



Food and Agriculture
Organization of
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Viale delle Terme di Caracalla, 00153 Rome, Italy - Tel: (+39) 06 57051 - Fax: (+39) 06 5705 4593 - E-mail: codex@fao.org - www.codexalimentarius.org

Agenda Item 5

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**JOINT FAO/WHO FOOD STANDARDS PROGRAMME
CODEX COMMITTEE ON FRESH FRUITS AND VEGETABLES**

19th Session

Ixtapa Zihuatanejo, Guerrero, Mexico, 5 – 9 October 2015

PROPOSED DRAFT CODEX STANDARD FOR KIWIFRUIT

(Prepared by the Electronic Working Group led by New Zealand)

Codex Members and Observers wishing to submit comments at Step 3 on this proposal should do so in conformity with the *Uniform Procedure for the Elaboration of Codex Standards and Related Texts* (Codex Alimentarius Commission Procedural Manual) as presented in Annex I before **15 September 2015** to the Codex Contact Point of Mexico (E-mails: codexmex@economia.gob.mx, codxmex1@economia.gob.mx), with a copy to the Secretariat, Codex Alimentarius Commission (E-mail: codex@fao.org).

Specific comments are required on those provisions placed in square brackets to aid discussion in CCFFV.

Format for submitting comments: In order to facilitate the compilation of comments and prepare a more useful comments document, Members and Observers are requested to provide their comments in the format outlined in Annex III to this document.

BACKGROUND

1. CCFFV¹18 (February 2014) agreed to request CAC² approval of new work on a Standard for Kiwifruit.³ In addition, The Committee also agreed to establish an EWG⁴, led by New Zealand and co-chaired by Iran and working in English only, to prepare, subject to approval by CAC, a proposed draft standard for circulation for comments at Step 3 and consideration at its next session. The list of participants is provided in Annex II. CAC37 (July 2014) approved the new work proposal as submitted by CCFFV.⁵

Nature of the standard

2. The proposed draft has been prepared based on the Codex layout. It uses wording from recently-adopted standards for fresh fruits and vegetables and from the *Proposed Layout for Codex Standards for Fresh Fruits and Vegetables* which appears in REP14/FFV, Appendix X⁶.

3. The proposed draft also makes use of UNECE Standard FFV-46 concerning the marketing and commercial quality control of Kiwifruit⁷, and the OECD brochure on International Standardisation of Fruit and Vegetables: Kiwifruit⁸.

Name of the standard

4. The name “kiwifruit” follows that used in the UNECE Standard and the OECD brochure.

¹ Codex Committee on Fresh Fruits and Vegetables

² Codex Alimentarius Commission

³ REP13/FFV, para 56 and Appendix VIII

⁴ Electronic Working Group

⁵ REP14/CAC, Appendix VI

⁶ <http://www.codexalimentarius.org/committees-and-task-forces/en/?provide=committeeDetail&idList=14>

⁷ http://www.unece.org/fileadmin/DAM/trade/agr/standard/fresh/FFV-Std/English/46Kiwifruit_2010.pdf

⁸ **Kiwifruit - Books - OECD iLibrary**, http://www.oecd-ilibrary.org/agriculture-and-food/kiwifruit_9789264044272-en-fr;jsessionid=rppvu54odn6p.x-oecd-live-02

1. Definition of produce

5. The definition is based on the wording of UNECE Standard FFV-46. Some members proposed that the range of varieties is widened to include any variety derived from *Actinidia* Lindl. and their hybrids in order to encompass the range of varieties exported and sold as kiwifruit, for example, hybrids of *A. chinensis* and *A. rufa*. Others however preferred to maintain the UNECE current list of the species because it refers to products with importance in international trade. The alternatives are placed in square brackets for further discussion.

6. If the definition is widened to include small-sized varieties, some consequential changes are needed later in the standard. These are noted below.

7. The phrase “also known as *Actinidia* or kiwi” is removed since several other denominations for kiwifruit are used around the world.

8. The last clause is made a separate sentence.

2. Provisions concerning quality

2.1 Minimum requirements

9. The minimum requirements follow the wording of UNECE Standard FFV-46, except:

- Freedom from damage caused by pests has been combined with the indent “practically free from pests” to follow the Codex layout
- Damage caused by pests has been extended to include damage affecting the general appearance of the produce
- Some members considered that double or multiple fruit should be allowed in Class II, but others considered this would allow very misshapen fruit to be included. Alternative wording is placed in square brackets here, and “double/multiple” in 2.3.3, for further discussion.
- Freedom from abnormal external moisture has been amended by adding “excluding condensation following removal from cold storage”, following the Codex layout.

2.2 Maturity requirements

10. In the first paragraph we have modified the UNECE wording to emphasise the importance of organoleptic characteristics.

11. There are several changes from UNECE wording to note in the second paragraph. The phrase “In order to satisfy this requirement” has been deleted, since while the specified degree of ripeness is a minimum, for some varieties this may not be sufficient to achieve satisfactory organoleptic characteristics.

12. In this paragraph the words “harvest and/or” and “normally” have also been included, which were supported by some members. The word “normally” is intended to indicate ripening without the use of chemical substances. It is placed in square brackets because members did not agree on its inclusion. Some members considered that if producers harvest kiwifruit earlier and use chemical substances like ethylene for ripening, kiwifruit cannot properly mature and satisfy the organoleptic characteristics applied by the standard. Other members were of the view that with good control ethylene can be used successfully post harvest, and the standard should not rule out its use.

13. The words “a minimum of” have been included to allow for fruit reaching a higher level than 9.5° Brix.

2.3 Classification

14. The wording follows UNECE Standard FFV-46, with the following minor changes.

15. In “Extra” Class and Class I the term “cultivar” has been included in parenthesis after “variety”, to be consistent with the Definition. (The same change is also made in later sections of the standard.)

16. In Class I the phrase “Hayward marks” has been made plural to match “longitudinal lines” and the indent has been reworded slightly for clarity. In Class II the phrase “more-pronounced” has been hyphenated to avoid possible ambiguity.

17. In Class II a reference to Section 2.1 has been added in the first paragraph, following the Codex layout. “Defects in shape” has been clarified by specifically including flattened and double/multiple fruit.

18. Variations are introduced for the small variety *Actinidia arguta*. In Extra class and Class I, such fruit are exempted from the provisions regarding the ratio of the minimum/maximum diameter, and in Class I and Class II the allowed area of skin defects is reduced.

2.3.3 Class II

19. It is difficult to measure small healed cuts or scarred/grazed tissue, so this example has been removed.

3. Provisions concerning sizing

20. The wording follows UNECE Standard FFV-46, except that the second paragraph offers two options, placed in square brackets for further discussion. Some members recommended that minimum sizes should not be specified because the minimum sizes depend on the variety; for example if the range of species listed in the definition of produce is extended, there are small-sized varieties of kiwifruit which range from 30 to 80 g in weight. It was also recommended that the uniformity provisions should not apply to small varieties, since these provisions were designed for varieties (cultivars) of *A deliciosa* and *A chinensis*.

21. Other members of the working group, who wished to maintain the original definition of produce, considered that the provision specifying minimum weights for each class should be retained.

4. Provisions concerning tolerances

22. Codex wording is used, which follows UNECE Standard FFV-46, except the introductory phrase "At all marketing stages" has been deleted.

23. The wording of this and following sections could be considered further in connection with discussion of the Proposed Layout for Codex Standards for Fresh Fruits and Vegetables.

4.1 Quality tolerances

24. The wording follows the Codex layout. In particular the introductory phrases from the UNECE Standard, "A total tolerance of" have been deleted, and the sentence (for example) "Within this tolerance not more than 0.5 per cent in total may consist of produce satisfying the requirements of Class II quality" has been replaced by "or, exceptionally, coming within the tolerances of that class". This Codex wording has the same effect as the UNECE wording.

4.2 Size tolerances

25. The first paragraph offers the wording from the Codex layout and the wording from the UNECE standard as alternatives. Some members favoured the UNECE wording because tolerances should allow for any mistakes that might happen during sizing and packaging, and should therefore be as simple as possible and allow for any deviation from the sizing requirements. Others considered this wording would allow too wide a range of sizes in the same package.

26. The wording "if sized" is added, consequential to the changes proposed in section 3.

27. The second paragraph from the UNECE standard specifying minimum tolerance weights for each class has been deleted, to enable all small varieties of kiwifruit to be covered.

5. Provisions concerning presentation

5.1 Uniformity

28. The provisions of the UNECE Standard and the Codex layout are identical.

5.2 Packaging

29. Wording from the Codex layout is used in this section.

6. Marking or labelling

6.1 Consumer packages

30. Wording from the Codex layout is used in this section.

6.2 Non-retail containers

31. The wording in this section generally follows the Codex layout. Sections 6.2.2 (Nature of Produce) and 6.2.4 (Commercial Identification) include wording from the UNECE Standard.

32. The wording "if sized" is added in 6.2.4, consequential to the changes proposed in section 3.

7. Contaminants

33. Wording from the Codex layout is used in this section.

8. Hygiene

34. Wording from the Codex layout is used in this section.

ANNEX I

PROPOSED DRAFT CODEX STANDARD FOR KIWIFRUIT

1. DEFINITION OF PRODUCE

This Standard applies to kiwifruit of varieties (cultivars) [derived from genus *Actinidia* Lindl. and hybrids thereof]/[grown from *Actinidia chinensis* Planch. and *Actinidia deliciosa* (A. Chev.) C.F. Liang & A.R. Ferguson and hybrids thereof], to be supplied fresh to the consumer. Kiwifruit for industrial processing are excluded.

2. PROVISIONS CONCERNING QUALITY

2.1 MINIMUM REQUIREMENTS

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

- intact (but free of peduncle);
- 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 of pests and damage caused by them affecting the flesh or the general appearance of the produce;
- free of abnormal external moisture, excluding condensation following removal from cold storage;
- free of any foreign smell and/or taste.
- adequately firm; not soft, shrivelled or water-soaked;
- well formed; [double/multiple fruit being excluded]/[misshapen fruit is not allowed; regular shaped double fruit is allowed];

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

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

2.2 MATURITY REQUIREMENTS

The kiwifruit must be sufficiently developed and display sufficient ripeness to allow for development of satisfactory organoleptic characteristics.

The fruit at harvest and/or packing must have attained [normally] a degree of ripeness of at least 6.2° Brix or an average dry matter content of 15%, which should lead to a minimum of 9.5° Brix when entering the distribution chain.

2.3 CLASSIFICATION

Kiwifruit are classified in three classes, as defined below:

2.3.1 "Extra" Class

Kiwifruit in this class must be of superior quality. They must be characteristic of the variety (cultivar).

The fruit must be firm and the flesh must be perfectly sound.

They must 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.

The ratio of the minimum/maximum diameter of the fruit measured at the equatorial section must be 0.8 or greater[, except for varieties (cultivars) grown from *Actinidia arguta*].

2.3.2 Class I

Kiwifruit in this class must be of good quality. They must be characteristic of the variety (cultivar).

The fruit must be firm and the flesh must be perfectly sound.

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 (but free of swelling or malformations);
- slight defects in colouring;
- slight skin defects, provided the total area affected does not exceed 1 cm² [(0.75 cm² for fruit of *A arguta*);
- small "Hayward marks" (longitudinal lines) without protuberance.

The ratio of the minimum/maximum diameter of the fruit measured at the equatorial section must be 0.7 or greater[, except for varieties (cultivars) grown from *Actinidia arguta*].

2.3.3 Class II

This class includes kiwifruit which do not qualify for inclusion in the higher classes, but satisfy the minimum requirements specified in Section 2.1 above.

The fruit must be reasonably firm and the flesh should not show any serious defects.

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

- defects in shape including flattened[, double/multiple] fruit;
- defects in colouring;
- skin defects provided that the total area affected does not exceed 2 cm² [(1.25 cm² for fruit of *A arguta*);
- several more-pronounced "Hayward marks" with a slight protuberance;
- slight bruising.

3. PROVISIONS CONCERNING SIZING

Size is determined by the weight of the fruit.

[The following provision shall not apply to kiwifruit varieties (cultivars) with a weight below 40 g.]/[The minimum weight for "Extra" Class is 90 g, for Class I is 70 g and for Class II is 65 g.]

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

- 10 g for fruit [weighing between 40 g and]/[of weight up to] 85 g;
- 15 g for fruit weighing between 85 g and 120 g;
- 20 g for fruit weighing between 120 g and 150 g;
- 40 g for fruit weighing 150 g or more.

4. PROVISIONS CONCERNING TOLERANCES

Tolerances in respect of quality and size shall be allowed in each lot for produce not satisfying the requirements of the class indicated.

4.1 QUALITY TOLERANCES

4.1.1 "Extra" Class

Five percent, by number or weight, of kiwifruit not satisfying the requirements of the class but meeting those of Class I or, exceptionally, coming within the tolerances of that class.

4.1.2 Class I

Ten percent, by number or weight, of kiwifruit not satisfying the requirements of the class but meeting those of Class II or, exceptionally, coming within the tolerances of that class.

4.1.3 Class II

Ten percent by number or weight of kiwifruit satisfying neither the requirements of the class nor the minimum requirements, with the exception of produce affected by decay should not be more than 2%.

4.2 SIZE TOLERANCES

For all classes (if sized): 10% by number or weight of kiwifruit [corresponding to the size immediately above and/or below that indicated on the package / not satisfying the requirements as regards sizing is allowed].

5. PROVISIONS CONCERNING PRESENTATION

5.1 UNIFORMITY

The contents of each package must be uniform and contain only kiwifruit of the same origin, variety (cultivar), quality and size. The visible part of the contents of the package must be representative of the entire contents.

5.2 PACKAGING

Kiwifruit must be packed in such a way as to protect the produce properly. The materials used inside the package must be new¹, 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.

Kiwifruit shall be packed in each container in compliance with the *Code of Practice for Packaging and Transport of Fresh Fruits and Vegetables* (CAC/RCP 44-1995).

5.2.1 Description of Containers

The containers shall meet the quality, hygiene, ventilation and resistance characteristics to ensure suitable handling, shipping and preserving of the kiwifruit. Packages must be free of all foreign matter and smell.

6. MARKING OR LABELLING

6.1 CONSUMER PACKAGES

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

6.1.1 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 the name of the variety (cultivar).

6.2 NON-RETAIL CONTAINERS

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

For produce transported in bulk, these particulars must appear on a document accompanying the goods.

6.2.1 Identification

Name and address of exporter, packer and/or dispatcher. Identification code (optional)².

¹ For the purposes of this Standard, this includes recycled material of food-grade quality.

² 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.

6.2.2 Nature of Produce

Name of the produce if the contents are not visible from the outside. Name of the variety or cultivar (optional).

6.2.3 Origin of Produce

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

6.2.4 Commercial Identification

- Class;
- Size (if sized) expressed by the minimum and maximum weight of the fruit;
- Number of fruits (optional).

6.2.5 Official Inspection Mark (optional)**7. CONTAMINANTS**

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

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

8. HYGIENE

8.1 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* (CAC/RCP 1-1969), *Code of Hygienic Practice for Fresh Fruits and Vegetables* (CAC/RCP 53-2003), and other relevant Codex texts such as codes of hygienic practice and codes of practice.

8.2 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* (CAC/GL 21-1997).

ANNEX II
List of Participants

Country	Name	Position	Affiliation	Email
Argentina	Silvia Santos	Coordinator	Dept of Agriculture	ssantos@senasa.gov.ar; codex@minagri.gob.ar
Brazil	Andre Luiz Bispo Oliveira	Inspector	Ministry of Agriculture, Livestock and Food Supply	andre.oliveira@agricultura.gov.br
Chile	Marcela Faundez Vidal	National Coordinator	Ministry of Agriculture	marcela.faunfezv@sag.gob.cl
European Union	Codex Contact Point		European Commission	codex@ec.europa.eu
Germany	Ms Ulrike Bickelmann	Head of Division	Federal Office of Agriculture & Food	ulrike.bickelmann@ble.de
Greece	Efthymia Skourogianni		Dept of Food Quality Control	ax2u051@minagric.gr
Greece	Charikleia Dimakou		Dept of Food Quality Control	ax2u023@minagric.gr; codex@efet.gr
Italy	Antonio Fadavi		Ministry of Agriculture	a.fallacara@politicheaagricole.it
Italy	Pellegrini Deleso		Ministry of Agriculture	p.deieso@politicheaagricole.it
Iran	Maziar Faghin Nasiri	Postharvest Physiology of Citrus & Kiwifruit	Iran Citrus Research Institute	mznasiri@yahoo.com
Iran	Nadia Ahmadi	Secretary CCFFV	Institute of Standards & Industrial research	nady.ahmadi@yahoo.com
Iran	Darab Hassani	Head of CCFFV	Ministry of Agriculture	hassanida@gmail.com
Iran	Javad Fattahi Moghaddam	Postharvest Physiology of Citrus & Kiwifruit	Iran Citrus Research Institute	jfattahim@yahoo.com
Japan	Ms Asako Kasai	Section Chief	Ministry of Agriculture, Forestry & Fisheries	asako_kaksai@nm.maff.go.jp; codex_maff@nm.maff.go.jp
Mexico	Gabriela Jimenez Rodriguez	Sub Director	SAGARPA	gjimenez.dgvdt@sagarpa.gob.mx; codexmex@economia.gob.mx
Netherlands	Mr Fred Jacobs	Specialist Quality Fruit & Veg	KCB	f.jacobs@kcp.nl
South Africa	Mr Mooketsi Mosome	Manager	Dept of Agriculture, Forestry & Fisheries	MooketsiMo@daff.gov.za
South Africa	Ms Tebogo Chipane	Chief	Dept of Agriculture, Forestry & Fisheries	TebogoC@daff.gov.za
Spain	Jaime Camps Alminana	Head of Area	Ministry of Economy and Competitiveness	JCamps@comercio.mineco.es
United Kingdom	Mr Ian Hewett	Market Measures Trader Manager	Dept for Environment, Food & Rural Affairs	ian.c.hewett@rpa.gsi.gov.uk

ANNEX III**GENERAL GUIDANCE FOR THE PROVISION OF COMMENTS**

In order to facilitate the compilation and prepare a more useful comments' document, Members and Observers, which are not yet doing so, are requested to provide their comments under the following headings:

- (i) General Comments
- (ii) Specific Comments

Specific comments should include a reference to the relevant section and/or paragraph of the document that the comments refer to.

When changes are proposed to specific paragraphs, Members and Observers are requested to provide their proposal for amendments accompanied by the related rationale. New texts should be presented in underlined/bold font and deletion in ~~strikethrough font~~.

In order to facilitate the work of the Secretariats to compile comments, Members and Observers are requested to refrain from using colour font/shading as documents are printed in black and white and from using track change mode, which might be lost when comments are copied/pasted into a consolidated document.

In order to reduce the translation work and save paper, Members and Observers are requested not to reproduce the complete document but only those parts of the texts for which any change and/or amendments is proposed.