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Seeds — Requirements for certification

Part 6:

Vegetable seeds



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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.

RS 275-6 was prepared by Technical Committee RSB/TC 032, *Seeds and planting materials*

RS 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.

Tri seeds Ltd

BALTON Rwanda

Ministry of Agricultural and Animal Resources (MINAGRI)

National Seed Association of Rwanda

Rwanda Agricultural Board (RAB)

Win Win Seed Company

Rwanda Standards Board (RSB) – Secretariat

Seeds — Requirements for certification — Part 6: Vegetable seeds

1 Scope

This Rwanda Standard specifies the requirements for certification for vegetables seeds. It applies to local produced and imported seeds as per the list in annex A.

2 Normative references

The following referenced documents are indispensable for the application 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

3 Terms and definitions

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

3.1

vegetable seed

grains intended for vegetable or horticultural production but not for ornamental uses

3.2

previous cropping

minimum number of growing seasons that 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

3.3

isolation

minimum distance between a field of vegetable seeds and any other vegetable seed of the same species that is required to prevent contamination

3.4

seed producer

person or entity registered to produce seed

3.5

inspector

official belonging to a quality control department responsible for performing field control and sampling of seeds

3.6

label

tag or other device that is attached to seeds or that accompanies any lot of bulk seed and which describes the kind of seed and any other required information

3.7

previous cropping

minimum number of growing seasons that elapses 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

3.8

seed certification agency

recognized agency responsible for the certification of seed

3.10

off-type

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

3.11

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

3.12

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 seed

3.13

seed certification

quality assurance system whereby seed is subjected to official control and inspection

3.14

seed lot

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

3.15

stability

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

4 Requirements for seed crop declaration

Seed producer of pre-basic, basic and certified seeds shall apply for certification of a seed crop not later than two (2) weeks after planting by filling the form in Annex B.

5 Field requirements

5.1 General requirements

5.1.1 Crop for locally produced seed shall be inspected by national certification Authority

5.1.2 A minimum of three inspections shall be made, the first after plant establishment, the second during flowering stage and the third at maturity stage prior harvesting.

5.1.3 The cultural condition of the field and the stage of development of the crop shall be such as to permit varietal identity and varietal purity and health status to be adequately checked.

5.2 Specific field requirements

Field for the production of vegetable seeds shall comply with minimum requirements as specified in Table 1.

Table 1 — Field requirements for vegetable seeds

| Species | Category | Previous cropping (number of season) | Isolation , m, min*1 | Off types, %, max | Plant affected by seed born disease %, max*2 |
|--|-----------|--------------------------------------|----------------------|-------------------|--|
| Tomato (Lycopersicum esculentum Mill) | Basic | 2 | 50 | 0.1 | 0.1 |
| | Certified | 2 | 25 | 0.2 | 0.5 |
| Capsicum (Sweet pepper) & Chilli (Capsicum annum L.) | Basic | 2 | 500 | 0.1 | 0.1 |
| | Certified | 2 | 250 | 0.2 | 0.5 |
| Eggplant (Solanum melongena L.) | Basic | 2 | 300 | 0.1 | 0.1 |
| | Certified | 2 | 150 | 0.2 | 0.2 |
| Watermelon (Citrullus lanatus Thumb) | Basic | 1 | 1000 | 0.1 | 0.1 |
| | Certified | 1 | 500 | 0.2 | 0.2 |
| Cucumber (Cucumis sativus L.) | Basic | 1 | 1000 | 0.1 | 0.1 |
| | Certified | 1 | 500 | 0.2 | 0.2 |
| Pumpkin | Basic | 2 | | 0.1 | 0.1 |
| | Certified | 2 | | 0.2 | 0.5 |
| Amaranthus | Basic | 1 | 200 | 0.1 | |
| | Certified | 1 | 100 | 0.2 | |
| Snap Peas | Basic | 1 | 50 | 0.1 | 0.1 |
| | Certified | 1 | 25 | 0.2 | 0.2 |
| Night shade (Isogo) | Basic | 1 | 50 | 0.1 | 0.1 |
| | Certified | 1 | 25 | 0.2 | 0.5 |
| African Spider plant (Isogi) | Basic | 1 | 50 | 0.1 | 0.1 |
| | Certified | 1 | 25 | 0.2 | 0.5 |
| Spinach (Scientific names) | Basic | 1 | 50 | 0.1 | 0.1 |
| | Certified | 1 | 25 | 0.2 | 0.5 |

NOTE 1 For enclosed fields (in green houses) the isolation can be reduced

NOTE 2 Seed born diseases are specified in annex C

NOTE 3 No virus diseases have been reported on amaranthus

6 Laboratory requirements

Vegetable seeds (imported and locally produced) shall comply with requirements set in Table 2

Table 2 — Laboratory requirements vegetable seeds

| S/N | Species | Category | Pure seed, %, min | Inert mater %, max | Other crop seeds, number per kg, max | Weed seeds number per kg, max | Germination, %, min | Moisture, %, max |
|--------|--|-----------|-------------------|--------------------|--------------------------------------|-------------------------------|---------------------|------------------|
| i. | Tomato (<i>Lycopersicon esculentum</i> Mill) | Basic | 98 | 1 | 5 | 0 | 70 | 10 |
| | | Certified | 98 | 2 | 10 | 0 | 65 | |
| ii. | Capsicum (Sweet pepper) & Chilli (<i>Capsicum annum</i> L.) | Basic | 98 | 2 | 5 | 5 | 65 | 8 |
| | | Certified | 98 | 2 | 10 | 10 | 60 | |
| iii. | Brinjal (<i>Solanum melongena</i> L.) | Basic | 98 | 2 | 0 | 0 | 75 | 8 |
| | | Certified | 98 | 2 | 0 | 0 | 70 | |
| iv. | Watermelon (<i>Citrullus lanatus</i> Thumb) | Basic | 98 | 2 | 0 | 0 | 70 | 7 |
| | | Certified | 98 | 2 | 0 | 0 | 60 | |
| v. | Cucumber (<i>Cucumis sativus</i> L.) | Basic | 98 | 2 | 5 | 0 | 65 | 7 |
| | | Certified | 98 | 2 | 10 | 0 | 60 | |
| vi. | Pumpkin | Basic | 98 | 1 | 2 | 0 | 70 | 7 |
| | | Certified | 98 | 2 | 5 | 0 | 60 | 7 |
| vii. | Amaranthus | Basic | 98 | 1 | 5 | 0 | 70 | 10 |
| | | Certified | 98 | 2 | 10 | 0 | 60 | 10 |
| viii. | Snap peas | Basic | 98 | 1 | 2 | 0 | 90 | 11 |
| | | Certified | 98 | 2 | 5 | 0 | 80 | 11 |
| ix. | Night shade (Isogo) | Basic | 98 | 1 | 2 | 0 | 90 | 11 |
| | | Certified | 98 | 2 | 5 | 0 | 80 | 11 |
| xi. | African Spider plant (Isogi) | Basic | 98 | 1 | 2 | 0 | 90 | 11 |
| | | Certified | 98 | 2 | 5 | 0 | 80 | 11 |
| xiii. | Spinach (Scientific names) | Basic | 98 | 2 | 2 | 0 | 80 | 11 |
| xiv. | Radish (<i>Raphanus sativus</i> L) | Certified | 98 | 2 | 10 | 20 | 70 | 6 |
| xv. | Carrot (<i>Dacus carota</i> L) | Certified | 95 | 5 | 10 | 20 | 60 | 8 |
| xvi. | Onion (<i>Allium cepa</i> L) | Certified | 98 | 2 | 10 | 10 | 70 | 8 |
| xvii. | Cauliflower & Broccoli | Certified | 98 | 2 | 10 | 10 | 65 | 7 |
| xviii. | Cabbage (<i>Brassica oleracea</i> var <i>capitata</i> L.) | Certified | 98 | 2 | 10 | 10 | 70 | 7 |
| xix. | Spinach & Spinach beet (<i>Spinacia oleracea</i> L & <i>Beta vulgaris</i> (L) var <i>falvesence</i> DC) | Certified | 96 | 4 | 10 | 10 | 60 | 9 |
| xx. | Lettuce (<i>Lactuca sativa</i> L) | Certified | 98 | 2 | 0 | 10 | 70 | 8 |
| xxi. | Asparagus (<i>Asparagus officinalis</i> L.) | Certified | 96 | 4 | 10 | 10 | 70 | 8 |
| xxii. | Bottle Gourd (<i>Lagernaria siceraria</i> Molina) | Certified | 98 | 2 | 0 | 0 | 60 | 7 |
| xxiii. | Bitter Gourd (<i>Momordica charantia</i> L.) | Certified | 98 | 2 | 0 | 0 | 60 | 7 |
| xxiv. | PARSLEY (<i>Petroselinum crispum</i> (Mill.) Nym.) | Certified | 97 | 3 | 10 | 10 | 65 | 8 |

Note All imported seeds are considered to be of certified category except otherwise indicated in the importing documents

7 Certificates

7.1 Imported vegetables seeds lot shall have required certificates including certificate of origin, phytosanitary certificate and test certificate

7.2 For locally produced seed, the test certificate shall be issued upon compliance with field and laboratory requirements

7.3 Test certificate shall be valid for a period of six months.

7.4 After the expiring of the validity of the certificate the seeds 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.

7.5 The test certificate shall indicate at least the result of the purity and germination test and testing date.

8 Packaging

8.1 Vegetable seeds shall be packaged in containers that preserve the quality of the seeds

8.2 Seed may be repackaged provided that new label retains the original label information.

8.3 Repackaging shall be authorised by the competent authority

9 Labelling

Vegetable seeds shall be labelled with the following information:

- a) species indicated at least in its botanical name,
- b) variety,
- c) category,
- d) month and year of the last official testing for the purposes of certification,
- e) reference number of lot,
- f) country of production,

- g) declared net or gross weight or declared number of seeds,
- h) chemical used for seed dressing where applicable, and
- i) The words "retested" where at least germination has been re-tested.

10 Methods of sampling and testing

Vegetables seeds shall be sampled and tested in accordance with ISTA Rules.

Copy for public comments

Annex A (normative)

Scope of application of the standard

The standard applies to the following species:

| S/N | Species |
|-----|--|
| 1. | Tomato (<i>Lycopersicum esculentum</i> Mill) |
| 2. | Capsicum (Sweet pepper) & Chilli (<i>Capsicum annum</i> L.) |
| 3. | Brinjal (<i>Solanum melongena</i> L.) |
| 4. | Watermelon (<i>Citrullus lanatus</i> Thumb) |
| 5. | Cucumber (<i>Cucumis sativus</i> L.) |
| 6. | Pumpkin |
| 7. | Amaranthus |
| 8. | Snap peas |
| 9. | Radish (<i>Raphanus sativus</i> L) |
| 10. | Carrot (<i>Dacus carota</i> L) |
| 11. | Onion (<i>Allium cepa</i> L) |
| 12. | Cauliflower & Broccoli |
| 13. | Cabbage (<i>Brassica oleracea</i> var <i>capitata</i> L) |
| 14. | Spinach & Spinach beet (<i>Spinacia oleracea</i> L & <i>Beta vulgaris</i> (L) var <i>falvesence</i> DC) |
| 15. | Lettuce (<i>Lactuca sativa</i> L) |
| 16. | Asparagus (<i>Asparagus officinalis</i> L.) |
| 17. | Bottle Gourd (<i>Lagernaria siceraria</i> Molina) |
| 18. | Bitter Gourd (<i>Momordica charantia</i> L.) |
| 19. | PARSLEY (<i>Petroselinum crispum</i> (Mill.) Nym.) |

Annex B (normative) Seed crop declaration form

B.1 Field declaration data

| | |
|----|------------------|
| FD | For official use |
|----|------------------|

B.2 Seed Producer data

Reg no Name

Crop details

| | | |
|-----------------------------|--------|------------------|
| Species | #Name? | |
| Variety name | #Name? | |
| Land type e.g. own, rented, | | contract |
| Seed Category (planted) | | |
| Area(ha) | | with one decimal |
| Lot no (planted) | | |

Official Lot no (planted)

Planting date

B.3 Geodata

| | | | | | | | |
|------|--------|-----------|--------|----------|------------------------------------|----------|--------|
| Cell | #Name? | Sector | #Name? | District | #Name? | Province | #Name? |
| GPS | | | | | coordinates for field (6 decimals) | | |
| | | Longitude | | Latitude | | | |

Date

Name

Signature

| | | |
|-------------------------------|----------------------|------------------|
| Date of receiving declaration | <input type="text"/> | For official use |
| Date of registration | <input type="text"/> | |
| Registration signature | <input type="text"/> | |

Annex C (normative)

Specific seed born diseases for vegetable seeds subjected to field inspection

Table A.1 Specific seed born diseases for vegetable seeds subjected to field inspection

| Species | Specific seed born disease |
|--|--|
| Tomato (<i>Lycopersicon esculentum</i> Mill) | Early blight (<i>Alternaria solani</i> Sorauer), Leaf spot (<i>Stemphylium solani</i> Weber.) and Tobacco Mosaic Virus (TMV) |
| Capsicum (Sweet pepper) & Chilli (<i>Capsicum annum</i> L.) | Leaf blight: (<i>Alternaria solani</i> Sorauer.); Anthracnose (Ripe rot, Die back); <i>Colletrotrichum capsici</i> (Syd.) (Butler & Bisby) |
| Eggplant (<i>Solanum melongena</i> L.), | Phomopsis blight (<i>Phomopsis vexans</i> (Sacc. & Syd.) Harter) |
| Watermelon (<i>Citrullus lanatus</i> Thumb) | cucumber mosaic virus (CMV), papaya ring spot virus - watermelon strain (PRSV-W), squash mosaic virus (SQMV), watermelon mosaic virus 2 (WMV-2), and zucchini yellows mosaic virus (ZYMV). |
| Cucumber (<i>Cucumis sativus</i> L.) | Gummy stem blight, Anthracnose, Cucumber mosaic, Papaya ring spot virus, Zucchini yellow mosaic, Cucumber green mottle mosaic, Squash Mosaic Virus, Cucumber vein yellowing |
| Pumpkin (<i>Cucurbita pepo</i> .) | Cucumber mosaic, Papaya ring spot virus, Zucchini yellow mosaic virus, Watermelon mosaic virus, |
| Snap peas | Enation mosaic, Mosaic, Stunt |

Annex D (informative) 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..... District Sector

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 | | |
| Seed born 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 not approved for certification | |

Seed grower
Date & signature

Inspector signature
Date & signature

National seed certification authority
Date & signature

Annex E
(informative)

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 number per kg | Weed seeds number per kg | Other varieties number 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 F (informative)

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. | Standard: | | | | | | |
| 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

Copy for public comments