
**Fresh bunched shallots —
Specification and grading**

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Foreword

This Ethiopian Standard has been prepared under the direction of the Technical committee for fruit and vegetable (TC-13) and published by Ethiopian Standard Agency (ESA).

In preparation of this Ethiopian Standard, references have been made to the following:

CD/K/089:2010, Fresh bunched shallots — Specification and grading, East African Standard.

Codex Stan 193, Codex general standard for contaminants and toxins in food.

Acknowledgement is made for the use information from the above publications.

Fresh bunched shallots — Specification and grading

1. Scope

This standard applies to shallots of varieties (cultivars) grown from *Allium ascalonicum* (*Allium cepa* var. *aggregatum*) to be supplied to the consumer in the natural state, shallots for industrial processing being excluded.

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.

CES 73, *General standard for pre-packaged foods labeling*.

ES 577, *Recommended code of practice. General principles of Food hygiene*.

ES 929, *Code of practice -food hygiene management*.

ES 1246, *Code of practice for packaging and transport of fruits and vegetable*.

ES ISO 4833, *Microbiology of food and animal feeding stuffs-Horizontal method for the enumeration of microorganisms -Colony-count technique at 30 °C*.

3. Terms and definitions

For the purpose of this standard the following definition shall apply.

3.1

similar varietal characteristics

the shallots shall be generally of one type, as stiff-leaved or broad-leaved type

3.2

fairly well formed

the shallot is not more than slightly curved, crooked, or otherwise slightly misshapen and does not show more than slight bulb formation

3.3

firm

the edible portion of the shallot is not soft

3.4

well trimmed

the shallots are separated so that not more than two are attached together; that the individual bulbs are not broken above the point of root attachment and are practically free from dead, discoloured or slick outer skins. Fresh, clean, loose skins which do not materially affect the appearance of the individual shallot or the bunch are permitted. The tops of shallots are sometimes clipped (pinched) back to remove discoloured or otherwise injured leaves. An individual plant shall be considered as well trimmed when only the tips of the leaves have been clipped back. However, a plant or a lot shall not be considered as well trimmed when more than half of the leaves have been clipped back to the extent that the appearance of the plant, or the lot as a whole is materially injured.

3.5

fairly clean

the appearance of the shallot is not materially injured by dirt

3.6

damage

any injury or defect which materially affects the appearance or edible or shipping quality

a) Seedstems: A shallot with a seedstem shall be considered as damaged if the seedstem has been broken at a point other than at the top, or is coarse, fibrous, hollow or soft, or has separated naturally from the sheath or skin. Shallots often show flower buds while the seedstem is still tender. Such shallots are not objectionable if the flower buds have been removed, or if present, are not noticeably protruding; however, a shallot with a seedstem which, after the flower bud has been removed, exceeds the length of the longest leaves of the plant, shall be considered as damaged.

3.7

fresh

the tops are not withered or badly wilted

3.8

good green colour

the tops have a normal green colour characteristic of healthy plants. A slight discoloration of the extreme tips is not objectionable.

3.9

diameter

the greatest dimension of the shallot taken at right angles to the longitudinal axis. If the shallots are attached together only at the base (not enclosed in a single parchment-like sheath or skin) they shall be considered as separate shallots when determining size.

3.10

not badly misshapen

the shallot is not badly curved or crooked and does not show excessive bulb formation

3.11

fairly firm

the edible portion of the shallot is not more than slightly soft

3.12

fairly young and tender

the shallot is not tough, stringy, or advanced to the stage where the neck is flabby

3.13

fairly well trimmed

the shallots are separated so that not more than three are attached together; that the individual bulbs are not broken above the point of root attachment and are reasonably free from dead, discoloured, or slick outer skins. Fresh, fairly clean, loose skins which do not seriously affect the appearance of the individual shallot or the bunch are permitted. An individual plant with all the tops clipped (pinched) back shall be considered as "fairly well trimmed" provided that not more than half of the leaves have been clipped (pinched) back to less than 8 inches in length.

3.14

serious damage

any injury or defect which seriously affects the appearance, or the edible or shipping quality

3.15

fairly good green colour

the tops are pale or yellowish green or otherwise slightly discoloured

4. Provisions concerning quality

4.1 General requirements

The purpose of the standard is to define the quality requirements of shallots at the market control stage, after preparation and packaging.

4.2 Minimum requirements

4.2.1 In all classes, subject to the special provisions for each class and the tolerances allowed, the shallots must be:

- a) intact;
- b) sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded
- c) clean, practically free of any visible foreign matter
- d) free from damage due to frost
- e) sufficiently dry for the intended use (in the case of pickling onions, at least the first two outer skins and the stem must be fully dried)
- f) without hollow or tough stems
- g) practically free from pests
- h) practically free from damages caused by pests
- i) free of abnormal external moisture
- j) free of any foreign smell and/or taste. In addition the stems must be twisted or clean cut and must not exceed 6cm in length (except for stringed shallots).

4.2.2 The development and condition of the shallots must be such as to enable them:

- a) to withstand transport and handling, and
- b) to arrive in satisfactory condition at the place of destination.

4.3 Classification

The shallots are classified in two classes defined below:

4.3.1 Class I

Shallots in this class shall consist of shallots of similar varietal characteristics, which are fairly well formed, firm, young and tender, well trimmed, fairly clean, free from decay, and from damage caused by seedstems, foreign material, disease, insects, mechanical or other means. The tops shall be fresh, of good green colour, and free from damage caused by broken or bruised leaves. The shallots must be:

- firm and compact
 - unsprouted (free from externally visible shoots)
 - free from swelling caused by abnormal vegetative development
 - practically free of root tufts; however, for onions harvested before complete maturity, root tufts are allowed.
- The following defects, however, may be allowed, provided they do not affect the general appearance of the produce, the quality, the keeping quality or presentation in the package:
- a slight defect in shape
 - a slight defect in colouring
 - light staining which does not affect the last dried skin protecting the flesh, provided it does not cover more than one fifth of the bulb's surface
 - superficial cracks in, and partial absence of the outer skins, provided the flesh is protected.

4.3.2 Class II

Class II shall consist of shallots which are not badly misshapen, and which are fairly firm, fairly young and tender, fairly well trimmed, fairly clean, free from decay and from serious damage caused by seedstems, foreign material, disease, insects, mechanical or other means. The tops shall be fresh, of fairly good green colour, and free from serious damage caused by broken or bruised leaves.

The following defects may be allowed provided the shallots retain their essential characteristics as regards the quality, the keeping quality and presentation:

- defect in shape

- defect in colouring
- early evidence of externally visible shoot growth (no more than 10 per cent by number or weight by unit of presentation)
- traces due to rubbing
- slight marking caused by parasites or disease
- small healed cracks
- slight bruising, healed, unlikely to impair keeping qualities
- root tufts
- stains which do not affect the last dried skin protecting the flesh, provided they do not cover more than half the bulb's surface
- cracks in the outer skins and partial absence of over a maximum of one third of the bulb's surface, provided the flesh is not damaged.

4.3.3 Unclassified

Unclassified shall consist of shallots which are not graded in conformity with either of the foregoing classes. The term "unclassified" is not a grade within the meaning of this standard but is provided as a designation to show that no definite class has been applied to the lot.

4.4 Application of tolerances

The contents of individual containers in the lot, based on sample inspection, are subject to the following limitations; provided the averages for the entire lot are within the tolerances specified:

- a) When a tolerance is 10 percent or more, individual containers in any lot shall have not more than one and one-half times the tolerance specified, except that at least one defective and one off-size specimen may be permitted in any container.
- b) When a tolerance is less than 10 percent, individual containers in any lot shall have not more than double the tolerance specified, except that at least one defective and one off-size specimen may be permitted in any container.

5. Provisions concerning sizing

5.1 Class I

Unless otherwise specified, the overall length (roots excepted) of the shallots in this class shall not exceed 558.8 mm and the shallots shall be not less than 6.35 mm or more than 19 mm in diameter.

5.2 Class II

Unless otherwise specified, the minimum size of the shallots shall be not less than 19.05 mm in diameter.

5.3 Diameter sizes

The following terms and definitions are provided for describing the diameters of any lot:

- "Small" means less than 9.5 mm.
- "Medium" means 9.5 mm to 19 mm, inclusive.
- "Large" means over 19 mm.

6. Provisions concerning tolerances

6.1 Quality tolerances

6.1.1 Class I

In order to allow for variations, other than size, incident to proper grading and handling, not more than a total of 10 percent, by count, of the shallots in any lot may fail to meet the requirements of this grade, but not more than 5 percent shall be allowed for defects causing serious damage, including not more than 2 percent for shallots affected by decay.

6.1.2 Class II

In order to allow for variations, other than size, incident to proper grading and handling, not more than a total of

10 percent, by count, of the shallots in any lot may fail to meet the requirements of this grade, including not more than 2 percent for shallots affected by decay.

6.2 Size tolerances

6.2.1 Class I

Not more than a total of 10 percent, by count, of the shallots in any lot may fail to meet the requirements as to the specified length, minimum diameter, or maximum diameter, but not more than 5 percent shall be allowed for any one of the requirements for size.

6.2.2 Class II

Not more than a total of 10 percent, by count, of the shallots in any lot may fail to meet the requirements of the specified minimum or maximum diameter, but not more than 5 percent shall be allowed for either of the requirements for size.

7. Provisions concerning presentation

7.1 Uniformity

The contents of each package (or lot, for produce presented in bulk) must be uniform and contain only shallots of the same origin, variety, quality and size. However, sales packages, of a net weight not exceeding 3 kg, may contain mixtures of onions of different colours, provided that they are uniform in quality, and, for each colour concerned, in origin, variety and size. Bunches shall be fairly uniform in size and the shallots in the individual bunches shall also be of fairly uniform size. The weight of the bunches shall be not less than 1.8 kg per dozen bunches. The weight of the bunched shallots shall be determined after they have been wet and shaken or drained to remove excess water. The visible part of the contents of the package (or lot, for produce presented in bulk) must be representative of the entire contents.

7.2 Standard bunches

In order to allow for variations incident to proper bunching, not more than 10 percent, by count, of the bunches in any lot may fail to meet the requirements for standard bunches.

7.3 Packaging

Shallots must be packed in such a way as to protect the produce properly. The produce must be packed in such a way as to protect the produce properly. The materials used inside the package must be new¹, clean, and of a quality such as to avoid causing any external or internal damage to the produce. The use of materials, particularly of paper or stamps bearing trade specifications is allowed, provided the printing or labelling has been done with non-toxic ink or glue. Stickers individually affixed on the produce shall be such that, when removed, neither leave visible traces of glue, nor lead to skin defects. Shallots shall be packed in each container in compliance with ES 1246.

7.4 Presentation

Shallots may be presented:

- arranged in layers
- loose in a package (including bulk bins)
- transported in bulk
- in strings
- either of a certain number of shallots, in which case the strings must contain at least six shallots
- or of a certain net weight.

For stringed shallots, the characteristics of the strings in any one package (number of shallots or net weight) must be uniform.

8. Marking and labeling

¹ For the purposes of this Standard, this includes recycled material of food-grade quality.

8.1 Consumer packages

The labeling shall comply with the requirements of CES 73, and shall be legibly and indelibly marked with the following:

8.1.1 Nature of produce

If the produce is not visible from the outside, each package shall be labelled as to the name of the produce and may be labelled as to name of the variety and/or commercial type.

8.2 Non-retail containers

Each package² must bear the following particulars in letters grouped on the same side, legibly and indelibly marked, and visible from the outside: For onions transported in bulk (direct loading into a transport vehicle) these particulars must appear on a document accompanying the goods, and attached in a visible position inside the transport vehicle.

8.2.1 Identification

The exporter, packer and/or dispatcher shall be identified by name and physical address (e.g. street/city/region/postal code and, if different from the country of origin, the country) or a code mark officially recognized by the national authority³.

8.2.2 Nature of produce

- "Shallots" if the contents are not visible from the outside.
- In the case of sales packages containing a mixture of different colours of shallots:
- Mixed shallots' or equivalent denomination,
- If the contents are not visible from the outside, the indication of each of the colours present in the package and of the minimum number of pieces of each of the colours concerned.

8.2.3 Origin of produce

- Country of origin and, optionally, national, regional or local place name.
- In the case of sales packages containing a mixture of shallots of different colours and different origins, the indication of each country of origin shall appear next to the name of the colour concerned.

8.2.4 Commercial specifications

- Class
- Size expressed by minimum and maximum diameters
- Net weight.

8.2.5 Official control mark (optional)

9. Contaminants

Onions shall comply with those maximum levels for heavy metals and pesticide residue established by the Codex Alimentarius Commission (CODEX STAN 193) for this commodity.

10. Hygiene

10.1 It is recommended that the produce covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of ES 577, ES 929, and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.

10.2 The produce should comply with any microbiological criteria established in accordance with ES ISO 4833.

²Package units of produce prepacked for direct sale to the consumer shall not be subject to these marking provisions but shall conform to the national requirements. However, the markings referred to shall in any event be shown on the transport packaging containing such package units.

³The national legislation of a number of countries requires the explicit declaration of the name and address. However, in the case where a code mark is used, the reference "packer and/or dispatcher (or equivalent abbreviations)" has to be indicated in close connection with the code mark, and the code mark should be preceded by the ISO 3166 (alpha) country/area code of the recognizing country, if not the country of origin.

Organization and Objectives

The Ethiopian Standards Agency (ESA) is the national standards body of Ethiopia established in 2010 based on regulation No. 193/2010. ESA is established due to the restructuring of Quality and Standards Authority of Ethiopia (QSAE) which was established in 1998.

ESA's objectives are:-

- ❖ Develop Ethiopian standards and establish a system that enable to check whether goods and services are in compliance with the required standards,
- ❖ Facilitate the country's technology transfer through the use of standards,
- ❖ Develop national standards for local products and services so as to make them competitive in the international market.

Ethiopian Standards

The Ethiopian Standards are developed by national technical committees which are composed of different stakeholders consisting of educational Institutions, research institutes, government organizations, certification, inspection, and testing organizations, regulatory bodies, consumer association etc. The requirements and/or recommendations contained in Ethiopian Standards are consensus based that reflects the interest of the TC representatives and also of comments received from the public and other sources. Ethiopian Standards are approved by the National Standardization Council and are kept under continuous review after publication and updated regularly to take account of latest scientific and technological changes. Orders for all Ethiopian Standards, International Standard and ASTM standards, including electronic versions, should be addressed to the Documentation and Publication Team at the Head office and Branch (Liaisons) offices. A catalogue of Ethiopian Standards is also available freely and can be accessed from our website.

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International Involvement

ESA, representing Ethiopia, is a member of the International Organization for Standardization (ISO), and Codex Alimentarius Commission (CODEX). It also maintains close working relations with the International Electro-technical Commission (IEC) and American Society for Testing and Materials (ASTM). It is a founding member of the African Regional Organization for standardization (ARSO).

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