



## **DRAFT EAST AFRICAN STANDARD**

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**Fresh sweet banana — Specification**

**EAST AFRICAN COMMUNITY**

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## Foreword

Development of the East African Standards has been necessitated by the need for harmonizing requirements governing quality of products and services in the East African Community. It is envisaged that through harmonized standardization, trade barriers that are encountered when goods and services are exchanged within the Community will be removed.

In order to achieve this objective, the Community established an East African Standards Committee mandated to develop and issue East African Standards.

The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the private sectors and consumer organizations. Draft East African Standards are circulated to stakeholders through the National Standards Bodies in the Partner States. The comments received are discussed and incorporated before finalization of standards, in accordance with the procedures of the Community.

East African Standards are subject to review, to keep pace with technological advances. Users of the East African Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

DEAS ... was prepared by Technical Committee EASC/TC 016 *Horticulture*



## Fresh sweet banana — Specification

### 1 Scope

This Draft East Africa Standard specifies the requirements and methods of sampling for fresh sweet banana, of *Musa* spp, of the family *Musaceae*; in an unripe or ripe state, to be supplied to the consumer. Bananas intended for cooking only (plantains and East Africa highland banana) or industrial processing are excluded.

NOTE The commonly grown commercial varieties of sweet bananas are stated in Annex A.

### 2 Normative references

The following referenced documents are indispensable for the application for this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies;

ISO 874, Fresh fruits and vegetables – Sampling

EAS 38, Packaging, marking and labeling of foods

CAC/RCP 53-2003 Code of Hygienic Practice for Fresh Fruits and Vegetables

ISO 7558:1988, Guide to the prepackaging of fresh fruits and vegetables

ISO 6633:1984 Fruits, vegetables and derived products -- Determination of lead content -- Flameless atomic absorption spectrometric method

ISO 17240:2004 Fruit and vegetable products -- Determination of tin content -- Method using flame atomic absorption spectrometry

ISO 7952:1994 Fruits, vegetables and derived products -- Determination of copper content -- Method using flame atomic absorption spectrometry

ISO 6636-2:1981 Fruits, vegetables and derived products -- Determination of zinc content -- Part 2: Atomic absorption spectrometric method

ISO 17239:2004 Fruits, vegetables and derived products -- Determination of arsenic content -- Method using hydride generation atomic absorption spectrometry

### 3 Terms and definitions

For the purpose of this standard the following definitions shall apply:

#### 3.1 fresh sweet banana

The mature fruit, being light green or red/purple when unripe, marketed before and/or after ripening for consumption.

#### 3.2 plantain

cooking banana; distinctly recognized for its higher level of starch content; commonly marketed while green in colour; normally not considered to be suitable for dessert even when ripened

### **3.3 East Africa highland banana**

cooking banana; recognized for its low level of starch content; commonly marketed while green or yellow in colour; normally not considered to be suitable for dessert even when ripened.

### **3.4 physiological maturity**

The stage when the fruit reaches its largest diameter.

### **3.5 cluster**

A group of attached bananas from a split hand

### **3.6 hand**

Group of bananas fingers attached to one piece of peduncle

### **3.7 finger**

Means single banana.

### **3.8 sound**

Not overripe, not soft and free from diseases or insect damage, or bruising or physical injuries affecting keeping quality of the fruit.

### **3.9**

Food grade packaging material

Any material which when it comes in contact with food or if the area near food is unlikely to contaminate food with harmful materials

### **3.10**

#### **firm**

not soft, flabby, or shriveled

## **4 Requirements**

### **4.1 General requirements**

Banana in all classes shall meet the following minimum requirements.

- (a) Whole (taking the finger as the reference).
- (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) Practically free of pests affecting the general appearance of the produce.
- (e) Practically free of damage caused by pests.
- (f) Free of abnormal external moisture, excluding condensation following removal from cold storage and banana packed under modified atmosphere conditions.
- (g) Free of any foreign smell and/or taste
- (h) Firm.
- (i) Free of damage caused by low temperatures.
- (j) Practically free of bruises.

- (k) Free of malformation or abnormal curvature of the fingers.
- (l) With pistil removed
- (k) With the stalk intact, without bending, fungal damage or desiccation.

In addition, hands/clusters must include;

- (i) A sufficient portion of the crown of normal colouring, sound and free of fungal contamination; and
- (ii) A cleanly cut stalk, not beveled or torn, with no stalk fragments.

**4.1.2** The development and condition of the bananas shall be such that enable them to:

- (a) reach the appropriate stage of physiological maturity corresponding to the particular characteristics of the variety, and
- (b) arrive in a satisfactory condition at the place of destination in order to ripen satisfactorily.

## **4.2 Specific requirements**

### **4.2.1 Classification**

Bananas are classified in three classes; Extra class, Class I and Class II:

#### **4.2.1.1 "Extra" Class**

Bananas in this class shall be of superior quality. They shall have the characteristics typical of the variety and/or commercial type. The fingers shall be free of defects, with the exception of very slight superficial defects, provided these do not affect the general appearance of the produce, the quality and presentation in the package.

#### **4.2.1.2 Class I**

Banana in this class shall be of good quality. They shall be characteristic of the variety. The following slight defects of the fingers, may however be allowed provided these do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package:

- i) Slight defect in shape and colour
- ii) Slight skin defects due to rubbing and other superficial defects not exceeding 2 cm<sup>2</sup> of the total surface area.
- iii) The defects shall not, in any case, affect the flesh of the fruit.

#### **4.2.1.3 Class II**

This class covers banana which do not qualify for inclusion in the Extra class or Class I but satisfy the minimum requirements specified in clause 4.1. The following defects, however, may be allowed provided the banana retains their essential characteristics as regards the quality, the keeping quality and presentation.

- a) Defects in shape and colour, provided the product retains the normal characteristics of the banana
- b) Skin defects due to scraping, scabs, rubbing, blemishes or other causes not exceeding 4 cm<sup>2</sup> of the total surface area.

The defects shall not, in any case, affect the flesh of the fruit.

### **4.2.2 Size requirements**



#### 4.2.2.1 Sizing is determined by:

- a) The length of the edible pulp of the fruit, expressed in centimeters and measured along the convex face from the blossom end to the base of the peduncle
- b) The grade (girth), i.e. the measurement, in centimeter of the thickness of a transverse section of the fruit between the lateral faces and the middle, perpendicularly to the longitudinal axis.

#### 4.2.2.2 The reference fruit for measurement of the length and grade 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 permitted is 14 cm with exception to apple banana and the minimum diameter permitted is 2.7 cm. (see 4.2.2.1(b))

## 5 Tolerances

### 5.1 Quality tolerances

**5.1.1 Extra class** – Five percent by number or weight of banana not satisfying the requirements of the class, but meeting those of class 1 or, exceptionally coming within the tolerances of that class.

**5.1.2 Class 1** - 10% by number or weight of banana not satisfying the requirements of class 1 but meeting those of class II, or, exceptionally, coming within the tolerance for class.

**5.1.3 Class II** -10% by number or weight of bananas satisfying neither the requirements for class I nor the minimum requirements, with the exception of produce affected by rotting or any other deterioration rendering it unfit for consumption.

### 5.2 Size tolerances

For all classes: 10 per cent by weight of carrots not satisfying the requirements as regards sizing. The roots may fall below the minimum size or exceed the maximum permissible difference for the class.

### 5.3 Presentation tolerances

- a) The banana shall be presented in hands and clusters (parts of hands) of at least four fingers. Bananas may also be presented as single fingers
- b) Clusters with no more than two missing fingers are allowed, provided the stalk is not torn but cleanly cut, without damage to the neighbouring fingers.
- c) Not more than one cluster of three fingers with the same characteristics as the other fruit in the package may be present per row.

## **6 Contaminants**

### **6.1 Pesticide residues**

Banana shall comply with those maximum residue limits established by the Codex Committee on Pesticide Residues for this commodity.

### **6.2 Metal contaminants**

When tested in accordance with ISO 6633, the Lead content in fresh avocado shall not exceed 0.1 mg/kg.

## **7 Hygiene**

It is recommended that the produce covered by the provisions of this standard be prepared and handled in accordance with CAC/RCP 53-2003.

## **8 Packaging**

**8.1** Banana shall be packed in such a way as to protect the produce properly. The food grade packaging material used inside the package shall be 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. Packages must be free from any foreign matter and the material shall be recyclable.

**8.2** Bananas shall also be packed in containers in accordance with ISO 7558.

**8.3** The contents of each package shall be uniform and consist exclusively of bananas of the same origin, variety and/or commercial type, and quality. The visible part of the content of the package must be representation of the entire contents.

## **9 Labelling**

In addition to the requirements of the EAS 38, the following specific provisions apply for each package; legibly and indelibly marked.

- i) Name, postal and physical address of the packer or dispatcher.
- ii) Name of the produce (banana) as "Fresh sweet banana"; including variety or commercial type.
- iii) Origin of the produce – Name of the producing country, region and district or where grown.  
Harvest date
- iv) Commercial specification i.e. banana in fingers (when appropriate), class and expressed as minimum length and maximum grade.
- v) Net weight (kg).
- vi) Identification code and/or batch number.
- vii) storage instructions

## **10 Sampling**

Representative samples of the banana shall be drawn as prescribed in ISO 874.

## **Annex A (informative) Varieties**

The following are the commonly grown commercial varieties of banana.

- i. Dwarf Cavendish
- ii. Giant Cavendish
- iii. Grand naine
- iv. Paz (Pazi)
- v. Robusta (Robusta)
- vi. Gros Michel/Jamaica
- vii. Williams
- viii. Silk/ Apple banana
- ix. FHIA

## Bibliography

CODEX STAN 205-1997 AMD 1:2005, *Codex standard for bananas*

DEAS 892:2016



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