

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of
the United Nations



World Health
Organization

E

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

Agenda Item 7(c)

CX/PR 15/47/8-Add.1

April 2015

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON PESTICIDE RESIDUES

47th Session

Beijing, P. R. China, 13-18 April 2015

Comments on the proposed draft revision of the Classification of Food and Feed at Step 3: Other selected vegetable commodity groups, submitted by Australia, Canada, Chile, Costa Rica, El Salvador, European Union, Ghana, Japan, Kenya, United States of America and African Union

Australia

In relation to the proposal for Cereal Grains, there are two options for the Committee to consider: Proposal A which includes 3 subgroups and Proposal B which has 6 subgroups. Australia supports Proposal A 'in principle' with modifications, explained below.

Proposal A is preferable on the basis that fewer subgroups allow more flexibility for extrapolation from representative crops/commodities to the subgroup or whole crop group. This supports the finding of the ICGCC that it is difficult to identify appropriate representative commodities for pseudocereals due to country and regional differences and lack of production data.

Australia also supports the separation of rice into a specific subgroup, due to the agronomic practices in rice production and potential for uptake of pesticides applied directly to the paddy water in addition to foliar application to the crop. The processing practices for rice, movement of various types of processed rice in trade and use of pesticides postharvest, are also different when compared to other types of cereal grains.

In relation to the inclusion of sweet corn to Group 20, Australia does not support this proposal, for the following reasons:

- This is contrary to the principles used during the revision of the classification, in terms of mixing commodities in one crop group that are traded or supplied as fresh commodities with those that are primarily traded as dry commodities. Examples are legume vegetables (fresh commodity) and pulses (dry commodities), herbs (fresh commodities) and spices (dry commodities).
- Extrapolation of residue data from a fresh commodity to a dry commodity in the absence of moisture content or water content data must be considered. Is this acceptable noting how the fresh commodity is treated with pesticide and harvested compared to the dry commodity?
- The acceptability of using sweet corn residues data for the purposes of extrapolation to a subgroup including sorghum, millet and other grains (representative commodity Table 3), is questionable. Post-harvest insecticides are not applied to sweet corn, but may be applied to sorghum and millet.

As an alternative, Australia proposes that sweet corn, maize (field corn), baby corn and popcorn, be included in a separate subgroup (20D) as part of Proposal A and should include the commodities listed under subgroup 20F in Proposal B. Or sweet corn be removed from the cereal grains group altogether. Sorghum and millet, which do not have a protective outer hull that is removed during processing should be included a subgroup separate to wheat, barley, oats etc. This may require further consideration of the pseudocereals, and whether they belong in the same subgroup as wheat and barley.

Australia provides comments and reservations for Group 20, as tabulated below.

Crop Group/Subgroup	Commodity	Comment	Proposal
Cereal grains	Maize/Field corn	Maize (as is currently listed in Group 20), is not included in the revised crop groupings. To correct the oversight, include maize with a cross-reference to field corn or include field corn in brackets.	Include maize in a new subgroup (20D see comments under sweet corn).
Group 20A Small grains	Amaranth	Amaranth is a very small grain which may be better grouped with millet.	Include amaranth in subgroup 20B
Group 20A Small grains	Chia	Chia may also be considered as an oilseed.	Include a cross-reference from oilseeds to cereal grains for chia.
	Psyllium	As the commodity is primarily supplied for consumption as the husk, a corresponding entry may be required in Group CF or CM, if a separate MRL is required for the husk in addition to the whole grain, on the basis of residues data.	Include new corresponding entries in Groups CF and/or CM.
Group 20B	Sweet corn	Delete from this subgroup; reasons given in comments above.	Include in a new subgroup (20D) with commodities as listed in subgroup 20F under Proposal B.

Canada

As a member of the CCPR Electronic Working Group on the Revision of the Classification, Canada provided comments through this working group regarding the revisions proposed for Group 020. As a result of comments received by the EWG, two proposals are under consideration at this session of the CCPR:

Proposal A: 3 subgroups divided as Subgroup 20A – Small grains, Subgroup 20B – Corn, grain sorghum, and millet, and Subgroup 20C – Rice

Proposal B: 6 subgroups divided as Subgroup 20A – Wheat, Subgroup 20B – Barley, Subgroup 20C – Rice, Subgroup 20D – Maize, millet, sorghum, Subgroup 20E – Pseudocereal grains, and Subgroup 20F – Sweet corn.

New commodities to be added (for both proposals A + B): Amaranth, Grain; Amaranth, purple; Buckwheat, Tartary; Canarygrass, Annual; Cram-cram; Fonio, Black; Huazontle; Inca Wheat; Millet, Japanese; Millet, Proso; Princess-feather; Psyllium; Psyllium, Blond; and Rice, African.

Canada supports PROPOSAL A (3 subgroups divided as Subgroup 20A – Small grains, Subgroup 20B – Corn, grain sorghum, and millet, and Subgroup 20C – Rice) for the following reasons:

- This option is consistent with the revisions currently being proposed by the ICGCC of which Canada is a member.
- Barley, Oats, Rye, Triticale and Wheat share similar commodity morphology and similar production practices and growth habits. They are all cool-season grasses that thrive in a terrestrial environment and are made up of relatively small-statured species that utilise the C₃ carbon fixation. The morphology of the inflorescence (or head) can be a spike or a panicle. These cereal crops often have the same or similar GAPs for pesticide uses in Canada. Therefore it is appropriate for these crops to be in one subgroup (e.g. Proposal A; subgroup 20A – small grains)
- The pseudocereals are also proposed for inclusion in subgroup 20A –small grains for Proposal A. Although they are considered “non-grass” plants, pseudocereals are used in a manner that is similar to cereals and smaller grains as sources of human food. Historically, in Canada, residue data for wheat and barley have been extended to the pseudocereal crops with no issues in terms of MRL exceedences. Therefore, Canada feels that a separate subgroup for the pseudocereals is not necessary as data on wheat and barley should be adequate to support Codex MRLs on pseudocereal crops.
- Corn, millet, sorghum, and teosinte share similar commodity morphology and similar agronomical growth practices. They are all warm-season grasses and are relatively large-statured species that can utilise the C₄ carbon fixation. Due to this plant metabolism, they can grow well under high sunlight, high temperatures, and reduced supply of ground water. Given the similarity in morphology and cultural practices, it is appropriate to include these crops in a single subgroup (e.g. Proposal A; subgroup 20B – Corn, grain sorghum and millet)
- While sweet corn is consumed as a vegetable, it shares very similar crop morphology to field corn and it is expected to have the same exposure to pesticides as field corn given that the grain for both crops is enclosed in husks. Field corn and sweet corn also share similar cultivation and growth practices.

Canada is in agreement with the additional crops proposed for the Cereal Grains Group (020), however as noted in the document (CX/PR 15/47/8) Japanese millet is not included in the ICGCC proposal for this group as it is used only for forage, silage, and hay. In addition, the ICGCC proposal also includes Eastern wild rice (*Zizania aquatica*).

Chile

Chile supports option B/Appendix III.

Rationale: considering the parameters for the grouping of commodities in the Classification of Foods and Feeds, the subdivision into 6 subgroups is considered the most appropriate and representative.

Costa Rica

Costa Rica supports the classification given by the Working Group in the first option:

Division into 3 subgroups:

20A Small grains

20B Corn, grain sorghum and millet

20C Rice

Taking into account that Good Agricultural Practices and other criteria are already considered in the trials to determine MRLs.

El Salvador

The Committee makes the following comment:

El Salvador supports proposal A, because in comparison with proposal B it is considered more specific.

The Committee requests clarification for the question marks that appear within proposal B.

European Union

The EU strongly supports Proposal B as set out in Appendix III of the proposed classification for cereals.

The EU agrees with the seven criteria that are to be considered when establishing crop groups (Circular Letter 2014/16-PR). The EU is of the view that in case of Proposal A these criteria are not fulfilled and that proposal A groups together crops which have very different characteristics. This may lead to unnecessarily high group tolerances and is not in line with the ALARA principle.

While in the EU the classification of cereals is based on nine specific sub groups, the EU can generally support the Proposal B containing six specific crop groups with similar characteristics, but will need further investigations into the effects before taking a final decision.

Rationale for supporting Proposal B:

1) Pseudocereals such as buckwheat are taxonomically different from cereals, have different growth habits and different GAPs. Therefore, different herbicidal products are needed to take into account these differences. The EU is of the view that pseudocereals should be kept in a separate sub-group as proposed in Proposal B.

2) Sweet corn is very different from maize as it is harvested at a different stage of maturity. Sweet corn is harvested immature (succulent) while maize is harvested at the ripe (dry) stage. Due to this difference in production practice, the GAP, the potential for pesticides residues and the residue behaviour may be very different. Moreover, sweet corn has a much higher water content and is eaten like a vegetable, which has a direct influence on human exposure. The EU agrees to move sweet corn from the current group "fruiting vegetables" to "cereals" since it clearly belongs to the cereals group, but insists on keeping sweet corn and maize in separate sub groups as proposed in Proposal B.

3) Wheat/rye and barley/oats:

The EU agrees to group wheat together with rye and barley together with oats. However, wheat/rye and barley/oats, respectively, should be kept in separate sub-groups as proposed in Proposal B. While for wheat the husks are completely removed during threshing, this may not be the case for barley. The residue behaviour for both crops may be very different. According to an analysis of the existing EU MRLs for barley and wheat, in residues tend to be higher in barley than in wheat.

The EU does not agree to group cereals together based on their size only, as proposed in Proposal A ("small grains").

Other comments:

1) There is some confusion over the terminology for "maize", "corn", "field corn", "sweet corn", "pop corn", etc. The EU suggests to introduce clear definitions at the beginning of the document of all the terms used.

Examples:

- In Proposal A "corn" is mentioned, while in option B, the term is "maize". We understand that the two terms are being used synonymously, but that should be clarified.
- In Table 3, Appendix II, the terminology is then "dried field corn", a term that was not mentioned before. Furthermore, sometimes it is "sweetcorn" and sometimes "fresh sweetcorn". To our understanding "maize" or "corn" are always the dry commodity while "sweet corn" is the succulent "fresh" kernel. The terms "fresh" or "dried" are not needed if a clear definition is introduced at the beginning.

2) Japan proposed to change the wording of Section 4.1 of CAC/GL 41-1993 "Analysis of Pesticides – Portion of Commodities to which MRLs apply and which is analysed".

Current wording: *"Whole commodity. Fresh corn and sweet corn: kernels plus cob without husk. (For the latter see Group 012 Fruiting vegetables, other than cucurbits)"*

Proposed wording: ***"Whole commodity in trade. Wheat, rye, triticale, maize, sorghum, pearl millet with husks readily separable from kernels during threshing: kernels. Barley oats, rice and other similar cereals with husks that remain attached to kernels even after threshing: kernels with husks (Note: for rice, only about 10% of traded grains is with husk). Fresh corn and sweet corn: kernels plus cob without husk."***

The EU does not agree to the wording proposed by Japan. In the EU the MRLs for cereals apply to the whole grain (kernel without husk) which is the commodity analysed by laboratories. If husks are partly analysed together with the kernel, the residues can be considerably higher and existing MRLs are likely to be exceeded more frequently.

3) The tables 3 in Appendix II and Appendix III list the examples for representative commodities. In the second column the commodities should not be separated by a comma, but by an “and” in line with the format of Appendix I, Table 2 of document CX/PR 15/47/9 (e. g for bulb vegetables, brassica vegetables, leafy vegetables, etc.)

Example for proposal B, Table 3, first line for Group 020 cereal grains, second column:

Instead of “Wheat, Barley, Rice, Maize, sorghum or Millet, Buckwheat and Sweet corn” the entry should read: “Wheat and Barley and Rice and Maize and Sorghum or Millet and Buckwheat and Sweet corn”.

4) The EU proposes the following detailed changes to the commodities listed in Proposal B (Table 3 of Appendix III):

20A Wheat

- Delete: “Canary grass, Annual?; Cram-cram?; Fonio, black?; Fonio, white?; Huauzontle?; Inca wheat?; Job’s tears?; Teff?”
- Delete the “?” in: “Triticale?”
- Add: “Spelt”

Proposed group 20 A Wheat: “Rye; Spelt; Triticale; Wheat”

20B Barley

- Delete: “Canary grass, Annual?; Fonio, black?; Fonio, white?; Huauzontle?; Inca wheat; Job’s tears?; Teff?; Triticale?”
- Delete the “?” in: “cram-cram?”

Proposed group 20 B Barley: “Barley; Oats, Cram-cram”

20C Rice

“Rice, wild” should be renamed into “Wild rice”.

Proposed group 20C Rice: “Rice; Rice, African; Wild rice”

20D Maize, millet, sorghum

Add: “Canary grass, Annual; Fonio, black; Fonio, white; Job’s tears; Sudan grass; Teff”.

It is in our view not necessary to mention all millet varieties separately as they are covered by “millet”.

Proposed group 20D “Maize, millet, sorghum”: “Maize, millet, sorghum, popcorn, Teosinte, Canary grass, annual; Fonio, black; Fonio, white; Job’s tears; Sudan grass; Teff; Teosinte”

20E Pseudocereal grains

Add: “Huazontle”

Proposed group 20E “Amaranth, Grain; Amaranth, Purple; Buckwheat; Buckwheat, Tartary; Canihua; Chia; Huauzontle; Inca wheat; Princess-feather; Psyllium; Psyllium, blond; Quinoa”

20F Sweet corn

Proposed group 20F sweet corn: “sweet corn”

Ghana

We support the second option (Proposal B, Appendix III) which includes 6 subgroups as follows:

20A Wheat

20B Barley

20C Rice

20D Maize, millet, sorghum

20E Pseudocereal grains

20F Sweet corn

Ghana’s support for the second option is based on such criteria as commodity’s similar potential for pesticide residues; commodity morphology; production practices, growth habits, and edible portion.

We also wish to propose the inclusion of *Oryza glaberimma* (African rice) as a species under subgroup 20C Rice since this is distinct from the widely cultivated Asian rice (*Oryza sativa*) and was independently domesticated.

Japan

Japan would like to reiterate its proposals on the amendment of *Portion of the commodity to which the MRL applies and (and which is analyzed)* and the subgrouping of this commodity group as follows:

Comments on Portion of the commodity to which the MRL applies (and which is analyzed)

The current *Portion of the commodity to which the MRL applies (and which is analyzed)* for Group 020 Cereal grains (except for fresh corn and sweet corn) is defined as “Whole commodity.” However, the term “Whole commodity” is ambiguous and confusing because what is meant by this term differs depending on the commodities in this commodity group.

For example, only kernels are traded for some grains such as wheat and rye because their kernels and husks separate readily with the mechanical stress of threshing process, while kernels with husks are mainly traded for other grains such as barley and oats because their husks cover the kernels so tightly that they remain attached to the kernels even after threshing. As for rice, GC 0649 Rice (rice grain which has retained its husk after threshing) is included in Group 020 Cereal grains as primary food commodities of plant origin. It should be noted that CM 0649 Rice, husked (rice grain from which husk only has been removed) and CM 1205 Rice, polished (husked rice from which all or part of the bran and germ have been removed by milling) are included in Group 058 Milled cereal products (early milling stages) as secondary food commodities of plant origin. According to the FAOSTAT, in 2010, 79% of rice traded internationally was polished rice, 10% was husked rice, and 11% was rice grains (calculated from the amount of imported rice).¹

Whether or not kernels are covered with husks when traded must be clarified because it has significant impact on pesticide residue levels on or in the commodities in this commodity group. For this reason, **Japan suggests that *Portion of the commodity to which the MRL applies (and which is analyzed)* for Group 020 Cereal grains should be amended as follows:**

“Whole commodity **in trade. Wheat, rye, triticale, maize, sorghum, pearl millet and other similar cereals with husks readily separable from kernels during threshing: kernels. Barley, oats, rice and other similar cereals with husks that remain attached to kernels even after threshing: kernels with husks (Note: For rice, only about 10% of traded grains is with husk).** Fresh corn and sweet corn: kernels plus cob without husk. ~~(For the latter see Group 012 Fruiting vegetables, other than Cucurbits).~~”

Comments on the subgrouping of Group 020 Cereal grains

Japan supports the second option (proposal B) as this option better subdivides commodities based on the factors leading to the difference in potential residues of grains such as whether or not the kernels in trade are covered with husks, and difference in growth stage of grains at harvest and water content in grains. In order to clarify which subgroup should include which commodities, Japan would like to provide the following specific comments:

(i) Wheat, Rye and Triticale versus Barley and Oats

Whether or not kernels are covered with husks when traded needs to be considered in the subgrouping of Group 020 Cereal grains because it has significant impact on residue concentrations of the commodities when analyzed. In view of this, **Japan suggests that Subgroup 20A should include wheat, rye and other commodities with husks readily separable from kernels during threshing. Japan also suggests that Subgroup 20B should include barley, oats and other commodities with husks that remain attached to kernels even after threshing.**

(ii) Rice

Unlike other major cereal grains, rice can be grown in flooded fields. Due to the significant difference in agricultural practices for rice and those for other major cereal grains, **Japan supports the proposal to establish Subgroup 20C Rice.**

(iii) Sweet corn versus Maize (Field corn)

As sweet corn is harvested immature (succulent) at the milk stage (between BBCH 75 and 79) while field corn and other grains are harvested mature (dry) at the full ripe stage (BBCH 99), the pesticide residue concentrations may be different due to water content, time for maturation, and/or other factors. The concentration of water in sweet corn kernels (77.1%) is much higher than those in other grains (10.0 – 15.5%) such as maize, amaranth, wheat, rice and sorghum (see the following Table). As nature of pesticide residues on or in sweet corns may not be similar to that on or in other commodities, in most cases, residue data for sweet corn would be required to estimate maximum residue levels applicable for sweet corns.

¹ CX/CF 14/8/6

Table. Nutrient composition of cereal grains²

Commodity	per 100g edible portion			
	Water (g)	Protein (g)	Lipid (g)	Carbohydrate (g)
Sweet corn (Immature kernels, raw)	77.1	3.6	1.7	16.8
Maize (Whole grain, raw)	14.5	8.6	5.0	70.6
Amaranth (Whole grain, raw)	13.5	12.7	6.0	64.9
Wheat (Whole grain, raw)	10.0 - 12.5	10.1 - 13.0	3.0 - 3.3	69.4 - 75.2
Rice (Husked rice, raw)	15.5	6.8	2.7	73.8
Sorghum (Whole grain, raw)	12.0	10.3	4.7	71.1

For the reasons mentioned above, **Japan supports the proposal to separate Sweet corn and maize (field corn) into different subgroups and to establish Subgroup 20 F which includes sweet corn only. Japan considers it necessary to establish a new entry for “GC **** Cereal grains except sweet corn”** in order to easily distinguish between group MRLs applicable to all the commodities in this commodity group and group MRLs applicable to all the commodities except sweet corn.

(iv) Other editorial comments

In accordance with the proposed establishment of Subgroup 20E Pseudocereal grains, Japan considers it necessary to amend the following Codex Code and Commodity Name:

GC 0080 Cereal grains

Seeds of *gramineous* plants as listed below, and **pseudocereal grains**~~Buckwheat and *Chenopodium spp.*~~ as listed

GC 0081 Cereal grains, except **pseudocereal grains**~~Buckwheat, Cañihua and Quinoa~~

Kenya

Kenya would like to propose first option Proposal A which is based on the work of the International Crop Grouping

Rational: The unavailability of data for small grains, the difficulty of separating small grains into different subgroups and flexibility for setting (sub) group tolerances.

Proposals for Group 020 Cereal Grains:

The first option (Proposal A, Appendix II), which is based on the work of the International Crop Grouping Committee includes 3 subgroups as follows:

20A Small grains

20B Corn, grain sorghum and millet

20C Rice

This option combines small grains and pseudocereals into one subgroups because of the difficulty of separating small grains into different subgroups (wheat and barley). It is also difficult to identify an appropriate representative commodity for pseudocereals because of country and regional differences and lack of production data. Option A is the International Crop Grouping Consulting Committee (ICGCC) proposal for NAFTA crop groups.

Comment

As per electronic working group recommendation 8, Kenya support the proposal of the advancement this document for adoption at Step 5 by the 38th Session of the Commission.

² Source: Tables of Food Composition in Japan (2010)

United States of America

For Group 020 Cereal Grains the United States supports the first option (Proposal A) discussed in CX/PR 15/47/8. This proposal is based on the work of the International Crop Grouping Consulting Committee (ICGCC), to include 3 subgroups for 20A Small grains, 20B Corn, grain sorghum and millet and 20C Rice. The United States has reservations regarding Proposal B, in particular the proposal for separating the Small grains into a Wheat 20A subgroup and a Barley 20B subgroup and creating a separate subgroup 20E Pseudocereals grains. Most of the commodities (Annual Canarygrass, Cram-cram, Black Fonio, White Fonio, Huazontle, Inca wheat, Job's tears, Rye, Teff and Triticale) listed in Proposal B for the 20A Wheat subgroup and 20B Barley subgroup are proposed for inclusion in both subgroups with barley and wheat being the major difference. The United States does not see the value in having two separate subgroups where the crops are similar and the main difference between these groups is wheat and barley. Instead the United States recommends that one subgroup be established but, as suggested by New Zealand, there be further discussion as to whether data be required for wheat and barley as representative commodities for the subgroup.

Proposal A also includes the pseudocereals in the same group as wheat and barley whereas, Proposal B would require additional data be submitted to support the establishment of 20E Pseudocereal subgroup. The United States currently has a cereal grains group that has been in existence since 1995. The representative commodities for this group are corn (fresh sweet corn and dried field corn), rice, sorghum, and wheat. Buckwheat is a member of the U.S. cereal grain group and there are no reports of over tolerance to suggest that additional data for buckwheat or other pseudocereals are necessary to establish U.S. tolerances for the pseudocereals. Therefore, the United States does not believe requiring additional residue field trial data for the pseudocereals are necessary or that having these additional data will be informative. Additionally, there does not appear to be a clear representative commodity for the proposed pseudocereals subgroup since none of the crops proposed for inclusion in this subgroup are produced on a large scale, production data do not exist for most of these crops. The establishment of this subgroup and requiring additional data on the pseudocerals appears to be an unneeded burden to establish MRLs on these minor crops.

African Union

With respect to the options posed, the following is proposed:

C. Subgroup 020 Cereal Grains

AU proposes the addition of the "pearl millet" and "kodo millet" into the group of cereal grains.

AU proposes the following subgroups:

- Wheat and barley
- Rice,
- Maize and sorghum or millet
- Buckwheat
- Sweetcorn

In view of the proposal to reorganise the sub-groups it is proposed that the document be re-drafted by the EWG, and brought back to the CCPR for further consideration.

RATIONALE

The "pearl" and "kodo millet" have not been included in the proposed classification.

The morphology and pests burden, growth behaviour on wheat and barley are similar.

As this is a new group, AU urges all African member countries evaluate the group to ensure that all cereal grains are included in the group.