Seed of a Varietal Association (CS)	Blue with diagonal green stripe	<b>Oil and Fibre</b> - Hybrids and varietal associations of swede rape and turnip rape.
Certified 1 <sup>st</sup> generation (C1)	Blue	<b>Oil and Fibre</b> - soya, flax, monoecious hemp and linseed only. Not vegetable or beet
Certified 2 <sup>nd</sup> generation (C2)	Red	<b>Oil and Fibre</b> - soya, flax, monoecious hemp and linseed only. Not vegetable or beet
Certified 3 <sup>rd</sup> generation (C3)	Red	<b>Oil and Fibre</b> - flax and linseed only. Not vegetable or beet
Commercial (CM)	Brown	<b>Oil and Fibre</b> - black mustard only. Identifiable as to its species. Not beet or vegetable.
Standard Seed (ST) (Note - these are supplier's, not official, labels) If all the particulars are printed indelibly on the outside of the package a label is not required.	Dark Yellow	Vegetable only
Seed for export which has met field standards but has not been finally certified	Grey	All seed

# Annex H

## COMMON NAMES, LATIN (SCIENTIFIC) NAMES AND ABRIDGEMENTS

Common name	Botanical name	Abridgement
<b>BEET</b>		
Fodder beet (includes mangel)	<i>Beta vulgaris</i> L.	BETA VUL
Sugar beet	<i>Beta vulgaris</i> L.	BETA VUL
<b>CEREALS</b>		
Barley	<i>Hordeum vulgare</i> L.	HORDEUM VUL
Durum wheat	<i>Triticum durum</i> Desf.	TRITICUM DUR
Maize (excluding sweetcorn & popcorn)	<i>Zea mays</i> L. (partim)	ZEA MAY
Naked oats	<i>Avena nuda</i> L.	AVENA NUD
Naked barley	<i>Hordeum vulgare</i> L.	HORDEUM VUL
Oats	<i>Avena sativa</i> L. (includes <i>A.byzantina</i> K. Koch)	AVENA SAT
Rye	<i>Secale cereale</i> L.	SECALE CER
Spelt wheat	<i>Triticum spelta</i> L.	TRITICUM SPE
Triticale	<i>xTriticosecale</i> Wittm.ex A. Camus	TRITICOSECALE
Wheat	<i>Triticum aestivum</i> L.	TRITICUM AES
<b>FODDER PLANTS (GRASSES)</b>		
Alaska brome-grass	<i>Bromus sitchensis</i> Trin.	BROMUS SIT
Annual meadowgrass	<i>Poa annua</i> L.	POA ANN
Brown top	<i>Agrostis capillaris</i> L.	AGROSTIS CAP
Cocksfoot	<i>Dactylis glomerata</i> L.	DACTYLIS GLO
Creeping bent	<i>Agrostis stolonifera</i> L.	AGROSTIS STO
Festulolium	<i>xFestulolium</i> Asch. & Graebn.	FESTULOLIUM
Fine leaved sheep's fescue	<i>Festuca filiformis</i> Pourr.	FESTUCA FIL
Hard fescue	<i>Festuca trachyphylla</i> (Hack.) Krajina.	FESTUCA TRA
Hybrid ryegrass	<i>Lolium x hybridum</i>	LOLIUM X HYB
Italian ryegrass (includes Westerwolds ryegrass)	<i>Lolium multiflorum</i> Lam.	LOLIUM MUL

<b>Common name</b>	<b>Botanical name</b>	<b>Abridgement</b>
Meadow fescue	<i>Festuca pratensis</i> Huds.	FESTUCA PRA
Perennial ryegrass	<i>Lolium perenne</i> L.	LOLIUM PER
Red fescue	<i>Festuca rubra</i> L.	FESTUCA RUB
Redtop	<i>Agrostis gigantea</i> Roth	AGROSTIS GIG
Rescue grass	<i>Bromus catharticus</i> Vahl.	BROMUS CAT
Rough-stalked meadowgrass	<i>Poa trivialis</i> L.	POA TRI
Sheep's fescue	<i>Festuca ovina</i> L.	FESTUCA OVI
Small timothy	<i>Phleum nodosum</i> L.	PHLEUM NOD
Smooth-stalked meadowgrass	<i>Poa pratensis</i> L.	POA PRA
Tall fescue	<i>Festuca arundinacea</i> Schreber	FESTUCA ARU
Tall oatgrass	<i>Arrhenatherum elatius</i> (L.)P Beauv. ex J. Presl &C. Presl	ARRHENATHERUM
Timothy	<i>Phleum pratense</i> L.	PHLEUM PRA
Velvet bent	<i>Agrostis canina</i> L.	AGROSTIS CAN
Westerwolds ryegrass (included in Italian ryegrass)	<i>Lolium multiflorum</i> Lam.	LOLIUM MUL
Wood meadowgrass	<i>Poa nemoralis</i> L.	POA NEM
<b>FODDER PLANTS (LEGUMES)</b>		
Alsike clover	<i>Trifolium hybridum</i> L.	TRIFOLIUM HYB
Birdsfoot trefoil	<i>Lotus corniculatus</i> L.	LOTUS COR
Trefoil	<i>Medicago lupulina</i> L.	MEDICAGO LUP
Narrow-leaved lupin	<i>Lupinus angustifolius</i> L.	LUPINUS ANG
Common vetch	<i>Vicia sativa</i> L.	VICIA SAT
Field bean	<i>Vicia faba</i> L. (partim)	VICIA FAB

Common name	Botanical name	Abridgement
Field pea	<i>Pisum sativum</i> L. (partim)	PISUM SAT
Hairy vetch	<i>Vicia villosa</i> Roth	VICIA VIL
Hungarian vetch	<i>Vicia pannonica</i> Crantz	VICIA PAN
Lucerne	<i>Medicago sativa</i> L.	MEDICAGO SAT
Sand lucerne	<i>Medicago x varia</i> T Martyn	MEDICAGO x VAR
Red clover	<i>Trifolium pratense</i> L.	TRIFOLIUM PRA
Sainfoin	<i>Onobrychis viciifolia</i> Scop.	ONOBRYCHIS VIC
White clover	<i>Trifolium repens</i> L.	TRIFOLIUM REP
White lupin	<i>Lupinus albus</i> L.	LUPINUS ALB
Yellow lupin	<i>Lupinus luteus</i> L.	LUPINUS LUT
<b>FODDER PLANTS (CRUCIFERS)</b>		
Fodder kale	<i>Brassica oleracea</i> L. convar. <i>acephala</i> (DC.) Alef. var. <i>medullosa</i> Thell. + var. <i>viridis</i> L.	BRASSICA OLE MED
Fodder radish	<i>Raphanus sativus</i> L. var. <i>oleiformis</i> Pers.	RAPHANUS SAT
Swede	<i>Brassica napus</i> L. var. <i>napobrassica</i> (L.) Rchb.	BRASSICA NAP NAP
<b>OIL AND FIBRE PLANTS</b>		
Black mustard	<i>Brassica nigra</i> (L.) W.D.J.Koch.	BRASSICA NIG
Brown mustard	<i>Brassica juncea</i> (L.) Czern.	BRASSICA JUN
Flax	<i>Linum usitatissimum</i> L.	LINUM USI
Fodder rape (included in Swede rape)	<i>Brassica napus</i> L. (partim)	BRASSICA NAP
Hemp	<i>Cannabis sativa</i> L.	CANNABIS SAT
Linseed	<i>Linum usitatissimum</i> L.	LINUM USI
Oilseed rape (included in Swede rape)	<i>Brassica napus</i> L. (partim)	BRASSICA NAP
Soya bean	<i>Glycine max</i> (L.) Merr.	GLYCINE MAX
Sunflower	<i>Helianthus annuus</i> L.	HELIANTHUS ANN

<b>Common name</b>	<b>Botanical name</b>	<b>Abridgement</b>
Swede rape (including fodder rape and oilseed rape)	<i>Brassica napus</i> L. (partim)	BRASSICA NAP
Turnip rape	<i>Brassica rapa</i> L. var. <i>silvestris</i> (Lam.) Briggs.	BRASSICA RAP
White mustard	<i>Sinapis alba</i> L.	SINAPIS ALB
<b>VEGETABLE</b>		
Asparagus	<i>Asparagus officinalis</i> L.	ASPARAGUS OFF
Beetroot including Cheltenham beet, spinach beet and chard	<i>Beta vulgaris</i> L.	BETA VUL
Borecole (curly kale)	<i>Brassica oleracea</i> L.	BRASSICA OLE
Broad bean	<i>Vicia faba</i> L. (partim)	VICIA FAB
Brussels sprouts	<i>Brassica oleracea</i> L.	BRASSICA OLE
Calabrese (sprouting broccoli)	<i>Brassica oleracea</i> L.	BRASSICA OLE
Carrot	<i>Daucus carota</i> L.	DAUCUS CAR
Cauliflower	<i>Brassica oleracea</i> L.	BRASSICA OLE
Celeriac	<i>Apium graveolens</i> L.	APIUM GRA
Celery	<i>Apium graveolens</i> L.	APIUM GRA
Chard (leaf beet, spinach beet)	<i>Beta vulgaris</i> L.	BETA VUL
Chicory (Industrial), (includes large-leaved and Witloof chicory)	<i>Cichorium intybus</i> L.	CICHORIUM INT
Chinese cabbage	<i>Brassica rapa</i> L.	BRASSICA RAP
Courgette (marrow)	<i>Cucurbita pepo</i> L.	CUCURBITA PEP
Cucumber (gherkin)	<i>Cucumis sativus</i> L.	CUCUMIS SAT
Curly kale (borecole)	<i>Brassica oleracea</i> L.	BRASSICA OLE
Endive	<i>Cichorium endivia</i> L.	CICHORIUM END
French bean	<i>Phaseolus vulgaris</i> L.	PHASEOLUS VUL
Gherkin (cucumber)	<i>Cucumis sativus</i> L.	CUCUMIS SAT

<b>Common name</b>	<b>Botanical name</b>	<b>Abridgement</b>
Gourd	<i>Cucurbita maxima</i> Duchesne.	CUCURBITA MAX
Kohl rabi	<i>Brassica oleracea</i> L.	BRASSICA OLE
Large-leaved chicory (includes industrial and Witloof chicory)	<i>Cichorium intybus</i> L.	CICHORIUM INT
Leaf beet (chard, spinach beet)	<i>Beta vulgaris</i> L.	BETA VUL
Leek	<i>Allium porrum</i> L.	ALLIUM POR
Lettuce	<i>Lactuca sativa</i> L.	LACTUCA SAT
Marrow (courgette)	<i>Cucurbita pepo</i> L.	CUCURBITA PEP
Melon	<i>Cucumis melo</i> L.	CUCUMIS MEL
Onion	<i>Allium cepa</i> L.	ALLIUM CEP
Parsley	<i>Petroselinum crispum</i> (Mill) Nyman ex A W Hill	PETROSELINUM CRI
Pea (Wrinkled, round, sugar not Field pea)	<i>Pisum sativum</i> L. (partim)	PISUM SAT
Radish/Black radish	<i>Raphanus sativus</i> L.	RAPHANUS SAT
Red cabbage	<i>Brassica oleracea</i> L.	BRASSICA OLE
Runner bean	<i>Phaseolus coccineus</i> L.	PHASEOLUS COC
Savoy cabbage	<i>Brassica oleracea</i> L.	BRASSICA OLE
Spinach	<i>Spinacia oleracea</i> L.	SPINACIA OLE
Spinach beet (chard, leaf beet)	<i>Beta vulgaris</i> L.	BETA VUL
Sprouting broccoli (calabrese)	<i>Brassica oleracea</i> L.	BRASSICA OLE
Squash	<i>Cucurbita maxima</i> Duchesne	CUCURBITA MAX
Sweetcorn or Popcorn	<i>Zea mays</i> L (partim)	ZEA MAY
Tomato	<i>Lycopersicon esculentum</i> Mill.	LYCOPERSICONESC
Turnip	<i>Brassica rapa</i> L.	BRASSICA RAP
White Cabbage	<i>Brassica oleracea</i> L.	BRASSICA OLE
Witloof chicory (Italian chicory), (includes industrial and large leaved chicory)	<i>Cichorium intybus</i> L. (partim)	CICHORIUM INT

# Annex I

## SUPPLIERS OF LABELS, SAMPLE BAGS, SEALS AND FORMS AND APHA CONTACT POINTS

### 1. Official Labels

Integrity Print  
Tel: 01761 409590  
Email: [APHA@integrity-print.com](mailto:APHA@integrity-print.com)

### 2. Sample Bags

C P L Feltham,  
Estover Road,  
March  
Cambridgeshire  
PE15 8SF  
Tel: 01354 652545  
Fax: 01354 650476  
Email: [sales@cplfelthams.com](mailto:sales@cplfelthams.com)

### 3. Official Seals

Universeal (UK) Ltd  
Tel: 01829 760000  
Email: [defra@universeal.co.uk](mailto:defra@universeal.co.uk)

### 4. Regulations

Office of Public Sector Information  
Web: <http://www.legislation.gov.uk/uksi> \_

### 5. APHA Contact

Guides, Instruction booklets and forms are available on the Gov.uk website.

For other enquiries please contact:  
APHA, Seed Marketing Team  
Eastbrook  
Shaftesbury Road  
Cambridge  
CB2 8DR

Helpdesk Tel: 0208 0265993  
Email: [seed.cert@apha.gsi.gov.uk](mailto:seed.cert@apha.gsi.gov.uk)

Webpage: [www.gov.uk](http://www.gov.uk)

## **6. The Official Seed Testing Station England and Wales (OSTS)**

NIAB

Huntingdon Road

Cambridge,

CB3 0LE

Tel: 01223 342260

Fax: 01223 342244

Email: [chief.officer@niab.com](mailto:chief.officer@niab.com)

**Eastbrook  
Shaftesbury Road  
Cambridge  
CB2 8DR**

**Tel 0300 060 0497    [info@APHA.gsi.gov.uk](mailto:info@APHA.gsi.gov.uk)  
Fax 0300 060 2115    [www.defra.gov.uk/APHA](http://www.defra.gov.uk/APHA)**



APHA is an Executive Agency of Defra