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**Seeds — Requirements for certification—
Part 3: Wheat**

ICS 67.060

Reference number

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Foreword

Rwanda Standards are prepared by Technical Committees and approved by Rwanda Standards Board (RSB) Board of Directors in accordance with the procedures of RSB, in compliance with Annex 3 of the WTO/TBT agreement on the preparation, adoption and application of standards.

The main task of technical committees is to prepare national standards. Final Draft Rwanda Standards adopted by Technical committees are ratified by members of RSB Board of Directors for publication and gazettment as Rwanda Standards.

DRS 275-3 was prepared by Technical Committee RSB/TC 032, *Seeds and planting materials*.

This second edition cancels and replaces the first edition (RS 275-3:2016), which has been technically revised.

DRS 275 consists of the following parts, under the general title *Seeds — Requirements for certification*

— *Part 1: Common bean*

— *Part 2: Rice*

— *Part 3: Wheat*

— *Part 4: Peas*

— *Part 5: Sweet potatoes*

— *Part 6: Vegetable seeds*

— *Part 7: Cassava seeds*

Committee membership

The following organizations were represented on the Technical Committee on *Seeds and planting materials* (RSB/TC 032) in the preparation of this standard.

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Rwanda Standards Board (RSB) – Secretariat

Seeds — Requirements for certification— Part 3: Wheat

1 Scope

This Draft Standard specifies the certification requirements for the production of pre-basic, basic and certified seed of wheat (*triticum aestivum* L. Amend). It includes requirements for eligible varieties, field standards, field inspections, seed sampling, laboratory standards, certificates, packaging and labelling, and post-control tests.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

International Seed Testing Association ISTA Rules

OECD Seed Schemes; Guidelines for Control Plot Tests and Field Inspection of Seed Crops

OECD Schemes for Varietal Certification or the Control of Seed Moving in the International Trade.

3 Terms and definitions

For the purposes of this standard, the terms and definitions given in ISTA, and OECD and the following shall apply.

3.1

seed test certificate

legal document issued by the national seed certification authority, which states that a seed lot has met the requirements set in this standard

3.2

distinctness

variety is deemed to be distinct if it is clearly distinguishable in at least one character from any other variety whose existence is a matter of common knowledge at the time of filing the application for registration

3.3

field

defined and identifiable area of land or facility that is used to produce a seed crop under the Seed Certification Scheme

3.4

field inspection

inspection of a field and or seed crop, by an inspector to check if the minimum requirements for seed certification have been satisfied

3.5

field number

number assigned to the field by the national seed certification authority, when the application form for certification is submitted

3.6

germination

emergence and development of a seedling to a stage where the aspect of its essential structures indicates whether or not it is able to develop further into a satisfactory plant under favourable conditions in the field

3.7

seed grower

person or entity registered to produce seed

3.8

inert matter

seed units and all other matter and structures not defined as pure seed or other seeds

3.9

isolation

minimum distance or time between two crops of wheat that is required to prevent contamination either mechanically or by cross pollination

3.10

inspector

authorized official or accredited entity responsible for carrying out seed certification activities

3.11

international seed testing association (ISTA) rules

rules for seed testing published by the International Seed Testing Association

3.12**label**

tag or other device that is attached to or written, stamped, or printed on any container of seed or that accompanies any lot of bulk seed and which describes the kind of seed and any other information required by relevant regulation

3.13**previous cropping**

minimum period (seasons or years) that must elapse between the production of a crop of the same species in a field and the production of a crop entered in the certification scheme in the same field

3.14**maintainer**

person or organisation responsible for the production or maintenance of a bred variety included in a national list of varieties/variety catalogue eligible for certification, and ensure that the variety remains true to type throughout its full life-span and in the case of hybrid varieties, that the formula for hybridisation is followed

3.15**national seed certification authority**

national authority responsible for conducting seed certification processes

3.16**noxious weed**

weed species, the seed of which is difficult to separate during processing or has undesirable effects on the crop produced, for example by possible genetic contamination

3.17**off-type**

plant of the same species which does not exhibit the recognised and accepted habit and characteristics of the variety being grown

3.18**other seeds**

seeds of any plant species other than that of the crop sample that is being tested. They consist of weed seeds and other crop seeds

3.19

parental material

population or lines used by a breeder to maintain a variety

3.20

person

natural person or legal entity

3.21

post-control plot

small plot where a representative sample of a seed lot is grown to determine the identity and purity of the variety and to check if the seed certification system is operating satisfactorily

3.22

pure seed

species stated by an applicant, or found to predominate in a test, and includes all botanical varieties and cultivars of that species, including intact seeds and pieces of seed units larger than one-half their original size

3.23

variety registration

recording of a new variety in a national variety catalogue when it has been tested and satisfied the requirements for distinctness, uniformity, stability, and has value for cultivation and use

3.24

roguing

removal of off-types and diseased plants or any other unwanted plant from a seed crop if they may reduce the quality of the harvested crop

3.25

seed certification

process by which the quality and identity of a seed lot is assured

3.26

seed lot

defined quantity of seed bearing the same reference number and for which the origin, production history and identity is known

3.27

stability

condition of a variety distinguishing characteristics to remain unchanged after repeated growing cycles

3.28

uniformity

variety is deemed to be uniform if, subject to the variation that may be expected from the particular features of its propagation, it is sufficiently uniform in its relevant characteristics

3.29

variety

assemblage of cultivated plants that is clearly distinguished from other varieties by any characters (morphological, physiological, cytological, chemical, or others) and which retains its distinguishing characteristics when reproduced by the normal means for the crop and variety

3.30

variety catalogue/national list varieties

list of varieties that have been registered by a national authority and can be produced and marketed as certified seed

3.31

carryover seed

seed produced in previous season and stored for one or more cropping seasons

3.32

pre-basic seed

seed that is derived from breeder seed and is used to produce basic seed through one cycle of multiplication

3.33

breeder seed

nucleus seed from the breeder and is used to produce pre-basic seed

3.34

seed

planting materials used for generative propagation of plants

3.35

basic seed

seed that has been produced from breeder or pre-basic seed and is used for the production of certified seed

3.36

certified seed

seed that is produced from basic seed through one or two generations of multiplication

3.36.1

certified seed 1st generation

first generation of seed derived from basic seed

3.36.2

certified seed 2nd generation

certified seed 2nd generation which is multiplied once and from certified seed 1st generation

3.37

Quality Declared Seeds (QDS)

Seed produced from basic or certified seed, declared by the producer as being in conformity with technical, identity and quality standards governing seed production and approved by the competent authority after verification of the quality.

4 Abbreviated terms

- DUS: Distinctness, Uniformity and Stability
- ISTA: International Seed Testing Association
- OECD: Organization for Economic Co-operation and Development

5 Seed classes

For the purpose of this standard, the following classes of seed shall apply:

- a) Pre-basic seed;
- b) Basic seed; and
- c) Certified seed:
 - 1) 1st generation (C1); and

- 2) 2nd generation (C2).

6 Eligible varieties

6.1 Varieties eligible for seed certification shall be those registered in the national list of varieties/variety catalogue.

6.2 The national seed certification authority shall keep the official descriptor of the varieties in hard and electronic copies.

7 Application requirements for certification

7.1 The minimum information for an application for certification of a seed crop shall include the following:

- d) name, address and contact details of the seed grower;
- e) crop and variety to be sown;
- f) physical location;
- g) area and reference number of the field, and its cropping history for the past two cropping seasons;
- h) class of seed to be produced; and
- i) registration number of the seed grower.

7.2 Information and records related to the previous cropping history, origin of seed planted, and field inspections shall be kept and used for certification to ensure full traceability of quality, genetic identity and purity of the seed harvested.

8 Field inspection

8.1 The national seed certification authority shall prepare the inspections' schedule for the inspectors, based on all necessary information on the application form, to ensure that the timing of inspections allows the standards in Table 1 to be properly assessed.

8.2 The inspector shall inspect the field in accordance with OECD seed schemes and shall check for isolation requirements, off types, the presence of noxious weeds and diseases.

8.3 A minimum of two (2) inspections shall be done for each seed production field to check if the field standards specified in Table 1 are met.**8.4** At the time of the first inspection, the inspector shall confirm with the grower the previous cropping of the field, checking on isolation, and the proof of origin/authentication of the variety planted by using the labels.

8.4 Depending on the degree of contamination, the inspector may give instructions for off-types and diseased plants to be rogued. In case of noxious weeds found in the field, the grower shall be instructed to remove the weeds before harvesting.

8.5 The field inspection report shall indicate the field status and comments for any corrective actions required such as re-inspection to confirm the field standards. All field inspection reports shall be provided to the grower after each inspection in a timely manner. The field inspection report in Annex B shall be signed by both the inspector and the grower or the grower's representative.

9 Field requirements

9.1 Pre basic and basic seed shall be produced under the responsibility of the breeder or maintainer

9.2 Certified seed may be produced in two generations.

9.3 The national certification authority shall inspect and certify the production of pre-basic, basic and certified seed crops

9.4 A field producing a seed crop of wheat shall be approved for certification if it complies with the requirements in Table 1.

Table 1 — Field standards for seed crops of wheat

S/N	Variable	Pre-basic seed	Basic seed	Certified seed
i.	Previous cropping requirements	1	1	1
ii.	Isolation, m, min	10	10	5
iii.	Maximum Off-types per 100 m ² , max	1	1	3
iv.	Kernel burnt (<i>Tilletia barclayana</i>) per 100 m ² , max	0	1	2
v.	Loose smut (<i>Ustilago nuda</i>) per 100 m ² , max	0	0	0

9.5 Fields may be rejected for certification because of unsatisfactory condition caused by noxious weeds, poor growth, poorstands, excessive disease presence, insect damage, and any other condition that prevents accurate inspection or creates doubt as to the identity of the variety.

10 Seed sampling and laboratory standards

10.1 The harvested seed from the field approved for certification shall be kept as an identified unit until processing. After processing, a sample shall be submitted to laboratory for testing where a conformed sample shall be given a certificate with a unique lot number for the purpose of tracking and sampling.

10.2 The maximum size of a seed lot for certification purposes is 30 000 kg; lots larger than this shall be divided and given separate lot numbers.

10.3 An inspector shall draw a representative submitted sample from each lot according to the Chapter 2 of ISTA rules.

10.4 The submitted sample shall be divided into three sub-samples, one for testing in the laboratory, one to be stored for reference purposes in case re-testing is necessary, and one for the post-control tests. The samples shall be marked with the same identification as the seed lot, securely sealed and shall be stored in cool and dry conditions to prevent contamination and loss of germination.

10.5 Laboratories authorized by the national seed certification authority to conduct seed testing for certification shall follow the methodology established in the ISTA rules for wheat seed.

10.6 The seed lots shall comply with the laboratory standards specified in Table 2.

Table 2 — Laboratory standards for seeds lots of wheat

S/N	Variable	Pre-basic seed	Basic seed	Certified seed
i.	Pure seed, %, min.	99	99	99
ii.	Inert matter, %, max.	0.95	0.95	0.95
iii.	Other crop seeds, %, max.	0.05	0.05	0.05
iv.	Germination, %, min.	85	80	75
v.	Moisture content, % max.	14	14	14
	Weed seeds, per kg, max.	0	0	0

NOTE Moisture content is expressed as a percentage of the fresh weight of the original sample.

10.7 The laboratory test report shall be issued in accordance with Annex C.

11 Certificates

11.1 The seed test certificate for a seed lot shall be signed and issued by the national seed certification authority and shall include all information presented in Annex D. This certificate shall be valid for a period of six months.

11.2 Carryover seed shall be re-sampled and retested for germination. If the test result complies with the minimum standards, a new test certificate shall be issued for the seed lot, which cancels the previously issued certificate, and shall include the certificate number of the cancelled certificate.

12 Packaging and labelling

12.1 All classes of seed that have been certified shall be packaged in new containers which shall be marked with the company name and crop species and shall have the official label of the national seed certification authority.

12.2 The labels for each class are identified by the following colours:

- a) Pre-basic seed: Violet band on white
- b) Basic seed: White
- c) Certified Seed 1st generation: Blue
- d) Certified Seed 2nd generation: Red

12.3 If seeds are treated with any chemical or product harmful for human or animal consumption, the container shall carry a label stating the chemical or product used and warning of the health risks.

12.4 The labels shall be prominent, indelible, and legible and fixed to the containers by an authorized person in such a way that they cannot be destroyed or easily removed. The following information shall be included on the official labels:

a) front of label:

- 1) name of the crop, "Wheat seed";
- 2) species (Latin name);
- 3) variety denomination;
- 4) seed lot number;
- 5) test certificate number;
- 6) date of test;
- 7) net weight; and
- 8) seed treatment declaration (if applicable);

b) back of label:

- 1) logo of the national certification authority;
- 2) name and address of certifying authority;
- 3) seed class;
- 4) year and country of production; and
- 5) statement of re-packing and re-labelling (if applicable).

12.4 All containers/bags shall be closed either by hand or machine stitching and shall be sealed in such a way that if they are opened illegally, that violation can be detected.

12.5 Repackaging and relabeling are authorized in the following cases:

- a) the national seed certification authority may authorize the re-packaging and re-labelling of a particular seed lot that is produced in another country, but shall retain the original label information of the producing country; and
- b) blending of a seed lot with other lots of the same variety and class (generation) is allowable if all seed lots of the blend have met the field and laboratory requirements for certification prior to blending. A new lot

number shall be issued. Details of the blended lots and their proportions shall be kept by the certifying authority for traceability.

13 Post-control tests

The Post control tests shall be carried out in accordance with OECD Schemes for Varietal Certification or the Control of Seed Moving in the International Trade.

PUBLIC REVIEW

Annex A
(normative)

Field inspection report

Reference number.....

Date of the report.....

Seed grower information

Name Address.....

Telephone: E-mail.....

Registration number..... Number of inspection.....

Field location

Province/Region..... DistrictSector

Latitude..... Longitude Field number

Field size (Ha/acre) Cropping season Crop species

Seed class Variety Previous cropping

Variable	Observations/results	Comments/remarks
Isolation, m		
Off types		
Noxious weeds		
Deliberative disease		
Other crops		
General conditions of the crop (for example, drought, crop husbandry, etc.)		

Decision

Decision on the approval	Justification
The seed crop is approved for certification	
The seed crop is approved for certification	

Seed grower

Inspector signature

National seed certification authority

Date & signature

Date & signature

Date & signature

PUBLIC REVIEW

**Annex B
(normative)**

Seed laboratory test report

Name of seed grower:										
Species, variety, class, weight of lot:										
Testing and Issuing laboratory:										
Sampled by:										
Test number:										
Country of origin:										
Label serial number:										
Seed Lot Reference Number:										
Number of containers			Date of sampling		Date sample received			Date test(s) concluded		Test number
ANALYSIS RESULTS										
Purity				Germination						Moisture content, %
Pure seed %	Inert matter, %	Other crop seeds %	Weed seeds, per kg	Number of days	Normal seedlings, %	Hard seeds, %	Fresh seeds, %	Abnormal seedlings, %	Dead seeds, %	
Kind of inert matter:										
Other crop seeds:										
Weed seed:										
Other determinations:										
Place				Date						Signature

Annex C (normative)

Seed test certificate

This certificate is issued for a seed lot which has satisfied all the requirements of the certification scheme.

Previously issued certificate number.....	Certificate No.	Requirements:							
SEED GROWER INFORMATION									
Name:	Address:	Country of origin:							
SEED LOT INFORMATION									
Seed Lot Reference Number	Species and variety	Class	Weight of lot	Number of containers					
SAMPLING AND TESTING INFORMATION									
Date of sampling	Sampled by	Date sample received	Date test(s) concluded						
Name of testing laboratory:		Test number:							
ANALYSIS RESULTS									
Purity			Germination			Moisture content%			
Pure seed %	Inert matter %	Other crop seeds %	Weed seeds Per kg	Normal seedlings	Abnormal seedlings		Fresh seeds	Hard seeds	Dead seeds
Kind of inert matter:					Statement of packaging and re-labelling: (if applicable)				
Kind of other crop seeds:									
Kind of weed seeds:									
Other determinations:									

National Seed Certification Authority

Signature

Place and Date

Bibliography

[1] RS 275-3: 2016, *Seeds — Requirements for certification — Part 3: Wheat, First edition*

PUBLIC REVIEW

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