

DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES

STD No. G-7

AGRICULTURAL PRODUCT STANDARDS ACT 119 OF 1990  
STANDARDS AND REQUIREMENTS REGARDING  
CONTROL OF THE EXPORT OF WHEAT

The Executive Officer: Agricultural Product Standards has stipulated under section 4(3)(a)(ii) of the Agricultural Product Standards Act 119 of 1990, the standards regarding the quality and food safety of wheat and the requirements regarding the packing, marking and labeling thereof.

STD. No. G-7

STANDARDS AND REQUIREMENTS REGARDING CONTROL OF THE EXPORT  
OF WHEAT AS STIPULATED BY  
GOVERNMENT NOTICE No. R.1983 OF 23 AUGUST 1991

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**Definitions**

1. In these standards and requirements any word or expression to which a meaning has been assigned in the Act, shall have that meaning and --

"amber glossy and flinty kernels" means all kernels of durum wheat of which the endosperm is not white and mealy, or partly white and mealy and which have a glossy and flinty appearance;

"animal filth" means dead rodents, dead birds and dung;

"bag" means a bag manufactured from --

- (a) jute or phormium or a mixture of jute and phormium; or
- (b) polypropylene that complies with SABS specification CKS632 1246: 2012

"bulk container" means any vehicle or container in which bulk wheat is stored or transported;

"chemical residues" means residues of agricultural remedies which in terms of the Foodstuffs, Cosmetics and Disinfectants Act 54 of 1972; are permissible for the treatment of pests and diseases and which do not exceed the prescribed maximum residue limit;

"consignment" means --

- (a) a quantity of wheat of the same class, which belongs to the same owner, delivered at any one time under cover of the same consignment note, delivery note or receipt note, or delivered by the same vehicle or bulk container, or loaded from the same bin of a grain elevator into a ship's hold or railway truck or road truck; or
- (b) in the case where a quantity referred to in paragraph (a), is subdivided into different grades, each such quantity of each of the different subclasses or grades;

"container" means a bag or a bulk container;

"damaged kernels" means wheat kernels and pieces of wheat kernels --

- (a) which have been damaged by insects;

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- (b) which have been distinctly discoloured (orange-brown, dark brown or black) by external heat or as a result of heating caused by internal fermentation in wheat with an excessive moisture content, excluding wheat kernels in respect of which the discolouration is confined to the germ end;
- (c) which are immature and have a distinctly green colour; and
- (d) in which germination has proceeded to such an extent that the skin covering the embryo has been broken or the developing rootlets and/ or sprouts are clearly visible;

"ergot sclerotia" means the sclerotia of the fungus *Claviceps purpurea*; and "ergot" has a corresponding meaning;

"falling number" means the time in seconds according to Hagberg - Perten as a measure of the degree of Alpha-Amylase Activity in grain and flour;

"field fungi infected kernels" means wheat kernels that are visibly infected with fungi, and that --

- (a) clearly have greyish brush-ends that are discoloured as a whole; or where field fungi growth is present from the brush-ends into the crease; and
- (b) have a dull, lifeless, chalky or pinkish and shrunken appearance as a result of *Fusarium* infection.

"foreign matter" means all material excluding wheat, other grain and unthreshed ears. coal, dung, glass and metal shall not be present in the consignment concerned;

"heavily frost-damaged wheat" means --

- (a) blistered wheat kernels which have been damaged by severe frost during the milk to soft dough stage and which is characterised by the kernels being fairly plump but covered entirely with small blisters extending into the crease, excluding --
  - (i) kernels in which blistering is confined to the back of the kernel; and
  - (ii) immature wrinkled kernels in which wrinkling has been caused by frost while the kernels were still immature; and
- (b) wheat kernels (flaked) which have a slightly flaked-off bran coat due to frost: Provided that evidence of frost damage is present and that the bran coat had not been rubbed off due to handling;

"hectolitre mass" means the mass in kilogram per hectolitre;

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"insect" in relation to wheat, means any live grain insect that is injurious to stored grain irrespective of the stage of development of that insect;

"inspector" means the Executive Officer or an officer under his or her control or an Assignee or an employee of an Assignee;

"other grain" means the kernels or pieces of kernels of barley, oats, triticale, maize, rye and sorghum;

"poisonous seeds" in relation to grains means the seeds or bits of seeds of plant species that may in terms of the Foodstuffs, Cosmetics and Disinfectants Act 54 of 1972 represent a hazard to human or animal health when consumed, including seeds of *Argemone mexicana*, *Convolvulus spp.*, *Crotalaria spp.*, *Datura spp.*, *Ipomoea purpurea*, *Lolium temulentum*, *Ricinus communis* or *Xanthium spp.*;

"protein content" means the percentage protein in wheat on a 12% moisture basis;

"release", with regard to wheat, means the loading of wheat from the grain elevator or bulk container into a ship's hold;

"ship's hold" means one or more cargo spaces into which wheat is released;

"storage facility" means any warehouse, silo or other place where wheat intended for export is stored;

"screenings" means all material that passes through a standard sieve;

"standard sieve" means a slotted sieve -

- (a) with a flat bottom of metal sheet of 1,0 mm thickness with apertures 12,7 mm long and 1,8 mm wide with rounded ends. The spacing between the slots in the same row must be 2,43 mm wide and the spacing between the rows of slots must be 2,0 mm wide. The slots must be alternately orientated with a slot always opposite the solid inter segment of the next row of slots;
- (b) of which the upper surface of the sieve is smooth;
- (c) with a round frame of suitable material with an inner diameter of between 300 mm and 310 mm maximum and at least 50 mm high;

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- (d) that fits onto a tray with a solid bottom and must be at least 20 mm above the bottom of the tray;

"stinking smut infection" means wheat that is infected with *Tilletia* spp. with the exception of wheat infected with *Tilletia indica* (karnal bunt). Wheat is considered to be infected by stinking smut infection if one or more of the following characteristics are present-

- (a) an unmistakable stinking smut odour; or
- (b) contains wheat kernels that are smeared with stinking smut; or
- (c) contains more than four stinking smut balls (or pieces of balls equal to four stinking smut balls) per 100 g of wheat.

"storage fungi infected kernels" means wheat kernels that are visibly infected with fungi, and that show --

- (a) blue, green, blackish or yellow fungal growth anywhere on the kernel; or
- (b) visible mould beneath the bran.

"the Act" means the Agricultural Product Standards Act 119 of 1990;

"unthreshed ears" means ears and pieces of ears of wheat, barley, triticale and rye that still contain seeds; and

"wheat" means the kernels of the species *Triticum aestivum* (bread wheat and soft wheat), *Triticum durum* (durum wheat), *Triticum polonicum* (durum wheat) and *Triticum turgidum* (durum wheat).

**Scope**

2. These standards and requirements shall relate to wheat in respect of which an approval for the export thereof is required in terms of section 4 of the Act.

**Requirements for approval**

3. (1) An approval referred to in section 4 of the Act may be issued in respect of a consignment of wheat if --

- (a) the wheat has been classified in accordance with the classes set out in item 4 and comply with the standards for classes set out in item 5;
- (b) the wheat has been graded in accordance with the grades set out in item 6;
- (c) the wheat complies with the standards for grades set out in item 7;
- (d) the containers in which the wheat concerned is packed, where applicable, comply with the requirements set out in item 8;
- (e) the wheat is packed in accordance with the packing requirements set out in item 9;
- (f) the containers concerned are marked in accordance with the marking requirements set out in items 10 and 11;
- (g) the samples for inspection are taken in accordance with the methods set out in items 12, 13 and 14;
- (h) the samples are inspected in accordance with the methods set out in items 15, 16 and 17;
- (i) the consignment concerned is inspected in accordance with the methods set out in items 18 to 32;
- (j) the results obtained after an inspection are interpreted in accordance with the requirements set out in item 33;
- (k) approval has been granted for the release of the wheat into a ship's hold in accordance with the requirements set out in items 34 and 35;



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- (l) confirmation has been received that the Standards regarding food hygiene and food safety programmes for regulated agricultural food products of plant origin intended for export have been met;
  - (m) the consignment concerned has been presented for inspection in accordance with the Regulations Regarding Control of the Export of Grains; and
  - (n) an inspector, after an inspection in terms of the said regulations, has found that the provisions of these standards and requirements have been complied with in respect of that consignment.
- (2) The Executive Officer may grant written exemption, entirely or partially, to any person on such conditions as he or she may deem necessary, from the provisions of subitem (1).

**QUALITY AND FOOD SAFETY STANDARDS****Classes of wheat**

4. The classes of wheat are --
- (a) Class Bread Wheat;
  - (b) Class Soft Wheat; and
  - (c) Class Durum Wheat;

**Standards for classes**

5. (1) Notwithstanding the provisions of subitems (2), (3) and (4), all consignments of wheat must --
- (a) be free from any toxins, chemicals or other substances which render it unfit for human or animal consumption or processing into or utilisation thereof as food or feed;
  - (b) not contain more poisonous seeds or ergot sclerotia than permitted in terms of the Foodstuffs, Cosmetics and Disinfectants Act 54 of 1972;
  - (c) be free from mould infected, sour and rancid other grain;
  - (d) be free from glass, metal or coal;
  - (e) be free from animal filth;
  - (f) be free from any odour, taste or colour not typical of undamaged and sound wheat;
  - (g) not contain chemical residues which exceed the prescribed maximum residue limit: Provided that --
    - (i) if the prescribed maximum residue limit of an importing country is lower than is permissible in terms of the Foodstuffs, Cosmetics and Disinfectants Act 54 of 1972 , the prescribed maximum residue limit of the importing country shall be complied with; and

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- (ii) the Executive Officer may grant permission for wheat with a higher maximum residue limit, to be exported to countries where this higher residue limit is permissible: Provided that the export documents are accordingly endorsed with the name of the importing country;
  - (h) not contain more than 10 microgram per kilogram aflatoxin of which not more than 5 microgram per kilogram may be aflatoxin B1: Provided that --
    - (i) if the prescribed maximum aflatoxin limit of an importing country is lower than is permissible, the prescribed maximum aflatoxin limit of the importing country shall be complied with; and
    - (ii) the Executive Officer may grant permission for wheat with a higher maximum aflatoxin content to be exported to countries where this higher aflatoxin limit is permissible: Provided that the export documents are accordingly endorsed with the name of the importing country;
  - (i) be free from live insects irrespective of whether such insects occur in, on or among the wheat, in or on bags containing wheat in or on a bulk container: Provided that a consignment which is rejected due to insect infestation may be presented for inspection again, after fumigation with prescribed remedies and in accordance with acknowledged methods;
  - (j) be free from stinking smut infection;
  - (k) have a moisture content not exceeding 13 percent; and
  - (l) be free from organisms of phytosanitary importance as determined in terms of the Agricultural Pest Act 36 of 1983;
- (2) A consignment of wheat shall be classified as Class Bread Wheat if it --
- (i) consists of at least 95 percent (m/m) of one or more of the bread wheat seeds and
  - (ii) complies with the standards for Grade 1, Grade 2, Grade 3, Grade 4 or Utility Grade set out in item 7.

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- (3) A consignment of wheat shall be classified as Class Soft Wheat if it --
- (a) consists of at least 95 percent (m/m) of one or more of the biscuit wheat seeds; and
  - (b) complies with the standards for Grade 1 or Grade 2 set out in item 7.
- (4) A consignment of wheat shall be classified as Class Durum Wheat if it --
- (a) consists of at least 95 percent (m/m) of one or more of the durum wheat seeds; and
  - (b) complies with the standards for Grade 1, Grade 2, Grade 3 and Grade 4 set out in item 7.

### Grades of wheat

6. The grades for the different classes of wheat shall be as follows:

- (a) Class Bread Wheat --
  - (i) Grade 1;
  - (ii) Grade 2;
  - (iii) Grade 3;
  - (iv) Grade 4; and
  - (v) Utility Grade.
- (b) Class Soft Wheat --
  - (i) Grade 1; and
  - (ii) Grade 2.
- (c) Class Durum Wheat --
  - (i) Grade 1;
  - (ii) Grade 2;
  - (iii) Grade 3; and
  - (iv) Grade 4

**Standards for grades of wheat**

7. (1) Subject to the provisions of subitems (2), (3) and (4), a consignment of wheat shall be graded as --

- (a) Grade 1 if the nature of deviation, specified in column 1 of the respective Tables of the Annexure, in that consignment does not exceed the percentage specified in column 2 of the said tables opposite the deviation concerned;
  - (b) Grade 2 if the nature of deviation, specified in column 1 of the respective Tables of the Annexure, in that consignment does not exceed the percentage specified in column 3 of the said tables opposite the deviation concerned;
  - (c) Grade 3 if the nature of deviation, specified in column 1 of Tables 2 and 3 of the Annexure, in that consignment does not exceed the percentage specified in column 4 of the respective tables opposite the deviation concerned;
  - (d) Grade 4 if the nature of deviation, specified in column 1 of Tables 2 and 3 of the Annexure, in that consignment does not exceed the percentage specified in column 5 of the respective tables opposite the deviation concerned; and
  - (f) Utility Grade if the nature of deviation, specified in column 1 of Table 3 of the Annexure, in that consignment does not exceed the percentage specified in column 6 of the said table opposite the deviation concerned.
- (2) (a) The minimum hectolitre masses for the different grades, in the case of Class Bread Wheat, are as follows:
- (i) Grade 1 - 77 kg;
  - (ii) Grade 2 - 76 kg;
  - (iii) Grade 3 - 74 kg;
  - (iv) Grade 4 - 72 kg; and

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- (v) Utility Grade - 70 kg.
  - (b) The minimum hectolitre masses for different grades in the case of Class Soft Wheat are as follows:
    - (i) Grade 1 - 76 kg; and
    - (ii) Grade 2 - 74 kg.
  - (c) The minimum hectolitre masses for different grades in the case of Class Durum wheat are as follows:
    - (i) Grade 1-79 kg;
    - (ii) Grade 2-77 kg;
    - (iii) Grade 3-76 kg; and
    - (iv) Grade 4-72 kg
  - (3) (a) Grade 1, Grade 2 and Grade 3 shall, in the case of Class Bread Wheat have a minimum falling number value of not less than 250 seconds.
  - (b) Grade 1, Grade 2, Grade 3 and Grade 4, in the case of Class Durum Wheat have a minimum falling number value of not less than 300 seconds.
  - (c) Grade 4 shall, in the case of Class Bread Wheat, have a minimum falling number value of not less than 200 seconds.
  - (d) Utility Grade shall, in the case of Class Bread Wheat, have a minimum falling number value of not less than 150 seconds.
  - (e) Notwithstanding the provisions of paragraph (a), wheat shall be deemed to comply with the requirements of the paragraph concerned if it deviates with not more than 30 seconds lower than the minimum prescribed for Grade 1, Grade 2, Grade 3 and Grade 4 as the case may be.
- (4) Class Durum Wheat shall --

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- (a) in the case of Grade 1, contain --
    - (i) a minimum of 12 percent protein ; and
    - (ii) a minimum of 85 percent amber glossy and flinty kernels.
  - (b) in the case of Grade 2, contain --
    - (i) a minimum of 11 percent protein; and
    - (ii) a minimum of 75 percent amber glossy and flinty kernels.
  - (c) in the case of Grade 3, contain--
    - (i) a minimum of 10 percent protein determined on a 12 percent moisture basis; and
    - (ii) a minimum of 60 percent amber glossy and flinty kernels.
  - (d) in the case of grade 4, contain--
    - (i) a minimum of 9 percent protein determined on a 12 percent moisture basis; and
    - (ii) a minimum of 50 percent amber glossy and flinty kernels.
- (5) The minimum protein content determined on a 12 percent moisture basis for the different grades, in the case of Class Bread Wheat shall be as follows:

- (a) Grade 1 - 12 percent;
- (b) Grade 2 - 11 percent;
- (c) Grade 3 - 10 percent;
- (d) Grade 4 - 9 percent; and
- (e) Utility Grade - 8 percent.

## REQUIREMENTS FOR CONTAINERS

### General

8. (1) A container, excluding a ship's hold, railway truck or road truck and storage facility, which contains wheat intended for export shall be suitable, intact (excluding holes made by a grain probe in the case of bags), clean, dry and odourless.

(2) Subject to the provisions of sub-item (1) a bag which contains wheat intended for export shall --

- (a) be new;
- (b) be strong enough for the conveyance of the maximum mass of wheat that can be accommodated in that bag;
- (c) not be stained by any colouring matter or be impregnated by any liquid capable of imparting stains, excluding normal discolouration due to exposure to the sun;
- (d) not impart a foreign taste or colour or any substance which may be injurious to human health to the wheat; and
- (e) in the case of the bags that are re-used, be of such a material that the bags can be cleaned and disinfected prior to re-use.

(3) A ship's hold into which wheat intended for export is released, shall --

- (a) not transmit to wheat any harmful substance that may be injurious to human health;
- (b) be free from insects; and
- (c) be reasonably free from pieces of grain or any other material that may harbour insects.

(4) A storage facility or railway truck or road truck shall --

- (a) not transmit to wheat any harmful substance that may be injurious to human health;
- (b) be free from insects; and



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- (c) reasonably be free from pieces of grain or any other material that may harbour insects: Provided that an inspector may order the exporter or agent to clean, treat or fumigate a contaminated storage facility or railway truck or road truck.

## PACKING REQUIREMENTS

### General

9. (1) Wheat of different classes and grades shall be packed in different containers or stored separately.
- (2) Bags shall be properly closed.

## MARKING REQUIREMENTS

### Particulars

10. Each container or the accompanying export documents of a consignment of wheat shall be marked or endorsed with --
- (a) the product name;
  - (b) the class and grade of the wheat;
  - (c) the name and address of the exporter or packer: Provided that if the name and address concerned are indicated in a code, such code shall be registered with the Executive Officer;
  - (d) the country of origin indicated as "Produce of South Africa" or "Product of South Africa": Provided no abbreviations or expression "South Africa" on its own shall be used; and
  - (e) The producer, exporter or packer or silo code which is registered with the Executive Officer by the producer, exporter, packer or silo as the case may be: Provided--
    - (i) if a producer has more than one farm, each farm shall be registered separately; and
    - (ii) such code shall be preceded by the expression "producer" "silo", "PUC", "FBO" as the case may be.

### Prohibited particulars

11. No wording, illustration or other device of expression which constitutes a misrepresentation or which, directly or by implication creates a misleading impression of the contents shall appear on a container which contains wheat.

## SAMPLING

### Taking of sample

12. (1) A sample of a consignment of wheat shall --
- (a) in the case of wheat delivered in bags and subject to item 13, be obtained by sampling at least ten percent of the bags, chosen from that consignment at random, with a bag probe: Provided that at least 25 bags in a consignment shall be sampled and where a consignment consists of less than 25 bags, all the bags in that consignment shall be sampled; and
  - (b) in the case of wheat delivered in bulk and subject to item 13, be obtained by sampling that consignment throughout the whole depth of the layer, in at least six different places, chosen at random in that bulk quantity, with a bulk sampling apparatus.
- (2) The collective sample obtained in sub-item (1) (a) or (b) shall --
- (a) have a total mass of at least 10 kg; and
  - (b) be thoroughly mixed by means of dividing before further examination.
- (3) If it is suspected that the sample referred to in sub item (1) (a) is not representative of that consignment, an additional five percent of the remaining bags, chosen from that consignment at random, shall be emptied into a suitable bulk container and sampled in the manner contemplated in sub-item (1) (b).
- (4) If it is suspected that the sample referred to in sub-item (1) (b) is not representative of that consignment, an additional representative sample shall be obtained by using an alternative sampling pattern, apparatus or method.
- (5) A sample taken in terms of the above method shall be deemed to be representative of the consignment from which it was taken.

### Sampling if contents differ

13. (1) If, after an examination of the wheat taken from different bags in a consignment in terms of item 12(1) (a), it appears that the contents of those bags differ substantially --
- (a) the bags concerned shall be placed separately;

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- (b) all the bags in the consignment concerned shall be sampled with a bag probe in order to do such separation; and
- (c) each group of bags with similar contents in that consignment shall for the purposes of these regulations be deemed to be a separate consignment.

(2) If, after the discharge of a consignment of wheat in bulk has commenced, it is suspected that the consignment could be of a class or grade other than that determined by means of the initial sampling, the discharge shall immediately be stopped and the part of the consignment remaining in the bulk container as well as the wheat already in the hopper shall be sampled anew with a bulk sampling apparatus or by catching at least 20 samples, by means of a suitable container, at regular intervals throughout the whole offloading period from the stream of wheat flowing in bulk.

#### **Obtainment of a working sample**

14. A working sample is obtained by dividing the representative sample of the consignment according to the latest revision of the ICC (International Association for Cereal Science and Technology) 101/1 method.

## INSPECTION METHODS

### Assessment of containers, packaging and presentation

15. An inspector shall visually examine the consignment and the sample from the consignment to determine if the containers, packaging and presentation comply with the prescribed requirements.

### Verification of markings

16. An inspector shall visually examine the containers in the consignment and the sample from the consignment to verify compliance to the marking requirements by --

- (a) satisfying him or herself whether the containers are marked as prescribed; and
- (b) checking the accuracy of the declarations during inspection.

### Verification of biological and chemical contamination

17. An inspector shall verify compliance to the levels of biological and chemical contaminations by sampling and submitting samples for analysis of only certain consignments according to a risk based plan.

### Determination of undesirable odours, harmful substances and poisonous seeds, live insects and plant injurious organisms of phytosanitary importance

18. (1) A consignment of wheat or a sample of a consignment of wheat shall sensorially be assessed or chemically analysed in order to determine whether it --

- (a) contains a substance or seeds that render the wheat unfit for human or animal consumption or for processing into or for utilisation as food or feed;
- (b) has a musty, sour, rancid or other undesirable odour: Provided that a working sample of unscreened wheat that is ground in a grain mill to a fine meal may be used for the determination concerned;
- (c) contains any live insects; and
- (d) contains plant injurious organisms of phytosanitary importance.

(2) The results of the determinations in sub item (1) represent the finding in respect of the consignment with regard to the presence of the factors thus determined.

**Determination of class**

19. The class of a consignment of wheat shall be determined as follows:
- (a) Obtain a working sample of at least 500 g and screen the working sample in the manner prescribed in item 25.
  - (b) Take at least 100 g of the screened wheat and remove all other grain, unthreshed ears and foreign matter by hand.
  - (c) Obtain a working sample of at least 25 g each after all other grain, unthreshed ears and foreign matter have been removed and separate the different cultivars.
  - (d) Determine the combined mass of all of the cultivars that belong to the same class and express the mass thus determined as a percentage of the mass of the working sample.
  - (e) Such percentage represents the percentage of all the cultivars that belong to the same class in the consignment.

**Determination of the hectolitre mass**

20. The hectolitre mass of a consignment of unscreened wheat may be determined by any suitable instrument: Provided that the instrument complies with and has been calibrated to, the specifications detailed in ISO (International Organization for Standardization) 7971-3.

**Determination of the percentage amber glossy and flinty kernels in Durum Wheat**

21. (1) The percentage amber glossy and flinty kernels shall, in the case of Class Durum Wheat, be determined by means of a kernel-cutter as follows:
- (a) Fill the cup of the kernel-cutter (knife in open position) from which all foreign matter, screenings and broken kernels have been removed and shake it in order to fill the 50 holes with kernels.
  - (b) Close the cup with one hand in such a manner that the wheat does not spill out and use the other hand to cut the kernels with the knife.
  - (c) Open the kernel-cutter and calculate the percentage mealy kernels by adding 1 percent for each kernel with one or more mealy spots and 2 percent for each kernel of which half or more is mealy.

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- (d) Repeat the procedure described in paragraphs (a), (b) and (c) three times and calculate the average of the three determinations.
- (e) Subtract the average obtained in paragraph (d) from hundred.
- (f) Such percentage represents the percentage amber glossy and flinty kernels in the consignment.

(2) The kernel-cutter referred to in sub-item (1), must be capable of simultaneously cutting 50 kernels broad wise.

### **Determination of moisture content**

22. (1) The moisture content of a consignment of wheat may be determined by any suitable method: Provided that the results thus obtained are in accordance with the maximum permissible deviation for a class 1 moisture meter as detailed in ISO (International Organization for Standardization) 7700/1 based on the results of the 72 hour, 103°C oven dried method [the latest revision of the AACCI (American Association of Cereal Chemists International) Method 44-15A].

### **Determination of protein content**

23. The percentage of protein of a consignment of wheat may be determined according to any suitable method: Provided that --

- (a) the determination shall be conducted on a sample which had been sifted using a screen with the same apertures as the standard sieve and from which other grain, unthreshed ears and foreign matter had been removed by hand; and
- (b) the results thus obtained are in accordance ( $\pm 0,3$  percent) with the results obtained by the Dumas Combustion Analysis method [AACCI (American Association of Cereal Chemists International) Method 46-30].

### **Determination of falling number in wheat**

24. (1) The falling number of a consignment of wheat may be determined according to any suitable method: Provided that --

- (a) the determination shall be conducted on a sample which had been sifted using a screen with the same apertures as the standard sieve and from which other grain, unthreshed ears and foreign matter had been removed by hand; and
- (b) the results thus obtained are in accordance ( $\pm 5$  percent) with the results obtained by the ICC (International Association for Cereal Science and Technology) No. 107/1 Method.

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- (2) If the falling number of a consignment of wheat is determined according to the latest revision of the ICC (International Association for Cereal Science and Technology) 107/1 method --
- (a) the sampling in the mentioned method shall be replaced with the manner pre-scribed in item 19; and
  - (b) only the altitude corrected value shall be used.

### **Determination of percentage screenings**

25. (1) The percentage screenings in a consignment of wheat shall be determined as follows:

- (a) Obtain a working sample of at least 500 g.
- (b) Place the sample on the standard sieve and screen the sample by moving the sieve 50 strokes to and fro, alternately away from and towards the operator of the sieve, in the same direction as the long axes of the slots of the sieve. Move the sieve, which rests on a table or other suitable smooth surface, 250 mm to 460 mm away from and towards the operator with each stroke. The prescribed 50 strokes must be completed within 50 to 60 seconds: Provided that the screening process may also be performed with the standard sieve in some or other container or an automatic sieving apparatus.
- (c) Determine the mass of the material that has passed through the sieve and express it as a percentage of the mass of the working sample.
- (d) Such percentage represents the percentage screenings in the consignment.



**Determination of the percentage heavily frost-damaged wheat**

26. The percentage of heavily frost-damaged kernels in a consignment of wheat shall be determined as follows:

- (a) Obtain a working sample of at least 25 g from a screened sample.
- (b) Remove all other grain and unthreshed ears by hand and determine the mass thereof.
- (c) Express the mass thus determined as a percentage of the mass of the working sample.
- (d) Such percentage represents the percentage other grain and unthreshed ears in the consignment concerned.

**Determination of the percentages other grain and unthreshed ears**

27. The percentage other grain and unthreshed ears in a consignment of wheat shall be determined as follows:

- (a) Obtain a working sample of at least 50 g from a screened sample.
- (b) Remove all other grain and unthreshed ears by hand and determine the mass thereof.
- (c) Express the mass thus determined as a percentage of the mass of the working sample.
- (d) Such percentage represents the percentage other grain and unthreshed ears in the consignment concerned.

**Determination of the percentage foreign matter**

28. The percentage foreign matter in a consignment of wheat is determined as follows:

- (a) Obtain a working sample of at least 100 g from a screened sample.
- (b) Remove all foreign matter by hand and determine the mass thereof.
- (c) Express the mass thus determined as a percentage of the mass of the working sample.

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- (d) Such percentage represents the percentage foreign matter in the consignment concerned.

#### **Determination of the percentage damaged kernels.**

29. The percentage damaged kernels in a consignment of wheat shall be determined as follows:

- (a) Obtain a working sample of at least 25 g of a screened sample.
- (b) Remove all damaged kernels by hand and determine the mass thereof.
- (c) Express the mass thus determined as a percentage of the mass of the working sample.
- (d) Such percentage represents the percentage damaged wheat in the consignment concerned.

#### **Determination of the percentage heat-damaged kernels**

30. The percentage heat-damaged kernels in a consignment of wheat shall be determined as follows:

- (a) Obtain a working sample of at least 100 g from a screened sample.
- (b) Remove all heat-damaged kernels by hand and determine the mass thereof. Kernels from an additional working sample may also be sensorially assessed (by smelling and tasting the kernels) to confirm suspicion of heat damage.
- (c) Express the mass thus determined as a percentage of the mass of the working sample.
- (d) Such percentage represents the percentage heat-damaged wheat in the consignment concerned.

#### **Determination of percentage field fungi infected wheat**

31. The percentage field fungi infected kernels in a consignment of wheat shall be determined as follows:

- (a) Obtain a working sample of at least 25 g from a screened sample.
- (b) Remove all field fungi infected kernels by hand and determine the mass thereof.

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- (c) Express the mass thus determined as a percentage of the mass of the working sample.
- (d) Such percentage represents the percentage of field fungi infected wheat in the consignment concerned.

**Determination of percentage storage fungi infected wheat**

32. The percentage storage infected kernels in a consignment of wheat shall be determined as follows:

- (a) Obtain a working sample of at least 100 g from a screened sample.
- (b) Remove all field fungi infected kernels by hand and determine the mass thereof.
- (c) Express the mass thus determined as a percentage of the mass of the working sample.
- (d) Such percentage represents the percentage of field fungi infected wheat in the consignment concerned.

## INTERPRETATION OF RESULTS

### General

33. (1) No consignment may be rejected before a further two analyses are made from an additional sample obtained from the same or an additional random sample: Provided that the average of the results of all such analyses shall be regarded as the result in respect of the consignment concerned.

(2) An inspector shall, if he has taken a deviating sample by virtue of item 13, reject the consignment if the average results of at least two analyses of the deviating sample do not comply with the requirements which are prescribed in items 4, 5, 6 and 7.

## RELEASE OF WHEAT

### Application for release

34. An application for an approval for the release of wheat shall, in the case where one or more cargo spaces of the ship are to be filled to capacity with such wheat, be directed in writing by the exporter or agent to the inspector.

### Approval of release

35. (1) An inspector issues a certificate as approval of the release of wheat if the inspector finds that the ship's hold complies with the requirements in item 8(3).

(2) If an inspector finds that the ship's hold does not comply with the requirements in item 8(3), the inspector shall --

- (a) issue a certificate to that effect;
- (b) re-inspect the ship's hold after the relevant ship's hold has been cleaned, treated or fumigated; and
- (c) issue a certificate as an approval for the release of wheat if he or she has found during the re-inspection that the ship's hold complies with the requirements in item 8(3).

(3) An inspector may at his discretion re-inspect the ship's hold if the release of wheat into the ship's hold occurs more than 96 hours after the approval of the ship's hold.

(4) The granting of approval for the release of wheat shall not serve as an assurance that the ship's hold is free of insects that could infest wheat in that ship's hold.

### **Offences and penalties**

36. Any person who contravenes or fails to comply with any provision of these exports standards and requirements shall be guilty of an offence and upon conviction be liable to a fine or to imprisonment in terms of section 11 of the Act.

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## ANNEXURE

TABLE 1

## STANDARDS FOR GRADES OF SOFT WHEAT

Nature of deviation	Maximum percentage permissible deviation (m/m)	
	Grade 1	Grade 2
<b>1</b>	<b>2</b>	<b>3</b>
(a) Heavily frost-damaged kernels.	5	5
(b) Field fungi infected kernels.	2	2
(c) Storage fungi infected kernels.	0,5	0,5
(d) Screenings.	3	3
(e) Other grain and unthreshed ears.	1	1
(f) Gravel, stones, and turf.	0,5	0,5
(g) Foreign matter including gravel, stones and turf: Provided that such deviations are individually within the limits specified in item (f).	1	1
(h) Heat-damaged kernels.	0,5	0,5
(i) Damaged kernels, including heat damaged kernels: Provided that such deviations are individually within the limited specified in item (h) and provided further that the minimum falling number value prescribed in item 7(3) for the grade concerned is at least complied with.	2	2
(j) Deviations in items (d), (e), (g) and (i) collectively: Provided that such deviations are individually within the limits of the said items.	5	5

## ANNEXURE

TABLE 2

## STANDARDS FOR GRADES OF DURUM WHEAT

Nature of deviation	Maximum percentage permissible deviation (m/m)			
	Grade 1	Grade 2	Grade 3	Grade 4
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
(a) Heavily frost-damaged kernels	5	5	5	5
(b) Field fungi infected kernels	2	2	2	2
(c) Storage fungi infected kernels	0,5	0,5	0,5	0.5
(d) Screenings	3	3	3	3
(e) Other grain and unthreshed ears	1	1	1	1
(f) Gravel, stones, and turf	0,5	0,5	0,5	0.5
(g) Foreign matter including gravel, stones, and turf: Provided that such deviations are individually within the limits specified in item (f)	1	1	1	1
(h) Heat-damaged kernels	0,2	0,3	0,5	0.7
(i) Damaged kernels, including heat-damaged kernels: Provided that such deviations are individually within the limit specified in item (h) and provided further that the minimum falling number value prescribed in item 7(3) for the grade concerned is at least complied with.	2	2	2	2
(j) Deviations in items (d), (e), (g) and (i) collectively: Provided that such deviations are individually within the limits of the said items.	5	5	5	5

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## ANNEXURE

TABLE 3

## STANDARDS FOR GRADES OF BREAD WHEAT

Nature of deviation	Maximum percentage permissible deviation (m/m)				
	Grade 1	Grade 2	Grade 3	Grade 4	Utility Grade
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
(a) Heavily frost-damaged kernel	5	5	5	5	10
(b) Field fungi infected kernels	2	2	2	2	2
(c) Storage fungi infected kernels	0,5	0,5	0,5	0,5	0,5
(d) Screenings	3	3	3	4	10
(e) Other grain and unthreshed ears	1	1	1	1	4
(f) Gravel, stones and turf.	0,5	0,5	0,5	0,5	0,5
(g) Foreign matter including gravel, stones and turf: Provided that such deviations are individually within the limits specified in item (f).	1	1	1	1	3
(h) Heat-damaged kernels	0,5	0,5	0,5	0,5	0,5
(i) Damaged kernels, including heat-damaged kernels: Provided that such deviations are individually within the limit specified in item (h) and provided further that the minimum falling number value prescribed in item 7(3) for the grade concerned is at least complied with.	2	2	2	2	5



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Nature of deviation	Maximum percentage permissible deviation (m/m)				
	Grade 1	Grade 2	Grade 3	Grade 4	Utility Grade
1	2	3	4	5	6
(j) Deviations in items (d), (e), (g) and (i) collectively: Provided that such deviations are individually within the limits of the said items.	5	5	5	5	10