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

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Agenda Item 8(d)

CX/PR 16/48/9-Add.1
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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON PESTICIDE RESIDUES

48th Session
Chongqing, P.R. China, 25 - 30 April 2016

COMMENTS at Step 3 on the proposed draft revision of the CLASSIFICATION OF FOOD AND FEED: Selected commodity groups: Group 020 – Grasses of cereal grains submitted by Australia, Canada, Chile, Japan, Kenya, Thailand, United States of America and African Union

Australia

Australia supports Proposal 1 as presented in CX/PR 16/48/9 with 5 subgroups:

- Subgroup 20A Wheat, similar grains and pseudo-cereals
- Subgroup 20B Barley and similar grains
- Subgroup 20C Rice cereals
- Subgroup 20D Maize, Grain Sorghum and Millet
- Subgroup 20E Sweet Corn cereals

Canada

Background:

An agreement could not be reached at the 47th session of the CCPR on how to narrow down the differences between the different options for grouping cereal grains based on the application of the criteria for crop grouping. There was general agreement that sweet corn and rice would be included under separate sub-groups. The Committee agreed to return the proposed draft Group 020 – Grasses of cereal grains to Step 2/3 for further discussion, comments and consideration by CCPR48. The Committee also agreed that the electronic work group (EWG) on the revision of the Classification would continue with the revision of the Classification and would further consider Group 020 and report back to the next CCPR on an agreed crop grouping proposal for consideration.

Current Status:

As a result of additional work done by the EWG, two proposals (one put forward by Canada and one put forward by Japan) are under consideration at this session of the CCPR:

PROPOSAL	SUBGROUPS	
Canadian Compromise Proposal	020A	Wheat, similar grains and pseudo-cereals (would include pseudo-cereals) (Wheat as representative commodity)
	020B	Barley and similar grains (Barley as representative commodity)
	020C	Rice cereals (Rice as representative commodity)
	020D	Maize, Grain Sorghum and Millet (Maize and sorghum or millet as representative commodity)
	020E	Sweet Corn (Sweet corn as representative commodity)

PROPOSAL	SUBGROUPS	
Japan Compromise Proposal	020A	Wheat, similar grains, and pseudo-cereals without husks (wheat as rep commodity)
	020B	Barley, similar grains, and pseudo-cereals with husks (barley as representative commodity) Rice cereals (rice as representative commodity)
	020C	Maize, Grain Sorghum and Millet (Maize and sorghum or millet as rep)
	020D	Sweet Corn cereals (sweet corn as representative commodity)
	020E	

Codex members and observers should take into consideration the discussion held at CCPR47, the mandate of the EWG, and the guiding principles and the criteria for crop group of the Classification of Food and Feed when providing comments on the proposed options.

Canada's Position on the Revised Grasses of Cereal Grains (Group 020)

As a member of the Electronic Working Group on the Revision of the Classification, Canada provided comments through this working group on the proposed draft revisions to Group 020.

Canada continues to support the Canadian compromise proposal for the revised Grass of Cereal Grains (GROUP 020) as presented in Appendix I of CX/PR 16/48/9.

Chile

I. General Comments.

Chile appreciates the work done by the electronic Working Group, led by the United States of America and co-chaired by The Netherlands.

Regarding the recommendations following the EWG, Chile supports **PROPOSAL** 1 raised by Canada:

Subgroup 20A. Wheat, similar grains and pseudo-cereals (would include pseudo-cereals) (Wheat as representative commodity)

Subgroup 20B. Barley and similar grains (Barley as representative commodity)

Subgroup 20C. Rice cereals (Rice as representative commodity)

Subgroup 20D. Maize, Grain Sorghum and Millet (Maize and sorghum or millet as representative commodity)

Subgroup 20E. Sweet Corn (Sweet corn as representative commodity)

It is considered that this proposal represents the different positions of the member countries, which can contribute to progress in this work at the 48th Session of the CCPR and may be submitted to the 39th Session of the CAC for adoption at Step 5.

Japan

Japan appreciates the efforts of the United States of America and the Netherlands in leading the electronic working group (eWG) for preparing the draft revision of the Codex Classification for Group 020 Cereal grains (CX/PR 16/48/9). Japan would like to provide the rationale and relevant information on Proposal 2 as shown in Paragraph 7 and Appendix I of CX/PR 16/48/9 for consideration. Our comments are on the following two issues:

I. Subgrouping of Group 020 Cereal grains; and

II. Proposal on the amendment of *Portion of the commodity to which the MRL applies and (and which is analyzed)* of this commodity group.

I. Comments on the subgrouping of Group 020 Cereal grains

a) Whether to separate or combine wheat and barley

1. **Wheat and barley should be separated into two different subgroups** for the following reasons:

   i. Whether the kernels are covered with husks when traded needs to be considered in the subgrouping of Group 020 Cereal grains because the presence of husks has significant impact on residue concentrations on/in the commodities. As the wheat husks readily separate from the kernels with mechanical stress of threshing process, only kernels (without husks) are distributed and traded. On the other hand, as the barley husks cover the kernels so tightly that they remain attached to the kernels even after threshing and it is not easy to remove them, kernels with husks are mainly distributed and traded; and

   ii. Analysis by Japan of a number of existing Codex MRLs with supporting supervised residue trials data for wheat and barley as well as the similar analysis by EU suggested that residue levels in barley grains were generally higher than those found in wheat grains when pesticides are applied in accordance with the same or similar GAP. Results of the analysis by Japan provided to the eWG are reproduced in Annex I of this paper for information.

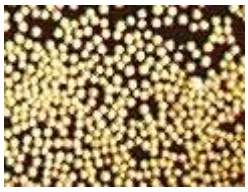
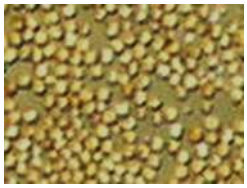
b) Whether to separate or combine pseudocereals and other small grains such as wheat and barley

2. Japan considers it appropriate to classify pseudocereal and wheat into separate subgroups due to the difference in botanical characteristics, growth habit and GAPs (see Annex II of this paper). However, after over a year of discussion, it seems difficult to reach consensus on the establishment of an independent subgroup for pseudocereals due to the fact that pseudocereals are very minor crops worldwide. In view of this, **as a compromise, Japan would be able to accept an option (Proposal 2) to classify a pseudocereal commodity into either Barley subgroup (Subgroup 20B) or Wheat subgroup (Subgroup 20A) on the basis of whether or not the kernels are protected by husks from pesticides sprayed during growing season (except when sprayed close to harvest) and whether or not the grains in trade retain husks**. More specifically, Japan proposes the following:

   i. to include any commodity of which kernels with husks are mainly distributed and traded (e.g. buckwheat) in Subgroup 20B; and

   ii. to include any commodity of which only kernels without husks are distributed and traded (e.g. amaranth, quinoa) in Subgroup 20A (see the Table 1 below).

Table 1. Presence of husks for protection of kernels from pesticides and in traded commodities

Commodity Code and name	Whether kernels are protected from pesticides during growing season	Portion of commodity in trade		Proposed Subgroup
GC 0640 Barley	Protected by husks	Kernels with husks		20B
GC 0641 Buckwheat				
GC 0654 Wheat	Protected by husks or perigonium (except when sprayed close to harvest) Note)	Kernels only		20A
GC 3080 Amaranth, grain				
GC 0648 Quinoa				

Note) For amaranth and quinoa, as perigonium which covers the kernels detaches easily on maturity, part of kernels may be exposed to pesticides when sprayed close to harvest.

c) <u>Whether to classify buckwheat and wheat into the same subgroup</u>

3. In terms of the subgrouping of Group 020 Cereal grains, the compromised proposal by Canada (Proposal 1) and the compromised proposal by Japan (Proposal 2) seem to be similar except that while Buckwheat and Buckwheat, Tartary are included in Subgroup 20A in Proposal 1, these commodities are included in Subgroup 20B in Proposal 2.

4. **GC 0641 Buckwheat and GC 3085 Buckwheat, tartary should be included in Subgroup 20B (subgroup with barley) instead of Subgroup 20A (subgroup with wheat)** for the following reasons:

   i. Despite the similar English names, they belong to quite different botanical families. While wheat is a monocotyledonous plant, buckwheat is a dicotyledonous plant;

   ii. GAPs are not similar between wheat and buckwheat because unlike wheat, buckwheat is prone to few pests and diseases and grow rapidly enough to outcompete weeds (see Annex 2 for details); and

   iii. Whether or not kernels in trade are covered with husks are different between wheat and buckwheat. Wheat kernels without husks are distributed and traded while buckwheat seeds with husks are mainly distributed and traded as is the case with barley (Note: Japan imported 49,924 tonnes of buckwheat in the form of 'seeds with husks' in 2014). This difference suggests that residue levels in buckwheat seeds are expected to be higher than those in wheat grains when pesticides are applied in accordance with the same GAP. Therefore, extrapolation of residue data on wheat grains to buckwheat seeds may underestimate residue levels in buckwheat seeds, which may result in the violation of MRLs for buckwheat.

d) Maize, Grain Sorghum and Millet

5. We wish to offer some information on GC 0644 Job's tears, which is a dicotyledonous C_4 plant belonging to *Poaceae* family as is maize, and is proposed to be included in Subgroup 20 D Maize, Grain Sorghum and Millet in both Proposal 1 and Proposal 2. Residue levels in Job's tears (kernels with husks) may be higher in those found in maize (kernels without husks) when pesticides are applied according to the same GAP because for Job's tears, the kernels with husks are exposed pesticides sprayed during growing season and they remain attached to the kernels ever after threshing.

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

6. 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." Japan considers it appropriate to establish MRLs for and analyze "Whole commodity" as traded. However, there may be some confusion over the term "Whole commodity" as the portion of a commodity actually analyzed may seem to be different from country to country in some cases. In order to avoid any confusion in the application of MRLs, it is necessary for major cereal grains such as wheat, barley and rice to clarify whether kernels with husks or kernels without husks are to be analyzed.

7. This is because the presence of husks has significant impact on residue concentrations on/in the commodities in this commodity group as already mentioned for wheat and barley (see the above Paragraph 1 and Table 1). As for rice, while the rice husks remain attached to the kernels even after threshing, in most cases the husks are removed from the raw grain (GC 0649) mechanically to obtain husked rice (CM 0649), which may then be milled to remove all or part of the bran and germ to obtain polished rice (CM 1205). According to the FAOSTAT, in 2010, 79% of rice traded internationally was polished rice (husked rice from which all or part of the bran and germ are removed), 10% was husked rice (rice grains without husks), and 11% was rice grains (rice grains with husks) (see Fig. 1).

GC 0649 Rice	CM 0649 Rice, husked Note)	CM 1205 Rice, polished
		

Fig. 1 Typical rice grains, husked rice, and polished rice

Note) Although CM 0649 Rice, husked is similar to 0649 Wheat in that their kernels are not covered with husks, the former is included in Group 058 Milled cereal products (early milling stages) while the latter is included in GC 020 Cereal grains. While husked rice (kernel with husk) is also traded but in significantly smaller volume compared to polished rice, only wheat grains without husks are traded.

8. For the above reasons, ***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).**~~"

Annex 1

Analysis of Codex MRLs and supporting supervised residue trials data for Wheat grain and Barley grain

Japan would like to provide the results of preliminary analysis of existing Codex MRLs for wheat and barley, which suggest that residue levels in barley grains would be higher than those found in wheat grains when pesticides are applied following the same or similar GAP.

According to the current Codex MRLs database (as of November 25, 2015), while Codex MRLs for GC 0080 Cereal grains are established for 33 pesticides, Codex MRLs for GC 0640 Barley and those for GC 0654 Wheat are separately established for 41 pesticides (excluding post-harvest applications). For most of these pesticides, the Codex MRL for barley grains is higher than that for wheat grains as shown in Table 1 below.

For 16 out of the above 41 pesticides, Codex MRLs for barley and wheat as well as corresponding GAPs and data on supervised residue trials are listed in Table 2. These pesticides were selected because supervised residue trials are conducted following the same or similar GAP for barley and wheat.

The ratios of median residue in barley to that in wheat for Propiconazole, Isopyrazam, Cyhalothrin (includes lambda-cyhalothrin), Metrafenone, Fenbuconazole, Prothioconazole, Penthiopyrad, Tebuconazole, Azoxystrobin, Sulfoxaflor, MCPA, Fluxapyroxad, Cyprodinil, Dicamba, Methomyl, and Trinexapac-ethyl are, >1.1, >2.2, >2, 6, >1.5, >1.8, >5.7, >17, 8, 3.5, 1, 6.5, 8.3, 7, 6, and 0.88, respectively. The ratios of maximum residue in barley to that in wheat for the same set of pesticides are, >5.5, 2.1, 11, 10, 2.3, 1.8, 3.2, 12, 2, 2.9, 0.75, 5.8, 6.3, 4.5, 1.2, and 0.36, respectively. These figures suggest that residue concentrations in barley grains would be higher than those found in wheat grains when pesticides are applied following the same or similar GAP. For Isopyrazam and Penthiopyrad, although they were used on barley at the earlier growth stage (BBCH 61: before beginning of flowering) than that on wheat (BBCH 71 : before grain watery ripe stage), residues concentrations in barley grains were higher than those found in wheat grains.

It could be concluded that at least for many pesticides, residue levels in barley are expected to be higher than those in wheat when pesticides are applied for both of the crops according to the same GAP. For this reason, when establishing group MRLs that covers both wheat and barley, it would be necessary to conduct supervised residue trials for not only wheat but also barley in order to avoid underestimating the potential residue levels of barley.

Based on the above data and information, Japan considers it necessary to separate the subgroup for wheat from that for barley in order to provide flexibility in establishing MRLs for subgroups.

Table 1. Comparison of Codex MRLs and residue levels for GC 0640 Barley and GC 0654Wheat

Note) higher value is *italicized*

Pesticide name	Codex MRL (mg/kg)		Pesticides of which MRLs are estimated according to supervised trials according to the same or similar GAP			
			Median residue (mg/kg)		Highest residue (mg/kg)	
	Wheat	Barley	Wheat	Barley	Wheat	Barley
Fipronil	0.002 *	0.002 *				
Lindane	0.01 *	0.01 *				
Quinoxyfen	0.01 *	0.01 *				
Quintozene	0.01	0.01 *				
Aldicarb	0.02	0.02				
Oxydemeton-Methyl	0.02 *	0.02 *				
Clothianidin	0.02 *	*0.04*				
Propiconazole	0.02	*0.2*	<0.02	*0.023*	<0.02	*0.11*
Isopyrazam	0.03	*0.07*	<0.01	*0.022*	0.017	*0.035*
Kresoxim-Methyl	0.05 *	*0.1*				
Methiocarb	0.05 *	0.05 *				
Dimethoate	0.05	*2*				
Diflubenzuron	0.05 *	0.05 *				
Thiamethoxam	0.05	*0.4*				
Carbendazim	0.05 *	*0.5*				
Bitertanol	0.05 *	0.05 *				
Cyhalothrin (includes lambda-cyhalothrin)	0.05	*0.5*	<0.01	*0.02*	0.03	*0.33*
Metrafenone	0.06	*0.5*	0.01	*0.06*	0.04	*0.4*
Famoxadone	0.1	*0.2*				
Fenbuconazole	0.1	*0.2*	<0.02	*0.03*	0.06	*0.14*
Prothioconazole	0.1	*0.2*	<0.02	0.035	0.05	*0.09*
Aminopyralid	0.1	0.1				
Penthiopyrad	0.1	*0.2*	<0.01 <0.01	<0.01 *0.057*	0.034 0.081	*0.11* *0.12*
Tebuconazole	0.15	*2*	<0.05	*0.085*	0.09	*1.1*
Azoxystrobin	0.2	*0.5* [a]	0.01	*0.08*	0.14	*0.28*
Trifloxystrobin	0.2	*0.5*				
Disulfoton	0.2	0.2				
Sulfoxaflor	0.2 [b]	*0.6* [b]	0.025 [b] 0.015 [c]	*0.063* [b] *0.053* [c]	0.11 [b,c]	*0.32* [b,c]
Pyraclostrobin	0.2	*1*				
MCPA	0.2	0.2	<0.05	<0.05	*0.16*	0.12
Fluxapyroxad	0.3	*2*	0.08	*0.52*	0.21	*1.22*
Fenpropimorph	0.5	0.5				
Boscalid	0.5	0.5				
Cyprodinil	0.5	*3*	0.07	*0.58*	0.32	*2.0*
Ethephon	1	1				
Dithiocarbamates	1	1				
Dicamba	2	*7*	0.22	*1.6*	1.1	*5.0*
Diquat	2	*5*				
Methomyl	2	2	0.12	*0.72*	1.1	*1.3*
Trinexapac-ethyl	3	3	*0.65*	0.57	*3.32*	1.2
Chlormequat	*3*	2				

* : At or about the limit of determination.

a : replaced by 1.5 mg/kg in 2014 b: existing JMPR practice c: global dataset method

Table 2. Comparison of GAPs and residue data on wheat and barley for 16 pesticides evaluated by the JMPR

Commodity	Use pattern					Supervised residue trials on crops						Codex MRL (mg/kg)
	Country	App. rate (kg ai/ha)	no.	BBCH	PHI (days)	Country	n (total)	n (below LOQ)	Residue data (mg/kg)	Range (mg/kg)	Median (mg/kg)	
Propiconazole (Extracted from 2008 JMPR Evaluation)												
Barley	FR	0.125	2	-	42	FR, DE, CH	24	9	< 0.02 (7), 0.02 (4), 0.025, 0.03, 0.03, 0.03, 0.03, 0.04, 0.04, 0.05, 0.1, 0.11	<0.02-0.11	0.0225	0.2
Wheat	FR	0.125	2	-	42	FR, DE, UK	12	12	<0.01 or <0.02	<0.02 [b]	<0.02	0.02
Rye	HU	0.125	2	-	42	DE	2	2	<0.01 or <0.02 [a]			
a) Two trials were performed with 2 × 0.125 kg ai/ha application rate. Grain samples taken 48 – 50 days after the second application did not contain detectable parent residues (< 0.01, < 0.02 mg/kg). b) As the GAP for wheat rye and triticale are the same, and in both commodities the residues were below the LOQ, the Meeting decided to combine residues in wheat and rye.												
Isopyrazam (extracted from 2011 JMPR Evaluation)												
Barley	UK	0.125	2	30-61[a]	-	Northern FR, DE, UK	8	0	0.014, 0.016, 0.017, 0.020, 0.024, 0.026, 0.026, 0.035	0.014 - 0.035	0.022	0.07
Wheat	UK	0.125	2	30-71[b]	-	Northern FR, DE, UK	11	7	<0.01 (7), 0.012, 0.012, 0.014, 0.017 [c]	<0.01 - 0.017	<0.01	0.03
a) before beginning of flowering b) before grain watery ripe stage c) In most of the trials, isopyrazam was applied three times instead of twice. Therefore, the trials were not in compliance with the GAP of the UK. The isopyrazam concentrations in whole plants immediately before the third application were on average about 15% of those on the day of the third application. The Meeting decided to use data from these trials for estimating a maximum residue level in wheat if the contribution of isopyrazam from the second application was below 25% of residues after the third application. Note) As GAP for wheat includes uses at the stage nearer to harvest than GAP for barley, pesticide uses following GAPs for wheat is expected to give rise to higher residues in plants. This is reflected in the higher residues in wheat straw (median: 0.952 mg/kg) than those in barley straw (median: 0.356 mg/kg).											
Cyhalothrin (includes lambda-cyhalothrin) (extracted from 2008 JMPR Evaluation)												
Barley	FR	0.008	3		28	Southern Europe	29	11	< 0.01(3), 0.01(8), 0.02(5), 0.03(4), 0.04(4), 0.05, 0.06, 0.07, 0.08, 0.33	<0.01 - 0.33	0.02	0.5
Wheat	FR	0.008	3		28	DE	2	1	<0.01, 0.01	<0.01 - 0.01	<0.01	0.05
	US	0.034			30	US	24	19	<0.01(19),0.01(2), 0.02(2),0.03 [a]	<0.01 - 0.03		

Commodity	Use pattern					Supervised residue trials on crops						Codex MRL (mg/kg)
	Country	App. rate (kg ai/ha)	no.	BBCH	PHI (days)	Country	n (total)	n (below LOQ)	Residue data (mg/kg)	Range (mg/kg)	Median (mg/kg)	
a) The Meeting decided to extrapolate the data for wheat grain according to US GAP to make recommendation for oats, rye and triticale grain. The Meeting estimated a maximum residue level and an STMR value for lambda-cyhalothrin in oats, rye, triticale and wheat grain of 0.05 and 0.01 mg/kg, respectively.												
Metrafenone (extracted from 2014 JMPR Report)												
Barley	PL	0.15	2		35	Europe	20	1	<0.01, 0.02(3), 0.03, 0.04, 0.05(3), 0.06, 0.06, 0.07, 0.08, 0.09, 0.11, 0.13, 0.15, 0.16, 0.23, 0.4	<0.01 - 0.4	0.06	0.5
Wheat	PL	0.15	2		35	Europe	18	9	<0.01(9), 0.01(4), 0.02, 0.03, 0.03, 0.04, 0.04	<0.01 - 0.04	0.01	0.06
Fenbuconazole (extracted from 1997 JMPR Evaluation)												
Barley	DE	0.075	2	-	35	DE, UK, FR	17	3	<0.02(3), 0.03(8), 0.04(2), 0.05, 0.08, 0.09, 0.14	<0.02 - 0.14	0.03	0.2
	UK	0.075	2	GS59[a]	-							
Wheat	DE	0.075	2	-	35	DE, PT, UK, FR, ES, IL	21	20	<0.01(3), <0.02(17), 0.06	<0.01 - 0.06	<0.02	0.1
	PT	0.075	2		42							
	UK	0.075	2	GS59[a]	-							
a) before beginning of flowering growth stage 59												
Prothioconazole (extracted from 2009 JMPR Evaluation)												
Barley	US	0.2	1+1[a]		32[b,c]	CA, US	10	3	<0.02(3), 0.03(2),0.04, 0.05, 0.07(2), 0.09	<0.02 - 0.09	0.035	0.2
Wheat	US	0.2	1+1[a]		30[b,d]	CA, US	13	9	<0.02(9), 0.02, 0.03, 0.04, 0.05	<0.02 - 0.05	<0.02	0.1
a) Maximum rate/ha/year requires at least 1 application at less than the maximum rate/ha b) Minimum PHI. Harvest interval based on last application at full head emergence (barley) or full flowering (wheat) growth stages c) Up to 5d after full head emergence, Max 330 g ai/ha/year, 14d interval d) Up to full flower (Feekes 10.52), Max 330 a gi/ha/year, 14d interval												
Penthiopyrad (extracted from 2012 JMPR Evaluation)												
Barley	US	0.36	2	59 [a)]	-	CA, US	13	7	< 0.01(7), 0.01, 0.011, 0.02, 0.024, 0.03, 0.11	<0.01 - 0.11	<0.01	0.15 [b)]
Wheat	US	0.36	2	59 [a)]	-	CA, US	29	24	< 0.01(24), 0.011, 0.012, 0.017, 0.019, 0.034	<0.01 - 0.034	<0.01	0.04 [b)]
a) before flowering b) not adopted by CAC												

Commodity	Use pattern					Supervised residue trials on crops						Codex MRL (mg/kg)
	Country	App. rate (kg ai/ha)	no.	BBCH	PHI (days)	Country	n (total)	n (below LOQ)	Residue data (mg/kg)	Range (mg/kg)	Median (mg/kg)	
Penthiopyrad (extracted from 2013 JMPR Report)												
Barley	IE UK	0.3	2	61	-	FR, DE, HU, UK	13	3	<0.01(3), 0.01, 0.01, 0.039, 0.057, 0.063, 0.069, 0.071, 0.076, 0.1, 0.12	<0.01 - 0.12	0.057	0.2
Wheat	IE UK	0.3	2	71	-	FR, DE, HU, UK	13	9	<0.01(9), 0.013, 0.015 (2), 0.081	<0.01 - 0.081	<0.01	0.1
Tebuconazole (extracted from 2011 JMPR Report)												
Barley	FR	0.25	2		28	FR, DE, GE, IT, PT, ES	14	5	<0.05(5), 0.07(2), 0.10, 0.38, 0.65, 0.85, 0.93, 0.96, 1.1	<0.05 - 1.1	0.085	2
Wheat	FR	0.25	2		28	FR, GE, IT, ES	10	5	<0.01, 0.01(2), <0.05(4), 0.06, 0.09	<0.01 - 0.09	<0.05	0.15
Azoxystrobin (extracted from 2008 JMPR Evaluation)												
Barley	FR	0.25	2		42	FR	19	0	0.01 (3), 0.02 (2), 0.03 (2), 0.04 (2), 0.05, 0.08, 0.09, 0.11 (2), 0.12, 0.13 (3), 0.19	0.01 - 0.28	0.08	0.5 [a)]
	ES	0.25	2		36	ES	3	0	0.03, 0.11, 0.28			
	DE IT NL	0.25	2		35	DE	3	0	0.02, 0.10, 0.11			
						IT	2	0	0.08, 0.10			
						NL	1	0	0.08			
						SE	1	0	0.20			
						CH	6	0	0.01, 0.02 (3), 0.03, 0.04			
	UK	0.25	2	71	(38-54)	UK	3	0	0.13, 0.14, 0.23			
Wheat	FR	0.25	2		42	FR	14	5	<0.01 (5), 0.04(4), 0.02, 0.03 (3), 0.14	<0.01 - 0.14	0.01	0.2
	ES	0.25	2		36	ES	3	1	<0.01, 0.01, 0.04			
		0.25	2		35	DE	4	1	<0.01, 0.01, 0.02, 0.04			

Commodity	Use pattern					Supervised residue trials on crops						Codex MRL (mg/kg)
	Country	App. rate (kg ai/ha)	no.	BBCH	PHI (days)	Country	n (total)	n (below LOQ)	Residue data (mg/kg)	Range (mg/kg)	Median (mg/kg)	
	DE IT NL					IT	2	1	<0.01, 0.02			
						CH	5	5	<0.01 (5)			
	UK	0.25	2	71	(40-59)	UK	3	0	0.01, 0.02, 0.03			
a) The Codex MRL for Barley was replaced in 2014 by an MRL of 1.5 mg/kg arising from the uses following US GAP.												
Sulfoxaflor (extracted from 2011 JMPR Report)												
(i) Current JMPR Practice												
Barley	AU, CAM, US [a)]	0.05	2		14	AU/NZ	6	1	<0.010, 0.025, 0.050, 0.075, 0.11, 0.32	<0.010 - 0.32	0.063	0.6
						N EU	7	1	<0.010, 0.050, 0.057, 0.058, 0.060, 0.079, 0.085	<0.010-0.085	0.058	
						S EU	6	0	0.015, 0.042, 0.052, 0.053, 0.055, 0.061	0.015-0.061	0.0525	
						US	6	0	0.038, 0.042, 0.044, 0.047, 0.072, 0.088	0.038-0.088	0.0455	
Wheat	AU, CAM, US [a)]	0.05	2		14	AU/NZ	6	2	<0.010 (2). 0.015 (2). 0.035, 0.040	<0.010-0.040	0.015	
						BR	4	3	<0.010 (3), 0.034	<0.010-0.034	<0.010	
						N EU	6	0	0.018, 0.019, 0.023, 0.027, 0.032. 0.11	0.018 - 0.11	0.025	0.2
						S EU	6	0	0.011, 0.013, 0.014, 0.020, 0.024, 0.056	0.011-0.056	0.017	
						US, CAN	11	6	<0.010 (6), 0.012, 0.015, 0.020, 0.037, 0.063	<0.010-0.063	<0.010	
a) proposed GAP at the time of evaluation by the 2011 JMPR												
(ii) Global Dataset Method												

Commodity	Use pattern					Supervised residue trials on crops						Codex MRL (mg/kg)
	Country	App. rate (kg ai/ha)	no.	BBCH	PHI (days)	Country	n (total)	n (below LOQ)	Residue data (mg/kg)	Range (mg/kg)	Median (mg/kg)	
Barley	AU, CAM, US [a)]	0.05	2		14	AU/NZ, N EU, S EU, US	25	2	<0.010 (2), 0.015, 0.025, 0.038, 0.042, 0.043, 0.044, 0.047, 0.050 (2), 0.052, 0.053, 0.055, 0.057, 0.058, 0.060, 0.061, 0.072, 0.075, 0.079, 0.085, 0.088, 0.11, 0.32	<0.010 - 0.32	0.053	0.4 [b)]
Wheat	AU, CAM, US [a)]	0.05	2		14	AU/NZ, BR, N EU, S EU, US/CA	33	11	<0.010 (11), 0.011, 0.012, 0.013, 0.014, 0.015 (3), -.018, 0.019, 0.020 (2), 0.023, 0.024, 0.027, 0.032, 0.034, 0.035, 0.037, -.040, 0.05, 0.063, 0.11	<0.010 - 0.11	0.015	0.15 [b)]
b) not adopted by the Codex Alimentarius Commission												
MCPA (extracted from 2012 JMPR Evaluation)												
Barley	UK	1.7	1	30		FR, UK	4	4	<0.05 (4)	<0.05 - 0.16	<0.05	2
	ES	1.2	1	30		FR, ES	4	3	<0.05 (3), 0.12			
Wheat	UK	1.7	1	31		FR, UK	5	4	<0.05 (4), 0.16			
	ES	1.2	1	31		FR, ES	4	4	<0.05 (4)			
Note) The Meeting noted that MCPA applied to barley and wheat before flowering results in comparable residues and agreed to combine all data from France and the UK against the UK GAP to support a maximum residue level for grain of barley, oats, rye, triticale and wheat.												
Fluxyapyroxad (extracted from 2012 JMPR Evaluation)												
Barley	US	0.097-0.10	2		21	US, CA	12	1	<0.01, 0.39 (2), 0.41, 0.50, 0.52 (2), 0.54, 0.82, 0.87, 1.02, 1.22	<0.01 - 1.22	0.52	2
Wheat	US	0.097-0.10	2		21	US, CA	20	0	0.03 (2), 0.05 (4), 0.06 (3), 0.07, 0.08, 0.09, 0.10, 0.11 (2), 0.12 (2), 0.13, 0.19, 0.21	0.03 - 0.21	0.08	0.30

Commodity	Use pattern					Supervised residue trials on crops						Codex MRL (mg/kg)
	Country	App. rate (kg ai/ha)	no.	BBCH	PHI (days)	Country	n (total)	n (below LOQ)	Residue data (mg/kg)	Range (mg/kg)	Median (mg/kg)	
Cyprodinil (Extracted from 2003 JMPR Report)												
Barley	FR	0.48		a)		FR, DE	41	1	<0.02, 0.07, 0.09, 0.11, 0.13, 0.14, 0.18, 0.22, 0.24, 0.25, 0.28, 0.31, 0.32, 0.36, 0.40, 0.44, 0.48, 0.54, 0.55, 0.58, 0.58, 0.65, 0.67, 0.73, 0.74, 0.74, 0.75, 0.76, 0.77, 0.93, 1.1, 1.2, 1.2, 1.3, 1.3, 1.4, 1.5, 1.8, 2.0 b)	<0.02-2.0	0.58	3.0
Wheat	FR	0.6		c)		FR, DE, CH	29	2	<0.02, <0.02, 0.02, 0.02, 0.03(3), 0.04, 0.05, 0.052, 0.06(3), 0.07(3), 0.08, 0.08, 0.10, 0.10, 0.11, 0.11, 0.13(3), 0.14, 0.16, 0.32 d)	<0.02-0.32	0.07	0.50
a) Use until end of earing. The instruction was interpreted as a PHI of approximately 35-50 days for the purpose of evaluating the trials. b) Trials in France and Germany were considered to comply with French GAP with application rates in the range of 0.36-0.61 kg ai/ha and with PHIs of 40-50 days. c) Use until end of earing. The instruction was interpreted as a PHI of approximately 45-60 days for the purpose of evaluating the trials. d) Trials in France, Germany, Switzerland and the UK were considered to conform to French GAP with application rates in the range of 0.45-0.75 kg ai/ha and with PHIs of 42-61 days.												
Dicamba (extracted from 2010 JMPR Evaluation)												
Barley	US	0.14 (1st) 0.28 (2nd)	2		7	US	10	0	0.78, 1.1, 1.1, 1.5, 1.6, 1.6, 1.8, 2.7, 2.8, 5.0	0.78 - 5.0	1.6	7
Wheat	US	0.28 (1st) 0.28 (2nd)	2		7	US	20	0	0.05, 0.07, 0.08, 0.11, 0.11, 0.11, 0.16, 0.19, 0.19, 0.25, 0.29, 0.34, 0.35, 0.47, 0.53, 0.81, 0.84, 1.1	0.05 - 1.1	0.22	2
Methomyl (extracted from 2001 JMPR Evaluation)												
Barley	US	0.5	4		7	US	3	0	0.12, 0.72, 1.3	<0.02 - 1.3	0.14	2
Wheat	US	0.5	4		7	US	15	4	<0.02 (4), 0.02 (2), 0.06, 0.12, 0.14, 0.17 (3), 0.40, 0.69, 1.1			2

Commodity	Use pattern					Supervised residue trials on crops						Codex MRL (mg/kg)
	Country	App. rate (kg ai/ha)	no.	BBCH	PHI (days)	Country	n (total)	n (below LOQ)	Residue data (mg/kg)	Range (mg/kg)	Median (mg/kg)	
Trinexapac-ethyl (extracted from 2013 JMPR Report)												
Barley	US	0.123	1		45	US	12	0	0.03, 0.08, 0.44, 0.50, 0.52, 0.53, 0.60, 0.72, 0.76, 0.83, 1.0, 1.2 a)	0.03-1.2	0.57	3
Wheat	US	0.123	1		45	US	18	0	0.07, 0.15, 0.27, 0.31, 0.32, 0.40, 0.45, 0.47, 0.53, 0.77, 0.78, 0.82, 0.85, 0.99, 1.01, 1.14, 1.64, 3.32 a)	0.07-3.32	0.65	3
a) total residues of trinexapac acid (residue definition for estimation of dietary intake for plant commodities)												

Annex 2

Information on botanical characteristics, growth habit of major pseudocereals

While all of the cereals such as wheat, rye, triticale, barley, oats, rice, maize, sorghum and millet are monocotyledonous plants and belong to *Poaceae* family, pseudocereals such as amaranth buckwheat and quinoa are dicotyledonous plants and do not belong to *Poaceae* family. Pseudocereals are composed of heterogeneous species such as *Amaranthaceae, Polygonaceae, Lamiaceae*. In terms of photosynthetic pathway of plants, while cereals such as wheat, rye, triticale, barley, oats and rice are C_3 plants that become less efficient as the temperature increases, pseudocereals such as amaranth buckwheat and quinoa are C_4 plants that can generally grow under high temperature with a high light intensity (Table. 1).

Table 1. Botanical characteristics of cereals and pseudocereals

<table>
<tr><th rowspan="2">Crop name</th><th colspan="3">Botanical classification</th><th rowspan="2">Photosynthetic pathway</th></tr>
<tr><th>Monocots / Dicots</th><th>Family</th><th>Subfamily</th></tr>
<tr><td>Wheat</td><td rowspan="16">Monocots</td><td rowspan="16">Poaceae</td><td rowspan="6">Pooideae</td><td rowspan="7">C3</td></tr>
<tr><td>Rye</td></tr>
<tr><td>Triticale</td></tr>
<tr><td>Barley</td></tr>
<tr><td>Oats</td></tr>
<tr><td>Canarygrass</td></tr>
<tr><td>Rice</td><td>Oryzoideae</td></tr>
<tr><td>Job’s tears</td><td rowspan="8">Panicoideae</td><td rowspan="15">C4</td></tr>
<tr><td>Maize</td></tr>
<tr><td>Millet, Barnyard</td></tr>
<tr><td>Millet, Foxtail</td></tr>
<tr><td>Millet, Pearl</td></tr>
<tr><td>Millet, Proso</td></tr>
<tr><td>Sorghum</td></tr>
<tr><td>Millet, Finger</td><td rowspan="2">Chloridoideae</td></tr>
<tr><td>Teff</td></tr>
<tr><td>Amaranth</td><td rowspan="5">Dicots</td><td rowspan="3">Amaranthaceae</td><td>Amaranthoideae</td></tr>
<tr><td>Canihua</td><td rowspan="2">Chenopodiaceae</td></tr>
<tr><td>Quinoa</td></tr>
<tr><td>Buckwheat</td><td>Polygonaceae</td><td>Polygonoideae</td></tr>
<tr><td>Chia</td><td>Lamiaceae</td><td>Nepetoideae</td><td>?</td></tr>
</table>

In addition to the difference in plant metabolism, as profiles of pests and diseases, and the necessity of pesticides are different, GAPs may not be similar between cereals and pseudocereals. For example, comparative information is provided for buckwheat, one of the most popular commodities of pesudocereals, and wheat/barley as follows:

> Wheat and barley are known to be prone to pests such as aphids, leafminers snow fleas and rice crane flies as well as many diseases including powdery mildew, Fusarium head blight, Scab, Fusarium foot rot, black rust, stripe rust, brown rust, loose smut and wheat mosaic virus. On the other hand, buckwheat is prone to few pests and diseases such as armyworm and crown and root rot. Due to less necessity for crop protection for buckwheat in Japan, small number of pesticides are registered for buckwheat and buckwheat is generally grown without the necessity of pesticides in major production area. Due to these difference in types and the occurrence and of pests and diseases, GAPs of buckwheat are not similar to those of wheat/barley.
>
> Difference in periods from planting to harvest between buckwheat and wheat/barley also affect the necessity of herbicides. In general, for buckwheat, it usually takes only 2 – 3 months from planting to harvest, while for wheat and barley, it takes 7 – 9 months from planting to harvest, although there periods may differ according to cultivated species and climatic conditions. As opposed to wheat and barley, buckwheat can generally be grown without post-emergence herbicides because it can outcompete weeds due to its rapid growth.

Kenya

Issue: Subgrouping and new commodities for group 020 – grasses of cereals grain.

Position: We agree to the Japanese compromise proposal no 2 in appendix 2 as presented by the EWG.

Rationale: The aspect of subgroups 20A and 20B with or without husks creates a difference in the edible portion and therefore a difference in the pesticide residues in the commodity referred.

Thailand

Considering the commodity “GC 3081: Chia (*Salvia hispanica* L.)” is usually consumed with the beverage and consumption patterns of Chia and basil seeds are similar. In addition, Chia is not grass. Thailand is of the view that this commodity should be classified as seeds for beverage. Then, we would like to propose moving Chia from “subgroup 020A: Wheat” to “**Group 024 Seed for beverage and sweets**”.

United States of America

This will be the second time that the CCPR considers the proposed revisions for Group 020 – Grasses of cereal grains. The main issue remaining for the cereal grains group is the proposal of a small grains subgroup, which the United States prefers, or the establishment of separate subgroups for wheat, barley and pseudocereals. However, the United States is primarily concerned about a separate subgroup for pseudocereals since the United States does not agree that separate residue field trial data are needed for the pseudocereals.

The United States does not believe requiring additional residue field trial data for the pseudocereals is necessary or that having these additional data will be in any way 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, and production data do not exist for most of these crops. Requiring a separate subgroup for the pseudocereals will likely result in fewer to even possibly the absence of tools for growers of these very minor crops since it is likely that data will not be generated to support this subgroup since the total acres grown does not justify the cost of conducting the field trial data. Registrants have not and are likely to never spend the funds needed to conduct the necessary studies on these crops. Finally, the United States does not believe that having the additional field trial data on the pseudocereals will make the world’s food supply safer.

The CCPR have been asked to consider two compromise proposals:

- From Canada that proposes a Subgroup 20A. Wheat, similar grains and pseudo-cereals (would include pseudocereals) (Wheat as representative commodity) and Subgroup 20B. Barley and similar grains (Barley as representative commodity); and
- From Japan that proposes Subgroup 20A. Wheat, similar grains, and pseudo-cereals without husks (wheat as rep commodity) and Subgroup 20B. Barley, similar grains, and pseudocereals with husks (barley as representative commodity).

At this time, the United States still supports the creation of a single small grains subgroup. We agree that the two compromise proposals are preferred over the original proposal of three separate subgroups since there is no separate subgroup for the pseudocereal grains. However, the United States believes there is little value in separating the small grains into a Wheat 20A subgroup and a Barley 20B subgroup. 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. Further, given the large variability of site to site field trials, residue values for wheat and barley data are expected to be in the same population and therefore, the United States does not believe there is a need to have separate requirements. The United States does agreed that there may be value to have both wheat and barley as representative commodities for the subgroup, but still supports the creation of a single small grains subgroup.

African Union

Background: It is recalled that the revision of the Codex Classification of Foods and Animal Feeds (CAC/MISC) had been approved by the 27th Session of the Codex Alimentarius Commission, and the CCPR at its 39th Session agreed to establish and electronic working group to further advance the revision.

It was further agreed that it should keep in mind that the revision should be fit for the purpose of the classification which was to facilitate the establishment and interpretation of MRLs.

During the 47th Session of the CCPR, the committee agreed to request the EWG to look into the crop grouping for Group 020 and report back to the 48th Session of the CCPR on an agreed proposal for consideration.

Position: AU welcomes the outcome of the EWG on classification. AU supports the proposed compromise by Canada. However, AU wishes to open a discussion to have a separate subgroup for pseudo-cereal.

Issue & Rationale: Pseudo cereals are non-grass cereals grown in certain parts of Africa. They are small in size. Farmers have interest in their seeds because of their nutritional values.