CODEX ALIMENTARIUS COMMISSION



Food and Agriculture Organization of the United Nations



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JOINT FAO/WHO FOOD STANDARDS PROGRAMME CODEX COMMITTEE ON FRESH FRUITS AND VEGETABLES 21st Session

DRAFT STANDARD FOR WARE POTATOES

Prepared by the Electronic Working Group chaired by India and co-chaired by Cameroon and Peru

Codex members and observers wishing to submit comments at Step 6 on this draft should do so as instructed in CL 2019/63-FFV available on the Codex webpage/Circular letters 2019: <u>http://www.fao.org/fao-who-codexalimentarius/circular-letters/en/</u>

BACKGROUND

1. At the 17th session of the Codex Committee on Fresh Fruits and Vegetables (CCFFV)¹ held in Mexico in September 2012, India introduced a new work proposal on a Codex standard for ware potatoes. CCFFV17 recommended approval of new work for the development of a standard for ware potato, and in taking this decision, CCFFV17 acknowledged the views of several delegations that, while not opposing the development of the standard, indicated that more time was needed to consult with their stakeholders as the proposal was received late. However, CCFFV17 noted that the period between this session and the next session of the Executive Committee i.e. ten months would allow for sufficient time for countries to consult with their stakeholders and bring any concerns to the Commission in relation to the approval of this new work.

2. The 36th Session of the Codex Alimentarius Commission (CAC) (July 2013)² requested CCFFV submit a clear project document with a well-defined scope for consideration at the next sessions of CCEXEC and CAC.

3. CCFFV18³, held in Phuket, Thailand from 24 – 28 February 2014, agreed to request the Commission to approve new work on a standard for ware potato and to forward the revised project document to the Executive Committee for critical review. CCFFV18 also agreed to establish an Electronic Working Group (EWG), led by India and co-chaired by France to prepare, subject to approval by the Commission, a proposed draft standard for circulation for comments at Step 3 and consideration at its next session.

4. CAC37⁴ (July 2014) approved the new work proposal of a standard for ware potatoes as proposed by CCFFV.

5. Subsequently, EWG was established and it commenced its deliberations in November, 2014. Based on the comments/suggestion received from EWG members, the document was revised and final report was submitted for consideration by CCFFV19 held in October, 2015.

6. CCFFV19⁵ noted that the proposed draft standard still required considerable reviews and was not ready for advancement in the Step process. Further, due to the complexity of the unresolved issues, CCFFV19 agreed to discuss the revised proposed draft Standard in general and made the following additional comments in relation to minimum requirements and quality classes:

- Presence of rotting, sprouts and green coloration should be further examined, as they negatively impact on food safety (presence of high levels of solanins);
- The allowance for the presence of soil in the quality classes should also be further examined.

¹ REP13/FFV, paras. 123-124 and Appendix VI

² REP13/CAC, para 116

³ REP14/FFV, para 53 and Appendix V

⁴ REP14/CAC Appendix VI

⁵ REP16/FFV para 83 and Appendix VI

7. The draft was revised in the light of comments received and was presented in CCFFV20(2017) for consideration. It was also indicated that only provisions on minimum requirements (allowance on sprouts, green colouration) and quality tolerances (i.e. tolerance for decay in "Extra" Class and soil in all classes) would require further consideration by the Committee as was pointed out in CCFFV19.

8. CAC41 (2018)⁶ adopted the proposed draft standard for ware potatoes at Step 5.

TERMS OF REFRENCE

9. CCFFV20 (2017) agreed to establish an EWG chaired by India and Co-chaired by Cameroon and Peru to consider those critical issues identified by the Committee especially minimum requirements and table of tolerances as well as comments provided at Step 5 on the standard in order to prepare a revised version for consideration at its next Session.

PARTICIPATION AND METHODOLOGY

10. Thirty four Member Countries (including one member organization and two observer organizations) nominated their experts to participate in this EWG. The list of EWG participants is provided at Appendix IV. Two rounds of consultations were done to prepare the proposed revised draft. The EWG began its work by circulating the first draft with a request to EWG members to consider provisions under square brackets of the proposed draft standard on ware potatoes especially minimum requirements and Table of tolerances as identified by the committee in CCFFV20.

11. In response, six member countries provided their comments (Colombia, Thailand, Spain, Ecuador, Iran and Mexico) and the same were analyzed and accordingly the draft was modified as appropriate. The analysis of the comments is attached at Appendix II.

12. During second round of consultation, comments were received from eleven member countries and one observer organisation including replies to CL2017-91-FFV, were considered by the EWG. The final revised draft has been prepared after incorporating changes as suggested by members, as appropriate, and the same is attached. The analysis of the comments received in second round of consultation is provided at Appendix III.

Discussions and Conclusion

13. Based on the comments/ suggestions received from EWG members, the amendments pertaining to minimum requirements, classification and quality tolerances have been made to the draft presented to CCFFV20.

14. The major modification and discussion points and consequent modifications to the draft standard include the following:

[practically unsprouted i.e. sprout may not be longer than 1 mm]

15. In respect of "**practically unsprouted i.e. sprout may not be longer than 1 mm**", most of the members supported retaining the part "practically unsprouted" but in respect of other part i.e. **sprout may not be longer than 1 mm**, there were divergent views. It is well recognized that ware potatoes are susceptible to sprouting if stored for a period of more than 3 months, therefore, it is important to set a limit beyond which the quality of ware potatoes would not be acceptable. Hence, it is proposed to retain practically unsprouted and its limit should be mentioned under provisions for quality tolerances as the proposed restriction of sprout is intended to cater for this phenomenon.

[free of external and internal defects affecting the appearance, keeping quality and presentation in the package, such as:

16. Few members were of the view that the internal defects may not affect the general appearance of the product, and therefore, type of defects should be removed. The same was accepted by the EWG.

<u>Green colouration; pale green flush not exceeding one eighth of the surface area and which can be removed</u> by normal peeling does not constitute a defect;

17. Members are generally in favour of retaining green colouration (except one member country) under minimum requirement as slight green colouration is not considered as a defect and can develop due to poor storage and transportation. One member supported deletion of description of colour as it is very subjective.

18. In order to maintain its consistency with other defects, EWG proposed retaining of this indent with slight modification in the text i.e. "Flush exceeding one eight of the surface...".

⁶ REP18/CAC Appendix IV

brown stains due to heat;

19. One member proposed to delete the text "due to heat", since the dark color is not only caused by heat. EWG accepted this proposal.

cracks (including growth cracks), cuts, bites, bruises or roughness (only for varieties of which the skin is not normally rough) exceeding 4 mm in depth

20. One member suggested removing this defect from the minimum requirement. However, another member suggested removing the information that is in parentheses. EWG is of the view that cracking is an external noninfectious physiological disorder (i.e. tuber splits while growing starting from bud and extend length wise), which occurs due to uneven soil moisture, air temperature and rapid water uptake. In light of the fact above, EWG proposed to retain this intend without the text in parentheses.

Deformities;

21. Members were of the view that only serious deformities should be excluded. EWG therefore proposed that word "serious" be prefixed to deformities.

grey, blue or black sub-epidermal stains; exceeding 5 mm in depth

22. One member suggested deleting this defect, while others proposed to keep this defect during first round of consultation. EWG noted that the presence of sub-epidermal stains of gray, blue or black color is a common problem in potatoes and therefore proposed that it should be limited in all classes by indicating tolerance limits under the provision concerning tolerances, therefore the original text was not amended.

- "deep common potato scab and powdery potato scab, of a depth of 2 mm or more"

- "superficial common potato scab, i.e. scab spot in all must not extend over more than a quarter of the surface of the tuber"]

23. Few members expressed that potato scab or powdery potato scab should be deleted. Since it would be in conflict of other minimum requirements i.e. Practically free from Pest" as its fails to meet the minimum requirement on practically free from pest. Some members were also of the view that as per the current practice, this defect is acceptable in trade. This defect, potato scab is a very common problem that occurs through the potato growing region of the world; superficial scab lesions do not greatly affect marketability however it increases peeling losses. There was no consensus on the issue and therefore the original text was not amended.

24. Some members proposed that superficial common potato scab is a part of defects and this minimum requirement should be retained as scab does not develop further once the potatoes are harvested. Accordingly, appropriate corrections have been made in the revised draft.

Classification: Extra Class; Class I; Class II.

25. Some members were of the view that there should be no extra class in case of the potatoes. This issue was already discussed in detail in CCFFV20. It is to be mentioned that the provisions on the three classes with tolerances are the same as for other fruits and vegetables standards established under Codex. Accordingly, the tolerances may be established depending on the characteristics/nature of produce and current trade practices. E.g. Codex standrads for cassava, okra, ginger and aubergines etc. provided five percent total allowances for quality tolerance in Extra Class, as Codex Standards were based on scientific evidence and well established trade practices. After extensive discussion, CCFFV20 agreed to retain extra class in draft standard. In view of the above, EWG proposed to retain the extra class in the proposed standard.

Provisions concerning "Quality Tolerances"

26. One member expressed that table included in the draft standard is not practical and proposed to include usual text. The proposed table was introduced as per the Standard layout for Fresh Fruits and Vegetables as agreed upon by CCFFV20. As agreed by CCFFV2-, slight modification in the table has been made to bring more clarity and for consistency with the provisions of minimum requirements. The Table for quality tolerances is included all the parameters specified under minimum requirements, which could be used as a ready reckoner by an inspector at the time of inspection for acceptance or rejection of a lot.

27. Some members were of the view that there should be no tolerances for frozen, decay, soft rot or internal breakdown" in extra class. However, it is to be mentioned that this is not a new provision and all fruits and vegetables codex standards specified this provision. There was no consensus on the issue.

28. Few members proposed that there should be a separate indent for "skinning" under Quality tolerances. However, EWG proposed to delete this indent from the quality tolerances, as the existing trade practices, skin missing or feathered are not allowed in case of ware potatoes

Recommendation

29. CCFFV21 is invited to consider:

- the proposed Codex Standards for Ware Potatoes at Appendix I; and
- forwarding the draft standard for ware potatoes to CAC43 for adoption at Step 8.

Appendix I

DRAFT STANDARD FOR WARE POTATOES

1. SCOPE

The purpose of the standard is to define the quality requirements for ware potatoes after preparation (e.g. brushing and/or washing) and packaging. When applied at stages following packaging, ware potatoes_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.

This standard covers all the commercial varieties of ware potatoes where, the varietal characteristics of tubers vary in:

- Shape: from spherical to ovoid and oblong, elongated;
- External/skin colour: from white through yellow to tan and from reddish through blue;
- Flesh Colour: from white to yellow to blue; and
- Depth and colour of the eye cavities: superficial, semi-deep and deep from shades ranging from pink to blue

2. DEFINITION OF PRODUCE

This Standard applies to commercial varieties of ware potato grown from *Solanumtuberosum*L., of the *Solanaceae*family, to be supplied fresh to the consumer, after preparation and packaging. Ware potatoes for industrial processing and early potatoes⁷ 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 ware potatoes must be:

- intact;
- sound; produce affected by rotting or deterioration, which makes it unfit for consumption is excluded
- fresh in appearance;
- firm;
- clean and practically free of any visible foreign matter⁸;
- practically free from pests⁹;
- practically free from damage caused by pest;
- free of abnormal external moisture, excluding condensation following removal from cold storage;
- free of any foreign smell;
- free of damage caused by low or high temperature;
- practically unsprouted;
- free of defects affecting the appearance, keeping quality and presentation in the package, such as:
 - o Green colouration; pale green flush exceeding one eighth of the surface area;
 - o brown stains;

⁷ Early potatoes means potatoes harvested before they are completely mature, marketed immediately but could not be stored and whose skin is not completely cured so can be easily removed without peeling

⁸ Visible foreign matter excludes visual indicators of treatment with sprout inhibitors

⁹ Provisions for pests and damage caused by pests apply without prejudice to the applicable plant protection rules applied by governments in line with the International Plant Protection Convention (IPPC)

- o cracks cuts, bites, bruises or roughness exceeding 4 mm in depth;
- o serious deformities
- o grey, blue or black sub-epidermal stains; exceeding5 mm in depth;
- o hollow or black hearts and other internal defects;
- o [deep common potato scab and powdery potato scab, of a depth of 2 mm or more]
- $\circ\;$ superficial common potato scab, i.e. scab spot in all must not extend over more than a quarter of the surface of the tuber

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

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

3.1.1 Minimum Maturity Requirements

Ware potatoes must be sufficiently developed with cured skin, with account being taken of the characteristics of the variety and/or commercial type and the area in which they are grown.

3.2 Classification

In accordance with Section 5 – Provisions concerning Tolerances, ware potatoes are classified into the following classes.

• "Extra" Class, Class I and Class II.

4. PROVISIONS CONCERNING SIZING

Ware potatoes are sized by diameter, count or weight; or in accordance with trading practices. When sized in accordance with trading practices, the package must be labelled with the size and method used.

When size is determined by the equatorial diameter (means the maximum distance taken from the right angle on the largest axis of the tuber) of the ware potato (in mm) in accordance with the following table that can be used as a guide in an optional way:

Size Code	Equatorial Diameter in mm
1	more than 80
2	35-80
3	25-75
4	18-24

However, uniformity in size in sales packages up to 5 kg net weight may be restricted to a maximum of 30 mm between the smallest and the largest tuber.

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 Systems* (CXG 47-2003).

5.1 Quality Tolerances

S.No.	Quality Tolerances	Percent by num	Percentage of defective produce, by number or weight				
		Extra Class	Class I	Class II			
1	Total Tolerances for ware potatoes not satisfying the minimum requirements including defects, of which no more than:	5	10	10			
	(a) Frozen, decay, soft rot and/or internal breakdown	1	1	2			
	(b) Soil and Extraneous matter	0.25	0.5	0.5			
	(c) Defects:						
	Brown stains, cuts, bites						
	Bruises or roughness						
	 Grey, blue or black sub-epidermal stains; > 5 mm deep 						
	 Deep common potato scab and powdery potato scab, > 2 mm deep. 						
	 superficial common potato scab > 25% of surface 						
	Sprouts >1mm						
	Green coloration >1/8 of the surface area						
	 Internal defects including Late blight, bacterial wilt, ring rot and blackheart 						
2	Additional tolerances						
	(a) Produce belonging to other varieties than marked	2	2	2			
	(b) Size Tolerances-off size from what is indicated/marketed	10	10	10			

6. PROVISIONS CONCERNING PRESENTATION

6.1 Uniformity

The contents of each package (or lot for produce presented in the bulk transport vehicle) must be uniform and contain only ware potatoes of the same origin, variety or commercial type, quality, size (if sized) and optionally, cooking type (if indicated).

The visible part of the contents of the package (or lot for produce presented in the bulk transport vehicle) must be representative of the entire contents.

However, a mixture of distinctly different ware potatoes of different colours (except green) may be packed together in a sales package, provided they are uniform in quality and, for each variety concerned, in origin.

6.2 Packaging

Ware potatoes 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.

Ware potatoes shall be packed in each package in compliance with the appropriate sections of the Code of *Practice for Packaging and Transport of Fresh Fruits and Vegetables* (CXC 44-1995).

6.2.1 Description of Containers

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

7. PROVISIONS CONCERNING MARKING OR LABELLING

7.1 Consumer Packages

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

7.1.1 Nature of Produce

If the produce is not visible from the outside, each package shall be labelled as to the name of the produce "Ware Potato" and should be labelled as to name of the variety and/or commercial type.

7.1.2 Origin of Produce

Country of origin¹⁰ and, optionally, district where grown, or national, regional or local place name.

In case of a mixture of distinctly different varieties of ware potatoes of ware potatoes of different origins, the indication of each country of origin shall appear next to the name of the variety concerned.

7.2 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, either printed on the package itself or on a label secured to the fastening (if the labels are placed inside the packages (string bag), this should be done in such a way that the indications concerning marking are readable from the outside); or in the documents accompanying the shipment and attached in a visible position inside the transport vehicle. Bulk loads can be accompanied by accompanying documents, but other non-retail containers (i.e. wholesale packages) must have the necessary information marked on the package.

7.2.1 Identification

Name and address of exporter, packer and/or dispatcher.Identification code (optional)¹¹.

7.2.2 Nature of Produce

Each shall be labeled as to the name of the produce and may be labeled as to name of the variety <and/or commercial type>. The shape of the tuber may be marked (optional) on the label such as oval, round and long.

7.2.3 Origin of Produce

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

In the case of a mixture of distinctly different varieties of ware potatoes of different origins, the indication of each country of origin shall appear next to the name of the variety concerned.

7.2.4 Commercial Identification

- class
- size (if sized)
- cooking type(optional)

7.2.5 Official Inspection Mark (optional)

8 CONTAMINANTS

8.1 The produce covered by this Standard shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission and where there is no relevant Codex MRLs recognition of destination country MRLs is an alternative.

8.2 The produce covered by this Standard shall comply with the maximum levels of the contaminants and toxins in accordance with the *General Standard for Contaminants and Toxins in Food and Feed* (CXS 193-1995).

¹⁰ The full or a commonly used name should be indicated.

¹¹ 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.

9. HYGIENE

9.1 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.

9.2 The produce should comply with any microbiological criteria established in accordance with the *Principles for the Establishment and Application of Microbiological Criteria for Foods* (CXG 21-1997).

Appendix II Original language only

Major concerns raised by EWG members of Ware potatoes on 1st draft (2018)

S.no.	Existing Provision	EWG Member's Comment	Remarks
1	Scope	There are many varieties in the	The text was extensively discussed
	The purpose of the standard is to define	world and each of them is different in color, so Mexico suggest leaving it clearly and subject to the	in the last session (CCFFV19 and 20) and the same was agreed by the Committee. However, for more clarity
	the quality requirements for	variety and / or use of the product.	the text may be revised as given below:
	ware potatoes after preparation (e.g. brushing and/or washing) and packaging. When applied at stages following packaging, products may show in relation to the requirements of the standard: 1. a slight lack of		The purpose of the standard is to define the quality requirements for ware potatoes after preparation (e.g. brushing and/or washing) and packaging. When applied at stages following packaging, products <u>ware</u> <u>potato</u> may show in relation to the requirements of the standard: 3. a slight lack of freshness and turgidity; 4. a slight deterioration due to their
	freshness and turgidity;		development and their tendency to perish .
	2. 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		 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. This standard covers all the commercial varieties of ware potatoes where, the Due to varietal characteristics of ware potato tuber vary in: Shape: from spherical to ovoid External/skin colour: from white through yellow to tan and from reddish through blue Flesh Colour: from white to yellow to blue
	Due to varietal characteristics, ware potato tubers vary in:		Depth and colour of the eye cavities.
	 Shape: from spherical to ovoid External/skin colour: from white through yellow to tan and from reddish through blue Flesh Colour: from white to yellow to blue Depth and colour 		
	• Depth and colour of the eye cavities.		

S.no.	Existing Provision	EWG Member's Comment	Remarks
2	Definition of produce	To include: foreign potatoes that are not registered in the national registry of varieties of the competent body.	Any variety including commercial gets the status of variety only after registration or notification as per the country law. Hence, proposed not to mention such requirement under the definition.
3	Minimum requirements	Be practically without outbreaks	The provisions under minimum requirements are as per the standard layout for FFV. No such requirement is mentioned in any of the codex standard for fresh fruits and vegetables.Hence, proposed not to include such requirement.
	Practically unsprouted i.e. sprout may not be longer than 1 mm	Practically unsprouted Potatoes with sprouts are not suitable for consumption because they present significant sensory changes, therefore they should not be commercialized. Limiting the occurrence of sprouting will help alleviate post harvest losses and enhances the keeping quality of ware potatoes	The standard applies to ware potatoes, as they are susceptible to sprouting if stored for a period of more than 3 months. Sprouting is a minimum requirement for ware potatoes as they are susceptible to sprouting if stored for a period of more than 3 months. The proposed restriction of sprout is intended to cater for this phenomenon and therefore, it is important to set a limit beyond which the quality of ware potatoes would not be acceptable. Hence, it is proposed not to delete this provision.
	Practically free of pest	no tolerance to quarantine pests. Free of pests The import / export protocols handle no tolerance to quarantine pests, because the potato tuber its by itself a disperser of diseases and in some countries the diversion of use is common, so it should not be allowed with the presence of pests	 As the proposed standard is for fresh committee and practically it is not possible to have 0% tolerances for pest. The said provision is consistent with the layout for fresh fruits and vegetables approved as guidance document for CCFFV standards in last session(CCFFV20) The issue regarding application of Phytosanitary rules to the provisions on presence of pest and damage caused by pest was extensively discussed in last sessions (CCFFV19 and 20), wherein, Codex Secretariat explained that the mandate of the Committee was on quality standards for fresh fruits and vegetables, and taking into account safety requirements by cross- referencing texts developed by the relevant Codex committees. The pests being referred to were related to quality rather than quarantine matters and therefore not regulated. Hence, Committee agreed to add footnote to the standard referring to IPPC.

S.no.	Existing Provision	EWG Member's Comment	Remarks
	Practically free of damage caused by Pest	Exempt from damage caused by pests. The import / export protocols handle no tolerance to quarantine pests, because the potato tuber its by itself a disperser of diseases and in some countries the diversion of use is common, so it should not be allowed with the presence of pests	 As the proposed standard is for fresh committee and practically it is not possible to have 0% tolerances for damage caused by pest. The issue was extensively discussed in last sessions (CCFFV19 and 20) wherein Codex Secretariat explained that the mandate of the Committee was on quality standards for fresh fruits and vegetables, and taking into account safety requirements by cross- referencing texts developed by the relevant Codex committees. The pests being referred to were related to quality rather than quarantine matters and therefore not regulated. Accordingly a footnote referring to IPPC is also included in the standard.
		be practically without outbreaks	The requirement is not as per the layout and general codex practices. Propose not to include this requirement.
		The green colour indicates the presence of solanine which can cause allergic reactions and illness. In addition, the amount of greening can be prevented or inhibited by avoiding light during the handling and storage process through Good Agricultural Practice.	Green colouration of potatoes occurs, when its tuber exposed to sunlight during production. Production of glycoalkaloids in the member of botanical family of solanacea and results greening of produce and in case of potato it is localized to skin. It is always far below the harmful level therefore does not cause allergic reactions. However limits should be established for this parameter vis-a-vis safety concerns on high levels of solanin in this produce like in the provision for hydrogen cyanide in the sweet or bitter cassava.
	deep common potato scab and powdery potato scab, of a depth of 2 mm or more.]	deep common potato scab and powdery potato scab, of a depth of 2 mm or more.] Scab and powdery potato scab are tuber diseases caused by pathogens. These diseases can develop and cause deep pitting and cracking that allows secondary pests and diseases to infect into the tuber's flesh. Therefore, potato scab or powdery potato scab should be deleted as its fails to meet the minimum requirement on practically free from pest.	As per the layout for fresh fruits and vegetables additional Provisions/defects are allowed, to be added, depending on the nature of the produce. Scab and powdery scab is very common defect in case of potatoes. Hence proposed to include such defects in the minimum requirement with their tolerance limits under provision of quality tolerances.
	[superficial common potato scab, i.e. scab spot in all must not extend over more than a quarter of the surface of the	superficial common potato scab, i.e. scab spot in all must not extend over more than a quarter of the surface of the tuber.] Consequence to the necessary to restrict the occurrence of potato	As per the layout for fresh fruits and vegetables additional Provisions/defects are allowed, to be added, depending on the nature of the produce. Scab and powdery scab is very common defect in case of

S.no.	Existing Provision	EWG Member's Comment	Remarks
	tuber.]	scab the reference to scab spot should be deleted.	potatoes. Hence proposed to include such defects in the minimum requirement with their tolerance limits under provision of quality tolerances.
		The dark colour is not only caused by heat	Propose to delete "due to heat"
4	Quality tolerances		
	Total Tolerances for ware potatoes not satisfying the minimum requirements of which no more than Extra Class 5, Class I 10, and class II 10. Skin Defects: • Brown stains, cuts, bites • Bruises or roughness • Late blight, bacterial wilt and ring rot • Grey, blue or black sub-epidermal stains; > 5 mm deep • Deep common potato scab and powdery potato scab, > 2 mm deep. • superficial common potato scab > 25% of surface • Sprouts > 1mm • Green coloration > 1/8 of the surface area; skinning- skin missing or "feathered"; internal defects including blackheart	Total Tolerances for ware potatoes not satisfying the minimum requirements of which no more than Extra Class 0, Class I 5, and class II 10. The present draft considers an Extra category of 5% tolerance, our proposal it's because extra class is a high quality category and should be more rigorous, so we suggest the following tolerances: extra 0, class I - 5 and class II - 10.	 The proposed standard applies to fresh commodity. Fruits and vegetables, irrespective of the quality class traded-in, are perishable by nature. Hence, zero tolerance is clearly inappropriate for fresh, perishable produce in trade that are transported long distances. The provisions on the three classes with tolerances are the same as for all fruits and vegetables standards established under Codex. Accordingly, the tolerances may be established depending on the characteristics/nature of produce and current trade practices. Eg Codex stan for litchi, cassava okra etc. provided five percent total allowances for quality tolerance in Extra Class. Further, ware potatoes are not in all countries of the world graded and classified as premium high value/quality fruits and vegetables such as apples.
	Soil and extraneous matter Extra Class 0.25 Class I 0.50 Class II 0.50	Extra Class 0.00 Class I 0.00 Class II 0.00 International trade of fresh potato tuber is very likely to be a source to introduce and dissemination of quarantine pests. Soil and matter are very high risk dispersion sources, so it is suggested to reduce tolerance and leave it at zero.	 The Minimum requirement provided provision of "Practically free of visible foreign matter". It is important to limit these requirements by giving tolerances under Quality tolerances provision also. Accordingly, limit is proposed under provision of Quality tolerances for its allowance level. The produce grown underground like potatoes, are more susceptible to adhere to soil and extraneous matter. Therefore, it is also important to set the limit of

S.no.	Existing Provision	EWG Member's Comment	Remarks
			 allowance. Accordingly, limits are proposed under provision of Quality Tolerances. W.r.t to any phytosanitary concerns relating to soil, it will be appropriately dealt with through the applicable requirements of the relevant National Plant Protection Organization. Hence, it should not be addressed in this standard as codex stan relates to quality only. Hence, it is proposed to retain such requirements.
		The application of this table is not practical; therefore it is suggested to include the usual Codex texts.	 The option 2 (tabular form of the Quality tolerances) would not prevent any trader to apply a stricter grading, but the basis in the standard would be more open and flexible as appropriate for a produce grown underground. Table of tolerances included all the parameters specified under minimum requirements; and that in situations where the values for minimum requirements were exceeded, the defects exceeding minimum requirements were scored. If the sum of the individual defects exceeds the allowed total tolerances limit, such a lot would be rejected. The proposed table for quality tolerances would be used as ready reckoner for food inspectors and more appropriate at the time of implementation. During previous discussion in EWG, few members proposed to apply option 2 of the new Standard Layout for classification as the classification based on shape, color and skin defects may be used for certain niche markets but is not the rule for ware potatoes.
	1.2 Frozen, decay, soft rot and/or internal breakdown Extra Class-1 Class I-1 Class II-2	Extra Class-0 Class I-1 Class II-2 Not in favor of allowing any tolerance for decay in Extra Class. There reasons are that producers have to undertake many of investments and take all measures with respect to transport guaranteeing the quality as ordered at arrival. Hence those investments have to be paid off.	30.During previous draft consultation, some of the members supported tolerance to soft rot decay and / or internal breakdown of extra class with a request that factors such as the perishable nature of fruit and wide geographical distances between production areas and target markets should be considered.

S.no.	Existing Provision	EWG Member's Comment	Remarks
	1.1 Skin Defects	1.1 Skin Defects	During previous EWG
	4-1- Deep common potato scab and powdery	4-6- Deep common potato scab and powdery potato scab,>2mm deep.	consultation, Some of the members suggested to elaborate the skin defects. Accordingly common skin defects mentioned in initial draft have
	potato scab,>2mm deep.	4-7- Late blight, bacterial wilt and ring rot.	been enlisted under Quality tolerances with the limit.
	4-2- Late blight, bacterial	4-8- Superficial common potato scab>25% of surface	 Hence, it is proposed, not to delete these defects from quality
	wilt and ring rot. 4-3- Superficial	4-9- Sprout > 1 mm	tolerances as their limits are also
	4-3- Superficial common potato scab>25% of	4-10- Green coloration >1/8 of the surface area	provided to restrict its allowance.
	surface 4-4- Sprout > 1	[1.2 Frozen, decay, soft rot and or internal breakdown]	
	mm	1.3 Soil and Extraneous	
	4-5- Green coloration >1/8 of the surface area [1.2 Frozen, decay, soft rot and	Exclusion of tolerances for skin defects of ware potatoes related to diseases from scab and powdery scab, Late blight, bacterial wilt and ring rot.	
	or internal breakdown] 1.3 Soil and Extraneous matter	Green coloration should be removed from the table on quality tolerances due to the presence of solanin.	
		Sprouted tubers contain naturally- occurring glycoalkaloids potentially unsafe for consumption	

Appendix III Original language only

Comments on text under square brackets at Step 5 with EWG remarks:

Egypt agrees the "PROPOSED DRAFT STANDARD FOR WARE POTATOES" to be adopted at step 5 with no comments

United Republic of Tanzania agrees the "PROPOSED DRAFT STANDARD FOR WARE POTATOES" to be adopted at step 5 with no comments

Costa Rica agrees the "PROPOSED DRAFT STANDARD FOR WARE POTATOES" to be adopted at step 5 with no comments

Ghana agrees the "PROPOSED DRAFT STANDARD FOR WARE POTATOES" to be adopted at step 5 with no comments

We propose increase in the total tolerances for Class II from 10 to 15 and reduce off size for Extra Class from 10 to 5. This is to create a distinction between classes

EWG remarks: The provisions on the three classes with tolerances are the same as for all fruits and vegetables standards established under Codex. Distinction between extra class, class I and Class II would be determined by other tolerances.

Algeria: Definition of the product: the list of conservation potato varieties must be annexed to this standard

Paragraph 4.

Provisions concerning sizing: paragraph 3: It is recommended that the text be written as follows:

However, the uniformity of size in sales packages of up to 5 kg net weight may be limited to a maximum difference of 30 mm between the smallest and the largest tuber.

- It is necessary to add another point relating to the storage condition of this kind of product

EWG remarks: the definition and sizing provision was discussed in detailed, no need to re-open it for discussion.

UNECE- To include foot note so that is it clear what is being excluded from the standards

"Early potatoes are obtained from early varieties and/or are harvested at the beginning of the season in the country of origin. "Early potatoes" means potatoes harvested before they are completely mature, marketed immediately after their harvesting, and whose skin must not be completely cured and can be easily removed without peeling."

EWG remarks: We may include it for more clarity.

Section	UK	Thailand	Ecuador	Ireland	Colombia	Peru	UNECE	EWG Remarks
3.1 Minimum requirements • [practically unsprouted i.e. sprout may not be longer than 1 mm;]	Practically unsprouted i.e. sprouts may not be longer than 3mm During storage and transportation sprouting can occur particularly if conditions are warm and humid. Allowing sprouts up to 3mm has not been a problem previously. Potatoes with sprouts should remain firm, but if not then the minimum requirement "firm" will exclude any that are not firm.	practically unsprouted i.e. sprout may not be longer than 1 mm Limiting the occurrence of sprouting will help alleviate post-harvest losses and enhances the keeping quality of ware potatoes.	practically unsprouted i.e. sprout may not be longer than 4 2mm Reason:- During storage and transport, sprouting may occur especially if the conditions are warm and humid. In addition, potato tubers, once harvested, enter a period of dormancy or resting period, which is the physiological state after harvest, during which the tubers do not sprout or reach a sprout of up to 2 mm (Wiltshire and Cobb, 1996). It is generally considered that dormancy is lost when a tuber contains one or more shoots with a length greater than two millimeters and it is there when it loses its characteristics of fresh with respect to taste and texture (Viola <i>et al.</i> , 2007).	Same as UK	practically unsprouted i.e. sprout may not be longer than 1-mm Not suitable for consumption because they exhibit significant sensory changes, therefore, should not be commercialized	We accept the text in square bracket	{practically unsprouted i.e. sprout may not be longer than 3 mm <i>Exporting</i> <i>countries have</i> <i>not had</i> <i>problems with</i> <i>sprout of 3 mm.</i> <i>We have to</i> <i>take into</i> <i>account that a</i> <i>product with no</i> <i>sprouts at</i> <i>export/packing</i> <i>stage may have</i> <i>sprouts at</i> <i>destination, but</i> <i>this is not a</i> <i>problem if they</i> <i>are no longer</i> <i>than 3 mm.</i>]	Most of the members supported to retain Practically unsprouted as minimum requirements. W.r.t its tolerances in the minimum requirement, it is proposed that tolerances should be shifted to Provisions for tolerances. Changes are made accordingly in the draft.
 [free of external and internal defects 	-	-	-	-	free of external and internal	accept		We may modify the text as proposed

Section	UK	Thailand	Ecuador	Ireland	Colombia	Peru	UNECE	EWG Remarks
affecting the appearance, keeping quality and presentation in the package, such as:					defects affecting the appearance, keeping quality and presentation in the package, such as: The internal defects may not affect the general appearance of the product, therefore, we suggest	the text in square bracket		(Deletion of internal and external defects)
Croop colouration:	This minimum	- Croon			modifying the text.		Green	Members are in
Green colouration; pale green flush not exceeding one eighth of the surface area and which can be removed by normal peeling does not constitute a defect;	This minimum requirement should be retained. Slight green colouration should not constitute a defect and can develop due to poor storage or transportation. Such slight green colouration is easily removable by normal peeling and does not constitute a hazard to health. This is not the dark green colouration that	 Green Colouration; pale green flush not exceeding one eighth of the surface area and which can be removed by normal peeling does not constitute a defect; The green colour indicates the presence of solanine which can cause allergic reactions and illness. In addition, the amount of greening can be prevented or inhibited by avoiding light during the handling and storage process through Good Agricultural Practice. 			Green colouration; pale green flush not_exceeding one_eighth_of thesurface area and which can be removed bynormal peelingdoes not_constitute a defect; The description of the color (pale green) is very subjective, as is the evaluation of this defect		Green colouration as mentioned in the draft standard is acceptable. It may develop incidentally in improper storage or transport conditions	Members are in favour to retain green colouration (except one member country)under minimum requirement as slight green colouration do not constitute a defect and can be develop due to poor storage and transportation. Green colouration of potatoes occurs, when its tuber exposed to sunlight during production. Production of glycoalkaloids in the member of botanical family of solanacea and results greening of produce and in case of potato it is

Section	UK	Thailand	Ecuador	Ireland	Colombia	Peru	UNECE	EWG Remarks
	develops in the field							always far below the harmful level therefore does not cause allergic reactions. However limits should be established for this parameter vis-a-vis safety concerns on high levels of solanin in this produce like in the provision for hydrogen cyanide in the sweet or bitter cassava.
brown stains due to heat;	-	-			brown stains due to heat; Colombia proposes to eliminate due to heat. It is not due to heat only	-		We may remove the additional explanation
cracks (including growth cracks), cuts, bites, bruises or roughness (only for varieties of which the skin is not normally rough) exceeding 4 mm in depth;	-	cracks (including growth cracks), cuts, bites, bruises or roughness (only for varieties of which the skin is not normally rough) exceeding 4 mm in depth; Cracks are critical to the keeping quality of potatoes and may pose risk to food safety			cracks (including growth cracks), cuts, bites, bruises or roughness (only for varieties of which the skin is not normally rough) exceeding 4 mm in depth; Each defect is not acceptable regardless of the detail of the description, so it is suggested to remove the information that	-		One member suggested to remove this parameter from the mimimum requirement. However, another member suggested to remove the information that is in parentheses. EWG is of the view that Cracking is an external noninfectious physiological disorder; tuber splits while growing starting from bud and extend length wise. • Occurs due to uneven soil

Section	UK	Thailand	Ecuador	Ireland	Colombia	Peru	UNECE	EWG Remarks
					is in parentheses. The depth of the defect is more a topic of the category classification chapter, therefore, it should be carried there.			moisture, air temperature and rapid water uptake. Hence, it is proposed to remove the information that is in parentheses
deformities	The text should be replaced by "serious deformities" To exclude potatoes that are sufficiently misshapen so it is not possible to peel				-	-	serious deformities [Only serious deformities should be excluded. [According to the OECD explanatory brochure, serious deformities are irregular shapes of tubers as well as tubers with shapes making peeling difficult.}]	Members were of the view that only serious deformities should be excluded. It is proposed to text should be replaced by "serious deformities"
grey, blue or black sub-epidermal stains; exceeding5 mm in depth;	-	-			grey, blue or black sub- epidermal stains; exceeding5 mm in depth; They can not be observed visually without destroying the product , so it is	-		One member suggested to delete this defect. However, presence of sub- epidermal stains of gray, blue or black color is a common problem in potatoes and their limits should be established.

Section	UK	Thailand	Ecuador	Ireland	Colombia	Peru	UNECE	EWG Remarks
					not practical to determine the depth. It is suggested to remove it.			
rust stains, hollow or black hearts and other internal defects;	-				rust stains, hollow or black hearts and other internal defects; It is important to describe the defects since, if they are not specified, they can be many things , that is why it is suggested to remove the phrase "and other internal defects". On the other hand, the spots are referred to in a previous vignette.	-		We may agree with the proposed text: hollow or black hearts
deep common potato scab and powdery potato scab, of a depth of 2 mm or more.]	-	deep common potato scab and powdery potato scab, of a depth of 2 mm or more.] Scab and powdery potato scab are tuber diseases caused by pathogens. These diseases can develop and cause deep pitting and cracking that allows secondary pests and diseases to infect into the tuber's flesh. Therefore, potato scab			Because these defects are caused by the presence of pests and diseases, it is suggested dicionar instead the requirement of being free from pests and diseases, as it is in other standards of fresh produce.	-	list of external and internal defects, which is in square brackets in the OECDE draft, is acceptable in trade. Same is true of superficial common potato scab. Common potato scab should not be a separate point	 Potato scab is a very common problem that occurs through the potato growing region of the world. Superficial scab lesions do not greatly affect marketability however it increases peeling losses. It is proposed to retain this defect in the

Section	UK	Thailand	Ecuador	Ireland	Colombia	Peru	UNECE	EWG Remarks
		or powdery potato scab should be deleted as its fails to meet the minimum requirement on practically free from pest.					but should be an item in list of external/internal defects.]	minimum requirement. However, to limit is tolerances, it is important to specified its tolerances limits also.
0 [superficial common potato scab, i.e. scab spot in all must not extend over more than a quarter of the surface of the tuber.]	This minimum requirement should be retained as scab does not develop further once the potatoes are harvested	[superficial common potato scab, i.e. scab spot in all must not extend over more than a quarter of the surface of the tuber.] Consequence to the necessary to restrict the occurrence of potato scab the reference to scab spot should be deleted.				superficial common potato scab, i.e. scab spot in all must not extend over more than a quarter of the surface of the tuber.] Not related to previous bullet		It is not a separate bullet point. Except one, members were in agreement to retain this provision.
Classification		-						
3 Extra Class, Class I and Class II	Extra Class is not considered appropriate for ware potatoes, so an Extra Class is not needed. Further we believe that classification should be optional. I.e. that a Class can be indicated if desired but if not, then the			Ireland support s the view that classification should be optional and "Extra" Class is not an appropriate classification for potatoes. There is no need to define "Extra" Class for ware potatoes.			UNECE would like to inform the working group that classification is not in use in many countries. Thus, we recommend that classification be optional. If no class is indicated, the provisions for class II apply. The UNECE	Some members of the view that there should be no extra class in case of the potatoes. This issue was already discussed in detail in CCFFV. The provisions on the three classes with tolerances are the same as for all fruits and vegetables standards established under Codex. Accordingly, the tolerances may

Section	UK	Thailand	Ecuador	Ireland	Colombia	Peru	UNECE	EWG Remarks
	potatoes should meet at least the requirements of Class II.						standard does not have classification of ware potatoes	be established depending on the characteristics/nature of produce and current trade practices. Eg Codex stan for cassava, okra, ginger and aubergines etc. provided five percent total allowances for quality tolerance in Extra Class.
								The Committee in its 20 th session (2017) discussed the issue regarding exclusion of Extra class from the standard. Following views were expressed by the delegation:-
								"Extra" Class was a motivation to the farmers, as it allowed fair competition between producers who make an effort to increase the value of the production;
								- Codex Standards were based on scientific evidence and well established trade practices, therefore there was no need to remove Section 4.1.1; and such tolerances should not be left at national level;
								- Deletion of this section would send a

Section	UK	Thailand	Ecuador	Ireland	Colombia	Peru	UNECE	EWG Remarks
								negative message to CAC, Codex members and other stakeholders.
								After extensive discussions, the Committee agreed to retain Section 4.1.1 "Extra" Class.
5. Provision relating to Tolerances	The "skin" defects listed should be grouped by those that affect the internal quality and those that are only skin defects. i.e. internal defects such as: • Late blight, bacterial wilt and ring rot • "feathered"; internal defects including blackheart These should have a maximum 1% tolerance and the remaining "skin" defects should have maximum tolerances of 4% in Extra Class and 10% in Class I and Class II.	1.1 Skin Defects Deep common potato scab and powdery potato scab,>2mm deep. Late blight, bacterial wilt and ring rot. Superficial common potato scab>25% of surface Sprout > 1 mm Green coloration >1/8 of the surface area [1.2 Frozen, decay, soft rot and or internal breakdown] 1.3 Soil and Extraneous matter 1.2 Extra Class-0 Class II-2 1.3 Soil and Extraneous matter -0 for every class We propose the exclusion of tolerances for skin defects of ware		In the event that "Extra" Class is retained there should be no tolerance for "frozen, decay, soft rot or internal breakdown" in ware potatoes labelled as "Extra" Class.	The application of the table included in the project is not practical; therefore, it is suggested to include the usual Codex texts.		UNECE will not comment on tolerance percentages, but individual countries may comment on these.] [Delete] internal defects including blackheart [from last point] There should be a separate indent for "skinning" as follows: • Skinning - skin missing or "feathered" Defect list should be: • Brown stains, cuts, bites • Bruises or roughness • Grey, blue or black sub- epidermal	Some members of the view that there should be no tolerances for frozen, decay, soft rot or internal breakdown" in extra class. Response: This is not a new provision; all the fruits and vegetables codex standards specified this provision. There should be a separate indent for "skinning" as follows: • Skinning - skin missing or "feathered Response:- As per the existing trade practices, skin missing or feathered are not allowed in case of ware potatoes. Not agreed to accept this proposal One member expressed that table included in the project is not practical and

Section	UK	Thailand	Ecuador	Ireland	Colombia	Peru	UNECE	EWG Remarks
		potatoes related to diseases from scab and					stains; > 5mm deep	proposed to include usual text.
		potatoes related to					stains; > 5mm deep • Deep common potato scab and powdery potato scab, > 2 mm deep. • Superficial common potato scab > 25% of surface • Sprouts > 1 mm • Green coloration>1/8 of the surface area • Skinning - skin missing or "feathered" For 1.2 change header to "Internal defects" • [Move category from above:] Late blight, bacterial wilt and ring rot • Frozen, decay, soft rot and or internal breakdown [Although there is no	proposed to include
							classification for ware potatoes in the UNECE	under minimum requirements; and that in situations
							standard, nevertheless, in other UNECE	that in situations where the values for minimum requirements were

Section	UK	Thailand	Ecuador	Ireland	Colombia	Peru	UNECE	EWG Remarks
							standards for fresh fruit and vegetables, there is no tolerance for decay in Extra Class.] We propose 1.3 is replaced by the following: • 2 per cent by weight of waste, of which a maximum of 1 per cent of attached soil for Classes I and II. And the whole section 1.3 should be moved to "additional tolerances"	exceeded, the defects exceeding minimum requirements were scored. If the sum of the individual defects exceeds the allowed total tolerances limit, such a lot would be rejected. Further, as per the standard layout Additional provisions may be made for specific standards, depending on the nature of the produce
5.1 Quality tolerances 2 Additional Tolerances (a) Produce belonging to other varieties than Marked (b) Size Tolerances off size from what is indicateed/marked	-	Taking into account the Proposed Layout for Standards for Fresh fruits and Vegetables, we consider that separated section 5.2 "Size Tolerance" is required. In addition, the issue on size tolerance in current table on "Quality Tolerances" should be moved to the new section 5.2.						Appropriate changes have been made accordingly.
5 Provisions concerning marking								

Section		UK	Thailand	Ecuador	Ireland	Colombia	Peru	UNECE	EWG Remarks
RELATING CALIBRATIO Size Code Dia in 1 1 mo 80 2 35 3 25	OVISIONS TO ON uatorial ameter mm ore than	Comment - Bulk loads can be accompanied by accompanying documents, but other non-retail containers (i.e. wholesale packages) must have the necessary information marked on the package.		The diameters established in categories 1, 2 and 3 do not have sequential coherence. Both in category 2 and 3 are tubers with diameters of 36 to 74. For this reason it is requested to send the table indicating which are the calibers proposed to perform the corresponding analysis	Sizing should be expressed by stating the size range in MM. A size code is not required.			The option to provide information in the shipping document should be restricted to produce transported in bulk in the transport vehicle	The table was proposed after extensive discussions at step 3. No change is required.
Additional comments									
3.1 Minimun requirement					An additional point should be added here to clearly state the ware potatoes must be				This requirement is already captured in the scope. Further, as minimum requirements described very specific characteristic, to

Section	UK	Thailand	Ecuador	Ireland	Colombia	Peru	UNECE	EWG Remarks
				characteristic of the variety, according to the production area. While this is inferred in the existing text Ireland believes it should be explicitly stated				which addition of this proposed text will not be adhered.
7.2.3 Origin Produce	of			This text is already covered at Section 7.1.2 of the draft.				This is as per the standard layout. No need to remove this section

Appendix IV

List of Participants

S.no	Name of the Participant	Country
1.	Dr. Suresh Kumar Malhotra(Chair)	India
	Ministry of Agriculture and Farmer's Welfare	
2.	Susan Karin Dioses Cordova (Co-chair)	Perú
3.	Temfack Edouard (Co-chair)	Cameroon
	ELSA MARITZA ACOSTA PIANTINI	Dominican Republic
4.	Codex Contact Point	
	Ministerio de Salud Pública y Asistencia Social	
	Codex Contact Point	Japan
5.	Ministry of Agriculture, Forestry and Fisheries	Capan
0.	Member	
	RIE YUNOKI	Japan
6.	Member	oupun
0.	Ministry of Agriculture, Forestry and Fisheries	
	Andre Bispo	Brazil
7.	Member	Brazii
7.	Agriculture, Livestock and Food Supply – MAPA	
0		Jamaica
8.	Damian Rowe	
0	Sakhiah Binti Md Yusof,	Malaysia
9.		
	MINISTRY OF HEALTH MALAYSIA	
10.	Dee Noo Aiza Hayati bt. Md Noh	Malaysia
	Department of Agriculture,	
	Amanda Lasso Cruz,	Costa Rica
11.	Codex Secretariat,	
	Ministerio de Economía Industria y Comercio	
	Danis De Froidmont,	European Union
12.	Others	
	European Commission	
13.	Alison Wereley	Canada
10.	Member Canadian Food Inspection Agency	
14.	Kevin Smith	Canada
14.	Canadian Food Inspection Agency	
	Sasiwimon Tabyam	Thailand
15.	Member	
	National Bureau of Agricultural Commodities and Food	
	Eryk Barlianto	
16.	Quality Control of Agricultural Products,	
10.	Directorate Processing and Marketing of Holticulture Produce	
	Ministry of Agriculture	
	Dorian Augustus LaFond	USA
17.	Member	
	U.S. Department of Agriculture	
	Tania Daniela fosado Soriano,	México
18.	Codex Contact Point,	
	Secretaría de Economía	
	Ruairi Colbert	Ireland
19.	Codex Contact Point	
	Department of Agriculture, Food and the Marine	
	Aidan O'Donnell	Ireland
~~	Member	-
20.	Department of Agriculture,	
	Food and the Marine	
	María de Armas Jaraquemada,	Spain
21.	Other, Ministry of industry, trade and tourism	
	Nadia Ahmadi	Iran
22.	Member	

	Standard Bassarah Instituta	
	Standard Research Institute	0.000
00	Ulrike Bickelmann	Germany
23.	Member	
	Bundesanstalt fuer Landwirtschaft und Ernaehrung	
24.	Elizabeth (Ilse) van Dijl	The Netherlands
۲.	Member	
25.	Kambire sansan cyrille regis	Burkina faso
25.	Observer Ministry in charge of agriculture	
	Caroline Makobe	South Africa
26.	Member	
	Department of Agriculture, Forestry and Fisheries	
	Ian Hewett	United Kingdom
27.	Member	e mea i mgaom
	Rural Payments Agency	
	Gabriela Prieto	Uruguay
28.		Oluguay
	Unidad de Proyectos de la Direccion General de la Granja del MGAP National Codex Contact Point	India
		India
29.	Food Safety and Standards Authority of India	
	FDA Bhawan, Kotla Road,	
	New Delhi	
	Pradeep Singh Negi	India
30.	Member	
	CSIR-Central Food Technological Research Institute	
31.	Anil Kumar Chauhan	India
01.	Member, Banaras Hindu University, Varanasi	
	Hakim Mufumbiro	Uganda
32.	Member	
	Uganda National Bureau of Standards	
20	Polydoros Zachariadis,	Cyprus
33.	Member, Department of Agriculture	
	Johanna Maribel Jimenez	ECUADOR
34.	Member	
• · ·	AGROCALIDAD	
	Alice Akoth Okelo Onyango	Kenya
35.	Codex Contact Point Kenya	nonya
00.	Bureau of Standards	
	Juan Carlos Huiza Trujillo	Perú
36.	Codex Contact Point	i eiu
50.	DIGESA (DIRECCION GENERAL DE SALUD AMBIENTAL)	
		Derté
37.		Perú
	SENASA/MINAGRI (MINISTERIO DE AGRICULTURA)	
	Tzarmallah Haynes Joseph	Saint Lucia
38.	Codex Contact Point	
	Saint Lucia Bureau of Standards	
_	Henry Pak	New Zealand
39.	Member	
	Ministry for Primary Industries	
40.	Malika El Krayass	France
40.	DGCCRF - Ministère de l'Economie et des Finances	
	claudia espinoza cayulen	Chile
41.	Other	
	Servicio Agrícola y Ganadero	
	Liliana Annovazzi-Jakab	Switzerland
42.	Observer UNECE	Cultonand
	Ricardo Munar	Colombia
43.		Colombia
	Other, Icontec	