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Agenda Item 7

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JOINT FAO/WHO FOOD STANDARDS PROGRAMME CODEX COMMITTEE ON FOOD HYGIENE

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COMMENTS ON THE PROPOSED DRAFT ANNEX ON MELONS TO THE CODE OF HYGIENIC PRACTICE FOR FRESH FRUITS AND VEGETABLES (CAC/RCP 53-2003) (At Step 3)

Submitted by:
Argentina, Ghana, Jamaica, Kenya, Philippines, Senegal

ARGENTINA

Argentina appreciates the opportunity to provide the following editorial comments for consistency of the document.

GENERAL COMMENTS

Argentina supports the layout of the prepared document. However, we would like to highlight the importance of maintaining a preventive approach based on good hygiene and sanitation practices. This approach would require, for example, fostering frequent hand washing instead of using gloves or hand sanitizers, both of which may very often not be feasible for the involved sectors.

In addition, Argentina wishes to stress the importance of risk management, particularly in respect of compliance with safety-related provisions by workers and by any casual visitors in producing farms. However, we note the strong need to take into consideration the intrinsic characteristics of production systems, which very often involves workers that may be considered higher risk, but which in itself would not require exceptional measures for risk prevention.

SPECIFIC COMMENTS on the text in Spanish

3.2.1.1. Agua para la producción primaria (page 8, Spanish version)

In the first and last bullet points, we suggest that the term "idoneidad" be replaced with "aptitud", given that the latter is considered more appropriate as it is used in CAC/RCP 53-2003 (applicable to the Spanish version).

First bullet point

- “Evaluar la posibilidad de contaminación microbiana (por ejemplo, procedente de ganado, asentamientos humanos, tratamiento de aguas negras, estiércol y operaciones de compostaje) y la idoneidad ~~idoneidad~~ **aptitud** del agua para su uso previsto.”

Last bullet point

- “Si se determina que la fuente de agua tiene niveles inaceptables de organismos indicadores o está contaminada con patógenos de transmisión alimentaria, deberían tomarse medidas correctivas a fin de asegurar que el agua resulte ~~idónea~~ **apta** para el uso previsto.”

3.2.1.1.1 Agua para riego. (page 8, Spanish version)

Argentina believes this annex does not follow the same approach adopted in Annex III of the Code of Hygienic Practice for Fresh Fruits and Vegetables, having deleted the text “[...] *la práctica de evaluar el sistema de distribución de agua a fin de conocer la fuente [...]*”. In this sense, Argentina believes that the text should be revised and that criteria should be aligned with previous annexes.

3.2.3 Personnel health, hygiene and sanitary facilities (page 8)

Regarding the third bullet point, Argentina reiterates the comment made on the draft document, which highlighted that the use of gloves is a very difficult practice to implement in field manual work, particularly when combined with high temperatures prevailing in producing areas during melon harvest.

In this respect, although we believe the recommendation on glove use could be an option for personnel working in a system of melon production, especially during harvest and handling, priority should be given to frequent hand washing in simple, economical field facilities provided for this purpose as a measure that would meet the objective to reduce risk of contamination. ~~during handling in view of the adoption of equipment which assist production but may act against the safety of the final product.~~

As regards the fourth bullet point (page 9), Argentina believes the presented text does not take into consideration the situation of many melon production systems in which the presence of complete families in the production farm would be normal. In this sense, in the understanding that risk management should consider all age groups alike, we suggest a complete change in the wording, as follows:

“If any person external to production activities is casually in the farm, his compliance with the same hygiene rules as agricultural workers should be ensured in order to guarantee the safety of the final product”.

3.2.3.1 Personnel hygiene and sanitary facilities (page 9)

Regarding the paragraph in square brackets in the last bullet point, which covers the *“the use of hand wipes along with hand sanitizer” “in situations when clean, running water is unavailable”*, Argentina believes that this provision is inappropriate and therefore should be deleted.

In observed field production situations, it can be expected that workers who cannot wash their hands will have much contamination (dirt) in their hands and clothes, which would mean that the use of hand wipes or sanitizers would hardly be practical for workers, considering the intended purpose.

Argentina reiterates the comment submitted for the 42nd session and suggests that the entire paragraph be deleted, reinforcing the promotion of good hand hygiene practices as a basis for risk reduction.

Prevention of cross-contamination

Argentina believes this section does not follow the approach adopted in the general Code of Hygienic Practice and its annexes. We therefore suggest that the text be revised in the light of what has been adopted, aligning approaches.

3.3.2 Storage and Transport from the production site to the packing/processing facility (page 10)

Following the approach adopted in the previous annexes to the guiding Code of Practices (Annex III), we suggest that this paragraph include an optimum temperature range in order to maintain the quality of the product. In this sense, Argentina believes optimum temperatures for melon throughout the supply chain should be between 7 and 10 degrees centigrade (°C) and suggests that this reference be added to this section.

SECTION 5 - CONTROL OF OPERATION (page 12)

Reiterating the need for consistency with the approach adopted in the previous annexes to the guiding Code of Practices (Annex III), Argentina believes that 5.3a ~~section on~~ “[...] Incoming material requirements”, should be 5.2.2.1. Incoming material should be selected before washing, chemical treatment or cooling in order to optimize resources and increase operation efficiency.

5.2.2.1- Post-harvest water use (page 12)

Regarding the first bullet point, which reads “Areas for garbage recyclables and compostable waste should be identified and all waste should be stored and disposed of in a manner to minimize contamination”, Argentina believes this text should be moved to section 4.4.2 Drainage and waste disposal for better articulation of the text.

5.2.2.2 Chemical treatments

First bullet point

Same as above.

GHANA

SPECIFIC COMMENTS

3.1 Environmental Hygiene

Paragraph 2

Ghana proposes that the paragraph be reviewed as

“Particular attention should be given to human and animal which are potential sources of faecal contamination in the melon production area and to vectors which may introduce faecal contamination to the production and handling areas. These vectors include, but are not limited to, humans, domestic and wild animals, or indirectly from contaminated water, insects, or fomites such as dust, tools and equipment”.

Rationale: To provide clarity for sources of faecal contamination and vectors.

3.2.3.1 Personnel Hygiene and Sanitary Facilities

Bullet 2

Ghana proposes the following:

- Move entire second bullet statement to Section 10 Training
- Delete the second sentence. The new sentence should read as follows:

“All agriculture workers should be trained in proper use of hygiene facilities. ~~Training should include toilet use, proper disposal of toilet pare equivalent, and proper hand washing and drying procedures.~~”

Rationale: Section 10 is the appropriate section for the position in the document. Second sentence too prescriptive

Bullet 6

Delete the statement in bullet 6.

~~“[In situations when clean, running water is available, the use of hand wipes along with hand sanitizers could be considered].”~~

Rationale: There is no scientific evidence of effectiveness of the use of hand wipes alone without cleaning with soap and water.

3.2.3.2 Health Status

Bullet 1

Rephrase sentence to read:

“Growers should be encouraged to observe **and keep records of** symptoms of diarrhoeal or food-transmissible, communicable diseases, ~~keep records of it~~ and reassign agricultural workers as appropriate”.

Rationale: Clarify roles of management in record keeping

Bullet 2

Ghana proposes the text be modified as follows:

“Agricultural workers should be encouraged to notice and report **and, where feasible, be motivated with appropriate incentives in reporting** symptoms of diarrheal or food transmissible, communicable diseases”.

Rationale: Ensure workers report illnesses without fearing loss of wages and benefits.

5.2.2.1 Post-harvest water use

Bullet 2 and 5.

Replace “antimicrobial” with “disinfectants”.

Bullet 2, “Antimicrobial **Disinfectants** may reduce, but not eliminate microbial pathogens if present, as they are primarily used to disinfect the water.”

Bullet 5, “Where appropriate, the pH, soil (including organic) load, turbidity, water hardness, product through-put capacity should be controlled and monitored to ensure the efficacy of the antimicrobial **disinfectant** treatments”

Rationale: The term disinfectants is more appropriate

Bullet 6

The difference between the internal temperature of melons and the dump tank water is critical to the ingress of water and microorganisms. Ghana suggests that the *critical temperature difference* should be clarified.

Rationale: This is necessary to prevent inadvertent ingress of water and microorganisms into melon and promote consumer protection

Bullet 7

Replace “potable” with “clean”

“If melons receive a wash treatment, the wash water should be ~~potable~~ **clean**”.

Rationale: Clean water is considered to be microbiologically safe given the pathogen/commodity combination. It's more practical and feasible to use clean water than potable water.

JAMAICA

Jamaica has read the document and finds that is a very useful one for developing countries such as Jamaica. We have no specific comment on this draft.

KENYA

GENERAL COMMENTS

Intra-African country trade in melons is significant although not documented. Cut melons have significant market share in the hospitality industry. The safety of melons should attract the attention of member states to ensure public health and safety.

SPECIFIC COMMENTS

3.1 Environmental Hygiene

Para.2.

Kenya reviewed para.2 to read **“Particular attention should be given to human and animal which are potential sources of fecal contamination in the melon production area; and to vectors which may introduce fecal contamination to the production and handling areas. These vectors include, but are not limited to, humans, domestic and wild animals, or indirectly from contaminated water, insects, or fomites such as dust, tools and equipment”**.

Justification:

Review was necessary to provide clarity for sources of fecal contamination and vectors.

3.2.3.3 Personnel Hygiene and Sanitary Facilities

Bullet.2.

Kenya recommends the following:

- Move entire second bullet statement to section 10 on Training
- Reconstruct sentence in bullet 2 to read “All agriculture workers should be trained in proper use of hygiene facilities” while deleting the second part of the sentence.

Bullet.6.

Kenya recommends deleting the statement in bullet 6.

Justification:

- Section 10 is the appropriate section for the position in the document
- Second sentence too prescriptive.
- There is no scientific evidence of effectiveness of the use of hand wipes alone without cleaning with soap and water.

Health Status**Bullet-1.**

Kenya proposes replacement of bullet 1 with the following text **“Growers should observe and keep records of symptoms of diarrhea or food-transmissible, communicable diseases, and reassign agricultural workers as appropriate”**.

Bullet-2.

Kenya proposes modification of bullet 2 to read as follows **“Agricultural workers should be encouraged and, where feasible, be motivated with appropriate incentives in reporting symptoms of diarrheal or food transmissible, communicable diseases.**

Justification:

- Clarify roles of management in record keeping
- Ensure workers report illnesses without fearing loss of wages and benefits.

5.2.2.1**Bullets.2 and 5.**

Kenya proposes replacement of the term Antimicrobial in bullet 2 and bullet 5 with *disinfectants*.

Bullet 6.

Kenya noted that the statement in bullet 6 suggests that the difference between the internal temperature of melons and the dump tank water is critical to the ingress of water and microorganisms. Kenya therefore suggests that the *critical temperature difference* should be clarified.

Justification:

- The term disinfectants is more appropriate
- This is necessary to prevent inadvertent ingress of water and microorganisms into melon and promote consumer protection.
- **Bul.7.** Kenya discussed the use of clean versus potable water and agreed that clean water is sufficient for the initial wash. The sentence should be modified to read as follows: “If melons receive a wash treatment, the wash water should be clean and safe”.

Justification:

Clean safe water is considered to be microbiologically safe given the pathogen/commodity combination. It's more practical and feasible to use clean water than potable water.

- It is a priority because of the upsurge of mass catering industries and potential public health concerns.
- To facilitate international trade

PHILIPPINES**II. Specific Comments**

The Philippines would like to propose revisions to the following items:

1. Section 2.3 Definitions, page 6, 1st paragraph

From	To
Melons in this document refers to whole and pre-cut cantaloupe (also known as muskmelons and rockmelons) honeydew, watermelon and varieties of melons.	Melons in this document refers to whole and pre-cut cantaloupe (also known as muskmelons and rockmelons) honeydew, watermelon and varieties of melons <u>(e.g., Cucumis melo Linn., Citrullus vulgaris, etc).</u>

Rationale: To provide scientific names of varieties of commercial melons.

2. **Section 3.1.1 Location of the production site, page 6, 1st paragraph**

Add another sentence stated as follows:

From	To
Consideration of production site location should include an evaluation of the slope and the potential for runoff from nearby fields, the flood risk as well as hydrological features of nearby sites in relation to the production site.	Consideration of production site location should include an evaluation of the slope and the potential for runoff from nearby fields, the flood risk as well as hydrological features of nearby sites in relation to the production site. <u>History of prior land use and the potential impact of the activities of adjacent sites may also help assess potential microbial hazards, heavy metals and pesticide contaminants.</u>

Rationale: History of prior use of land and the activities of adjacent sites are important to identify potential hazards.

3. **Section 3.1.2 Wild and domestic animals and human activity page 6, 2ndbullet, 2nd paragraph**

From	To
Activities to consider include efforts to minimize standing water in fields, restrict access by animals to water sources, and keep production sites and handling areas free of waste and clutter.	Activities to consider include efforts to minimize standing water in fields, restrict access by animals to water sources <u>(may be based on local ordinances for public irrigation systems)</u> , and keep production sites and handling areas free of waste and clutter.

Rationale: For public irrigation systems, local ordinances may provide regulations to keep animals upstream of the melon area.

4. **Section 3.1.2 Wild and domestic animals and human activity page 6, 3rd bullet, 1st paragraph**

From	To
Melon production sites and handling areas should be evaluated for evidence of the presence of wildlife and domestic animal activity (e.g., presence of animal feces, large areas of animal tracks, or burrowing).	Melon production sites and handling areas should be evaluated for evidence of the presence of wildlife and domestic animal activity (e.g., presence of animal feces, hairs/furs , large areas of animal tracks, or burrowing, decomposing remains).

Rationale: To provide other common examples of evidence of presence of wildlife and domestic animal activity as observed on the field.

5. **Section 3.2 Hygienic primary production of melons, page 7, 2nd paragraph, 1st sentence**

From	To
Some growers place melons on cups (i.e. small plastic pads) or plastic-covered beds to minimize direct melon-to-soil contact and thereby reduce ground spot development.	Some growers place melons on cups (i.e. small plastic pads) or plastic mulch -covered beds (wider and more elevated during the wet season), or halved bamboo segments to minimize direct melon-to-soil contact and thereby reduce ground spot development.

Rationale: To include production practices in some Asian countries like the Philippines to minimize direct melon-to-soil contact.

6. **Section 3.2 Hygienic primary production of melons, page 7, 2nd paragraph, 2nd sentence**

From	To
Melons also may be hand-turned multiple times by agricultural workers during the growing season to prevent sunburn or ground spot development.	Melons also may be hand-turned multiple times by agricultural workers during the growing season or covered with biodegradable materials such as rice straw to prevent sunburn or ground spot development.

Rationale: Covering with biodegradable materials is used to prevent sunburn during the dry season.

7. **Section 3.2 Hygienic primary production of melons, page 7, 2nd paragraph, 4th sentence**

From	To
If cups are used underneath melons, the following are recommended:	If cups or biodegradable materials are used underneath melons, the following are recommended:

Rationale: To include examples of biodegradable materials previously provided.

8. **Section 3.2 Hygienic primary production of melons, page 7, 2nd paragraph**

Add another bullet after the second bullet to be read as:

- **Use biodegradable materials only once to prevent cross-contamination**

Rationale: To provide general hygienic guidelines on the use of biodegradable materials such as bamboo segments.

9. Section 3.2.1.1.1 Water for irrigation, page 8, 2nd bullet

From	To
Avoid overhead irrigation methods, particularly with netted rind melons, because wetting the outer rind of melons increases the risk of pathogen contamination.	Avoid overhead irrigation methods, particularly with netted rind melons, because wetting the outer rind of melons increases the risk of pathogen contamination. <u>Overhead irrigation also enhances downy mildew infection in melons.</u>

Rationale: Overhead irrigation is not generally practiced in melons because it also enhances downy mildew infection

10. Section 3.3 Handling storage and transport, page 10, 1st paragraph

From	To
Melons such as cantaloupe are harvested based on the melon’s stage of maturity as judged by the formation of an abscission zone between the vine and the melon. After the vine is separated from the melon, a stem scar is left on the fruit. Melon stem scars may provide a potential route for entry of foodborne pathogens, if present, to the edible portion of the melons. It is recommended that post-harvest handling practices be implemented to minimize stem scar and rind infiltration, such as during washing operations, of foodborne pathogens into the edible portions of melon flesh. Written SOPs should be developed and implemented to ensure appropriate handling, storage and transport of melons.	<u>In general, melons should be harvested early in the morning while the fruit is cool. Melons should be harvested when it has reached an appropriate degree of development and ripeness in accordance with characteristics appropriate to the variety and to the area in which they are grown.</u> Melons such as cantaloupe are harvested based on the melon’s stage of maturity as judged by the formation of an abscission zone between the vine and the melon. After the vine is separated from the melon, a stem scar is left on the fruit. Melon stem scars may provide a potential route for entry of foodborne pathogens, if present, to the edible portion of the melons. It is recommended that post-harvest handling practices be implemented to minimize stem scar and rind infiltration, such as during washing operations, of foodborne pathogens into the edible portions of melon flesh. Written SOPs should be developed and implemented to ensure appropriate handling, storage and transport of melons. <u>It should be considered that the length of storage for melons at a recommended temperature depends on the stage of maturity when melons are harvested.</u>

Rationale: To provide general guidelines on harvesting and storage. An example on storage guidelines specifically for muskmelons is that it can be stored for 15 days at 5°C when harvested at the hard ripe stage (3/4 full-slip) (USDA Agricultural Handbook 66 and other sources).

11. Section 3.3.1 Prevention of cross contamination, page 10, 2nd paragraph, 2nd bullet

From	To
<ul style="list-style-type: none"> Minimize mechanical damage such as rind puncture, cracks, bruising, as these wounds may provide entry points for pathogens and sites for microbial survival and multiplication 	<ul style="list-style-type: none"> Minimize mechanical damage such as rind puncture, cracks, bruising, as these wounds may provide entry points for pathogens and sites for microbial survival and multiplication. <u>Care should be taken to avoid bruising of the fruit stem left with the melon.</u>

Rationale: Bruising of the stem left on the melon may also provide entry points for pathogens and can be a site for microbial survival and multiplication.

12. Section 3.3.2 Storage and Transport from the production site to the packing/processing facility, page 10, 2nd bullet, 1st sentence

From	To
Fresh melons should not be transported in vehicles used previously to carry animals, animal manure or biosolids unless they are adequately cleaned and disinfected.	Fresh melons should not be transported in vehicles used previously to carry animals, animal manure or biosolids <u>and pesticides</u> unless they are adequately cleaned and disinfected.

Rationale: Transport used for pesticides may also be used to transport melons.

13. Section 4.4.2 Drainage and waste disposal, page 11, 1st bullet

From	To
Drainage in the facility should be designed with sloped floors to effectively drain standing water.	Drainage in the facility should be designed with <u>cemented/concrete</u> sloped floors to effectively drain standing water.

Rationale: To specify that sloping of floors can only be done when it is cemented or is made of concrete material.

14. Section 5.2.2.2 Chemical treatments, page 12, 1st paragraph

From	To
Fungicides may be applied to melons by use of an aqueous spray or immersion to extend the post-harvest life of the fruit. The following are recommended:	Fungicides may be applied to melons by use of an aqueous spray or immersion to extend the post-harvest life of the fruit. <u>Food grade fruit wax may also used.</u> The following are recommended:

Rationale: Fruit wax is also used to prolong shelf life of melons.

15. Section 5.2.2.3 Cooling melons, page 13, 2nd bullet

From	To
Cooling and cold storing of melons as soon as possible after harvest is recommended to prevent multiplication of foodborne pathogens, if present, on or from the rind surface of melons.	Cooling and cold storing of melons as soon as possible after harvest is recommended to prevent multiplication of foodborne pathogens, if present, on or from the rind surface of melons, <u>aside from reducing high field temperature.</u>

Rationale: Muskmelons requires pre-cooling soon after harvest to reduce high field temperature

References:

ASEAN Standard for Melon (ASEAN Stan 18:2010).

Maghirang, Rodel G Ph.D. Crop Science Cluster, Institute of Plant Breeding. Comments on the draft submitted through electronic mail accessed last 27 July and 24 August 2011

Philippine National Standard: Code of Good Agricultural Practices for Fruits and Vegetable Farming (PNS BAFPS 49:2007 ICS 65.020.30)

Philippine National Standard: Fresh Fruits –Watermelon – Grading and classification. (PNS/BAFPS 56: 2007 ICS 065.020)

Philippine National Standard Fresh Fruits –Melons (PNS/BAFPS 63: 2008 ICS 67.080)

SENEGAL

GENERAL COMMENTS

Melon production is important but it is generally intended for local consumption or trade among African countries

<p><u>GENERAL COMMENTS</u> Melon production is important but it is generally intended for local consumption or trade among African countries</p>	
<p><u>SPECIFIC COMMENTS</u></p> <ul style="list-style-type: none"> • <u>Section 3 - Primary production:</u> Add to the introductory sentence "<u>or sale</u>" because in our country, melons can be sold immediately after harvest • <u>3.1.1 Location of the production site:</u> Add "<u>avoid proximity to dwellings</u>" • <u>Plan for a chapter on high humidity in packing and storage facilities .</u> • <u>3.21.2 Manure, biosolids and other natural fertilizers</u> <p>5th bullet : delete "unless it can be demonstrated that product contamination will not occur"</p> <p><u>3.2.3.1 Personnel hygiene and sanitary facilities</u></p> <p>6th bullet : "In situations when clean, running water is unavailable...: should be deleted</p> <p><u>3.2.3.2 Health status</u></p> <p>2nd bullet: Must be changed and rewritten: <u>Agricultural workers should be encouraged to report symptoms of diarrhea or food-transmissible, communicable diseases..."</u></p> <p>3th bullet: replace « should be carried out if clinically or epidemiologically indicated » par « <u>systematically</u> » as periodic medical examinations</p> <ul style="list-style-type: none"> • <u>4.4.2 Drainage and waste disposal</u> <p>6th bullet, add "<u>far from facilities</u>"</p> <ul style="list-style-type: none"> • <u>5.2.2.1 Post-harvest water use</u> <p>4th paragraph, add "<u>and thus microorganisms</u>"</p>	<p>There are risks of contamination</p> <p>Moisture may encourage the growth of microorganisms</p> <p>You can not have that certainty.</p> <p>Running water should be available in agricultural areas</p> <p>The motivation should be evidenced by a satisfactory medical care, without loss of salary and other benefits.</p>

<ul style="list-style-type: none"> • 5.2.2.2 Chemical treatment <p>3rd bullet: replace antimicrobial agents with <u>disinfectants</u></p> <p>3rd bullet, add <u>because there is a risk of microbial growth</u> "</p> <ul style="list-style-type: none"> • 5.2.2.5 Cutting, slicing and peeling melons <p>5th bullet, put in brackets "<u>(e.g. maximum temperature of 4 °C and minimum temperature of 0 °C)</u>"</p> <ul style="list-style-type: none"> • 5.2.3 Microbiological and other specifications <p>The first sentence is too long</p> <ul style="list-style-type: none"> • 5.3 Incoming material requirements <p>Delete "whole"</p> <ul style="list-style-type: none"> • 6.3 Pest control systems <p>Last sentence, replace "melons" with "<u>damaged melons</u>"</p> <ul style="list-style-type: none"> • 9.4 Consumer education <p>Third bullet, add <u>(0 °C and 4 °C)</u> at the end of the sentence.</p> <p>7th bullet, add "etc. "</p>	<p>In order to check the health condition of farm workers and prevent certain diseases, as the workers often lack the resources to obtain medical care.</p> <p>In order to avoid contamination</p> <p>The minimum refrigeration temperature should be specified</p> <p>Any melon showing signs of decomposition is no longer whole.</p> <p>These are the minimum and maximum temperatures recommended for refrigeration</p> <p>The list is not exhaustive</p>
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