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Fresh avocados — Specification

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Fresh avocados — Specification



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Introduction

Compared with other fruit crops, worldwide commercial avocado production ranks 17th of the 20 top produced fruits according to FAOSTAT(2010) [1]. In the recent years, avocado consumption has increased substantially throughout the developed and developing world. As more countries produce avocado for export or become familiar with the fruit, the increase in production area, production and consumption is likely to continue. Although avocado is primarily consumed as fresh fruit, substantial gains in the use of 'value-added' avocado products (e.g. guacamole) and oil processing for cosmetics and culinary use also suggest further market growth.

The documented health benefits of avocado consumption in general, and by extension, avocado oil, are numerous and growing, and include decreased risk of coronary heart disease, cataracts, diabetes, benign prostatic hypertrophy, prostate and other cancers and age-related macular degeneration [2,3]. Additional properties of the oil include wound healing and hepatoprotection [4]. Some of these benefits appear to be linked to the pigments in avocado pulp, including chlorophylls, carotenoids and anthocyanins and other as yet unidentified phytochemicals [2], many of which are preserved by the coldpressed methods now increasingly utilized [3]. The prospects for cold-pressed avocado oil and even 'chinene' (*P. schiedeana*) oil appear to be enormous around the world [5,6]. A shift from annual plant-based cooking oils to a perennial plant-based cooking oil could have profound positive agroecological effects, helping reduce soil erosion and fertilizer and pesticide run-off, while providing a more conducive habitat for the conservation of biodiversity and creating an additional income source for farmers in coffee and cacao growing areas who are subject to the volatile global market for these commodities.

In addition to the health benefits of avocado oil due to the pigments found within the pulp, avocado fruit and avocado oil are increasingly recognized as healthy foods due to their high levels of monounsaturated fats and low levels of saturated fats, quite similar to olive oil. High consumption of avocado has been linked to lowering of low-density lipoproteins (harmful/bad cholesterol) and increasing levels of high-density lipoproteins (good cholesterol) [7]. The 50% less fat and 35% lower calorie content of West Indian and Guatemalan–West Indian cultivars grown in Florida are being marketed as a heart healthy and reduced energy alternatives to the 'Hass' avocado. Other qualities of avocados include high protein for a fleshy fruit (2–4%), the highest levels of potassium among common fruits (equal to or greater than that of banana), high concentrations of antioxidants, and appreciable amounts of vitamins A and E and the B vitamins [8].

Fresh avocados — Specification

1 Scope

This African Standard applies to commercial varieties (cultivars) of avocados grown from *Persea americana* Mill. (Syn. *Persea gratissima* Gaertn), of the Lauraceae family, to be supplied fresh to the consumer, after preparation and packaging. Parthenocarpic fruit and avocados for industrial processing are excluded.

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.

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

ARS 56, *Pre-packaged foods — Labelling*

CAC/GL 21, *Principles for the Establishment and Application of Microbiological Criteria for Foods*

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

ISO 6561-1, *Fruits, vegetables and derived products — Determination of cadmium content — Part 1: Method using graphite furnace atomic absorption spectrometry*

ISO 6561-2, *Fruits, vegetables and derived products — Determination of cadmium content — Part 2: Method using flame atomic absorption spectrometry*

3 Terms and definitions

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

3.1

similar varietal characteristics

the avocados in any container are similar in shape, texture, and colour of skin and flesh

3.2

mature

the avocado has reached a stage of growth which will insure a proper completion of the ripening process

3.3

overripe

the avocado is dead ripe with flesh soft or discoloured and past commercial use

3.4

well formed; well developed

the avocado has the normal shape characteristic of the variety

3.5

clean

the avocado is practically free from dirt, staining or other foreign material

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3.6

well coloured

the avocado has the colour characteristic of the variety

3.7

well-trimmed

the stem, when present, is cut off fairly smoothly at a point not more than 6.35 mm beyond the shaller of the avocado

3.8

damage

any defect which materially affects the appearance, or the edible or shipping quality of the individual fruit, or the general appearance of the avocados in the container. Any one of the following defects, or any combination of defects the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as damage:

- (a) Cuts or other skin breaks when not healed and penetrating beneath the epidermis or the aggregate area exceeds that of a rectangle 25 mm in length and 3 mm in width, or when healed and the appearance is materially affected;
- (b) Pulled stems when the exposed stem cavity is excessively deep, or when skin surrounding the stem cavity is more than slightly torn;
- (c) Russeting or similar discoloration when the appearance of the avocado is affected to a greater extent than that of an avocado which has light brown surface discoloration aggregating 10 percent of the fruit surface;
- (d) Scars or scab when the appearance of the avocado is affected to a greater extent than that of an avocado which has light brown superficial, fairly smooth scars aggregating 10 percent of the fruit surface;
- (e) Sunburn when the appearance of the avocado is affected to a greater extent than that of an avocado which has greenish-yellow coloured sunburn aggregating 10 percent of the fruit surface; and,
- (f) Sunscald or sprayburn when not well healed, or when soft, or when the appearance of the avocado is affected to a greater extent than that of an avocado which has light brown, superficial scars aggregating 10 percent of the fruit surface.

3.9

fairly well formed

the avocado may be slightly abnormal in shape but not to the extent that the appearance is seriously affected

3.10

fairly well coloured

the avocado shows a shade of colour which is fairly characteristic of the variety

3.11

serious damage

any defect which seriously affects the appearance, or the edible or shipping quality of the individual fruit, or the general appearance of the avocados in the container. Any one of the following defects, or any combination of defects the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as serious damage:

- (a) Anthracnose when any spot exceeds the area of a circle 6.35 mm in diameter, or when more than 3 spots each of which exceeds the area of a circle three-sixteenths inch in diameter;
- (b) Cuts or other skin breaks when not healed and penetrating into the flesh of the fruit, or the aggregate area exceeds that of a rectangle 25.4 mm in length and 6.35 mm in width, or when healed and the appearance is seriously affected;

- (c) Pulled stems when the skin surrounding the exposed stem cavity is torn more than an aggregate area of a circle 6.35 mm in diameter, or when the flesh is torn;
- (d) Russetting or similar discoloration when the appearance of the avocado is affected to a greater extent than that of an avocado which has light brown surface discoloration aggregating 25 percent of the fruit surface;
- (e) Scars or scab when the appearance of the avocado is affected to a greater extent than that of an avocado which has light brown superficial fairly smooth scars aggregating 25 percent of the fruit surface;
- (f) Sunburn when the appearance of the avocado is affected to a greater extent than that of an avocado which has greenish-yellow coloured sunburn aggregating 25 percent of the fruit surface;
- (g) Sunscald or sprayburn when not well healed, or when soft, or when the appearance of the avocado is affected to a greater extent than that of an avocado which has light brown superficial, fairly smooth scars aggregating 25 percent of the fruit surface; and
- (h) Cercospora spot when any spot exceeds the area of a circle 6.35 mm in diameter, or when more than 3 spots each of which exceeds the area of a circle three-sixteenths inch in diameter, or when the aggregate area of all spots exceeds the area of a circle 25.4 mm in diameter.

3.12

badly misshapen

the avocado is so badly curved, constricted, pointed or otherwise deformed that the appearance is very seriously affected

3.13

very serious damage

any defect which very seriously affects the appearance, or the edible or shipping quality of the avocado. Any one of the following defects, or any combination of defects the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as very serious damage:

- (a) Cuts or other skin breaks when not healed and penetrating into the flesh of the fruit, or any skin break very seriously affecting the appearance, or the edible or shipping quality;
- (b) Pulled stems when the skin surrounding the exposed stem cavity is torn more than an aggregate area of a circle one-half inch in diameter, or when the flesh is torn;
- (c) Russetting or similar discoloration when the appearance of the avocado is affected to a greater extent than that of an avocado which has light brown surface discoloration aggregating 50 percent of the fruit surface;
- (d) Scars or scab when the appearance of the avocado is affected to a greater extent than that of an avocado which has light brown superficial, fairly smooth scars aggregating 50 percent of the fruit surface;
- (e) Sunburn when the appearance of the avocado is affected to a greater extent than that of an avocado which has greenish-yellow coloured sunburn aggregating 50 percent of the fruit surface; and,
- (f) Sunscald or sprayburn when not well healed, or when the appearance of the avocado is affected to a greater extent than that of an avocado which has light brown superficial, fairly smooth scars aggregating 50 percent of the fruit surface.

4 Quality requirements

4.1 General

The purpose of the standard is to define the quality requirements of avocados at the export-control stage, after preparation and packaging.

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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 shall be responsible for observing such conformity.

4.2 General requirements

4.2.1 In all classes, subject to the special provisions for each class and the tolerances allowed, the avocados shall be:

- (a) **intact/whole**; not having any mutilation or injury spoiling the integrity of the fruit, such as cuts or punctures or other significant physical damage sustained during harvesting or post-harvest handling.
- (b) **sound**; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded. Avocados shall be free from disease or serious deterioration which appreciably affects their appearance, edibility or market value. In particular, this excludes avocados affected by rotting, even if the signs are very slight but liable to make the avocados unfit for consumption upon arrival at their destination. Avocados showing the following defects are therefore excluded:
 - (i) **Bruising**: the result of impact or compression damages the flesh and causes soft patches and a greyish discolouration of the flesh.
 - (ii) **Sunburn**: mild symptoms are yellowing of fruit surface facing the sun. More severe symptoms are darkening of affected areas with a sunken appearance.
 - (iii) **Rots**
- (c) clean, practically free of any visible foreign matter. Avocados shall be practically free of visible soil, dust, chemical residue or other visible foreign matter.
- (d) practically free of pests affecting the general appearance of the produce. The presence of pests can detract from the commercial presentation and acceptance of the avocados.
- (e) practically free from damage caused by pests affecting the flesh. Pest damage can detract from the general appearance, keeping quality and edibility of avocados.
- (f) free of damage caused by low temperature. Damage caused by frost prior to harvest or by chilling due to low temperature during storage: the external signs include darkening of the skin. Internally, flesh texture is changed, its colour is grey and the vascular bundles appear dark brown.
- (g) free of abnormal external moisture, excluding condensation following removal from cold storage. This provision applies to excessive moisture, for example, free water lying inside the package but does not include condensation on produce following release from cool storage or refrigerated vehicle.
- (h) having a stalk not more than 10 mm in length which shall be cut off cleanly. However, its absence is not considered a defect on condition that the place of the stalk attachment is dry and intact. An injured place of attachment may cause stem end rot.

- (i) free of any foreign smell and/or taste.¹ This refers particularly to avocados which have been stored on badly kept premises or have travelled in a badly maintained vehicle, especially avocados which have acquired a strong smell from other produce stored on the same premises or travelling in the same vehicle. It does not refer to any smell emanating from products used in conformity with the regulations for their use to improve keeping properties. Therefore, care shall be taken to use only non-smelling materials as protection in packaging.

4.2.2 The avocados shall have been carefully picked. Their development shall have reached a physiological stage which will ensure a continuation of the maturation process to completion. The mature fruit shall be free of bitterness and/or rubbery taste. Avocados shall be firm at the point of dispatch. The degree of softening which makes the fruit ready for consumption shall occur only at the retail or consumer level.

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

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

4.3 Maturity requirements

The fruit shall have a minimum dry matter content, to be measured by drying to constant weight:

- (a) 21 % for the variety Hass
- (b) 20 % for the varieties Fuerte, Pinkerton, Reed and Edranol
- (c) 19 % for the other varieties except for Antillian varieties² that may show a lower dry matter content.

Avocados shall attain a minimum degree of maturity prior to picking. As an indicator of maturity, the fruit shall have reached a minimum oil content in the flesh. The required oil content is different, according to different varieties and correlated to the total dry matter content. Therefore, the standard sets out minimum values for the dry matter content of different varieties. The reference laboratory method as well as a quick method using the microwave oven are shown in the annex.

The ripe fruit shall be free from bitterness.

4.4 Classification

Avocados are classified in three classes, as defined below:

4.4.1 "Extra" Class

Avocados in this class shall be of superior quality. In shape and colouring they shall be characteristic of the variety and/or commercial type avocados of similar varietal characteristics which are mature but not overripe, well formed, clean, well coloured, well-trimmed and which are free from decay, anthracnose, and freezing injury and are free from damage caused by bruises, cuts or other skin breaks, pulled stems, russetting or similar discoloration, scars or scab, sunburn, sunscald or sprayburn, cercospora spot, other disease, insects, or mechanical or other means.

Avocados shall be very carefully presented.

¹ The use of preserving agents or any other chemical substance liable to leave a foreign smell on the skin of the fruit is permitted where it is compatible with the regulations of the importing country.

² Reservation from the United States: Antillean varieties shall not be included in the standard because they are substantially different.

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There is a natural variation in shape for each variety according to the growing area. Nevertheless, the shape shall be regular with no distortions or malformations.

The colour of ripe fruit may be dark green, pale green or black. Black varieties such as Hass may still be green when picked at proper physiological stage, and attain their typical black colour during the softening process.

They shall 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. If present, the stalk shall be intact.

Very slight superficial defects may appear during cultivation, harvest, storage, packaging or transport.

4.4.2 Class I

Avocados in this class shall be of good quality. They shall be characteristic of the variety and/or commercial type: avocados of similar varietal characteristics which are mature but not overripe, fairly well formed, clean, fairly well coloured, well-trimmed and which are free from decay and freezing injury and are free from serious damage caused by anthracnose, bruises, cuts or other skin breaks, pulled stems, russetting or similar discoloration, scars or scab, sunburn, sunscald or sprayburn, cercospora spot, other disease, insects, or mechanical or other means. 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.
- slight defects in colouring
- slight skin defects (corkiness, healed lenticels) and sunburn, provided they are not progressive; the maximum total area shall not exceed 4 cm².

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

The stalk, if present, may be slightly damaged.

4.4.3 Class II

This class includes avocados that do not qualify for inclusion in the higher classes but satisfy the minimum requirements specified in 4.2.1. This class consists of avocados of similar varietal characteristics which are mature but not overripe, which are not badly misshapen, and which are free from decay and are free from serious damage caused by anthracnose and are free from very serious damage caused by freezing injury, bruises, cuts or other skin breaks, pulled stems, russetting or similar discoloration, scars or scab, sunburn, sunscald or sprayburn, cercospora spot, other disease, insects, dirt or mechanical or other means.

Avocados in this class shall be of marketable quality, suitably presented and suitable for human consumption.

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

- defects in shape.
- defects in colouring
- skin defects (corkiness, healed lenticels) and sunburn, provided they are not progressive; the maximum total area shall not exceed 6 cm².

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

The stalk, if present, may be damaged.

4.4.4 Combination Class

The Combination Class consists of a combination of Extra Class and Class I avocados. However, at least 60 percent, by count, of the avocados in each container shall meet the requirements of the Extra Class.

4.4.5 Unclassified

"Unclassified" consists of avocados which have not been classified in accordance with any of the foregoing grades but meet the minimum requirements specified in 4.2.1. The term "unclassified" is not a grade within the meaning of this standard, but is provided as a designation to show that no grade has been applied to the lot.

5 Provisions concerning sizing

Size is determined by the weight or count of the fruit.

Minimum weight for avocados is 123 g except for Hass where it is 80 g and for Antillean varieties where it is 170 g.

To ensure uniformity in size:

(a) For Antillean varieties

The weight of the smallest fruit shall be not less than 75 percent of the weight of the largest fruit in the same package.

(b) For other varieties the following size scale applies:

Size code	Weight scale (g)
4	781 to 1220
6	576 to 780
8	456 to 576
10	364 to 462
12	300 to 371
14	258 to 313
16	227 to 274
18	203 to 243
20	184 to 217
22	165 to 196
24	151 to 175
26	144 to 157
28	134 to 147
30	123 to 137
S ³	80 to 123 (Hass variety only)

6 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 for the class indicated. Tolerances are provided to allow for human error during the grading and packing process. During grading and sizing it is not permitted to deliberately include out of grade produce, i.e. to exploit the tolerances deliberately.

³ The difference between the smallest and largest fruit within a package shall not be more than 25 g.

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The tolerances are determined after examining each sample package and taking the average of all samples examined. The tolerances are stated in terms of percentage, by number or weight of fruit in the total sample not conforming to the class (or to the size) indicated on the package.

6.1 Quality tolerances

6.1.1 "Extra" Class

A total tolerance of 5 per cent, by number or weight, of avocados 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. Not more than 2.5 percent shall be allowed for avocados affected by decay or anthracnose, including therein not more than 1 percent for avocados affected by decay.

6.1.2 Class I

A total tolerance of 10 per cent, by number or weight, of avocados 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 neither satisfying the requirements of Class II quality nor the minimum requirements or of produce affected by decay.

6.1.3 Class II

A total tolerance of 10 per cent, by number or weight, of avocados 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.

Under no circumstances shall these tolerances apply to fruit affected by rotting, severely damaged fruit, fruit too soft to eat, or any other deterioration rendering it unfit for consumption.

6.1.4 Combination class

In order to allow for variations incident to proper grading and handling, not more than a total of 10 percent, by count, of the avocados in any lot may fail to meet the requirements of the Class I. However, not more than one-half of this amount, or 5 %, shall be allowed for avocados affected by decay or seriously damaged by anthracnose, including therein not more than 1 percent for avocados affected by decay. No part of any tolerance shall be allowed to reduce for the lot as a whole the percentage of Extra Class fruit required or specified in the combination, but individual containers may have not more than 10 percent less than the percentage of Extra Class fruit required or specified.

6.1.5 Unclassified

"Unclassified" consists of avocados which have not been classified in accordance with any of the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards, but is provided as a designation to show that no grade has been applied to the lot.

6.2 Standard pack

- (a) The avocados shall be packed in accordance with good commercial practice and the pack shall be at least fairly tight. The weight of the smallest fruit in any container shall be not less than 75 percent of the weight of the largest fruit in the container. Size of the avocados may be specified by count.
- (b) In order to allow for variations incident to proper sizing and packing, not more than 5 percent, by count, of the avocados in any container may weigh less than 75 percent of the weight of the largest fruit. However, no fruit in any container shall weigh less than 60 percent of the weight of the largest fruit in the container. In addition, not more than 5 percent of the containers in any lot may fail to meet the requirement as to tightness of pack.

6.3 Application of tolerances

The contents of individual packages in the lot, based on sample inspection, are subject to the following limitations on the condition that the averages for the entire lot are within the tolerances specified for the grade:

- (a) For packages which contain more than 20 avocados and a tolerance of 10 percent or more is provided, individual packages in any lot shall have not more than one and one-half times the tolerance specified. For packages which contain more than 20 avocados and a tolerance of less than 10 percent is provided, individual packages in any lot shall have not more than double the tolerance specified, except that at least one defective and one off-size specimen may be permitted in any package; and,
- (b) For packages which contain 20 avocados or less, individual packages shall have not more than double the tolerance specified, except that at least one defective and one off-size specimen may be permitted in any package.

6.4 Size tolerances

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

A deviation of 2 % from the indicated weight of the range is permitted for some of the fruit in the package.

7 Provisions concerning presentation

7.1 Uniformity

The contents of each package shall be uniform and contain only avocados of the same origin, variety, quality, colouring⁴ and size. The visible part of the contents of the package shall be representative of the entire contents.

A special effort shall be made to suppress camouflage, i.e. concealing in the lower layers of the package produce inferior in quality and size to that displayed and marked.

Similarly prohibited is any packaging method or practice intended to give a deceptively superior appearance to the top layer of the consignment.

7.2 Packaging

The avocados shall be packed in such a way as to protect the produce properly. Packages shall be of a quality, strength and characteristics to protect the produce during transport and handling. The materials used inside the package shall be new⁵, 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 on the produce shall be such that, when removed, they neither leave visible traces of glue nor lead to skin defects.

This provision is designed to ensure suitable protection of the produce by means of materials inside the package which are new and clean and also to prevent foreign bodies such as leaves, sand or soil from spoiling its good presentation.

⁴ A change in the colour of the dark-skinned varieties is not considered as a defect, but the colouring of the fruit in each package shall be uniform at the point of dispatch.

⁵ For the purposes of this Standard, this includes recycled material of food-grade quality.

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The containers shall meet the quality, hygiene, ventilation and resistance characteristics to ensure suitable handling, shipping and preserving of the avocados. Packages shall be free of all foreign matter and smell. A visible lack of cleanliness in several packages could result in the goods being rejected.

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

8 Marking or labelling

Each package⁶ shall bear the following particulars, in letters grouped on the same side, legibly and indelibly marked, and visible from the outside. In the case of packed produce, all particulars shall be grouped on the same side of the package, either on a label attached to or printed on the package with water-insoluble ink.

In the case of reused packages, all previous labels shall be carefully removed and previous indications deleted.

8.1 Consumer packages

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

8.1.1 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. The name of the variety is compulsory for all classes.

8.2 Non-retail containers

Each package 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.

8.2.1 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.⁷

8.2.2 Nature of produce

- Name of the produce “avocados” if the contents are not visible from the outside.
- “Antillean/Florida” or equivalent denomination, where appropriate
- Name of the variety or commercial type.

8.2.3 Origin of produce

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

⁶ According to the Geneva Protocol, footnote 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”.

⁷ The national legislation of a number of 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)” has to be indicated in close connection with the code mark, and the code mark shall be preceded by the ISO 3166 (alpha) country/area code of the recognizing country, if not the country of origin.

8.2.4 Commercial identification

- Class;
- Size expressed in minimum and maximum weight in grams;
- Code number of the size scale and number of fruits when it is different from reference number. Stating the size range is compulsory. Additionally the code number of the size scale and the number of fruits when this is different from the code number shall be stated on the package, or optionally, the code number and net weight of the package.
- Net weight of the package.

8.2.5 Official Inspection Mark (optional)

9 Contaminants

9.1 Heavy metals

Avocados shall comply with those maximum levels for heavy metals established by the Codex Alimentarius Commission for this commodity. The current limits are as indicated below:

Metal	Unit of measurement	Maximum limit	Test method
Lead (Pb)	mg/kg wet weight	0.10	ISO 6633 (AAS)
Cadmium (Cd)	mg/kg wet weight	0.050	ISO 6561-1 or 6561-2

9.2 Pesticide residues

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

10 Hygiene

10.1 It is recommended that the produce covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of ARS 53.

10.2 The produce shall comply with any microbiological criteria established in accordance with CAC/GL 21.

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