

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of the
United Nations



World Health
Organization

Viale delle Terme di Caracalla, 00153 Rome, Italy - Tel: (+39) 06 57051 - E-mail: codex@fao.org - www.codexalimentarius.org

Agenda Item 5

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Comments on the
Proposed Draft Revision of the Code of Hygienic Practice for Fresh Fruits and Vegetables (CAC/RCP
53-2003)

Comments Submitted by:

Benin, Ecuador, European Union, Gambia, Ghana, Japan, Kenya, Nicaragua, Nigeria, Senegal,
Thailand, Zambia

BENIN

Paragraphes introductifs

Remplacer la première phrase du paragraphe 1 « Introduction » qui est libellée comme suit : « *Les recherches scientifiques des dernières années ont montré qu'une alimentation riche en fruits et légumes protège contre de nombreuses formes de cancers et réduit le risque de cardiopathies coronariennes* » par « **Les recherches scientifiques des dernières années ont montré qu'une alimentation riche en fruits et légumes favorise une bonne santé...** ».

2.1 Champ d'application, paragraphe 4

Modifier la première phrase du champ d'application, comme suit : « **Le présent Code d'usages énumère les pratiques d'hygiène générale à observer durant la production primaire et l'emballage des fruits et des légumes frais destinés à la consommation humaine, afin d'assurer l'innocuité et l'hygiène des denrées consommées cru** ».

2.3 Définitions, paragraphes 7

Agents antimicrobiens : Remplacer l'énoncé original comme suit: « **toute substance d'origine naturelle, synthétique ou semi-synthétique qui, à l'usage des concentrations prévues, détruit ou empêche le développement de micro-organismes mais cause peu ou pas de dégâts pour les fruits et les légumes frais. Par exemple, les désinfectants et les fongicides** »

3.2.1.3 Sols, paragraphe 31

Remplacer la phrase au paragraphe 31 par la phrase suivante : « *Les sols doivent être évalués pour vérifier qu'ils ne présentent pas de dangers microbiens. Si l'examen laisse croire que de tels dangers atteignent des niveaux susceptibles de compromettre la salubrité des récoltes, des mesures de contrôle appropriées devront être appliquées pour ramener le danger à un niveau acceptable. Si ces mesures se révèlent inadéquates, les producteurs ne devraient pas utiliser ces sols pour la production primaire* ».

3.2.1.4 Produits chimiques agricoles, paragraphe 37

Remplacer le mot « **mélange** » au paragraphe 37 par « **l'utilisation** ». La phrase est modifiée comme suit : « **L'utilisation des produits chimiques agricoles doit s'effectuer de manière à éviter la contamination de l'eau et du sol environnants** ».

3.2.4 Les équipements servant à la culture et à la récolte

Modifier la phrase comme suit : « *Des politiques devraient être mises en place pour contrôler les équipements lorsqu'ils ne sont pas utilisés, notamment des directives pour enlever les équipements de l'aire de travail ou de leur entreposage en toute sécurité sur le site* ».

3.3.1 Prévention de la contamination croisée, paragraphe 62

Point 1 :

Remplacer le mot « **contamination** » avec « **contaminant** ». La phrase est libellée comme suit : « *Le champ devrait être examiné pour détecter la présence de dangers ou de **contaminants** avant la récolte afin de déterminer si le champ ou des parties de celui-ci ne doivent pas être récoltés.* »

9.4 Éducation des consommateurs, paragraphe 130

Point 1:

Remplacer la phrase par celle-ci: « **Éviter d'acheter des fruits ou légumes endommagés, en décomposition ou vendus dans des conditions non hygiéniques, afin d'éviter au maximum toute contamination microbienne** ».

ANNEXE I : LEGUMES ET FRUITS FRAIS PRÉDÉCOUPÉS PRÊTS À LA CONSOMMATION

Introduction, paragraphe 2

Supprimer tout le paragraphe 3 qui est libellé comme suit : « **Parmi les éléments pathogènes microbiologiques associés aux fruits et aux légumes frais, notons *Salmonella spp.*, *Shigella spp.*, les souches pathogéniques de *Escherichia coli*, *Listeria monocytogenes*, les norovirus et le virus de l'hépatite A ainsi que les parasites tels que *Cyclospora*. Certains de ces pathogènes sont associés à l'environnement agricole tandis que d'autres sont associés aux travailleurs infectés et à l'eau contaminée. Compte tenu de la capacité des pathogènes à survivre et à se développer sur les produits frais, il est impératif que l'industrie du prédécoupé adopte de bonnes pratiques d'hygiène pour assurer la sécurité microbiologique de ses produits** ».

Rajouter le nom d'espèce de *Cyclospora* qui devient : *Cyclospora cayetanensis* au paragraphe 3 de l'introduction

ANNEXE III : LÉGUMES EN FEUILLES FRAIS

Introduction, paragraphe 2

Reformuler la phrase de la ligne 9 comme suit : « *Les légumes en feuilles frais sont commercialisés sous diverses formes, soit : entiers, à l'état brut, en feuilles détachées, en feuilles coupées et plantes aromatiques fraîches et produits emballés pré-coupés* ».

ANNEXE IV : MELONS

5.5.1. Utilisation d'eau après la récolte, paragraphe 20

Point 5 : Remplacer la phrase par celle-ci : « *Il est recommandé que **la concentration** des agents antimicrobiens dans l'eau à la température d'utilisation reste à un niveau adéquat* ».

ANNEXE V : PETITS FRUITS

2. CHAMP D'APPLICATION, UTILISATION ET DÉFINITIONS, paragraphe 5

Reformuler le paragraphe 5 comme suit : « *Cette annexe fournit des directives précises concernant la **salubrité des petits fruits**, de la production primaire à la consommation, **y compris** les petits fruits destinés à être consommés crus (p. ex., petits fruits frais) ou qui sont transformés sans toutefois être soumis à un traitement microbicide.* »

10.2 Programmes de formation, paragraphe 36

Reformuler la phrase comme suit : « *En plus de ceux énumérés dans le Code d'usage en matière d'hygiène pour la production primaire et l'emballage des fruits et les légumes frais (CAC/RCP 53-2003), les programmes de formation devraient inclure les pratiques de manipulation, de transport et d'entreposage, afin de veiller à ce que les petits fruits soient refroidis immédiatement après la récolte* ».

ECUADOR

(i) Comentarios generales:

Ecuador considera acogerse y apoyar al documento, tomando en consideración las siguientes observaciones:

(ii) Comentarios específicos:

- El país solicita que se incluya en el numeral 2.3 Definiciones los siguientes términos: **escorrentía, semillas germinadas y rezuman**.
- Se sugiere incluir en el numeral 3.2.3 del Anexo I sobre Frutas y hortalizas frescas precortadas listas para el consumo, lo siguiente:

“Siempre que sea posible, los procesos de cosecha, **cortado, pelado**, envasado e inspección deben diseñarse para reducir la manipulación”.

- Se solicita en el párrafo 17 del numeral 5.1 de Control de los peligros alimentarios, eliminar la frase “frutas y hortalizas bajas en ácido frescas” y reemplazar por lo siguiente **“frutas y hortalizas frescas precortadas de baja acidez”**.
- El país sugiere que se reemplace de la sección 5.2.2.5 Corte, rebanado, pelado, picado y procesos análogos de precortado, lo siguiente: “las cuchillas y demás hojas de corte” por **“las cuchillas, hojas de corte y tablas de picar, deben estar en buen estado,”** lavarse y desinfectarse con regularidad conforme a los procedimientos escritos para disminuir la posibilidad de contaminación cruzada de las frutas y hortalizas frescas durante el proceso de corte.
- Se solicita incluir al final del párrafo 2, de la sección 5.2.2.5 Corte, rebanado, pelado, picado y procesos análogos de precortado, lo siguiente:

Las tablas de picar deben mantenerse en soluciones desinfectantes.

EUROPEAN UNION

General comments

The EUMS can largely support the revised work subject to some specific comments presented below. However the EUMS consider that Annex II still requires a substantial revision as regards structure and content.

Specific comments to the basic Code

Paragraph 2

It is proposed to add ", including food allergens," after "chemical" in the first sentence.

Rationale: It is important to refer specifically to food allergens as chemical hazards since they are often forgotten while being of increasing concern.

Paragraph 7

1. It is proposed to replace the term “hydroponics” by a more general one “soil-less systems”

Rationale: This general term is widely used nowadays.

2. It is proposed to delete the definition of "Ready-to-eat fresh fruits and vegetables".

Rationale: The definition is very unclear and confusing ("fresh" <-> "cooked"). In addition it is only used once as such (in Annex I) in a context which explains what it refers to. From a control point of view, only the fact that a food is considered "ready-to-eat" is essential, but defining "ready-to-eat" does not seem necessary because it is well understood.

3. It is proposed to introduce a definition of "Processing – peeling, slicing or cutting fresh fruit and vegetables, but excluding any treatment (e.g. cooking) which would prevent the product of being considered as "fresh".

Rationale: This would clarify the meaning of the term for this specific code, as in other Codes its meaning is much broader.

Title of section 3.1

It is proposed to replace the title "Environmental hygiene" by "Site Assessment"

Rationale: this wording gives a better description of the content of section 3.1.

Paragraph 11

It is proposed to include "industry" in the parenthesis that says (e.g. crop growth, feed lot, etc ...)

Rationale: as relevant as the other examples given.

Section 3.1.1

An additional paragraph is proposed:

"17bis Knowledge of the geology and soil metal content should be considered when determining which fruit and vegetables can be grown, as certain crops are more susceptible to absorb certain heavy metals (e.g. root crops and cadmium)."

Rationale: The soil type and geology might influence the safety of the food and should therefore be considered.

Paragraph 21, 3rd sub-bullet under 1st bullet

Include "storage" as follows "...provided the integrity of the water capture, **storage** and distribution system....."

Rationale: storage must also be considered.

Paragraph 21, 5 last bullets:

These bullets should become sub-bullets to the preceding bullet.

Rationale: editorial

Paragraph 22:

It is proposed to add an additional recommendation at the end: **"Where possible, primary producers should have a contingency plan in place that identifies an alternate source of water."**

Rationale: It is unlikely that many of the listed corrective actions will have immediate effect and therefore there may be a need for an alternative safe supply whilst the compromised supply is restored to safety.

3.2.1.2 Title:

It is proposed to replace the term "natural fertilizer" by "organic fertilizer".

Rationale: natural fertiliser can include some inorganic fertilisers from natural sources. This is not the intent of the section.

Section 3.2.1.3

This Section would be better placed under Section 3.1.1

Rationale: seems to fit better under that Section.

Paragraph 67

It is proposed to move this paragraph to section 3.1.2.

Rationale: Section 3.4 focuses on cleaning, maintenance and sanitation at and after harvesting while paragraph 67 is on pest control at primary production (growing), which is addressed in section 3.1.2.

Paragraph 82

It is proposed to delete this paragraph

Rationale: It is a general statement that is not only relevant for the control of the operation but for the whole Code.

Paragraph 117

It is proposed to amend the paragraph as follows: "~~Operators such as Growers or, in cases where contract harvesters are used, they~~ should keep current all relevant information on agriculture activities such as information concerning each lot, sprays used, date harvested, grower contact information, harvest practices and water quality, if water used in harvesting."

Rationale: The responsibility for the described activities lays with the growers as defined in section 2.3.

Paragraph 121

It is proposed to replace the word "aggressive" by "efficient".

Rationale: The key point is the efficiency.

Specific comments to Annex I

Paragraph 3

It is proposed to delete this paragraph.

Rationale: Duplication of paragraph 2.

Paragraph 5

It is proposed to delete the last sentence.

Rationale: Repetition of the last sentence of paragraph 4.

Specific comments to Annex II

A logic order should be used representing the production chain in particular in Section 5 on the control of operations. Specific examples of moving texts are below.

Section 2.3

It is proposed to delete the definitions of "seed producer", "seed distributor" and "sprout producer".

Rationale: The EUMS consider that the meaning of these wordings is so obvious that no definition is needed.

Paragraph 18

It is proposed to replace this paragraph by the following: "**Decontamination of seeds prior to the sprouting process might be considered. Although there are other options like the use of lactic acid bacteria, liquid microbiological decontamination treatment is generally used. Alternative treatments such as heating seeds, alone or in combination with other treatments, could greatly improve the efficacy of seed decontamination. Such decontamination should never replace good hygiene practices during seeds production and distribution as no method of decontamination is available to ensure elimination of pathogens. Decontamination of seeds would need to be optimised for each type of seeds since its safety and efficiency should be evaluated including the consequences on the background microflora and its potential impact on pathogenic bacteria during sprouting. When decontamination is used, the manufacturing instructions for their intended use should be closely followed. The use of chemical decontamination may be subject to approval by the competent authority.**"

Rationale: The paragraph should not promote the use of antimicrobial agents for decontamination taking into account the increasing concern of antimicrobial resistance by the use of such products in the food chain. In addition, their safety and efficiency are not always demonstrated. There is no need to detail how decontamination should be used as long as the manufacturer's instructions are followed.

Measures to prevent the introduction of pathogens in sprouted seed production (as well as primary production of seeds) remain of the foremost importance. Alternative treatments such as heating seeds, alone or in combination with other treatments, could greatly improve the efficacy of seed decontamination. However, the temperature/time parameters should be optimized for each type of seed variety as not all of them will be suitable for the same treatment. Decontamination treatments should not kill seed or reduce the germination rate.

"Paragraph 20

The EUMS believe that this paragraph should be placed after section 5.2.2.3.1.

Rationale: This paragraph relates to sprouts, not seeds. It has probably been inserted in the wrong place.

Paragraphs 29 to 36

These paragraphs should be moved to Section 5 to follow a logical order of operations.

Rationale: The EUMS are aware that the Annexes try to follow the structure of the basic document; however Section 5.3 is on requirements for incoming materials for further processing after primary production. In Annex II, this is on control of seeds. The order used is therefore in contradiction with the structure of the basic texts and confusing as it does not follow the order of operations.

Paragraphs 37 and 38

Paragraph 38 should be deleted

Rationale: Paragraph 38 is a repetition of paragraph 37.

Paragraphs 39 and 40

Paragraph 40 should be deleted and paragraph 39 moved to Section 5.2.2.

Rationale: Paragraph 40 is a repetition of paragraph 39. Paragraph 39 should be moved to be consistent with the place of section 5.2.2.2.2.

Paragraphs 41

An additional sentence/paragraph should be inserted before paragraph 41: "**As regards recall procedures for sprouts: refer to items 5.8 of the Code of Hygienic Practice for Fresh Fruits and Vegetables (CAC/RCP 53-2003).**"

Rationale: Section 5.8 only refers to recall of seeds while recall of sprouts should also be considered, as sprouts are identified as risky products.

Section 6, 7 and 8

It should be made clear if these sections refer to seeds, sprouts or both. The EUMS are of the view it should be both.

Rationale: Clarity.

Specific comments to Annex III

Paragraph 1

It is proposed to amend the last sentence as follows: "Fresh leafy vegetables are marketed both locally and globally to provide year round availability to consumers and a sold as fresh, fresh-cut, pre-cut or **other often sold as** ready to eat products such as pre-packed salads."

Rationale: All products mentioned are often RTE, not only the pre-packed salads.

Paragraph 2

It is proposed to delete the fourth sentence (starting "Fresh leafy vegetables are marketed ...")

Rationale: Repetition of paragraph 1.

Paragraph 19

It is proposed to delete the first sentence of the second bullet point and the whole third bullet point. In addition the second sentence of the second bullet point should be amended as follows: Consumers need specific and clear guidance on how to safely handle fresh-cut, pre-cut or **other often sold as** ready-to-eat (~~RTE~~) leafy vegetables."

Rationale: Fresh-cut and pre-cut products often are also ready-to-eat. No need for the abbreviation at the end of the document.

Specific comments to Annex IV

Section 2.3

It is proposed to delete the definition of melons.

Rationale: It does not seem to improve the understanding. Examples are given in the first sentence of paragraph 1 where other examples could be added if considered appropriate.

Paragraph 20

It is proposed to replace the last bullet point by the following: "**If microbiological agents are added to the water, levels must be sufficient for the temperature used.**"

Rationale: The use of antimicrobial agents should not be "recommended".

GAMBIA

General comment:

Issue: Introduction section

Replace the first sentence in paragraph 1 "Introduction" which reads "*Scientific research over the last decades has shown that a diet rich in fruits and vegetables is protective against many cancers and lowers coronary heart disease....*" with "**Scientific research over the last decades has shown that a diet rich in fruits and vegetables promote good health....**"

Rationale:

The original sentence suggests the suitability of consumption of food (fruits and vegetables) in the prevention of diseases, even though food (fruits and vegetables) should not be presented as having an absolute therapeutic effect. The recommended introduction therefore conforms to the requirements of the General Guidelines for Claims (CAC/GL 1-1979) (Rev 1-1991), section 3.4. which prohibits any claim as to the suitability of a food for use in the prevention, alleviation, treatment or cure of a disease, disorder or particular physiological condition.

Issue: 2.1, Scope, Paragraph 4

Modify the first sentence in the scope to read as follows: "**This Code of Practice covers General Hygienic Practices from primary production to consumption of fresh fruits and vegetables in order to ensure safe and wholesome product**".

Rationale:

The modified sentence allows logical flow and clarity of expression.

Issue: 2.3, Definitions, Paragraph 7

Antimicrobial agents: Replace the original statement with the following: “**any substance of natural, synthetic or semi-synthetic origin which at intended use concentrations kills or inhibits the growth of microorganisms but causes little or no damage to the fresh fruits and vegetables. Examples are disinfectants and fungicides**”.

Rationale:

The recommended definition provides clarity of expression.

Issue: 3.2.1.3 Soil, Paragraph 31

Replace the sentence in paragraph 31 with the following sentence: “*Soils should be evaluated for **microbial hazards**. If the evaluation concludes that such hazards may compromise the safety of crops, **appropriate control measures** should be implemented to reduce the microbial hazards to acceptable levels. If this cannot be achieved, by available control measures, growers should not use these soils for primary production*”.

Rationale:

The rephrased sentence provides clarity on the specific types of hazards to be evaluated, thereby removing any ambiguities. It provides flexibility in the choice of appropriate control measures since the specified control measures (top soil replacement or solar heat disinfection) are not feasible in small-scale farming.

Issue: 3.2.1.4 Agricultural chemicals, Paragraph 37

Replace the word “**mixing**” in **paragraph 37** with “**use**”. The sentence will read as follows: “*The **use** of agricultural chemicals should be carried out in such a way as to avoid contamination of water and land in the surrounding areas*”.

Rationale:

The *mixing* of agricultural chemicals is one of the several ways by which water and land can be contaminated on the farm. However, the improper *use* of agricultural chemicals, which includes mixing of agricultural chemicals, covers all possible ways by which water and land and the surrounding areas on the farm can be contaminated by agricultural chemicals. Therefore, the replacement of the word (**mixing**) with the word (**use**) is more appropriate.

Issue: 3.2.4 Equipment associated with growing and harvesting

Modify the sentence to read as follows: “*Policies should be established for the control of equipment when it is not in use, including policies for the removal of the equipment from the work area or **storing** them safely **on site***”.

Rationale:

The modified sentence provides clarity of meaning.

Issue: 3.3.1 Prevention of cross-contamination, Paragraph 62

Bullet 1: Replace the word “**contamination**” with “**contaminant**”. The sentence will read as follows: “*The field should be evaluated for the presence of hazards or **contaminants** prior to harvest to determine if the field or portions thereof should not be harvested.*”

Rationale:

The modified sentence provides clarity of understanding and the word contaminant is more appropriate than contamination.

Issue: 9.4 Consumer Education, Paragraph 130

Bullet 1: Replace the sentence with the following “**Avoiding the purchase of damaged, rotten or products sold under unsanitary conditions to minimize microbiological contamination.**”

Rationale:

The new sentence provides clarity on the specific avoidable conditions that can promote microbial contamination of fresh fruits and vegetables that need to be stressed in Consumer Education to ensure the microbiological safety of these products.

Annex I: Ready-To-Eat Fresh Pre-Cut Fruits and Vegetables

Issue: Introduction, paragraph 2

Delete the whole of paragraph 3 which states: “**Some of the microbiological pathogens associated with fresh fruits and vegetables include *Salmonella* species, *Shigella* species, pathogenic strains of *Escherichia coli*, *Listeria monocytogenes*, *Norovirus* and hepatitis A virus and parasites such as *Cyclospora cayentanensis*. Some of these pathogens are associated with the agricultural environment, whereas others are associated with workers or contaminated water. Because of the ability of pathogens to survive and grow on fresh produce, it is important for the pre-cut industry to follow Good Hygienic Practices to ensure the microbiological safety of its products.**”

Rationale:

This paragraph is a repetition of paragraph 2 of the introduction section making it redundant.

Annex III: Fresh Leafy Vegetables

Issue: Introduction, paragraph 2

Rephrase the sentence in line 9 to read as follows: “*Fresh leafy vegetables are marketed in diverse **forms** which include whole, unprocessed heads, loose leaves, mixed cut leaves and fresh herbs, and pre-cut package products*”.

Rationale:

The new sentence provides clarity on the different forms of leafy vegetables that are offered for sale which are not necessarily different products.

Annex IV: Melons

Issue: 5.2.2.3 Cooling melons

Bullet 5: Replace the sentence with the following: “*It is recommended that **the concentration** of antimicrobial agents in the water at the temperature of use, should be adequate.*”.

Rationale:

The new text provides adequate clarity and understanding.

Annex V: Berries

Issue: 2. SCOPE, USE AND DEFINITIONS, paragraph 5

Rephrase paragraph 5 to read as follows: “*This Annex covers specific guidance related to the **safety of berries**, from primary production to consumption, **including** berries that are intended to be consumed raw (e.g. fresh berries) and/or are processed without a microbiocidal step*”.

Rationale:

The new text provides clarity.

Issue: 10.2. Training programs, paragraph 36

Reconstruct the sentence to read as follows: “*In addition to those listed in the *Code of Hygienic Practice for Fresh Fruits and Vegetables* (CAC/RCP 53-2003), specific employee training programmes should include safe handling, transport and storage practices to ensure that berries are immediately cooled after harvesting*”.

Rationale:

This reconstruction provides clarity and understanding

GHANA

Introduction

Comments

Consider rewording the first sentence in paragraph 1, “Introduction”

Scientific research over the last decades has shown that a diet rich in fruits and vegetables is protective against many cancers and lowers the occurrence of coronary heart disease....

Rationale

The sentence suggests the suitability of food for use in the prevention of a disease, even though food should not be presented as having an absolute therapeutic effect. The introduction must conform to the requirements of the General Guidelines for Claims (CAC/GL 1:1979).

2.1 Scope

Paragraph 4

Comments: Modify the scope as follows to ensure logical flow and clarity.

This code of practice covers general hygienic practices ~~for the from~~ primary production **to consumption** and packing of fresh fruits and vegetables cultivated for human consumption in order to ensure produce a safe and wholesome product:

Section 3.2.4 3rd Bullet point

Comments: Modify the sentence for clarity.

Policies should be established for the control of equipment when it is not in use, including policies for the removal of equipment from the work area or ~~storage~~ **storing** them safely in **on** site.

Section 3.3.1 Prevention of cross-contamination**1st Bullet Point**

Comments: Change “contamination” to “contaminant”.

The field should be evaluated for the presence of hazards or **contaminants** ~~contamination~~ prior to harvest to determine if the field or portions thereof should not be harvested.

JAPAN

Main text, para 4

Japan proposes to delete the last sentence: “Some requirements may not be applicable to fresh fruits with very low risk with no record as a source of outbreak i.e. fruits from tall tree with inedible peel such as durian, mangosteen, coconut, rambutan, etc.”

Rationale:

- a) It is unclear which “requirements” may not be applicable to fresh fruits with very low risk.
- b) Due to limited outbreak investigation capacity/laboratory capacity, some fruits, which are real sources of an outbreak, might not be identified as a source, and not reported. Fresh fruits with no record as a source of outbreaks do not necessarily mean fresh fruits with very low risk.
- c) The last sentence of para 6 provides adequate flexibility for the application of this Code.

Annex I, paras 2 and 3

These two paragraphs are almost identical except "or the processing environment" in the 2nd sentence of para 3. We propose to delete para 2 and keep para 3.

Rationale:

Processing environment can be a source of contamination.

Annex III, para 19

The 2nd and 3rd bullet points are almost identical. We propose to delete 3rd bullet point.

Editorial and Format**In all the Annexes**

When referring to the sections of the main text in the annexes, it is not necessary to spell out the subsections.

e.g.) Annex I, 3. PRIMARY PRODUCTION

11. Refer to **section 3** ~~items 3.1 to 3.4~~ of the Code of Hygienic Practice for Fresh Fruits and Vegetables (CAC/RCP 53-2003) and additionally:

Main text, para 91

Need to delete “116.” at the beginning.

Annex 1, para 18

5.2.2.4 should be 5.2.2.3.

Annex 1, para 19

It should be 5.2.2.4.

KENYA

ANNEX I: READY-TO-EAT FRESH PRE-CUT FRUITS AND VEGETABLES**1. SCOPE**

COMMENT ON THE SCOPE: Kenya propose that the statements number 7 to be transferred to introductory section and 9 to be in the packing establishment respectively as indicated below.

7. For some establishments that process fresh pre-cut fruit and vegetables, this Annex will cover all operations from receipt of raw material to the distribution of the final product. For other establishments, (e.g those that use ready-to-eat pre-cut fresh fruit and vegetables in combination with other products, such as sauces, meat, cheese, etc.) only the specific sections that relate to the processing of the fresh pre-cut fruit and vegetable components will apply.

9. Packaging includes single serving containers (e.g. sealed pouches or plastic trays), larger consumer or institutional size packages and bulk containers. This Annex concentrates on microbial hazards and addresses physical and chemical hazards only in so far as these relate to GHPs.

Justification: The scope should be precise and short.

ANNEX II :SPROUT PRODUCTION.

Kenya went through the document and accepts the document as is for now.

ANNEX III:FRESH LEAFY VEGETABLES

Kenya went through the document and accepts the document as is for now.

ANNEX IV :MELONS

Kenya went through the document and accepts the document as is for now.

ANNEX V:BERRIES

Kenya went through the document and accepts the document as is for now.

NICARAGUA

(i) Comentarios generales

CODEX Nicaragua agradece al Grupo de Trabajo electrónico por la elaboración del documento de trabajo y por brindarnos la oportunidad de trabajar en el proceso de elaboración de observaciones. Considera que el documento "Anteproyecto de Revisión del Código de Prácticas de Higiene para las Frutas y Hortalizas Frescas", está bien estructurado y completo, principalmente descripción de la cadena agroalimentaria de las Frutas y Hortalizas Frescas.

Las soluciones planteadas en el documento para los puntos de debate son pertinentes y facilitan la comprensión del Código.

(ii) Comentarios específicos**2.3 Definiciones**

Definir dentro del apartado los siguientes términos: Buenas prácticas agrícolas, plaga, contaminación cruzada y riesgo (físico, químico y microbiológico).

Justificación:

Aunque el apartado hace referencia a las definiciones contenidas en los Principios Generales de la Higiene de los Alimentos, los términos mencionados no están presentes en los documentos.

3. Producción primaria

En la mayoría de los componentes de la producción primaria no se aborda el tema de registros para dar respaldo a las actividades, procedimientos y cualquier eventualidad del historial que se realiza en la producción primaria (unidad de producción).

3.1 Higiene del medio

Incluir el análisis de suelo y agua para detección de materiales pesados (Arsénico, Plomo, Cadmio, Mercurio) y microbiológico, el historial de la finca los últimos cinco años y los terrenos colindantes o adyacentes.

3.2.1 Requisitos relativos a los insumos agrícolas

Se debe reflejar el uso de semillas certificada para garantizar la condición fitosanitaria del material vegetativo.

3.2.3 Salud e higiene del personal y servicios sanitarios

Incluir dentro del apartado la presentación de certificados de salud, según lo dispuesto por cada Autoridad Competente, para el personal involucrado en la recolección de la cosecha, selección y empaque.

3.2.3 Salud e higiene del personal y servicios sanitarios

36. Los productores deberían llevar registros de las aplicaciones de productos agroquímicos. Tales registros deberían incluir información sobre la fecha de aplicación, el producto químico utilizado, el cultivo rociado, la plaga o enfermedad contra la que ha sido utilizado, la concentración, método y frecuencia de la aplicación, y registros relativos a la recolección para verificar si ha transcurrido un lapso de tiempo adecuado entre la aplicación y la recolección. Los aspersores de productos agroquímicos deberían calibrarse de la manera necesaria para controlar la precisión de la tasa de aplicación.

Justificación:

Se propone mantener únicamente el término “plaga”, dado que este es incluido en el glosario de definiciones NIMF 5; el término “enfermedades” es usado para animales.

3.2.1.4 Productos agroquímicos

40. A los recipientes vacíos **se deberá realizar triple lavado, perforado y eliminación**, siguiendo las indicaciones del fabricante. No deberían utilizarse para otros fines.

41. **Los trabajadores encargados de aplicar estos agroquímicos deberían hacer uso del equipo de protección y una vez finalizada la aplicación a los cultivos bañarse inmediatamente.**

NIGERIA

Appendix I

INTRODUCTION

1. ~~Scientific research over the last decades has shown that a diet rich in fruits and vegetables is protective against many cancers and lowers the occurrence of coronary heart disease.~~ **Scientific research over the last decades has shown that a diet rich in fruits and vegetables promote good health.** This recognition of the importance of routine consumption of fresh fruits and vegetables, together with a marked increase in the year-round availability of these products from a global market, has contributed to the substantial increase in their consumption over the past two decades. However, continuing reports of foodborne illness associated with fresh fruits and vegetables has raised concerns from public health agencies and consumers about the safety of these products.

Rationale

The original sentence suggests the suitability of consumption of food (fruits and vegetables) in the prevention of diseases, even though food (fruits and vegetables) should not be presented as having an absolute therapeutic effect. The recommended introduction therefore conforms to the requirements of the General Guidelines for Claims (CAC/GL 1-1979) (Rev 1-1991), section 3.4. which prohibits any claim as to the suitability of a food for use in the prevention, alleviation, treatment or cure of a disease, disorder or particular physiological condition.

2.1 Scope, paragraph 4

~~This code of practice covers general hygienic practices for the primary production and packing of fresh fruits and vegetables cultivated for human consumption in order to produce a safe and wholesome product.~~ **This Code of Practice covers General Hygienic Practices from primary production to consumption of fresh fruits and vegetables in order to ensure safe and wholesome product.** particularly for those intended to be consumed raw. Specifically, this code is applicable to fresh fruits and vegetables grown in the open field or in protected facilities (hydroponic systems, greenhouses/net houses, etc). It concentrates on microbial hazards and addresses physical and chemical hazards only in so far as these relate to GAPs and GHPs. Some requirements may not be applicable to fresh fruits with very low risk with no record as a source of outbreak i.e. fruits from tall tree with inedible peel such as durian, mangosteen, coconut, rambutan, etc.

Rationale

The modified sentence allows logical flow and clarity of expression.

2.3 Definitions, paragraph 7

Antimicrobial agents – any substance of natural, synthetic or semi-synthetic origin which at intended use concentrations kills or inhibits the growth of microorganisms but causes little or no damage to the fresh fruits and vegetables such as. **Examples are** disinfectants and fungicides

Rationale:

The recommended definition provides clarity of expression.

3.2.1.3 Soil, paragraph 31

31. Soils should be evaluated for **microbial** hazards. If the evaluation concludes that such hazards may compromise the safety of crops, **appropriate** control measures, e.g. topsoil replacement or solar-heat disinfection, should be implemented to reduce hazards to acceptable levels. If this cannot be achieved by available control measures, growers should not use these soils for primary production.

Rationale

The rephrased sentence provides clarity on the specific types of hazards to be evaluated, thereby removing any ambiguities. It provides flexibility in the choice of appropriate control measures since the specified control measures (topsoil replacement or solar heat disinfection) are not feasible in small-scale farming.

3.2.1.4 Agricultural chemicals, paragraph 37

37. ~~The mixing~~ **Use** of agricultural chemicals should be carried out in such a way as to avoid contamination of water and land in the surrounding areas.

Rationale:

The mixing of agricultural chemicals is one of the several ways by which water and land can be contaminated on the farm. However, the improper use of agricultural chemicals, which includes mixing of agricultural chemicals, covers all possible ways by which water and land and the surrounding areas on the farm can be contaminated by agricultural chemicals. Therefore, the replacement of the word (mixing) with the word (use) is more appropriate.

3.2.4 Equipment associated with growing and harvesting Paragraph 61

Bullet 4

- Policies should be established for the control of equipment when it is not in use, including policies for the removal of equipment from the work area or ~~storage~~ **storing** them safely in **on** site.

Rationale:

The modified sentence provides clarity of meaning.

3.3.1 Prevention of cross-contamination, paragraph 62

Bullet 1:

- The field should be evaluated for the presence of hazards or ~~contamination~~ **contaminants** prior to harvest to determine if the field or portions thereof should not be harvested.

Rationale:

The modified sentence provides clarity of understanding and the word contaminant is more appropriate than contamination.

9.4 Consumer Education, paragraph 130

Bullet 1:

- Avoiding the purchase of damaged or rotten products **sold under unsanitary conditions** to minimize microbiological contamination.

ANNEX I: READY-TO-EAT FRESH PRE-CUT FRUITS AND VEGETABLES**Paragraph 3**

Nigeria proposed the deletion of third paragraph:

~~3. Some of the microbiological pathogens associated with fresh fruits and vegetables include Salmonella spp., Shigella spp., pathogenic strains of Escherichia coli, Listeria monocytogenes, norovirus and hepatitis A virus and parasites such as Cyclospora. Some of these pathogens are associated with the agricultural environment, whereas others are associated with infected workers, contaminated water or the processing environment. Because of the ability for pathogens to survive and grow on fresh produce, it is important for the pre-cut industry to follow good hygienic practices to ensure the microbiological safety of its products.~~

Rationale:

Paragraph 3 is a repetition of paragraph 2 of the introduction section making it redundant.

ANNEX III: FRESH LEAFY VEGETABLES

Introduction, paragraph 2

Line 9 of annex III

2. A broad array of microbial pathogens have been associated with fresh leafy vegetables as reported in international outbreak data, including Enterohemorrhagic Escherichia coli, Salmonella enterica, Campylobacter spp, Shigella spp, Hepatitis A virus, Norovirus, Cyclospora cayetanensis, Cryptosporidium parvum, Giardia lamblia Yersinia pseudotuberculosis and Listeria monocytogenes. Epidemiological evidence, outbreak investigations and risk assessments have identified areas of risk for pathogen contamination of leafy vegetables including key risks from water, animals, workers and manure-based soil amendments. Fresh leafy vegetables are grown and harvested in large volume, often for export and increasingly in places that are new to harvesting and distributing fresh leafy vegetables, therefore the potential for human pathogens to spread has also grown. Fresh leafy vegetables are marketed as in diverse forms products including which include whole, unprocessed heads, loose leaves, mixed cut leaves and fresh herbs, and pre-cut packaged products. Fresh leafy vegetables are packed in diverse ways, including field packed direct for market, in packing houses and pre-cut products processed in sophisticated processing plants. As fresh, ready-to-eat leafy vegetables move through the supply chain, there is also the potential for the introduction and growth of pathogens. There is no further processing treatment that would eliminate or inactivate the target microorganisms. Examples of control measures are illustrative only and their use and approval may vary among member countries.

Rationale:

The new sentence provides clarity on the different forms of leafy vegetables that are offered for sale which are not necessarily different products.

ANNEX IV: MELONS

5.5.1 Post-harvest water use

Bullet 5

•It is also recommended that the concentrations of antimicrobial agents are present in the water at sufficient levels for the temperature used.

Rationale:

The new text provides adequate clarity and understanding.

ANNEX V: BERRIES

2. SCOPE, USE AND DEFINITIONS paragraph 5

5. This Annex covers specific guidance related to all areas, the safety of berries, from primary production to consumption, of including berries that are intended to be consumed raw (e.g. fresh berries) and/or are processed without a microbiocidal step.

Rationale:

The new sentence provides clarity.

10.2 Training programs, paragraph 36

36. In addition to those listed in the Code of Hygienic Practice for Fresh Fruits and Vegetables (CAC/RCP 53-2003), specific employee training programmes should include safe handling, transport and storage practices to ensure that berries are immediately cooled after harvesting the following:

~~• Agricultural workers should be trained on safe handling, transport and storage practices and to ensure that berries are immediately cooled after harvesting.~~

Rationale:

This reconstruction provides clarity and understanding.

SENEGAL

Observation générale:

Paragraphes introductifs

Question: Modifier la phrase du paragraphe 1 de l'« Introduction » comme suit : « *Les recherches scientifiques des dernières années ont montré qu'une alimentation riche en fruits et légumes réduit le risque de certaines formes de cancers et de cardiopathies coronariennes ...* »

Justification: La consommation des fruits et légumes est recommandée pour la prévention des maladies.

1.1 Champ d'application, paragraphe 4

Question: Modifier la première phrase du champ d'application, comme suit : « **Le présent code d'usages énumère les pratiques d'hygiène générale à observer durant la production primaire et l'emballage des fruits et des légumes frais destinés à la consommation humaine, afin d'assurer l'innocuité des denrées consommées crues** ».

Justification: Cette phrase ainsi modifiée, semble plus logique.

2.3 Définitions, paragraphes 7

Question: Agents antimicrobiens: Remplacer l'énoncé original comme suit: « **toute substance d'origine naturelle, synthétique ou semi-synthétique qui, à l'usage des concentrations prévues, détruit les micro-organismes ou empêche leur développement mais cause peu ou pas de dégâts pour les fruits et les légumes frais. Par exemple, les désinfectants et les fongicides** »

Justification: La définition recommandée semble plus claire.

3.2.1.3 Sols, paragraphe 31

Question: Remplacer la phrase au paragraphe 31 par la phrase suivante : « *Les sols doivent être évalués pour vérifier qu'ils ne présentent pas de **dangers microbiens**. Si l'examen laisse croire que de tels dangers atteignent des niveaux susceptibles de compromettre la salubrité des récoltes, **des mesures** de contrôle **appropriées** devront être appliquées pour ramener le danger à un niveau acceptable. Si ces mesures se révèlent inadéquates, les producteurs ne devraient pas utiliser ces sols pour la production primaire* ».

Justification: La phrase ainsi reformulée, apporte des précisions sur le type de danger à évaluer, de manière à éliminer toute ambiguïté. Elle offre une certaine souplesse dans le choix des mesures de contrôle appropriées, étant donné que les mesures de contrôle spécifiques (remplacement de la terre végétale ou désinfection par chaleur solaire) ne sont pas réalisables dans l'agriculture à petite échelle.

3.2.1.4 Produits chimiques agricoles, paragraphe 37

Question: Remplacer le mot «**mélange**» au paragraphe 37 par «**l'utilisation**». La phrase est modifiée comme suit : « **L'utilisation** des produits chimiques agricoles doit s'effectuer de manière à éviter la contamination de l'eau et du sol environnants ».

Justification: Le *mélange* des produits chimiques agricoles est l'un des moyens par lesquels l'eau et les sols peuvent être contaminés à la ferme. Cependant, l'utilisation inappropriée de ces produits qui inclut leur mélange, couvre l'ensemble des moyens par lesquels l'eau et la terre, ainsi que les environs de la ferme peuvent être contaminés par des produits chimiques agricoles. Le remplacement du mot «**mélange**» par le terme «**utilisation**» est donc mieux approprié.

Pour réduire autant que possible l'introduction de terre et les dommages aux produits de récolte, l'équipement utilisé à cet effet, doit être au préalable réglé et nettoyé. Il ne faut pas utiliser les graines endommagées ou atteintes de maladie pour la production de germes destinés à la consommation humaine, car elles risquent d'être vulnérables à la contamination microbienne **de favoriser des contaminations microbiennes**.

3.2.4 Les équipements servant à la culture et à la récolte

Question: Modifier la phrase comme suit : « ~~Des mesures devraient être prises mises en place pour contrôler les équipements lorsqu'ils ne sont pas non utilisés, notamment des directives procédures pour enlever et entreposer sur le site les équipements de l'aire de travail ou de leur entreposage en toute sécurité sur le site~~ ». **Des procédures devraient être définies pour préciser les conditions d'entreposage et d'enlèvement du matériel non utilisé sur le site**

Justification: La phrase modifiée permet d'en clarifier le sens.

3.3.1 Prévention de la contamination croisée, paragraphe 62

Point 1:

Question: Remplacer le mot «**contamination**» par avec «**contaminant**». La phrase est libellée comme suit : « ~~Le champ devrait être examiné pour détecter la présence de dangers ou de contaminants avant la récolte afin de déterminer si le champ en totalité ou en partie ou des parties de celui-ci ne doivent pas être récoltés.~~ »

9.4 Éducation des consommateurs, paragraphe 130

Point 1:

Question: Remplacer la phrase par celle-ci: « **Ne pas Éviter d'acheter des fruits ou légumes endommagés, en décomposition ou vendus dans des conditions non hygiéniques, afin d'éviter au maximum toute contamination microbienne** ».

Justification: La nouvelle phrase semble plus claire quant aux conditions spécifiques à éviter du fait qu'elles favorisent la contamination microbienne des fruits et des légumes frais qui doivent faire l'objet d'une attention particulière dans l'éducation des consommateurs, afin d'optimiser la sécurité microbiologique de ces produits.

ANNEXE I: LEGUMES ET FRUITS FRAIS PRÉDÉCOUPÉS PRÊTS À LA CONSOMMATION

Introduction, paragraphe 2

Question: Supprimer tout le paragraphe 3 qui est libellé comme suit : « **Parmi les éléments pathogènes microbiologiques associés aux fruits et aux légumes frais, notons *Salmonella spp.*, *Shigella spp.*, les souches pathogènes de *Escherichia coli*, *Listeria monocytogenes*, les norovirus et le virus de l'hépatite A ainsi que les parasites tels que *Cyclospora*. Certains de ces pathogènes sont associés à l'environnement agricole tandis que d'autres sont associés aux travailleurs infectés et à l'eau contaminée. Compte tenu de la capacité des pathogènes à survivre et à se développer sur les produits frais, il est impératif que l'industrie du prédécoupé adopte de bonnes pratiques d'hygiène pour assurer la sécurité microbiologique de ses produits** ».

Justification: Ce paragraphe est une répétition du paragraphe 2 de la partie introductive, ce qui le rend superflu.

Rajouter le nom d'espèce de *Cyclospora* qui devient : *Cyclospora cayetanensis* au paragraphe 3 de l'introduction

Justification: Pour être conforme à la nomenclature internationale

ANNEXE III: LÉGUMES EN FEUILLES FRAIS

Introduction, paragraphe 2

Question: Reformuler la phrase de la ligne 9 comme suit : « *Les légumes en feuilles frais sont commercialisés sous diverses formes, soit entiers, à l'état brut, en feuilles détachées, en feuilles coupées et plantes aromatiques fraîches et produits emballés pré-coupés* ».

Justification: La nouvelle phrase fournit des précisions sur les différentes formes de légumes en feuilles offerts à la vente et qui ne sont pas nécessairement des produits différents.

ANNEXE IV: MELONS

5.5.1. Utilisation d'eau après la récolte, paragraphe 20

Question: Point 5 : Remplacer la phrase par celle-ci : « *Il est recommandé que **la concentration** des agents antimicrobiens dans l'eau à la température d'utilisation reste à un niveau adéquat* ».

Justification: Le nouveau texte semble apporter plus de clarté et permet une meilleure compréhension.

ANNEXE V: PETITS FRUITS

2. CHAMP D'APPLICATION, UTILISATION ET DÉFINITIONS, paragraphe 5

Question: Reformuler le paragraphe 5 comme suit : « *Cette annexe fournit des directives précises concernant la **salubrité des petits fruits**, de la production primaire à la consommation, **y compris** ceux destinés à être consommés crus (p. ex., petits fruits frais) ou qui sont transformés sans toutefois être soumis à un traitement microbicide.* »

Justification: La nouvelle phrase semble plus claire.

10.2 Programmes de formation, paragraphe 36

Question: Reformuler la phrase comme suit : « En plus de ceux énumérés dans le *Code d'usage en matière d'hygiène pour la production primaire et l'emballage des fruits et les légumes frais* (CAC/RCP 53-2003), les programmes de formation devraient inclure les pratiques de manipulation, de transport et d'entreposage, afin de veiller à ce que les petits fruits soient refroidis immédiatement après la récolte ».

Justification: Cette reformulation fournit davantage de clarté et une meilleure compréhension.

THAILAND

Section 3.1.2 Animals and human activity paragraph 19, bullet 3

We would like to propose an amendment as follows.

“Where relevant to risk of contamination, Fresh fruits and vegetables primary production areas should be evaluated...”

Rationale: for flexibility of fruits with lower risk such as those with inedible peel

Section 3.2.1.1 Water for primary production paragraph 21, the sixth bullet from the last

We would like to ask for clarification about water safety expert. Does water safety expert refer to competent authority, and academics? If yes, we would like to propose the amendment as follows:

“When testing, growers may consult, if needed, ~~water safety experts~~ **related competent authority or expert** in order to...”

Rationale: to clarify about water safety expert

Section 3.2.1.1.1 Water for irrigation and harvesting paragraph 24

We would like to propose an amendment as follows.

“Additionally, growers **where necessary** should:”

Rationale: to provide flexibility for small holder farmers

Section 3.2.1.4 Agricultural chemicals paragraph 34

We would like to ask for clarification of this paragraph since it is unclear whether who should take into account the *Guidelines for Risk Analysis of Foodborne Antimicrobial Resistance* (CAC/GL 77-2011). Growers normally use agricultural chemicals permitted by the competent authority. They might not have knowledge and facilities to assess the risk of foodborne antimicrobial resistance in accordance with CAC/GL 77-2011. In contrast, the competent authority should take into consideration the CAC/GL 77-2011 during authorization of the chemicals.

Section 3.2.3 Personnel health, hygiene and sanitary facilities paragraph 53

We would like to propose an addition to paragraph 53 as follows.

“...for worker hygiene as well as illness reporting. **In case of small holder farmers where written SOPs are not feasible, there should be records related to health, hygiene and sanitary facilities.**”

Rationale: to provide flexibility for small holder farmers

Section 3.3.2 Storage and transport from the field to the packing facility paragraph 63 bullet 1

We would like to propose an addition to paragraph 63 bullet 1 as follows.

“Where appropriate, Each transporter should have its own SOP for shipping containers/trailers...”

Rationale: to provide flexibility for small holder farmers and collectors who transport their own produce

Section 4.3 Equipment paragraph 78

We would like to propose an addition to paragraph 78 as follows.

“Care should be taken to ensure that equipment used in handling fruits and vegetables do not damage the fruit or vegetable and can be cleaned and disinfected in order to avoid source of contamination, ~~such as biofilms.~~”

Rationale: It is too specific. Smaller packers may not be able to specifically detect biofilms in their monitoring process.

ZAMBIA

General comment:

Introduction section

Issue: Replace the first sentence in paragraph 1 “Introduction” which reads “*Scientific research over the last decades has shown that a diet rich in fruits and vegetables is protective against many cancers and lowers coronary heart disease....*” with “**Scientific research over the last decades has proven that a diet rich in fruits and vegetables promote good health....**”

Rationale: The original sentence suggests the suitability of consumption of food (fruits and vegetables) in the prevention of diseases, even though food (fruits and vegetables) should not be presented as having an absolute therapeutic effect. The recommended introduction therefore conforms to the requirements of the General Guidelines for Claims (CAC/GL 1-1979) (Rev 1-1991), section 3.4. which prohibits any claim as to the suitability of a food for use in the prevention, alleviation, treatment or cure of a disease, disorder or particular physiological condition.

1.1 Scope, paragraph 4

Issue: Modify the first sentence in the scope to read as follows: “**This Code of Practice covers General Hygienic Practices from primary production to consumption of fresh fruits and vegetables in order to ensure safe and wholesome product**”.

Rationale: The modified sentence allows logical flow and clarity of expression.

2.3 Definitions, paragraph 7

Issue: Antimicrobial agents: Replace the original statement with the following: “**any substance of natural, synthetic or semi-synthetic origin which at intended use concentrations kills or inhibits the growth of microorganisms but causes little or no damage to the fresh fruits and vegetables. Examples are disinfectants and fungicides**”.

Rationale: The recommended definition provides clarity of expression

3.2.1.3 Soil, paragraph 31

Issue: Replace the sentence in paragraph 31 with the following sentence: “*Soils should be evaluated for microbial hazards. If the evaluation concludes that such hazards may compromise the safety of crops, appropriate control measures should be implemented to reduce the microbial hazards to acceptable levels. If this cannot be achieved, by available control measures, growers should not use these soils for primary production*”.

Rationale: The rephrased sentence provides clarity on the specific types of hazards to be evaluated, thereby removing any ambiguities. It provides flexibility in the choice of appropriate control measures since the specified control measures (topsoil replacement or solar heat disinfection) are not feasible in small-scale farming.

3.2.1.4 Agricultural chemicals, paragraph 37

Issue: Replace the word “**mixing**” in **paragraph 37** with “**use**”. The sentence will read as follows: “*The use of agricultural chemicals should be carried out in such a way as to avoid contamination of water and land in the surrounding areas*”.

Rationale: The *mixing* of agricultural chemicals is one of the several ways by which water and land can be contaminated on the farm. However, the improper *use* of agricultural chemicals, which includes mixing of agricultural chemicals, covers all possible ways by which water and land and the surrounding areas on the farm can be contaminated by agricultural chemicals. Therefore, the replacement of the word (**mixing**) with the word (**use**) is more appropriate.

3.2.4 Equipment associated with growing and harvesting

Issue: Modify the sentence to read as follows:” *Policies should be established for the control of equipment when it is not in use, including policies for the removal of the equipment from the work area or storing them safely on site”.*

Rationale: The modified sentence provides clarity of meaning.

3.3.1 Prevention of cross-contamination, paragraph 62

Bullet 1:

Issue: Replace the word “**contamination**” with “**contaminant**”. The sentence will read as follows: “*The field should be evaluated for the presence of hazards or contaminants prior to harvest to determine if the field or portions thereof should not be harvested.*”

Rationale: The modified sentence provides clarity of understanding and the word contaminant is more appropriate than contamination.

9.4 Consumer Education, paragraph 130

Bullet 1:

Issue: Replace the sentence with the following “**Avoiding the purchase of damaged, rotten or products sold under unsanitary conditions to minimize microbiological contamination.**”

Rationale: The new sentence provides clarity on the specific avoidable conditions that can promote microbial contamination of fresh fruits and vegetables that need to be stressed in Consumer Education to ensure the microbiological safety of these products.

ANNEX I: READY-TO-EAT FRESH PRE-CUT FRUITS AND VEGETABLES**Introduction, paragraph 2**

Issue: Delete the entire paragraph 3 which states: “Some of the microbiological pathogens associated with fresh fruits and vegetables include *Salmonella* species, *Shigella* species, pathogenic strains of *Escherichia coli*, *Listeria monocytogenes*, *Norovirus* and hepatitis A virus and parasites such as *Cyclospora cayetanensis*. Some of these pathogens are associated with the agricultural environment, whereas others are associated with workers or contaminated water. Because of the ability of pathogens to survive and grow on fresh produce, it is important for the pre-cut industry to follow Good Hygienic Practices to ensure the microbiological safety of its products.”

Rationale: This paragraph is a repetition of paragraph 2 of the introduction section making it redundant.

ANNEX III: FRESH LEAFY VEGETABLES**Introduction, paragraph 2**

Issue: Rephrase the sentence in line 9 to read as follows: “Fresh leafy vegetables are marketed in diverse **forms** which include whole, unprocessed heads, loose leaves, mixed cut leaves and fresh herbs, and pre-cut package products”.

Rationale: The new sentence provides clarity on the different forms of leafy vegetables that are offered for sale which are not necessarily different products.

ANNEX IV: MELONS**5.2.2.3 Cooling melons**

Issue: Bullet 5: Replace the sentence with the following: “It is recommended that **the concentration** of antimicrobial agents in the water at the temperature of use, should be adequate.”

Rationale: The new text provides adequate clarity and understanding.

ANNEX V: BERRIES**2. SCOPE, USE AND DEFINITIONS, paragraph 5**

Issue: Rephrase paragraph 5 to read as follows: “This Annex covers specific guidance related to the **safety of berries**, from primary production to consumption, **including** berries that are intended to be consumed raw (e.g. fresh berries) and/or are processed without a microbiocidal step. »

Rationale: The new sentence provides clarity.

10.2 Training programs, paragraph 36

Issue: Reconstruct the sentence to read as follows: “In addition to those listed in the *Code of Hygienic Practice for Fresh Fruits and Vegetables* (CAC/RCP 53-2003), specific employee training programmes should include safe handling, transport and storage practices to ensure that berries are immediately cooled after harvesting ».

Rationale: This reconstruction provides clarity and understanding.