

CODEX ALIMENTARIUS

INTERNATIONAL FOOD STANDARDS



Food and Agriculture
Organization of
the United Nations



World Health
Organization

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STANDARD FOR YAM

CXS 340-2020

Adopted in 2020.

1. SCOPE

The purpose of the Standard is to define the quality requirements for yam after preparation and packaging. When applied at stages following packaging, products may show in relation to the requirements of the Standard:

- a slight lack of freshness and turgidity;
- a slight deterioration due to their development and their tendency to perish.

The holder/seller of the product may not display such product or offer it for sale or deliver or market it in any manner other than in conformity with this Standard. The holder/seller shall be responsible for observing such conformity.

2. DEFINITION OF PRODUCE

This Standard applies to tubers from commercial varieties of yam of the Dioscoreaceae family obtained from the species *Dioscorea rotundata*, *D. cayenensis*, *D. alata*, *D. esculenta* and *D. trifida*, to be supplied fresh to the consumer. Yams intended for industrial processing are excluded.

The skin colour of yams ranges from off-white to brown and dark brown. The flesh colour of yams can be off-white, yellow, pink or purple. Some large yam tubers are also known to vary in colour between the head and the tail.

3. PROVISIONS CONCERNING QUALITY

3.1 Minimum Requirements

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

- Whole or transversely cut pieces provided that the cut surface is sufficiently cured;
- sound; produce affected by rotting or deterioration such as to make it unfit for consumption should be excluded;
- firm;
- clean, practically free of any visible foreign matter, excluding coconut fiber, saw dust and other materials used for protective packaging;
- practically free from pests¹;
- practically free from damages caused by pests;
- free from abnormal external moisture, excluding condensation following removal from cold storage;
- free from any foreign smell and/or taste;
- free from damage caused by low or high temperature;
- practically free from sprouting;

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

- to withstand transportation and handling; and
- to arrive in satisfactory condition at the place of destination.

3.1.1 Minimum Maturity Requirements

The yams must have reached an appropriate degree of development and/or maturity in accordance with the characteristics of the species, the time of harvesting/picking, and the area in which they are grown.

¹ The provisions for pests apply without prejudice to the applicable plant protection rules applied by governments in line with the International Plant Protection Convention (IPPC).

3.2 Classification

The yams are classified into three classes defined below:

3.2.1 "Extra" Class

Yams in this class must be of superior quality and with the characteristics of the variety and/or commercial type. They must be free from defects, with the exception of 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.

- Non-transversal cuts or surfaces and/or scars, as long as they do not exceed 5% of the surface of the product;
- Very slight defects in shape.

3.2.2 Class I

Yams in this class must be of good quality. They must be characteristic of the variety and/or commercial type.

The following slight defects, 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:

- Non-transversal cuts or surfaces and/or scars, as long as they do not exceed 10% of the surface of the product;
- A slight defect in shape.

The defects must not, in any case, affect the pulp of yams.

3.2.3 Class II

This class includes yams that do not qualify for inclusion in the higher classes but satisfy the minimum requirements specified in section 3.1 above.

The following defects may be allowed provided that the yam retains its essential characteristics as regards the quality, the keeping quality and presentation in the package:

- Non-transversal cuts or surfaces and/or scars, as long as they do not exceed 15% of the surface of the product;
- defects in shape.

The defects must not, in any case, affect the pulp of yams.

4. PROVISIONS CONCERNING SIZING

Yam may be sized by weight or in accordance with existing trade practices. When sized in accordance with existing trade practices, the package must be labelled with the size and method used.

When sized by weight, size is based on the individual weight of each tuber or a weight range per package.

The following table is a guide and may be used on an optional basis:

| Size Code | Weight (range in Kg) |
|-----------|----------------------|
| A | >6 |
| B | >4-6 |
| C | >2.5-4 |
| D | >1.5-2.5 |
| E | >1.0-1.5 |
| F | >0.75-1 |
| G | >0.5-0.75 |
| H | >0.25-0.5 |
| I | >0.1-0.25 |
| J | 0.05-0.1 |

5. PROVISIONS CONCERNING TOLERANCES

5.1 Quality Tolerances

At all marketing stages, tolerances in respect of quality and size shall be allowed in each lot for produce not satisfying the requirements of the class indicated. Produce that fail conformity assessment, may be allowed to be re-sorted and brought into conformity in accordance with the relevant provisions in the *Guidelines for Food Import Control Systems* (CXG 47-2003).

5.1.1 "Extra" Class

Five per cent, by number or weight, of yams not satisfying the requirements of this class but meeting the requirements of Class I. Included therein, is 1% tolerance for decay, soft rot and/or internal breakdown. And 1% of dirt and impurities.

5.1.2 Class I

Ten percent by number or weight of yams not satisfying the requirements of this class, but meeting those of class II. Included therein, is 2% tolerance for decay, soft rot and/or internal breakdown. And 1% of dirt and impurities.

5.1.3 Class II

Ten per cent by number or weight, of yams not satisfying the requirements of this class. Included therein, is 2% tolerance for decay, soft rot and/or internal breakdown. And 1% of dirt and impurities.

5.2 Size Tolerances

For all classes, if sized, 10-0% by number or weight of yams not satisfying the requirements with regard to the size indicated.

6. PROVISIONS CONCERNING PRESENTATION

6.1 Uniformity

The contents of each package shall be uniform and contain only yams of the same origin, variety or commercial type, quality and size.

However, a mixture of yam of distinctly different colours may be packed together in a package, provided they are uniform in quality and for each colour concerned in origin.

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

6.2 Packaging

Yams must be packed in such a way as to protect the produce. The materials used inside the package must be of food-grade quality, 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.

Yams shall be packed in each package in compliance with the *Code of Practice for Packaging and Transport of Fresh Fruits and Vegetables* (CXC 44-1995).

6.2.1 Description of Containers

The containers shall meet the quality, hygiene, ventilation and resistance characteristics necessary to ensure suitable handling, shipping and preserving of the yams.

Packages must be free of any foreign matter and smell.

7. PROVISIONS CONCERNING MARKING OR LABELLING

7.1 Consumer Packages

In addition to the requirements of the *General Standard for the Labelling of Prepackaged Foods* (CXS 1-1985), the following specific provisions apply:

7.1.1 Name of Produce

Each package shall be labelled as to the name of the produce "yam" and may be labelled as to the name of the variety(ies), and/or commercial type.

7.1.2 **Origin of Produce**

Country of origin² and, optionally, district where grown, or national, regional or local place name.

In the case of a mixture of distinctly different varieties of yams of different origins, the indication of the country of origin shall appear next to the name of the variety.

7.2 **Non-Retail Containers**

Each package must bear the following particulars in letters grouped on the same side, legibly and indelibly marked, and visible from the outside.

For yams 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 unless the document is replaced by an electronic solution. In that case the identification must be machine readable and easily accessible.

7.2.1 **Identification**

Name and address of exporter, packer and / or dispatcher. Identification code (optional)³.

7.2.2 **Name of Produce**

Name of the produce.

Name of variety and/or commercial type.

7.2.3 **Origin of Produce**

Country of origin and, optionally, district where grown, or national, regional or local place name.

In the case of a mixture of distinctly different varieties or species of yams of different origins, the indication of each country of origin shall appear next to the name of the variety or species concerned.

7.2.4 **Commercial Specifications**

- Class;
- Size expressed as
 - size range in Kg or,
 - size code in accordance with the table in Section 4 or,
 - in accordance with the method used;
- Cooking type (optional)

7.2.5 **Official Inspection Mark (optional)**

8. **CONTAMINANTS**

8.1 The produce covered by this Standard shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission.

8.2 The produce covered by this Standard shall comply with the maximum levels of the *General Standard for Contaminants and Toxins in Food and Feed* (CXS 193-1995).

9. **HYGIENE**

9.1 It is recommended that the produce covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the *General Principles of Food Hygiene* (CXC 1-1969), *Code of Hygienic Practice for Fresh Fruits and Vegetables* (CXC 53-2003), and other relevant Codex texts such as codes of hygienic practice and codes of practice.

9.2 The produce should comply with any microbiological criteria established in accordance with the *Principles and Guidelines for the Establishment and Application of Microbiological Criteria related to Foods* (CXG 21-1997).

² The full or commonly used name should be indicated.

³ The national legislation of some countries requires an explicit declaration of name and address. However, in the case where a code mark is used, the reference to the "packer and/or dispatcher" (or equivalent abbreviations) has to be indicated in close connection with the code mark.