
Fresh banana — Specification



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This second edition cancels and replaces the first edition (ARS 831:2018), which has been technically revised.

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ARSO Central Secretariat
International House 3rd Floor
P. O. Box 57363 — 00200 City Square
NAIROBI, KENYA

Tel. +254-20-2224561, +254-20-3311641, +254-20-3311608

E-mail: arso@arso-oran.org

Web: www.arso-oran.org

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ARSO Central Secretariat
International House 3rd Floor
P.O. Box 57363 — 00200 City Square
NAIROBI, KENYA

Tel: +254-20-2224561, +254-20-3311641, +254-20-3311608

E-mail: arso@arso-oran.org
Web: www.arso-oran.org

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Introduction

The leaves are eaten as vegetables, raw or cooked, preferably blanched. Roots and flowers are edible as well. Taproot, leaves, and flowers of dandelions are nutritious and high in vitamins A and C, and niacin. The root yields a bitter resin with medical properties. Dried and ground roots are used in decaffeinated coffee type beverages, as a flavouring in coffee, cacao, and salads. Tender leaves are often made into salads or soups. Flowers are used to make dandelion wine.

Fresh banana — Specification

1 Scope

This Draft African Standard specifies the requirements of Banana varieties (cultivars) grown from *Musa spp.* (AAA), of the Musaceae family, entering the domestic and international trade in the fresh and natural state. Bananas for industrial processing are excluded

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.

CAC/RCP 1, *Recommended International Code of Practice — General Principles of Food Hygiene*

CAC/RCP 44, *Recommended International Code of Practice for the Packaging and Transport of Tropical Fresh Fruit and Vegetables*

CAC/RCP 53, *Code of Hygienic Practice for Fresh Fruits, and Vegetables*

ARS 53, *General principles of food hygiene — Code of practice*

ARS 56, *Prepackaged foods — Labelling*

CODEX STAN 193:1995 (Rev.5:2009), *General Standard for Contaminants and Toxins in Foods*

ISO 874, *Fresh fruits, and vegetables — Sampling*

ISO 2173, *Fruit, and vegetable products — Determination of soluble solids content — Refractometric method*

3 Terms and definitions

For the purpose of this standard the following definitions apply.

3.1 clean

the banana fruit is practically free from dirt, dust, or other foreign material.

3.2 correct length

outer whorl fingers adjacent to cut side of the cluster, measurement of pulp from end to the base of pedicel on outer curve of the finger, found to be less or more than that specified based on market requirements.

3.3 damage

any defect that materially affects the appearance, or the edible or shipping quality of the bananas.

3.4 disease

any defect or combination of defects caused by micro-organisms.

3.5 finger end rot

abnormal constriction at the blossom-end and blackening of the pulp when split open.

3.6 firm

the banana is not soft or shrivelled.

3.7 fresh

clusters showing coloured crowns or pedicels or fruits which are not dehydrated.

3.8 fused fingers

two or more fingers joined together.

3.9 malformed finger

a unit or fingers on a cluster which do not conform to the general physical characteristics of the banana.

3.10 sound

banana not affected by rot or deterioration such as to make it unfit for consumption.

4 Provisions concerning quality

4.1 Minimum requirements

4.1.1 For all classes of banana, the minimum requirements shall be:

- a) whole (taking the finger as the reference);
- b) firm;
- c) fresh in appearance, not affected by rot;
- d) sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;
- e) clean; practically free from any visible foreign matter;
- f) practically free from pests (dead or alive);
- g) practically free from pests physical and physiological damage;

- h) free of malformation or abnormal curvature of the fingers;
- i) free from marked bruising;
- j) free from damage caused by low temperature;
- k) free of abnormal external moisture,
- l) free of any foreign smell and/or taste;
- m) of the correct length;
- n) free from fused fingers;
- o) with pistils removed;
- p) with intact stalk, without bending, fungal damage or desiccation; and
- q) free from finger end rot

In addition, hands and clusters shall include:

- a) a sufficient portion of the crown of normal colouring (green or yellow), sound and free of rot
- b) a cleanly cut crown, not bevelled or torn, with no stalk fragments.

4.1.2 The development and condition of the banana shall be such as to enable them:

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

4.2 Maturity requirements

The development and condition of bananas shall be such as to reach the appropriate state of physiological maturity corresponding to the particular variety. The development and condition shall enable the bananas withstand transport and handling and arrive in satisfactory condition at its destination to ripen satisfactorily.

4.3 Classification

In addition to the minimum requirements stated in Clause 4.1, bananas shall be classified as follows:

4.3.1 Extra Class

Bananas in this class shall be of superior quality. They shall be characteristic of the variety. The fingers shall be free of defects, except for very slight superficial defects provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package.

4.3.2 Class I

Bananas in this class shall be of good quality. They shall be characteristic of the variety and/or commercial type,

The following slight defects of the fingers, however, may be allowed, provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package:

- a) slight defects in shape and colour

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- b) slight defects of the skin due to rubbing and other superficial defects not exceeding 2 cm² of the total surface
- c) The defects shall not, in any case, affect the flesh of the fruit.

4.3.3 Class II

This class includes bananas which do not qualify for inclusion in the higher classes, but satisfy the minimum requirements specified in Clause 4.1.

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

- a) defects in shape and colour provided the produce retains the normal characteristics of banana.
- b) skin defects due to rubbing, scraping, blemishes or other causes not exceeding 4 cm² of the total surface area.
- c) The defects shall not, in any case, affect the flesh of the fruit.

5 Sizing

For the purposes of sizing banana of the Gross Michel and Cavendish sub-groups, the length of the finger is determined along the outside curve from the blossom end to the base of the pedicel where the edible pulp ends, and the diameter is defined as the thickness of the transverse section of the midpoint of the finger. The reference fruit for measurement of length and diameter is:

- a) for hands, the median finger on the outer row of the hand
- b) for clusters, the finger next to the cut section of the hand, on the outer row of the cluster

The minimum length should not be less than 14.0 cm and the minimum diameter not less than 2.7 cm. For other varieties, the length and diameter should be characteristic of the variety or commercial type.

5.1 Fruit Selection Method for Measurement of the Length and Diameter:

In case of hand, a single fruit, or any finger of a couple at the middle of the hand, on the outer row of the cluster is selected.

In case of cluster, a single fruit next to the cut section of the hand, on the outer row of the cluster, is selected. If the cluster has 2 cuts, take the average of the fingers next to the cuts, on the outer row.

5.2 Method for size measurement

- a) The length is determined along the outside curve from the blossom end to the base of the pedicel.
- b) The diameter is defined at the widest part of the finger.
- c) The weight is calculated as the weight of the hand divided by the number of fingers.

6 Tolerances

Tolerances in respect of quality and size shall be allowed in each lot for produce not satisfying the requirements of the class indicated.

6.1 Quality tolerances

6.1.1 "Extra Class"

A total tolerance of 5 per cent, by number or weight, of bananas not satisfying the requirements of the class but meeting those of Class I or exceptionally, coming within the tolerances of that class.

6.1.2 Class I

A total tolerance of 10 per cent, by number or weight, of bananas not satisfying the requirements of the class but meeting those of Class II is allowed.

6.1.3 Class II

A total tolerance of 10 per cent, by number or weight, of bananas satisfying neither the requirements of the class nor the minimum requirements, except for produce affected by rot, marked bruising or any other deterioration rendering it unfit for consumption.

6.2 Size tolerances

For all classes: a total tolerance of 10 per cent, by number or weight, of bananas corresponding to the size immediately above or below that indicated on the package.

7 Presentation

7.1 Uniformity

The contents of each package shall be uniform and contain only bananas of the same origin, variety, quality, and size.

The visible part of the contents of the package shall be representative of the entire contents.

7.2 Presentation

7.2.1 Banana may be presented in hands and clusters; they may also be presented as single fingers.

7.2.2 – Clusters with no more than one missing finger are allowed, provided the crown is not torn but cleanly cut, without damage to the neighbouring fingers.

7.2.3 Not more than one cluster of three fingers with the same characteristics as the other fruits in the package may be presented per row.

7.3 Packaging

7.3.1 Banana shall be packed in such a way as to protect the produce properly.

7.3.2 The materials used inside the package shall be new¹, clean, and of a quality such as to avoid causing any external or internal damage to the produce.

7.3.3 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.

7.3.4 Banana shall be packed in each container in compliance with CAC/RCP 44.

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

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7.3.5 Stickers individually affixed to the produce shall be such that, when removed, they neither leave visible traces of glue nor lead to skin defects. Information lasered on single fruit should not lead to flesh or skin defects.

7.3.6 Packages (or lot for produce presented in bulk) shall be free of all foreign matter.

8 Contaminants

8.1 Heavy metals

Banana shall comply with those maximum levels for heavy metals established by the Codex Alimentarius Commission for this commodity. (CXS 193)

8.2 Pesticide residues

Banana shall comply with those maximum pesticide residue limits established by the Codex Alimentarius Commission for this commodity.

9 Hygiene

It is recommended that the produce covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of ARS 53, CXS 1, CXS 53, and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.

10 Labelling

10.1 Consumer packages

In addition to the requirements of ARS 56, the following specific provisions apply:

10.1.1 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.

10.2 Non-retail containers

Each package² shall bear the following particulars, in letters grouped on the same side, legibly and indelibly marked, and visible from the outside, or in the documents accompanying the shipment. For produce transported in bulk these particulars shall appear on a document accompanying the goods.

10.2.1 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 authority.³

² Package 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.

³ The national legislation of some 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)" shall 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.

10.2.2 Nature of the produce

- "Banana " if the contents are not visible from the outside.
- Name of the variety.

10.2.3 Origin of the produce

Country of origin

10.2.4 Commercial specifications

- a) Class
- b) Size expressed as minimum and maximum weight.
- c) Size code (optional)
- d) Number of fruits.

10.2.5 Official control mark (optional)

11 Methods of sampling

Sampling shall be done in accordance with ISO 874

Bibliography

GS 977: 2016, *Fresh fruits, and vegetables – Specification for fresh banana*, 2nd Edition,

