



JOINT FAO/WHO FOOD STANDARDS PROGRAMME
CODEX COMMITTEE ON FRESH FRUITS AND VEGETABLES
Twenty-third Session

DISCUSSION PAPER ON THE REVIEW OF EXISTING FFV STANDARDS

Prepared by the Electronic Working Group chaired by Germany

Introduction

1. At the 22nd Session of the Codex Committee on Fresh Fruit and Vegetables (CCFFV22) (Virtual meeting, 25-29 April and 4 May 2022), the European Union (EU) introduced as a new work proposal a review of the existing fresh fruits and vegetable standards. CCFFV22 agreed to establish an Electronic Working Group (EWG) on the “Review of the existing fresh fruits and vegetable (FFV) standards” chaired by Germany.

Terms of reference

2. The terms of reference of the EWG were to review existing FFV standards in order to ensure their alignment with the layout for FFV standards, consider necessary updates, and note need for proposals for possible revisions of standards. The EWG would report the progress of the work at CCFFV23.

Participation and methodology

3. 17 Members registered to take part in the EWG via the Codex platform (Appendix III). Three rounds of consultations) took place to prepare the proposed revisions of the *Standards for Avocado* (CXS 197-1995) and *Asparagus* (CXS 225-2001). Due to unforeseen capacity constraints, it was not possible to revise additional standards. Instead, the two revised standards should be understood as examples of the approach. The selection of the avocado standard and the asparagus standard as examples was made randomly. Germany, as Chair of the EWG, is confident that the revision of the remaining standards can take place within the next two years. The EWG started its work with the circulation of the first draft of the revision of the *Standard for Avocado*.
4. On 17 October 2024, ten members took part in a virtual meeting of the EWG. During this meeting, the participants discussed and agreed upon the methodology for the revision process (i.e. of the *Standard for Avocado*) and set a timeline for the work until the meeting of CCFFV23.
5. Methodology: the exact text of the old standard has been transferred into the standard layout provided in Appendix VII of REP22/FFV. Specific requirements to the product mentioned in the old versions of the standards were added, identified and marked in red. Whenever the meaning would be changed by the standard layout the text was identified as substantial change, put into brackets and marked in red. Recommendations were provided in boxes.
6. The revised draft of the *Standard for Avocado* as well as the first draft for the revision of the *Standard for Asparagus* provided by Germany were circulated within the agreed timeline with the invitation for comments.
7. On 6 December 2024, five members took part in the second meeting of the EWG to discuss both revisions. EU submitted written comments.
8. The revised draft of the *Standards for Avocado* and *Asparagus* as well as the draft for the report provided by Germany were circulated with the invitation for comments.
9. The final drafts were prepared after incorporating all changes and the same are attached (Appendices I and II).

Summary of discussion

10. Canada and the United States of America (USA) raised their concerns, noting that the number of standards to be revised was very high. Regarding the short time until the CCFFV23, they questioned how many standards could be revised. Germany offered to revise the *Standards for Avocado* (CXS 197-1995) and *Asparagus* (CXS 225-2001) for establishing a methodology to be presented to CCFFV23.
11. Canada and USA expressed their willingness to check available resources for additional support on reviewing but weren't able to do so.
12. General consensus of the EWG was reached, that the standard(s) to be revised should be put into the frame of the standard layout as provided by REP18/FFV including the amendments according to Appendix VII REP22/FFV. Editorial changes, e.g. additional phrases from the original standard, would be marked within the text. The EWG would also make recommendations regarding substantial changes or necessary technical updates, and if needed, regarding changes to the layout.
13. The participants agreed with the proposal of the Chair that revisions concerning Food Additives (Section 8 of the standard layout), Contaminants (Section 9) or Hygiene (Section 10) should not be discussed during this revision. The EWG would leave the revision up to the Codex Secretariat.
14. The Codex Secretariat has, however, since clarified that the Codex Procedural Manual specifies that for Section 8 on food additives, CCFFV must determine whether the use of food additives is technologically justified. Additionally, whether a general reference to the *General standard for food additives* (CXS 192-1995) should be included. For Sections 9 and 10, CCFFV must assess whether the text provided in the Codex Procedural Manual is sufficiently comprehensive and adequately addresses the relevant requirements.
15. **Section 8:** The EWG recommends the alignment with the last two approved standards: No food additives are permitted in avocados/asparagus.
16. The EWG considered the text provided for Sections 9 and 10 as adequate.
Standard for Avocado (CXS 197-1995)
17. **Section 3.1 Minimum Requirements:** "free from damage caused by pests affecting the flesh" (standard layout). This would be a substantial change, as the original standard refers to "damages affecting the general appearance of the produce". The EWG recommends keeping the wording of the original standard.
18. **Section 3.1 Minimum Requirements:** The Term "practically" is not included in the standard layout but in the old version of the avocado standard. The EWG recommended to delete the term.
19. **Section 3.1 Minimum Requirements:** "However, its absence is not considered a defect provided the place of the stalk attachment is dry and intact." (original standard). The EWG, recommended to change it to "However, the stalk can be missing providing the break is clean" as a substantial change.
20. **Section 3.2.3 Class II:** "The flesh must be free from major defects." (standard layout). The EWG recommends keeping the wording of the old version of the standard "The defects must not, in any case, affect the flesh of the fruit." as it is considered a substantial change otherwise.
21. **Section 5.1.1 Class Extra:** The EWG decided to delete "or, exceptionally, coming within the tolerances of that class." as a substantial change according to the standard layout.
22. **Section 5.1.3 Class II:** the EWG decided to delete "nor the minimum requirements" as a substantial change according to the standard layout.
23. **Section 6.2 Packaging:** The EWG recommended to use the phrase: "Stickers individually affixed to the produce shall be such that, when removed, they neither leave visible traces of glue nor lead to skin defects." as it is common practice to use stickers. This would be a substantial change to the original standard.
24. **Section 8 Food additives:** The EWG made a recommendation for the use of food additives.
Standard for Asparagus (CXS 225-2001)
25. **Section 1 Scope:** the EWG recommended to change the first sentence to "The purpose of the standard is to define the quality requirements for shoots of asparagus from here on referred as asparagus after preparation and packaging." The original standard refers to "shoots of asparagus" instead of "asparagus" throughout the text.

26. **Section 3.1. Minimum requirements:** In the old version of the asparagus standard, it states in contrast to the standard layout: "free of pests affecting the general appearance of the produce.". Therefore, compliance with the standard layout (only "free from pests") represents a significant substantive deviation from the old standard. CCFV23 is asked to decide which formulation should be kept.
27. **Section 3.1 Minimum requirements:** although this was not stated in the original standard the EWG recommended to keep "free of damage caused by low and/or high temperature" from the standard layout.
28. **Section 3.2 Classification:** the EWG decided to change the order of the phrases according to the standard layout and to state requirements concerning colouration together.
29. **Section 5.1.3 Class II:** the EWG decided to delete "nor the minimum requirements" as a substantial change according to the standard layout.
30. **Section 6.2.2 Presentation and section 7.2.1 Nature of produce:** these sections had been added as a to the standard layout to state the requirements concerning the presentation and nature of asparagus as done in the original standard.
31. **Section 8 Food additives:** The EWG made a recommendation for the use of food additives.

Standard layout

32. **Section 5 Provisions concerning tolerances:** The EWG recommended to move the paragraph of section 5.1 Quality Tolerances "At all marketing stages....." to Section 5, as it mentioned both tolerances for quality and size.
33. **Section 7.2 Non-retail containers:** deviation from CXS 346-2021. In the old version of the avocado standard and the asparagus standard the following text was mentioned: Identification code (optional)¹This sentence is missing in CXS 346-2021. The EWG considered the identification code useful for trade and recommended to add the missing term "identification code (optional)" in addition to the requirements of CXS 346-2021.

Conclusions

34. The Chair of the EWG have achieved the task to start the revision of Codex Standards. By revising two standards, a methodology for the revision has been established and used. As expected, most differences to the standard layout proved to be only editorial. Substantial changes have been identified as such and recommendations have been made by the EWG. The Chair of the EWG believes that by showing the examples, CCFV23 is in the position to make a decision on the continuation of the proposed work.

RECOMMENDATIONS

35. CCFV23 is invited to:
 - i. agree to the methodology as described in paragraph 5;
 - ii. note the proposed draft for regarding the added specific requirements pointed out in the boxes in the Appendices I and II;
 - iii. discuss the recommendations of the EWG regarding substantial changes for the revised *Standard for Avocado* at Appendix I (also outlined in paragraphs 14 - 17 and 23, 24);
 - iv. discuss the recommendations of the EWG regarding substantial changes for the revised *Standard for Asparagus* at Appendix II (also outlined in paragraphs 25 – 28, 31);
 - v. discuss the recommendations of the EWG regarding the changes in the standard layout (also outlined in paragraphs 32 and 33); and
 - vi. allow the EWG to continue the review of all FFV standards, including the review Section 8 food additives in these standards.

¹ 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

REVISION OF THE STANDARD FOR AVOCADO (CXs 197-1995)

1. SCOPE

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

2. DEFINITION OF PRODUCE

This standard applies to commercial varieties¹ (cultivars) of avocados grown from *Persea americana* Mill.² from the *Lauraceae*¹ family to be supplied fresh to the consumer. Parthenocarpic fruit and avocados for industrial processing are excluded.

3. PROVISIONS CONCERNING QUALITY

3.1 MINIMUM REQUIREMENTS

In all classes, subject to the special provisions for each class and the tolerances allowed, the avocados must be display the following characteristics, deviations from which shall be observed by the naked eye or corrected 20/20 vision³ when appropriate:

- intact;
- sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;
- firm;
- clean, practically free of any visible foreign matter;
- practically free from pests⁴;
- free of damage caused by pests [affecting the general appearance of the produce];

Substantial change

For the minimum requirement "free of damage caused by pests," the standard layout specifies the following wording for fruits without edible skin: "free of damage caused by pests affecting the flesh." In the old version of the avocado standard, it states: "free of damages affecting the general appearance of the produce." Therefore, compliance with the standard layout (affecting the flesh) represents a significant substantive deviation from the old standard.

Recommendation from EWG: stick to wording from the old version of the avocado standard

- free of abnormal external moisture excluding condensation following removal from cold storage;
- free of any foreign smell and/or taste;
- fresh in appearance;
- [practically] free of damage caused by low and/or high temperature

¹ Varieties suitable for trade

² All information on botanical names is taken from the GRIN database (www.ars-grin.gov) or Mansfeld's World Database of Agricultural and Horticultural Crops (<http://mansfeld.ipk-gatersleben.de/apex/f?p=185:3:0>) or any other suitable database.

³ Loupe, binocular or other magnifying equipment should not be used when assessing defects.

⁴ The provisions for pests applies without prejudice to the applicable plant protection rules applied by governments in line with the International Plant Protection Convention (IPPC).

Substantial

The term „practically” is not included in the standard layout but in the old version of the avocado standard

Recommendation from EWG: remove

- having a stalk not more than 10 mm in length which must be cut off cleanly. However, its absence is not considered a defect provided the place of the stalk attachment is dry and intact. [However, the stalk can be missing providing the break is clean.]

Substantial

Recommendation from EWG: Substitute: “However, its absence is not considered a defect provided the place of the stalk attachment is dry and intact.”

with “However. the stalk can be missing providing the break is clean”.

The development and condition of the avocados 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 avocados must have reached an appropriate degree of development and/or maturity in accordance with criteria proper to the variety, to the time of harvesting, and to the area in which they are grown.

The development and state of maturity of avocados must be such as to enable them to continue their ripening process and to reach the degree of ripeness required in relation to the varietal characteristics and the growing area.

The mature fruit should be free of bitterness.

The fruit should have a minimum dry matter content⁵ at the harvest, according to the variety, to be measured by drying to constant weight:

- 21 % for the variety Hass;
- 20 % for the varieties Torres, Fuerte, Pinkerton, Edranol and Reed.

Other varieties including Antillean/West Indian/Guatemalan may show a lower dry matter content.

Note: Specific requirements from the old version of the avocado standard is added.

3.2 CLASSIFICATION

The avocados are classified into three classes defined below:

3.2.1 “Extra” Class

Avocados in this class must be of superior quality. They must be characteristic of 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.

If present, the stalk must be intact.

Note: Specific requirements from the old version of the avocado standard is added.

3.2.2 Class I

Avocados in this class must be of good quality. They must be characteristic of 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;
- slight defects in colouring;
- slight skin defects (corkiness, healed lenticels) and sunburn; the maximum total area should not

⁵ This requirement applies to a fruit lot and not to individual fruits.

exceed 4 cm².

Note: Specific requirements from the old version of the avocado standard is added.

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

The stalk, if present, may be slightly damaged.

Note: Specific requirements from the old version of the avocado standard is added.

3.2.3 Class II

This class includes avocados 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 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; the maximum total area should not exceed 6 cm².

Note: Specific requirements from the old version of the avocado standard is added.

The flesh must be free from major defects

[The defects must not, in any case, affect the flesh of the fruit.]

Substantial

The standard layout stipulates that the flesh in class II must be “free from major defects”. In the old version of the avocado standards, however, it states for the flesh in class II “The defects must not, in any case, affect the flesh of the fruit.” If one were to adhere to the formulation of the standard layout, it would mean a significant change in content.

Recommendation from the EWG: Deviate from the standard layout and retain the old text: “The defects must not, in any case, affect the flesh of the fruit.”

The stalk, if present, may be damaged.

Note: Specific requirements from the old version of the avocado standard is added.

4. PROVISIONS CONCERNING SIZING

Avocados may be sized by count or weight.

- When sized by count, size is determined by the number of individual fruit per package.
- When sized by weight, size is determined based on the individual weight of each fruit or a weight range per package in accordance with the following table:

Size Code	Weight (in grams)
2	> 1220
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
32	80 – 123 (only Hass type)

The minimum weight for avocados of Antillean/West Indian/Guatemalan and other not defined varieties shall be 170 g.

Note: Specific requirements from the old version of the avocado standard is added.

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

- a) For fruit sized by count: the weight of the smallest fruit shall be not less than 75% of the weight of the largest fruit in the same package.

Note: Specific requirements from the old version of the avocado standard is added.

5. 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. Produce that fail conformity assessment, may be allowed to be resorted and brought into conformity in accordance with the relevant provisions in the *Guidelines for Food Import Control System (CXG 47-2003)*.

Substantial Change to the standard layout

This text refers to both quality tolerances as well as size tolerances. It serves as an introductory sentence to the chapter on tolerances (Section 5.). In contrast, section 5.1, where the sentence is currently positioned, exclusively pertains to quality tolerances. Therefore, the EWG recommended to switch the position of the text in the layout from section 5.1 to section 5.

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 resorted and brought into conformity in accordance with the relevant provisions in the *Guidelines for Food Import Control System (CXG 47-2003)*.~~

Substantial Change to the standard layout (see box above)

This text refers to both quality tolerances as well as size tolerances. It serves as an introductory sentence to the chapter on tolerances (Section 5.). In contrast, section 5.1, where the sentence is currently positioned, exclusively pertains to quality tolerances. Therefore, the EWG recommended to switch the position of the text in the layout from section 5.1 to section 5.

5.1.1 “Extra” Class

Five percent, 5.0% by number or weight, of avocados not satisfying the requirements of the class, but meeting those of Class I.

5.1.2 Class I

Ten percent, 10.0% by number or weight, of avocados not satisfying the requirements of the class, but meeting those of Class II. Included therein, is one percent, 1%, tolerance for decay.

5.1.3 Class II

Ten percent, 10.0% by number or weight, of avocados not satisfying the requirements of the class. Included therein, is two percent, 2%, tolerance for decay.

5.2 SIZE TOLERANCES

For all classes: Ten percent, 10.0% by number or weight of avocados not satisfying the requirements as regards to sizing.

6. PROVISIONS CONCERNING PRESENTATION

6.1 UNIFORMITY

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

Note: Specific requirements from the old version of the avocado standard is added.

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

6.2 PACKAGING

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

[Stickers individually affixed to the produce shall be such that, when removed, they neither leave visible traces of glue nor lead to skin defects.]

Substantial change

The option to use stickers is not available in the old standard. However, this is a common trading practice for avocados, which is why the EWG recommends including this option.

Avocados shall be packed in each container 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 container shall meet the quality, hygiene, ventilation and resistance characteristics to ensure suitable handling, shipping and preserving of the avocados.

Packages must be free of all foreign matter and smell.

7. PROVISIONS CONCERNING MARKING OR LABELLING

7.1 CONSUMER PACKAGES

In addition to the requirement of the *General Standard for the Labelling of Pre-packaged 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 and may be labelled as to name of the variety.

7.1.2 Origin of produce

Country of origin⁶ and, optionally, district where grown, or national, regional or local place name.

7.2 NON-RETAIL CONTAINERS

The labelling of non-retail containers should be in accordance with the *General Standard for the Labelling of Non-Retail Containers of Foods* (CXS 346-2021). [Identification code (optional)* * 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 (set as footnote).]

Substantial change

According to the old version of the avocado standard, there was the option to an identification code (optional). However, this option is not provided in CXS 346-2021 and therefore also not in the standard layout. Recommendation from the EWG: Include the text "Identification code (optional) and add the footnote (marked with *) accordingly."

⁶ The full or a commonly used name should be indicated.

In addition, the following specific requirements shall apply:

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

7.2.1 Origin of produce

Country of origin⁶ and, optionally, district where grown, or national, regional or local place name.

7.2.2 Commercial Specifications

- Class;
- Size;
- Net weight (optional).

Note: Specific requirements from the old version of the avocado standard are

7.2.3 Official control mark (optional)

8. FOOD ADDITIVES

[No food additives are permitted in these products.]

Substantial change

Recommendation from EWG: chose this text from the list of options provided by the standard layout.

9. CONTAMINANTS

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

9.2 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).

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 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.

10.2 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).

Appendix II

REVISION OF THE STANDARD FOR ASPARAGUS (CXS 225-2001)

1. SCOPE

The purpose of the standard is to define the quality requirements for [shoots of] asparagus [from here on referred as asparagus] after preparation and packaging. When it is applied at stages

Substantial
Recommendation

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 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.

2. DEFINITION OF PRODUCE

This Standard applies to shoots of commercial varieties¹ of asparagus grown from *Asparagus officinalis*² from the *Liliaceae*¹ family to be supplied fresh to the consumer. Asparagus for industrial processing is excluded.

Asparagus shoots is classified into four groups according to colour:

- white asparagus;
- violet asparagus, having tips of a colour between pink and violet or purple and part of the shoot white;
- violet/green asparagus, part of which is of violet and green colouring;
- green asparagus having tips and most of the shoot green.

This Standard does not apply to green and violet/green asparagus of less than 3 mm diameter and white and violet asparagus of less than 8 mm diameter, packed in uniform bundles or unit packages.

Note: Specific requirements from the old version of the asparagus standard are added.

3. PROVISIONS CONCERNING QUALITY

3.1 MINIMUM REQUIREMENTS

In all classes, subject to the special provisions for each class and the tolerances allowed, the asparagus must display the following characteristics, deviations from which shall be observed by the naked eye or corrected 20/20 vision³ when appropriate:

- Intact;
- sound; produce affected by rotting or deterioration such as to make it unfit for consumption is excluded;
- firm;
- clean, practically free of any visible foreign matter;
- practically free from pests affecting the general appearance of the produce⁴;

¹ Varieties suitable for trade

² All information on botanical names is taken from the GRIN database (www.ars-grin.gov) or Mansfeld's World Database of Agricultural and Horticultural Crops (<http://mansfeld.ipk-gatersleben.de/apex/f?p=185:3:0>) or any other suitable database.

³ Loupe, binocular or other magnifying equipment should not be used when assessing defects.

⁴ The provisions for pests applies without prejudice to the applicable plant protection rules applied by governments in line with the International Plant Protection Convention (IPPC).

Substantial change

In the old version of the asparagus standard, it states: "free of pests affecting the general appearance of the produce." Therefore, compliance with the standard layout (only "free from pests") represents a significant substantive deviation from the old standard.

CCFFV23 must make a decision on this matter.

- practically free of damage caused by pests
- free of abnormal external moisture excluding condensation following removal from cold storage;
- free of any foreign smell and/or taste;
- fresh in appearance **and fresh-smelling;**

Note: Specific requirements from the old version of the asparagus standard are added.

- **[free of damage caused by low and/or high temperature;]**

Substantial change

This minimum requirement is defined in the standard layout. In the old version of the asparagus standard, this content was not present. Recommendation: add as minimum requirement for asparagus.

- **practically unbruised;**

Note: Specific requirements from the old version of the asparagus standard are added.

- free of damage caused by **unsuitable washing or soaking.**

Note: Specific requirements from the old version of the asparagus standard are added.

The cut at the base of the shoots must be as clean as possible.

In addition, shoots must be neither hollow, split, peeled nor broken. Small cracks which have appeared after harvesting are, however, allowed, so long as they do not exceed the limits laid down in Section 5.1, **Quality Tolerances.**

Note: Specific requirements from the old version of the asparagus standard are added.

The development and condition of the asparagus 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 asparagus must have reached an appropriate degree of development and/or maturity in accordance with criteria proper to the variety, to the time of harvesting/picking/etc., and to the area in which they are grown.

The asparagus must display sufficient development for the intended purpose in accordance with criteria appropriate to the variety and to the area in which they are grown.

3.2 CLASSIFICATION

The asparagus is classified into three classes defined below:

3.2.1 "Extra" Class

Asparagus in this class must be of superior quality. They must be characteristic of 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.

They must be **very well formed and practically straight.** Having regard to the normal characteristics of the group to which they belong, their tips must be very compact.

Only a few very slight traces of rust caused by non-pathogenic agents on the shoot, removable by normal peeling by the consumer, are allowed.

For the white asparagus group, the tips and shoots must be white; only a faint pink tint is allowed on the shoots.

Green asparagus must be green for at least 95% of the length.

No traces of woodiness are allowed for the shoots in this class.

The cut at the base of the shoots must be as square as possible. However, to improve presentation when the asparagus is packed in bundles, those on the outside may be slightly bevelled, so long as the bevelling does not exceed 1 cm.

Note: Specific requirements from the old version of the asparagus standard are added.

3.2.2 Class I

Asparagus in this class must be of good quality. They must be characteristic of the variety.

They must be well formed. Having regard to the normal characteristics of the group to which they belong, their tips must be compact.

Green asparagus must be green for at least 80% of the length.

Note: Specific requirements from the old version of the asparagus standard are added.

The cut at the base of the shoots must be as square as possible.

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, i.e. the shoots may be slightly curved
- slight defects in colouring; a faint pink tint may appear on the tips and the shoots for the white asparagus group;
- slight traces of rust caused by non-pathogenic agents removable by normal peeling by the consumer;
- a trace of woodiness on the lower part is permissible, except of the group of white asparagus, provided this woodiness disappears by normal peeling by the consumer.

Note: Specific requirements from the old version of the asparagus standard are added.

3.2.3 Class II

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

Green asparagus must at least be green for 60% of the length.

The tips of white asparagus may have a colouration including a green tint.

The tips of violet asparagus may have a slight green tint.

Note: Specific requirements from the old version of the asparagus standard are added.

The cut at the base of the shoots may be slightly oblique.

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

- defects in shape; i.e. shoots may be less well formed, more curved [than in class I] and having regard to the normal characteristics of the group to which they belong, their tips may be slightly open.
- traces of rust caused by non-pathogenic agents, removable by normal peeling by the consumer are allowed;
- slight woodiness.

Note: Specific requirements from the old version of the asparagus standard are added.

4. PROVISIONS CONCERNING SIZING

Asparagus may be sized by diameter and length of the shoot.

Note: Specific requirements from the old version of the asparagus standard are added.

(A) When sized by length, size is determined by the length of the longitudinal axis.

The length of the shoots must be:

- above 17 cm for long asparagus;
- 12 to 17 cm for short asparagus;
- for Class II asparagus arranged, but not bundled in the package:
 - white and violet: 12 to 22 cm,
 - violet/green and green: 12 to 27 cm.
- under 12 cm for asparagus tips.

The maximum length allowed for white and violet asparagus is 22 cm and for violet/green and green asparagus 27 cm.

The maximum difference in length of shoots packed in firmly bound bundles must not exceed 5 cm.

Note: Specific requirements from the old version of the asparagus standard are added.

(B) When sized by diameter, size is determined by either the maximum diameter of the equatorial section of each fruit or a diameter range per package in accordance with the following table.

The diameter of the shoots shall be measured 2.5 cm from the cut end.

The minimum diameter and sizing shall be:

White and violet:

Class	Minimum diameter	Sizing
Extra	12 mm	Maximum variation of 8 mm between the thinnest and the thickest shoot in the same package or the same bundle.
I	10 mm	Maximum variation of 10 mm between the thinnest and the thickest shoot in the same package or the same bundle.
II	8 mm	No provision as to uniformity.

Violet/green and green asparagus:

Class	Minimum diameter	Sizing
Extra and I	3 mm	Maximum variation of 8 mm between the thinnest and the thickest shoot in the same package or the same bundle.
II	3 mm	No provision as to uniformity.

Note: Specific requirements from the old version of the asparagus standard are added.

5. PROVISIONS CONCERNING TOLERANCES⁴

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 resorted and brought into conformity in accordance with the relevant provisions in the *Guidelines for Food Import Control System (CXG 47-2003)*.

Substantial change to the standard layout

This text refers to both quality tolerances as well as size tolerances. It serves as an introductory sentence to the chapter on tolerances (Section 5.). In contrast, section 5.1, where the sentence is currently positioned, exclusively pertains to quality tolerances. Therefore, the EWG recommended to switch the position of the text in the layout from section 5.1 to section 5.

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 resorted and brought into conformity in accordance with the relevant provisions in the Guidelines for Food Import Control System (CXG 47-2003).~~

Substantial change to the standard layout (see box above)

This text refers to both quality tolerances as well as size tolerances. It serves as an introductory sentence to the chapter on tolerances (Section 5.). In contrast, section 5.1, where the sentence is currently positioned, exclusively pertains to quality tolerances. Therefore, the EWG recommended to switch the position of the text in the layout from section 5.1 to section 5.

5.1.1 "Extra" Class

Five percent 5.0%, by number or weight, of asparagus not satisfying the requirements of the class, but meeting those of Class I. ~~Included therein are slight unscarred cracks appearing after harvesting.~~

Note: Specific requirements from the old version of the asparagus standard are added.

5.1.2 Class I

Ten percent, 10.0% by number or weight, of asparagus not satisfying the requirements of the class, but meeting those of Class II. ~~Included therein are slight unscarred cracks appearing after harvesting.~~

Note: Specific requirements from the old version of the asparagus standard are added.

5.1.3 Class II

Ten percent, 10.0% by number or weight, of asparagus not satisfying the requirements of the class ~~with the exception of produce affected by rotting or any other deterioration rendering it unfit for consumption.~~

~~In addition to the above, 10% by number or weight can be allowed for hollow shoots or shoots showing very slight cracks due to washing. In no case can there be more than 15% hollow shoots in each package or bundle.~~

Note: Specific requirements from the old version of the asparagus standard are added.

5.2 SIZE TOLERANCES

For all classes: Ten percent, 10.0%, by number or weight of asparagus not satisfying the requirements as regards to sizing ~~and deviating from the specified limits with a maximum deviation of 1 cm in length.~~

Note: Specific requirements from the old version of the asparagus standard are added.

~~For all classes, 10% by number or weight of shoots not corresponding to the size indicated and deviating from the specified limits with a maximum deviation of 2 mm in diameter. In no case shall the diameter be less than 3 mm.~~

Note: Specific requirements from the old version of the asparagus standard are added.

6. PROVISIONS CONCERNING PRESENTATION

6.1 UNIFORMITY

The contents of each package must be uniform and contain only asparagus of the same origin, quality, ~~colour group~~ and size (if sized).

~~Nevertheless, with respect to colour, shoots of a different colour group may be allowed within the following limits:~~

- White asparagus: 10% by number or weight of violet asparagus in Classes Extra and I and 15% in Class II;
- violet, violet/green and green asparagus: 10% by number or weight of asparagus of another colour group.

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

Note: Specific requirements from the old version of the asparagus standard are added.

The visible part of the contents of the package, **unit package or bundle** must be representative of the entire contents.

Note: Specific requirements from the old version of the asparagus standard are added.

6.2 PACKAGING

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

Asparagus shall be packed in each container 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 container shall meet the quality, hygiene, ventilation and resistance characteristics to ensure suitable handling, shipping and preserving of the asparagus.

Packages must be free of all foreign matter and smell.

6.2.2 Presentation

The asparagus may be presented under one of the following forms:

- In bundles firmly bound.
Shoots on the outside of each bundle must correspond in appearance and diameter with the average of the whole bundle.
In "Extra" Class, asparagus shoots packed in bundles must be of the same length. Bundles must be arranged evenly in the package, each bundle may be protected by paper. In any one package, bundles must be of the same weight.
- Arranged, but not bundled in the package.
- In prepackaged units placed in another package.

Note: Specific requirements from the old version of the asparagus standard are added.

7. PROVISIONS CONCERNING MARKING OR LABELLING

7.1 CONSUMER PACKAGES

In addition to the requirement of the General Standard for the Labelling of Pre-packaged 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 and may be labelled as to name of the variety.

7.1.2 Origin of Produce

Country of origin⁵ and, optionally, district where grown, or national, regional or local place name.

7.2 NON-RETAIL CONTAINERS

The labelling of non-retail containers should be in accordance with the *General Standard for the Labelling of Non-Retail Containers of Foods* (CXS 346-2021).

⁵ The full or a commonly used name should be indicated.

[Identification code (optional)* * 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 (set as footnote).]

Substantial change

According to the old version of the avocado standard, there was the option to an identification code (optional). However, this option is not provided in CXS 346-2021 and therefore also not in the standard layout. Recommendation from the EWG: Include the text “Identification code (optional) and add the footnote (marked with *) accordingly.”

In addition, the following specific requirements shall apply:

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

7.2.1 Nature of produce

“Asparagus” followed by the indication “white”, “violet”, “violet/green” or “green” if the contents of the package are not visible from the outside and, where appropriate, the indication “short” or “tips” or “mixture white and violet”.

Note: Specific requirements from the old version of the asparagus standard are added.

7.2.2 Origin of produce

Country of origin⁴ and, optionally, district where grown, or national, regional or local place name.

7.2.3 Commercial Specifications

- Class;
- Size, expressed:
 - for asparagus subject to the uniformity rules as minimum and maximum diameters,
 - for asparagus not subject to the uniformity rules, as minimum diameter followed by maximum diameter or the words “and over”.
- Number of bundles or number of unit packages, for asparagus packed in bundles or unit packages.

Note: Specific requirements from the old version of the asparagus standard are added.

7.2.4 Official control mark (optional)

8. FOOD ADDITIVES

[No food additives are permitted in these products.]

Substantial change

Recommendation from EWG: chose this text from the list of options provided by the standard layout.

9. CONTAMINANTS

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

9.2 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).

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 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.

10.2 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).

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