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Specialized Section on Standardization of Fresh Fruit and Vegetables

Annonas

Submitted by the secretariat

The following document is submitted to the Working Party for adoption as the revised UNECE Standard for Annonas. The document is prepared according to ECE/CTCS/2017/10 section II c and ECE/CTCS/2018/2 section VII a.

I. Definition of produce

This standard applies to the following fruits, classified as "Annonas", to be supplied fresh to the consumer, annonas for industrial processing being excluded.

- Cherimoya of varieties (cultivars) grown from *Annona cherimola* Mill.
- Sugar apple of varieties (cultivars) grown from *Annona squamosa* L.
- Atemoya hybrid from *Annona cherimola* Mill. and *Annona squamosa* L.
- Soursop of varieties (cultivars) grown from *Annona muricata* L.

II. Provisions concerning quality

The purpose of the standard is to define the quality requirements for annonas after preparation and packaging.

However, if applied at stages following export, products may show in relation to the requirements of the standard:

- a slight lack of freshness and turgidity
- for products graded in classes other than the "Extra" Class, a slight deterioration due to their development and their tendency to perish.

The holder/seller of products may not display such products or offer them for sale, or deliver or market them in any manner other than in conformity with this standard. The holder/seller shall be responsible for observing such conformity.

A. Minimum requirements

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

- intact
- sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded
- clean, practically free of any visible foreign matter
- practically free from pests
- free from damage caused by pests affecting the flesh
- free of damage caused by low temperatures
- free of sunburn
- free of abnormal external moisture
- free of any foreign smell and/or taste.

The peduncle must be cut near the fruit.

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

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

B. Maturity requirements

The development and state of maturity of the annonas must be such as to enable them to continue their ripening process and to reach a satisfactory degree of ripeness.

To ensure a suitable degree of commercial maturity, the annonas must present the following characteristics:

- Cherimoya: the skin should have begun to turn to a pale green colour, the carpellary walls should have lost their concave appearance and the ribs of the carpellary joints must not be pronounced.
- Sugar Apple: the carpellary segments are pronounced. The groove-like area between the carpellary segments at the time of harvest must turn pale green to yellow.
- Atemoya: the area separating the carpellary segments at the time of harvest must turn pale green to yellow.
- Soursop: the colour of the skin turns from dark green to pale green at the time of harvest, the spines should be slightly fleshy and the distance between them should be about 15 mm.

C. Classification

Annonas are classified in three classes, as defined below:

(i) “Extra” Class

Annonas in this class must be of superior quality. They must be characteristic of the species and the variety.

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.

The spines of the fruit from soursops may have slight cracks.

(ii) Class I

Annonas in this class must be of good quality. They must be characteristic of the species and the variety.

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:

- a slight defect in shape
- a slight defect in development
- slight defects in colouring
- slight alterations of the skin and in the case of soursop, of the spines, due to rubbing and/or other causes, not exceeding 5 per cent of the surface area of the fruit.

(iii) Class II

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

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

- defects in shape
- defects in development
- defects in colouring
- alterations of the skin and in the case of soursops, of the spines, due to rubbing and/or other causes, not exceeding 15 per cent of the surface area of the fruit.

III. Provisions concerning sizing

Size is determined by the weight of individual fruit.

The minimum size shall be

- 100 g for Cherimoya, Sugar Apple and Atemoya and
- 200 g for soursop.

To ensure uniformity in size, the range in size between produce in the same package shall not exceed:

<i>Cherimoyas, Sugar Apples and Atemoyas</i>		<i>Soursops</i>	
<i>Size group in grammes</i>	<i>Max. range in the package in grammes</i>	<i>Size group in grammes</i>	<i>Size code</i>
100-225	75	981-1 200	4
225-425	100	801-980	5
425-825	200	651-800	6
>825	300	541-650	7
		441-540	9
		351-440	11
		271-350	14
		200-270	20

Size codes/ranges other than those indicated are allowed provided that the code/range used is labelled accordingly.

IV. Provisions concerning 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.

A. Quality tolerances

(i) “Extra” Class

A total tolerance of 5 per cent, by number or weight, of fruit not satisfying the requirements of the class but meeting those of Class I is allowed. Within this tolerance not more than 0.5 per cent in total may consist of produce satisfying the requirements of Class II quality.

(ii) Class I

A total tolerance of 10 per cent, by number or weight, of fruit not satisfying the requirements of the class, but meeting those of Class II is allowed. Within this tolerance not more than 1 per cent in total may consist of produce satisfying neither the requirements of Class II quality nor the minimum requirements, or of produce affected by decay.

(iii) Class II

A total tolerance of 10 per cent, by number or weight, of fruit satisfying neither the requirements of the class nor the minimum requirements is allowed. Within this tolerance not more than 2 per cent in total may consist of produce affected by decay.

B. Size tolerances

For all classes: a total tolerance of 10 per cent, by number or weight, of fruit not satisfying the requirements as regards sizing is allowed.

V. Provisions concerning presentation

A. Uniformity

The contents of each package must be uniform and contain only annonas of the same origin, species, variety, quality and size.

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

B. Packaging

Annonas must be packed in such a way as to protect the produce properly.

The materials used inside the package must 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.

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.

Packages must be free of all foreign matter.

VI. Provisions concerning marking

Each package¹ must bear the following particulars, in letters grouped on the same side, legibly and indelibly marked, and visible from the outside:

A. Identification

Packer and/or dispatcher/exporter:

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 authority² if the country applying such a system is listed in the UNECE database.

B. Nature of produce

- "Cherimoyas", "Sugar Apples", "Atemoyas" or "Soursops" if the contents are not visible from the outside
- Name of the variety (optional).

C. Origin of produce

- Country of origin³ and, optionally, district where grown, or national, regional or local place name.

D. Commercial specifications

- Class
- Size expressed as minimum and maximum weights
- Size code for soursops which must be followed by the range if the code or range used is different from the table in Section III
- Number of fruit (optional).

E. Official control mark (optional)

Adopted 1994

Aligned with the Standard Layout 2017

¹ These marking provisions do not apply to sales packages presented in packages. However, they do apply to sales packages (pre-packages) presented individually.

² The national legislation of a number of countries requires the explicit declaration of the name and address. However, in cases where a code mark is used, the reference "packer and/or dispatcher (or equivalent abbreviations)" must be indicated in close connection with the code mark, and the code mark should be preceded with the ISO 3166 (alpha) country code of the recognizing country, if not the country of origin.

³ The full or a commonly used name should be indicated.