



## **BAHAMAS NATIONAL STANDARD**

### **SPECIFICATION FOR GRADES OF FRESH AGRICULTURAL PRODUCE**

#### **PART 6: ORANGES**

#### **BNS CRS 24: PART 6: 2010**

Bahamas Bureau of Standards & Quality (BBSQ)  
Verizon Business Park, 1000 Bacardi Road  
P.O. Box N- 4843, Nassau, New Providence, Bahamas  
Tel: (242) 362-1748 thru 56  
Fax: (242) 362-9172  
Email: [standards@bbsq.bs](mailto:standards@bbsq.bs)  
Website: [www.bbsq.bs](http://www.bbsq.bs)



Website: [www.bbsq.bs](http://www.bbsq.bs)

© BBSQ – All rights reserved. No part of this publication is to be reproduced without the prior written consent of BBSQ.

**ISBN**

## **Notice**

Standards are subjected to periodic review.

The next amendment will be sent without charge if you return the self-addressed label. If we do not receive this label we have no record that you wish to be kept up-to-date. Please note amendments are not exclusive of a revision of the document.

Our address:

**Bahamas Bureau of Standards and Quality (BBSQ)**

Verizon Business Park

1000 Bacardi Road

P.O. Box N-4843

Nassau, New Providence

Bahamas

..... ( cut along the perforated line ) .....

BNS CRS 24: PART 6: 2010

Name: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Company/Designation:

\_\_\_\_\_

\_\_\_\_\_

Address:

---

---

**AMENDMENTS ISSUED SINCE PUBLICATION**

| AMENDMENT<br>NO. | DATE OF ISSUE | TYPE OF<br>AMENDMENT | NO. OF TEXT<br>AFFECTED | TEXT OF<br>AMENDMENT |
|------------------|---------------|----------------------|-------------------------|----------------------|
|                  |               |                      |                         |                      |
|                  |               |                      |                         |                      |
|                  |               |                      |                         |                      |
|                  |               |                      |                         |                      |

## **BBSQ Foreword**

This draft national standard is identical to Caribbean Regional Organisation of Standards and Quality CRS 24: PART 6: 2010. The national committee responsible for reviewing this standard is Technical Committee 15 Food and Food Products. The standard contains the requirements relevant for The Bahamas.

## **BBSQ Committee Representation**

This Bahamas National Standard was adopted as a national standard under the supervision of the National Technical Committee for Food and Food Products (NTC 15) hosted by The Bahamas Bureau of Standards and Quality which at the time comprised of the following members:

| <b>Member</b>             | <b>Representing</b>                                |
|---------------------------|----------------------------------------------------|
| Dr. Patricia Johnson      | Bahamas Food Safety Authority                      |
| Ms. Shania Smith          | Department of Environmental Health Services        |
| Ms. Destinae Munroe       | Department of Environmental Health Services        |
| Ms. Kristen Brochu        | University of the Bahamas                          |
| Ms. Kellie Rolle          | Bahamas Food Safety Authority                      |
| Mr. Kimball Stubbs        | Bahamas Food Safety Authority                      |
| Mr. Robert Butler         | Ministry of Education                              |
| Ms. Raquel Turnquest      | Bahamas Department of Education                    |
| Ms. Theresa Dorsett       | Office of the Auditor General                      |
| Ms. Mona Nixon            | Bahamas Agricultural and Industrial Corporation    |
| Mr. Joshua Symonette      | Independent                                        |
| Ms. Sheri Fountain        | The Bahamas Agriculture Marine Science Institution |
| Ms. Yvette R. Charlton    | Presidential Suites                                |
| Ms. Marissa Stubbs        | Consumer                                           |
| Ms. Micah Carey           | Quiose Wines                                       |
| Ms. Sharmaine Smith-Farah | Bahamas Ministry of Tourism Investments & Aviation |
| Ms. Felistar Butler       | Bahamas Food Safety Authority                      |

|                              |                                                         |
|------------------------------|---------------------------------------------------------|
| Ms. Shandera Smith           | Ministry of Health & Wellness                           |
| Ms. Lathera Lotmore-McKenzie | Ministry of Health & Wellness                           |
| Ms. Patrice Adderley         | We Buy Sell                                             |
| Ms. Tamara Munroe            | Independent                                             |
| Mr. Peter Bethell            | Police                                                  |
| Mr. Owen Coakley             | Princess Margaret Hospital                              |
| Ms. Camelta Barnes           | Ministry of Health and Wellness                         |
| Ms. Michelle Bowleg          | Cryshelle's tasty tingz & Cryshelle's Infused Drinks    |
| Mr. Tony Smith               | Andros Crab Farm                                        |
| Ms. Charo Morley             | Bahamas Chamber of Commerce                             |
| Ms. Tonjia Burrows           | Bahamas Agricultural and Industrial Corporation         |
| Ms. Kimberly Trowers         | Bahamas Agricultural Health & Food Safety Authority     |
| Ms. Melvern E. Symonette     | Public Hospitals Authority – Princess Margaret Hospital |
| Ms. Camille Stephen          | Princess Margaret Hospital                              |
| Ms. Joyanne Thompson         | University of The Bahamas                               |
| Mr. Owen Coakley             | Princess Margaret Hospital                              |
| Ms. Denise Worrell           | Naturally Bahamian                                      |
| Mr. Long Water               | Long Bay Enterprises T/A Out Island Water Company       |
| Mr. Andre Newbold            | Royal Bahamas Defense Force                             |
| Officer Ingraham             | Royal Bahamas Defense Force                             |
| Mr. Troy Smith               | Andros Crab Forum                                       |
| Ms. Ethuce Cooper            | Ministry of Social Services                             |
| Dr. Cherita Moxey            | Ministry of Health and Wellness                         |
| Ms. Nastazia Hepburn         | Ministry of Health and Wellness                         |
| Mr. Delmon Rolle             | Ministry of Agriculture                                 |
| Ms. Tiara Stubbs             | Ministry of Finance                                     |
| Ms. Avis Richardson          | Food Safety Testing Laboratory                          |
| Mr. Elvis Bullard            | Royal Bahamas Defense Force                             |

FOR REVIEW ONLY



## **CARICOM REGIONAL STANDARD**

### **SPECIFICATION FOR GRADES OF FRESH AGRICULTURAL PRODUCE**

#### **PART 6: ORANGES**

#### **CRS 24: PART 6: 2010**

**CARICOM Regional Organisation for Standards and Quality, CROSQ**

2<sup>ND</sup> Floor Nicholas House

29 & 30 Broad Street

Bridgetown, St Michael

Barbados

Telephone: 246-622-7677

Fax: 246-622-6778

Email: [crosq.caricom@crosq.org](mailto:crosq.caricom@crosq.org)

Website: <http://www.crosq.org>

© CROSQ – All rights reserved. No part of this publication is to be reproduced without the prior written consent of CROSQ.

**AMENDMENTS ISSUED SINCE PUBLICATION**

| <b>AMENDMENT<br/>NO.</b> | <b>DATE OF<br/>ISSUE</b> | <b>TYPE OF<br/>AMENDMENT</b> | <b>NO. OF TEXT<br/>AFFECTED</b> | <b>TEXT OF<br/>AMENDMENT</b> |
|--------------------------|--------------------------|------------------------------|---------------------------------|------------------------------|
|                          |                          |                              |                                 |                              |
|                          |                          |                              |                                 |                              |
|                          |                          |                              |                                 |                              |
|                          |                          |                              |                                 |                              |

FOR REVIEW ONLY



ATTACHMENT PAGE FOR CRS AMENDMENT SHEETS

FOR REVIEW ONLY

## Committee representation

This CARICOM Regional Standard was prepared under the supervision of the Regional Technical Committee for Agricultural Commodities (RTC 19), (hosted by the CARICOM Member State, Dominica), which at the time comprised the following members:

### Members

Mr. Lloyd Pascal (**Chairperson**)

Mr. Richard Allport

Mr. Ryan Anselm

Mr. Kent Coipel

Mr. Clement Ferreira

Mrs. Marcella Harris

Mr. Cecil Joseph

Mr. Rawle Leslie

Mr. Angus McIntyre

Dr. Gregory Robin, PhD

Mr. John Robin

Mr. Delroy Williams

Dr. Nadia Pacquette-Anselm (**Technical Secretary**)

### Representing

Dominica Export Import Agency (DEXIA)

Division of Agriculture, Dominica

Plant protection and Quarantine Services,  
Dominica

Inter-American Institute for Cooperation on  
Agriculture (IICA)

Nature's Best, Dominica

Windward Islands Farmers Association  
(WINFA)

Dominica Hucksters Association (1995) Ltd.  
(DHA)

Dominica State College – Agriculture

Windward Island Banana Development  
Cooperation (WIBDECO)

Caribbean Research and Development  
Institute (CARDI)

Agro-processors Association of Dominica  
(APAD)

National Association of Youth in Agriculture  
(NAYA)

Dominica Bureau of Standards

## Contents

|                                  |   |
|----------------------------------|---|
| Foreword .....                   | 1 |
| 1 Scope .....                    | 2 |
| 2 Normative references .....     | 2 |
| 3 Terms and definitions .....    | 2 |
| 4 Requirements .....             | 3 |
| 4.1 Quality .....                | 3 |
| 4.1.1 Minimum requirements ..... | 3 |
| 4.1.2 Maturity criteria .....    | 4 |
| 4.1.3 Classification .....       | 5 |
| 4.2 Sizing .....                 | 5 |
| 4.3 Tolerances .....             | 7 |
| 4.3.1 Quality tolerances .....   | 7 |
| 4.3.2 Size tolerances .....      | 7 |
| 5 Presentation .....             | 7 |
| 5.1 Packaging .....              | 7 |
| 5.2 Uniformity .....             | 8 |
| 6 Marking or labelling .....     | 8 |
| 6.1 Consumer packaging .....     | 8 |
| 6.1.1 Nature of produce .....    | 8 |
| 6.2 Non-retail containers .....  | 8 |
| 7 Contaminants .....             | 8 |
| 7.1 Heavy metals .....           | 8 |
| 7.2 Pesticide residues .....     | 9 |
| 8 Hygiene .....                  | 9 |

FOR REVIEW ONLY

(This page was intentionally left blank)

## Foreword

This CARICOM Regional Standard was developed in an effort to:

- a) improve the regional and international market competitiveness of oranges and to address critical concerns relating to quality in the production of the oranges in the region;
- b) avoid misunderstanding and confusion among those involved in the marketing chain;
- c) provide an objective basis for relating price with quality;
- d) encourage better selection, packaging and presentation of produce as a means of obtaining greater income overall; and
- e) assist exporters and their countries in meeting export market requirements and thereby enhancing their reputation and market position

This standard was approved by the Twenty-ninth Council for Trade and Economic Development (COTED) on 8-9 February 2010.

In the development of this standard, assistance was derived from the following:

- a) CODEX Standard, CODEX STAN 245-2004, AMD. 1-2005, Specification for Grade of Oranges;
- b) Guyana Standard, Specification for Grades of Oranges.

NOTE During the development of this standard, the CARICOM Regional Code of Practice for Food Hygiene was still under development.

## 1 Scope

This standard specifies the requirements for commercial varieties of oranges grown from *Citrus sinensis* (L.) Osbeck, of the Rutaceae family, to be supplied fresh to the consumer after preparation and packaging.

This standard does not apply to oranges for industrial processing.

## 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.

*CARICOM Regional Code of Practice for Food Hygiene*

*CODEX Alimentarius Commission, Recommended International Code of Practice for Packaging and Transport of Fresh Fruits and Vegetables (CAC/RCP 44-1995, Amd. 1-2004)*

*CODEX Alimentarius Commission, CODEX General Standard for the Labelling of Pre-packaged Foods (CODEX STAN 1-1985, Rev. 1-1991)*

*CODEX Alimentarius Commission, Code of Hygienic practices for Fresh Fruits and Vegetables (CAC/RCP 53-2003)*

*CODEX Alimentarius Commission, Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997)*

## 3 Terms and definitions

For the purposes of this standard, the following terms and definitions shall apply.

### 3.1

#### **clean**

free from loose or adhering soil, chemical deposits and any other foreign matter

### 3.2

#### **damage**

any defect or combination of defects which materially detracts from the appearance, or the edibility or shipping quality of the fruit such as bruises, cuts, healed or open cracks, insect damage, defects caused by physiological disorder

### 3.3

#### **discolouration**

any variation from the normal skin colour

### 3.4

#### **fairly smooth texture**

skin does not feel noticeably rough or coarse for the variety

### 3.5

#### **fairly well formed**

not of the shape characteristic of the variety, but not decidedly flattened, pointed, extremely elongated, or otherwise badly deformed

**3.6**

**firm**

not soft, noticeably wilted or spongy, and the skin does not have a swollen appearance which is not characteristic of the variety

**3.7**

**form**

shape which is characteristic of the variety

**3.8**

**fairly form**

80 % of the fruit has shape which is characteristic of the variety

**3.9**

**free from disease**

free from any visible signs of moulds, fungal, and bacterial rots, spots or any symptom of viral infection

**3.10**

**mature**

stage of development where optimum growth characteristics of the variety are attained, and post harvest handling is not adversely affected

**3.11**

**serious damage**

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

**3.12**

**similar varietal characteristics**

colour, size and shape typical of the variety

**3.13**

**slightly rough texture**

skin is not decidedly rough, badly folded, badly ridged, or decidedly lumpy

NOTE Heavily "pebbled" skin shall be considered as slightly rough.

**3.14**

**smooth texture**

skin is of fairly fine grain for the variety, the "pebbling" is not pronounced, and any furrows radiating from the stem end are shallow

**3.15**

**sound**

produce not affected by rotting or deterioration which makes it unfit for consumption

## **4 Requirements**

### **4.1 Quality**

#### **4.1.1 Minimum requirements**

**4.1.1.1** Oranges shall meet or exceed the following minimum requirements subject to the special provisions specified in 4.1.2 and 4.3:

- a) whole;
- b) sound;
- c) clean;
- d) free of pests affecting the general appearance of the produce;
- e) free of damage caused by pests;
- f) free of abnormal external moisture, excluding condensation following removal from cold storage;
- g) free of any foreign smell and or taste;
- h) free of damage caused by low and or high temperatures;
- i) free of signs of internal shrivelling; and
- j) free of bruising and or extensive healed-over cuts.

**3.1.1.2** The oranges shall be carefully picked and have reached an appropriate degree of development and ripeness, account being taken of the characteristics of the variety, time of picking and area.

**3.1.1.3** The development and condition of the oranges 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.

#### **4.1.2 Maturity criteria**

The maturity of oranges shall be defined by the parameters in 4.1.2.1 and 4.1.2.2.

##### **4.1.2.1 Colouring**

The degree of colouring shall be such that, following normal development, the oranges reach their normal variety colour at their destination point, account being taken of the time of picking, the growing area and the duration of transport.

NOTE Colouring shall be typical of the variety.

##### **4.1.2.2 Minimum juice content**

Minimum juice content shall be calculated in relation to the total weight of the fruit and after extraction of the juice by means of a hand press (see Table 1).

**Table 1 – Juice content**

| Type of orange  | Juice content<br>% |
|-----------------|--------------------|
| Blood oranges   | 30                 |
| Navels group    | 33                 |
| Other varieties | 35                 |



### **4.1.3 Classification**

Oranges shall be classified as Class I, Class II or Class III.

#### **4.1.3.1 Class I**

Oranges in this class shall be of superior quality in shape, external appearance, development and colouring and they must be characteristic of the variety and or commercial type. They 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, the keeping quality and presentation in the package.

#### **4.1.3.2 Class II**

**4.1.3.2.1** Oranges in this class shall be of good quality. They shall be characteristic of the variety and or commercial type. The following slight defects may be allowed, provided they do not affect the general appearance of the produce, the quality, the keeping quality and presentation in the package:

- a) slight defect in shape;
- b) slight defect in colouring;
- c) slight skin defects occurring during the formation of the fruit, such as silver scurfs and russets; and
- d) slight healed defects due to a mechanical cause such as rubbing and damage from handling.

**4.1.3.2.2** The defects shall not, in any case, affect the pulp of the fruit.

#### **4.1.3.3 Class III**

**4.1.3.3.1** This class includes oranges which do not qualify for inclusion in Class I and Class II, but satisfy the minimum requirements specified in 4.1.1 above. The following defects, however, may be allowed, provided the oranges retain their essential characteristics with respect to the quality, the keeping quality and presentation:

- a) defect in shape;
- b) defect in colouring;
- c) skin defects occurring during the formation of the fruit, such as silver scurfs and russets;
- d) healed defects due to a mechanical cause such as rubbing and damage from handling;
- e) rough skin;
- f) superficial healed skin alterations; and
- g) slight and partial detachment of the pericarp

**4.1.3.3.2** The defects must not, in any case, affect or expose the pulp of the fruit.

### **4.2 Sizing**

**4.2.1** The size of oranges shall be determined by the maximum diameter of the equatorial section of the fruit, in accordance with Table 2.

**Table 2 – Size codes**

| Size code                                                | Diameter<br>mm |
|----------------------------------------------------------|----------------|
| 0                                                        | 92 -110        |
| 1                                                        | 87 – 100       |
| 2                                                        | 84 – 96        |
| 3                                                        | 81 – 92        |
| 4                                                        | 77 – 88        |
| 5                                                        | 73 – 84        |
| 6                                                        | 70 – 80        |
| 7                                                        | 67 – 76        |
| 8                                                        | 64 – 73        |
| 9                                                        | 62 – 70        |
| 10                                                       | 60 – 68        |
| 11                                                       | 58 – 66        |
| 12                                                       | 56 – 63        |
| 13                                                       | 53 - 60        |
| NOTE     Oranges of a diameter below 53 mm are excluded. |                |

**4.2.2** Oranges may be packed by count. In this case, provided the size uniformity required by the standard is retained, the size range in the package may fall outside a single size code but within two adjacent codes.

**4.2.3** Uniformity in size is achieved by the above mentioned size codes as specified in Table 2, unless otherwise stated, as follows:

- a) for fruit arranged in regular layers in the package, including unit consumer packages, the maximum difference between the smallest and the largest fruit, within a single code or, in the case of oranges packed by count, within two adjacent codes, must not exceed the maxima specified in Table 3.

**Table 3 – Maximum difference between fruit in the same package**

| Size code | Maximum difference between fruit in the same package<br>mm |
|-----------|------------------------------------------------------------|
| 0 to 2    | 11                                                         |
| 3 to 6    | 9                                                          |
| 7 to 13   | 7                                                          |

- b) for fruit not arranged in regular layers in packages and fruit in individual rigid packages for direct sale to the consumer, the difference between the smallest and largest fruit in the same package must not exceed the range of the appropriate size code or, in the case of oranges packed by count, the range in mm of one of the two adjacent codes concerned.
- c) for fruit in bulk bins and fruit in individual non-rigid (nets, bags) packages for direct sale to the consumer, for which the maximum size difference between the smallest and the largest fruit in the same lot or package must not exceed the range obtained by grouping three consecutive sizes in the size scale.

### **4.3 Tolerances**

#### **4.3.1 Quality tolerances**

##### **4.3.1.1 Class I**

5 % by number or weight of oranges not satisfying the requirements of the class, but meeting those of Class II or, exceptionally, coming within the tolerances of that class.

##### **4.3.1.2 Class II**

10 % by number or weight of oranges not satisfying the requirements of the class, but meeting those of Class III or, exceptionally, coming within the tolerances of that class.

##### **4.3.1.3 Class III**

10 % by number or weight of oranges satisfying neither the requirements of the class nor the minimum requirements, with the exception of produce affected by rotting or any other deterioration rendering it unfit for consumption.

NOTE Within this tolerance, a maximum of 5 % is allowed for fruit showing slight superficial unhealed damage, dry cuts or soft and shrivelled fruit.

#### **4.3.2 Size tolerances**

All classes shall be allowed a tolerance of 10 % by number or weight of oranges corresponding to the size immediately above or below that indicated on the package.

## **5 Presentation**

Oranges for retail may be presented as follows:

- a) arranged in regular layers in the package. Class I shall comply with this manner of presentation;

NOTE Optional for Class II and Class III.

- b) not arranged in packages. This type of presentation shall be allowed only for Class II and III;
- c) in individual packages for direct consumer sale of a weight less than 5 kg, either made up by number or by weight of fruit.

### **5.1 Packaging**

**5.1.1** Oranges shall be packed in such a way as to protect the produce properly. The materials used inside the package shall be new, 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.

**5.1.2** Oranges shall be packed in each container in compliance with the Recommended International Code of Practice for Packaging and Transport of Fresh Fruits and Vegetables (CAC/RCP 44-1995, Amd. 1-2004).

**5.1.3** Containers shall meet quality, hygiene, ventilation and resistance characteristics to ensure suitable handling, shipping and preserving of the oranges. Packages shall be free of all foreign matter and odour.

## **5.2 Uniformity**

The contents of each package shall be uniform and contain only oranges of the same origin, variety and or commercial type, quality and size, and appreciably of the same degree of ripeness and development. The visible part of the contents of the package shall be representative of the entire contents. In addition, uniformity of colouring is required for Class I.

## **6 Marking or labelling**

### **6.1 Consumer packaging**

In addition to the requirements of the CODEX General Standard for the Labelling of Pre-packaged Foods (CODEX STAN 1-1985, Rev. 1-1991) and any relevant CARICOM Regional Standards, the following specific provisions shall apply.

#### **6.1.1 Nature of produce**

If the produce is not visible from the outside, each package (or lot for produce presented in bulk) shall be labelled as to the name of the produce and may be labelled as to the name of the variety and/or commercial type.

### **6.2 Non-retail containers**

Each package shall bear the following particulars, in letters grouped on the same side, legibly and indelibly marked in the official language(s) of the country in which the produce is to be sold, and which are visible from the outside, or in the documents accompanying the shipment:

- a) name and address of exporter, packer and or dispatcher;

NOTE Identification code is optional.

- b) country of origin;

NOTE The district where grown or national, regional or local place name is optional.

- c) class;
- d) size code for fruit;
- e) number of fruit, in the case of fruit arranged in layers in the package;
- f) if appropriate, a statement indicating any treatment methods such as waxing; and
- g) net weight (optional).

NOTE The use of red or orange should be avoided since these colours are used in the labelling of dangerous goods.

## **7 Contaminants**

### **7.1 Heavy metals**

Oranges shall comply with the maximum levels for heavy metals established by the CODEX Alimentarius Commission for this commodity.

## **7.2 Pesticide residues**

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

## **8 Hygiene**

**8.1** It is recommended that the produce covered by the provisions of this standard be prepared and handled in conjunction with the appropriate clauses of the latest edition of the CARICOM Regional Code of Practice for Food Hygiene or other international Codes of Practice, the latest recommended Code of Hygienic practices for Fresh Fruits and Vegetables (CAC/RCP 53-2003) and other Codex texts which are relevant to this commodity.

**8.2** The produce shall comply with any microbiological criteria established in accordance with the Codex Alimentarius Commission Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997).

**8.3** The produce shall comply with Sanitary and Phyto-Sanitary (SPS) requirements of the importing and exporting countries.

**End of document**