



**Food and Agriculture  
Organization of  
the United Nations**



**World Health  
Organization**

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

Agenda Item 11

CX/PR 14/46/12 (Rev)

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## JOINT FAO/WHO FOOD STANDARDS PROGRAMME

### CODEX COMMITTEE ON PESTICIDE RESIDUES

46<sup>th</sup> Session

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#### DISCUSSION PAPER ON GUIDANCE TO FACILITATE THE ESTABLISHMENT OF MAXIMUM RESIDUE LIMITS FOR PESTICIDES FOR MINOR CROPS / SPECIALTY CROPS

(Prepared by the Electronic Working Group chaired by  
France and Co-Chaired by Kenya and Thailand)

#### Background

1. In 2012, the 44<sup>th</sup> Session of the Committee on Pesticide Residues (CCPR) agreed on criteria for use by CCPR and JMPR to determine the minimum number of field trials necessary to support the establishment of MRLs for minor crops / specialty crops in order to facilitate data submission to JMPR and to further develop these criteria to clarify commodities according to consumption. The Committee had agreed on 3 categories based on world consumption data to determine the appropriate number of residue field trials:<sup>1</sup>

Category 1 - No data in FAO Stat and No GEMS Food Cluster data = 3 trials

Category 2 - < 0.5% worldwide and < 0.5% in all of the clusters = 4 trials

Category 3 - < 0.5% worldwide and > 0.5% in one or more clusters = 5 trials

2. In 2013, the 45<sup>th</sup> Session of CCPR considered a methodology to apply these criteria to crops listed in the FAO database and in the 17 new GEMS FOOD clusters and to propose a minimum number of trials for each crop. The EWG recommended the 0.5% cut-off diet criteria and its mode of calculation; use of the FAO STAT 2 and the expanded GEMS/FOOD cluster diets to further develop the list of crops for which consumption values are above the threshold value of 0.5% of dietary intake (Annex I to CX/PR 13/45/11); the tiers 2 (consumption per cluster) methodology to further develop the list of crops (including number of trials) for which consumption values are below the threshold value of 0.5% of dietary intake (Annex II to CX/PR 13/45/11); criteria to refine the list of crops with consumption values less than 0.5% to be used on case by case basis. Some criteria required further discussion and agreement such as the use of large portion of the commodity together with other criteria like seasonality. Some crops also needed further refinement (Annexes I and II) including fruits adopted in the revised Classification of Food and Feed; outstanding issues around 10% of these crops in relation to items which are the combination of more than one commodity that might not allow the identification of major and minor crops, lack of consumption data and the subsequent need for national consumption data; and the possible development of a database in close connection with the GMU global needs and data sharing databases and CCPR priority list.

3. The Committee generally supported the recommendations presented in CX/PR 13/45/11. Several delegations highlighted the relevance of this work to facilitate international trade in minor crops / specialty crops.

4. The Committee agreed that the remaining issues and possible future work identified in the document could form the basis for further work as follows:

- Refining a limited list of crops not finalised in Annexes I and II of CXPR 13/45/11 (Mango, Pumpkins, Lettuce (head and leaf), Peppers, chili, Rape seed, Palm fruits, Coffee, Tea) and II (Lemon, Pear, Cherries, Plum, Apricot, Nectarine, Peach, Olives, kiwi, Brussels sprouts, broccoli, Cauliflower, Beans, Peas, Beet root, Sweet peppers, Oats, Rye, Cotton seed, Peanuts, Sunflower) and additional fruits approved in the new codex classification;
- Proposing a guidance document to facilitate the establishment of MRLs for pesticides for minor crops;
- Continuing the development of a simple database to identify residue data needs for minor crops for specific chemicals on the priority list for JMPR.

<sup>1</sup> REP12/PR, paras 129-139.

5. In order to carry out the above task, the Committee agreed to re-establish the EWG on Minor Uses and Specialty Crops. The EWG will be chaired France and co-chaired by Kenya and Thailand and will work in English only.<sup>2</sup> The List of Participants is presented in Annex 4.

6. The Committee is invited to consider the conclusions in paras 44-46 vis-à-vis the remaining issues identified at the 45<sup>th</sup> Session of CCPR namely the refinement of a limited list of crops not finalised at the last CCPR, the development of a guidance document to facilitate the establishment of MRLs for pesticides for minor crops and the development of a database to identify residue data needs for minor crops for specific chemicals on the priority list for JMPR in order to determine how to proceed further with guidance to facilitate the establishment of maximum residue limits for pesticides for minor crops / specialty crops. In considering the conclusions, consideration should be given to the information and data provided in this document. The Committee is also invited to consider the recommendations for further work in paras 47-48.

## I. Discussion on remaining issues

### 1. Refining a limited list of crops not finalized in 2013

7. Last year, the work of the EWG pointed out the lack of consumption data for individual crops. Indeed for many crops, consumption data were only available for several crops grouped, for some others consumption data were reported under the category "Nes" and cannot be used at all for the purpose of the working group. These crops groups would need to be further considered as they can represent significant parts of the total consumption and contains crops that could be candidate for MRL setting. Individual consumption data exist in many countries and could be used to refine and complete the list of crops that were generated. The EWG recommends using national consumption data to work on unresolved issues for crops for which no clear individual consumption data are available in the FAO tables.

8. With reference to mandate established by CCPR during its 45th session held in Beijing during the period 6-13 May 2013, France, as chair of the EWG on minor crops, requested on Members in August 2013 to provide relevant consumption data on several commodities to perform further analysis to determine the number of trials required to set MRLs (See REP13/PR para 133 and 135).

9. In response to this call, comments and consumption data were submitted by the following countries and organisations: Canada, Germany, Malaysia, Morocco, Thailand, The Netherlands, USA, WHO, EFSA. The data were diverse and unfortunately it was not possible to gather consumption data that would cover significant part of the world population for each of the crop of interest. These data could not be used for recalculation of clusters because they were not representative enough and could not be directly compared to the existing data set without complete normalisation and statistical analysis (which was not achievable in the framework of this year working load). However they were useful to answer some of the questions and make rough estimates in order to make a decision. The consumption data were summarised and submitted to the EWG for a second round of comment in January 2014. All the responses from member countries following this second round expressed their agreement about the calculation and the proposed number of trials. Lately the European Commission sent comments to the whole EWG pointing out a limited of crops that are important in Europe and for which they would like to increase the number of trials. Conclusions for each of the crops under consideration this year are presented below and are reported in the Annex 1 of this document.

10. **Lemon:** Lemon consumption represented 0.3% of the total world consumption. New data were collected that confirm this low level, none of the countries show consumption levels above the threshold of 0.5%. However Germany provided data from a recent survey (2005-2007) showing high consumption level for the adult German population (>14g/capita/d). Considering the importance of lemon consumption in Europe, EU proposed a minimum of 6 trials to set a specific MRL on Lemon.

- Lemon (FC 0204): 6 trials

11. **Pears:** The Netherlands and Germany consider this crop as major and indicated in the round of comment that they would like that a minimum of 6 trials would be required to set a CXL on pears. During tiers one, pear consumption represented 0,4% of the total consumption, the new data on pear received this year show that high consumption level are reported in several countries around the world (up to 25 g/capita/d in Spain, 18 g/capita/d in Australia), pear belongs to the group of pome fruits which is major in term of global consumption and MRL for the group can be established from pear alone (RP12-Pre), therefore it is proposed to require a minimum of 6 trials to set an MRL on pears.

- Pear (FP 0230): 6 trials

12. **Peach and apricot:** During tiers 1 analysis, the group peach (including nectarine) and apricot (003C) represented 0.5% of the global consumption. Individual consumption data were received this year and confirm the consumption levels for both peach and apricot. It was recommended to set a global MRL for this subgroup with peach or apricot being the representative commodity (RP12-Pre). Therefore a minimum of 6 trials on peach and/or apricot would be required to set an MRL for subgroup 003C.

- Peach (FS 0247): 5 trials
- Apricot (FS 0240): 4 trials
- Peach and Apricot (003C): 6 trials

<sup>2</sup> REP13/PR, paras 133-137.

13. **Plums:** European Commission proposed to require a minimum of 6 trials for plums based on the following arguments:

- high consumption in some countries, i.e. above 7.5 g/cap/d. Data from a recent survey (2005-2006) submitted by EFSA to the Chair of the EWG show a consumption level for the population of Italian elderly of 7.54 g/cap/d;
- the consumption of plums follows a seasonal pattern, hence the acute risk requires particular consideration;
- GAPs for this soft fruit frequently include a high number of treatments and a short PHI.

14. This proposal was not opposed by any member of the EWG and a minimum of 6 trials could then be required for plums.

- Plums (FS 0014): 6 trials

15. **Cherry:** Cherries consumption represented 0.1% of the total world consumption. New data were collected that confirm this low level of consumption. None of the countries show consumption levels above the threshold of 0.5%. However Germany provided data from a recent survey (2005-2007) showing high consumption level for the adult German population (7.35g/capita/d). This value was used to recalculate the part of cherry consumption in the total consumption of cluster 8 Germany belongs to. With this new calculation Cherry consumption increased from 0.23% to 0.35% of cluster diet but remained below the threshold value of 0.5%. Efsa also submitted data indicating a consumption level for the population of Bulgarian children of 14.62 g/cap/d. Furthermore, The European Commission stressed the consumption of cherries follows a seasonal pattern, hence the acute risk requires particular consideration and that for this soft fruit frequently include a high number of treatments and a short PHI. For these reasons, despite a low worldwide consumption level, the European Commission proposed to require a minimum of 6 trials to set an MRL on cherries. This proposal was not opposed by any member of the EWG, this proposal was not opposed by any member of the EWG.

- Cherry (FS0013): 6 trials

16. **Kiwi fruits:** The Netherlands consider this crop as major and indicated in the round of comment that they would like that a minimum of 6 trials would be required to set a MRL on kiwi. European Commission also indicated Kiwi consumption is above 7.5 g/ p/day in some countries, Kiwi consumption is very low in the database, however Kiwi consumption is increasing worldwide and it may become significant in certain clusters as observed in the new data received from WHO (8.54 g/h/d in Italy). Therefore following, the comments made by European Commission and The Netherlands, 6 trials may be required to set a MRL on kiwi. The proposal was not opposed by any member of the EWG.

- Kiwi fruit (FI 0341): 6 trials

17. **Mango:** Only two countries provided data on both mango and mangosteen, in Australia mangosteen consumption represents only 1% of the mango consumption when in Thailand it represents nearly 25%. Data on both guava and mango were available from 7 countries. When mango consumption represents more than 90% of the total consumption in European Countries, in other countries where mango have a higher consumption level, guava can represent up to 40% of the total, it is for example the case for Brazil which is a highest mango consumer. It can be concluded that the data considered for mango consumption for tiers 1 analysis by the EWG contained a significant proportion of guava. Thailand made a proposal for mango based on calculations on the 2006 Gems/food data where mango data were not grouped with other fruits. It appeared that mango consumption alone is below the threshold of 0.5% worldwide, however the number of clusters for which mango is above that threshold would remain high. Consequently the EWG makes the following proposal for mango, mangosteen and guava:

- mango (FI 0345) – (5-7 clusters > 0.5%): 5 trials
- mangosteen (FI 0346) – (no cluster > 0.5%): 4 trials
- guava (FI 0336) – (no cluster > 0.5%): 4 trials

18. **Cabbage Head:** Data on cabbage head included Brussels sprouts and kohlrabi and the question was raised to know if without these two crops cabbage head consumption would stay above the threshold. Detailed consumption data are available for 20 countries. These data clearly indicate that both Brussels sprouts and kohlrabi consumptions are lower than those of head cabbage. The head cabbage consumption represents the majority in all cases and in average for the 20 countries 80% of the total. The group for head cabbage represented 1.5% of the total consumption in the tiers 1 analysis, removal of Brussels sprouts and kohlrabi consumptions does not modify its status. Therefore, for this group the following proposal is made:

- Cabbage Head (VB 0041): 6 trials
- Brussels sprouts (VB 0402): 4 trials
- Kohlrabi (VB 0405): 4 trials

19. **Cauliflower- Broccoli:** Broccoli is representative commodity for the group of flowering brassica. It was proposed during the last session to ask for a minimum of 6 trials for cauliflower + broccoli. We received no comment about this group of commodities during the first round of comments this year and we propose to maintain this number of trials.

- Cauliflower (VB 0404) + broccoli (VB 0400): 6 trials or more

20. **Courgette:** No individual consumption data on courgette was available during the initial work and it was not possible to clearly identify in which group these data were included. Following the call, consumption data on courgette, zucchini and summer squash were available for 17 countries. From these data it appeared that the global consumption of courgette was below the threshold value of 7.5g/day but that for at least one cluster the consumption is above the threshold (cluster including China). Therefore 5 trials will be required to set a CXL on courgette. Note that courgette is part of the cucurbit group edible peel and that CXL could be obtained for the group based on a mix of cucumber and courgette trials.

- Squash, summer (courgette, marrow, zucchetti, zucchini) (VC 0431): 5 trials

21. **Pumpkins:** Question was raised by some member countries at the last sessions whether this item could include other crops the consumption of which could be below the threshold of 0.5% and the global consumption for pumpkin could also be below 0.5%. New data were submitted on pumpkins but no information was available to clearly answer the question and identify any other crop than the ones initially declared in the group (ie winter squash and gourd). Therefore the level considered in tiers 1 analysis remains unchanged and a minimum of 6 trials should be required to set a CXL. Note that MRL on Pumpkin is often extrapolated from cantaloupe for the whole group of cucurbits, inedible peel.

- Pumpkins (VC 0429): 6 trials

22. **Pepper Sweet, pepper Chili:** Separate data on pepper sweet and pepper chili are available but in most European countries, no chili pepper consumption is available, the sweet pepper consumption prevails. The data available from 20 countries show that in different regions of the world, different kind of peppers are consumed. The consumption of sweet peppers in some of the European countries is well above the threshold value when the consumption of chili peppers in eastern and south regions is below the threshold with the exception of two countries. Therefore it is the proposal of the chairs and co-chair of the EWG to require 5 trials to set a CXL on chili peppers and a minimum of 6 trials to set a CXL on sweet peppers.

- Pepper Chili (VO 0444): 5 trials
- Pepper sweet (VO 0445): 6 trials

23. **Lettuce (head and leaf):** No individual data were available at the last session to know the part of head lettuce and leaf lettuce in the total lettuce consumption (0.5% worldwide). In the new data set that covers 20 countries, individual consumption data for both lettuces is only available for Australia. These data indicated that the consumption of head and leaf lettuce are equivalent. Therefore the global consumption could be divided by two, however in this case 5 trials would be required for each kind of lettuce. Subgroup 013A, Leafy greens including spinach, is considered as major in term of global consumption and a minimum of 6 trials will be required to set an MRL on this subgroup.

- Lettuce head (VL 0482): 5 trials
- Lettuce Leaf (VL 0476): 5 trials
- Leafy Greens (013A): 6 trials

24. **Endive:** Data were included in the Lettuce group in the initial analysis. Individual data were submitted for 4 European countries. The Netherland was the only country reporting a consumption level higher than 7.5g/day (8.69 g/day), in the other countries the level was lower but significant (0.31, 4, 12, 7.12) and a European cluster could be above the threshold value of 0,5%. For these reason, it is the chair proposal to ask for 5 trials to set a CXL on endive.

- Endive (VL 0476): 5 trials

25. **Beans:** Data were submitted but only global data consumption, no individual data were submitted; however the global data consumption for the sum of beans is still well below the threshold value of 0.5% even if for some countries the consumption is very high (up to 192 g/day for Brazil)

- Beans (VP0061): 5 trials

26. **Beetroot:** No data were available for beetroot and data was required in the first paper. Data were submitted indicating that the global consumption of beet root is below the threshold of 0.5%. 4 trials will be required to set an MRL on beetroot.

- Beetroot (VR 0574): 4 trials

27. **Rape Seed:** Last year the following proposal was made for rape seed in order justifies a minimum of 6 trials to set a CXL: the consumption of rapeseed was considered as RAC commodity because the CXL apply to raw commodities and because the rape cakes enter the livestock dietary intake and therefore contribute indirectly to human exposure, in this context the oil consumption was converted into raw rapeseed. The proposal raised no comment in the final proposal, however one member country asked for rapeseed to be reconsidered this year. As no comment was made during the first round, the proposal is unchanged.

- Rapeseed (SO 0495): 6 trials

28. **Sunflower seed:** The European Commission indicated the consumption of this crop is close to the threshold value of 7.5 g/cap/d (6.97 g/cap/d). Furthermore this crop also contributes indirectly to human exposure via livestock. Therefore it is proposed to require a minimum of 6 trials to set an MRL on sunflower seeds.

- Sunflower seed (SO 0702): 6 trials

29. **Olive:** Olives for oil production are a major crop in Southern Europe, the European Commission proposed to require a minimum of 6 trials to set an MRL on olives, the proposal was not opposed by any member of the EWG.

- Olive (FT 0305): 6 trials

30. **Palm Fruits:** Data were submitted this year showing very low levels of palm oil consumption, however during tiers 1 calculation, the world global consumption was above the threshold value of 0.5%, even if consumption of palm oil was only reported in African countries. In western countries the palm oil is a major source of vegetable fat, but raw consumption are barely reported, data are available mainly as palmitic acid, but palm oil is not the only source of palmitic acid. In the future, detailed consumption of palm oil outside Africa would be of interest. A minimum of 6 trials will be required to set an MRL on palm fruits. Note that to our knowledge such an MRL was never proposed for any active substance.

- Palm Fruits (OR 0696): 6 trials

31. **Coffee:** Several countries have submitted additional data on coffee consumption but not all the data were declared the same way. Some countries have declared beverage consumption in L/day, some others fresh or roasted beans and some others instant powder. No robust information is available to make the conversion in g/person/day. However an attempt was made to collect information from different public sources available in the internet (commercials, recipes and good practices), a rough estimate indicates that quantity of roasted coffee used ranges from 50 g/L for large filter coffees to 100 g/L for espressos. These rough calculations tend to demonstrate that global consumption of roasted beans would be above the threshold value of 0.5% and a minimum of 6 trials would be required to set CXL on coffee beans.

- Coffee Bean (SB 0716): 6 trials

32. **Tea:** Available data on tea show the same problem as coffee, part of it is declared as a beverage and part of it is the leaf weight per day. However WHO kindly indicated that a conversion factor of 20g of dried leaves per liter of tea generally applies. Again a rough estimation based on data declared on leaf tends to indicate that global tea consumption would be below the threshold value of 0.5% but in several countries the consumption is high. EU indicated that for tea consistently large number of notifications to the EU Rapid Alert System for Food and Feed (RASFF) was reported. Thirty-six (36) notifications were reported over a one-year period as of 7 March 2014. Since 1 January 2012, a total of 85 notifications were registered. Therefore a minimum of 6 trials are required to set an MRL on tea.

- Tea, green, black (DT 1114): 6 trials

33. For a number of crops for which no data were available, consumption data were provided by member countries or national authorities. Therefore the number of trials that are required for these crops is now 4 instead of 3. The crops concerned by this modification of Annex 2 are listed below:

Codex Code	FOOD COMMODITY	Mean consumption (g/d)	Number of country	# Clusters	Number of Trial
FT 0287*	Acerola (Acerola, see Barbados cherry: FT 0287 <i>Malpighia glabra</i> )	5.43	1	5	4
HH 0720	Angelica (leaves), including Garden Angelica	0.002	1	9	4
VC 0421	Balsam pear (=bitter gourd)	1.619	2	9	4
HH 0722	Basil	0.104	11	7; 8; 9; 10; 11; 15	4
VC 0422	Bottle gourd	0.530	1	9	4
VR 0575	Burdock	0.855	1	10	4
DT 1110	Camomile or Chamomile (Herb tea)	0.001	1	9	4
VC 0423	Chayote	1.325	4	5; 7; 9	4
VL 0510	Cos lettuce	4.218	1	7	4
VL 0472	Cress ( <i>Lepidium sativum</i> ), garden	0.252	4	7; 9; 10; 11	4
VL 0479*	Crown Daisy <i>Chrysanthemum coronarium</i>	0.56	1	10	4
VL 0474	Dandelion leaves	0.010	3	7; 8; 11	4
HS 0783	Galangal, rhizome	0.00005	1	9	4
VL 0507	Kangkung (water spiach)	3.860	1	9	4
VL 0470	Corn salad (lambs lettuce)	0.132	1	11	4
VL 0485	Mustard greens	0.104	1	5	4
VS 0626	Palm hearts	0.211	6	5; 7; 8; 9; 11	4
VL 0492	purslane	0.067	2	7; 11	4
VL 0495	Rape greens	5.789	1	9	4
FT 0309	Rose apple	11.420	1	9	4
HH 0741	Rosemary	0.003	4	7; 8; 10; 15	4
VL 0496	Rucola	0.228	4	5; 7; 10; 11	4
HH 0743	Sage and related salvia species	0.010	4	7; 8; 10; 15	4
FI 0365	Soursop (Guanabana)	0.134	1	5	4
HS 0794	Turmeric, root	0.028	2	7; 15	4

34. All this year proposals are reported highlighted in yellow in the list of crops presented in Annex 1 of this document.

35. In response to the call, data were also submitted for crops not actually considered in the risk assessment calculation during the previous years. These crops are summarised in the following table and may be further considered if necessary for MRL setting.

FT 2400	Açaí ( <i>Euterpe oleracea</i> )	3.030	1	5	4
FB 0000	Antilles cherry ( <i>Prunus pleuradenia</i> )	0.080	1	5	4
FI 2483	Cupuaçu ( <i>Theobroma grandiflorum</i> )	1.080	1	5	4
VR 0604	Ginseng ( <i>Panax ginseng</i> )	0.560	1	10	4
VO 2704	Goji berry ( <i>Lycium barbarum</i> ) ( <i>Lycium chinense</i> ).	0.010	1	9	4
OR 0172	Perilla seeds (oil) (SO 3145 for seeds)	0.150	1	10	4
FI 2540	Pitahaya (=dragon fruit) <i>Hylocereus undatus</i> (aka <i>H. triangularis</i> ).	3.200	1	9	4
SO 3140	Borage seed	0.040	1	10	4
HH 0746	Sorrel ( <i>Rumex acetosa</i> )	0.160	4	7; 10; 11;15	4
-	Kelp ( <i>Phaeophyceae</i> , <i>laminariales</i> )	1.420	1	10	4
VD 0534	lima, butter bean ( <i>Ph. lunatus</i> )	0.040	1	7	4
VL 0502	Spinach Indian Vinespinach (vine leaves)	0.001	1	5	4
VO 0487	Nightshade, black ( <i>Solanum nigrum</i> )	0.600	1	5	4
VP 0536	Mung-bean sprouts ( <i>V. radiata</i> )	1.650	1	10	4

## 2. Criteria proposed to refine a limited list of crops:

36. A number of criteria was considered when establishing and refining the list of crops. It is noted that these criteria can be used on the limited number of crops, provided sufficient information is available.

- **Part of the crop really consumed.** It was concluded that there was a general lack of data to globally apply this criteria, most of the reported values are a mix of raw and processed commodities; furthermore several member states indicated that the consumption value should be reported as raw commodities (ei for processed product) as MRL are set on raw commodities. **It is not recommended to apply this criteria.**
- **Crops which are important in certain clusters.** The question was raised for certain commodities that are very important for a small number of countries. This is for example the case for dates that account for nearly 5% of the total consumption in Egypt. This criteria was not approved by any delegation and was not used. It was noted that commodities that are highly consumed only in a single country are in general not subjected to international trade and do not need codex MRL. **It is not recommended to apply this criteria.**
- **Seasonal crops that are major during part of the year.** This criterion was applied to strawberries considering also other criteria such as high number of treatment and short PHI. However some delegations do not believe it is appropriate to use this criterion to determine the number of trial. **It is recommended to use this criteria on very specific cases and preferentially in combination with other criteria.**

- **Large portion instead of average consumption.** There was not full agreement on that criterion and it was not used. The main arguments against this criteria was a lack of reliable world wild data on large portions. However some delegations pointed out that for some seasonal crops the intake may be very high and would justify to be taken into account, this is for example the case for cherries. **It is recommended to use this criteria on very specific cases and preferentially in combination with other criteria.**
- **Representative commodities from which extrapolation is made to a wide group.** This criteria was agreed by the majority of the delegations. Furthermore, CCPR practice encouraging crop grouping, extrapolation and group MRL setting to cover as many minor commodities as possible was taken in to account. A sufficient data set must be available to reach this objective in particular when the whole group consumption is above the threshold of 0.5% total consumption (for example Stone Fruits, group 003). However, residue data of a representative commodity can be submitted to JMPR to establish MRL for itself and in this case application of criteria according to tiers one and two prevails. This approach is consistent with the general principle of the draft principles and guidance on the selection of representative commodities for the extrapolation of MRLs to commodity groups which establish that representative commodity is likely to be major in term of production and/or consumption. **It is recommended to use this criteria.**

### 3. Database for identifying residue data needs for minor crops

37. Last year, the EWG proposed a simple excel spread sheet to collect needs, existing label, GAP, residue data available and/or on going to be used by Codex member to support MRL proposals for minor crops in the framework of CCPR schedule and priority lists. This "Minor Crop Data Collection" table (MCDC, Annex 3) was agreed and it was suggested to test this approach using this table in the framework of the EWG on minor crops.

38. A new proposal was discussed in line with the proposal of the 2010 draft document (CX/PR10/42/13) in which the EWG proposed to establish a Specialty Crops & Minor uses Interest Group of Members and Observers to work collaboratively to identify and nominate chemical/uses to the *EWG on Priorities* and collate submissions (comprising of data and product labels across member countries) to JMPR.

39. **The EWG recommends to establish a "Minor Crops Interest Group" to identify issues and find solutions to help facilitate MRL setting and trade for minor crops.** This work should be done in collaboration with other activities of the OECD EGMU and the Global Minor Use group, so that there is not a duplication of effort. Several members are already involved in the work done in these other groups.

40. This "minor crops interest group" will be consulted each year as soon as the draft schedule proposed by the priority list working group is available, the MCDC will be circulated. As member of the EWG on priority list, the chair of the Minor Crops Interest Group will compile the answers in line with the schedule. He will send to the EWG of priority list a proposal for additional commodities belonging to minor crops for which a sufficient number of trials have been identified.

41. The Minor Crops Interest Group will include:

- members and observers of CCPR;
- persons in charge of this issue (not necessary involved in Codex activities) proposed by delegates;
- OECD EGMU contact list;
- GMU contact list (in particular members of the data base working group).

42. EWG supports also the EGMU (OECD) project to identify and initiate a pilot data generation project across a number of countries for a minor use need that as mutual benefit/need (a crop/pest is not chosen at this date). This project could be linked with the approach proposed above.

43. Furthermore, the EWG strongly supports the design of a global need and data sharing database for minor crops and invite the members to contribute to this GMU project.

### 4. Conclusion

44. This year the EWG have received new consumption data and comments to refine a limited list of crops not finalised during the previous session of CCPR. These data were used to draw conclusions for the following crops: mango, pumpkins, Lettuce (head and leaf), peppers, chili, palm fruits, coffee, tea, lemon, pear, cherries, plum, apricot, nectarine, peach, kiwi, Brussels sprouts, broccoli, cauliflower, beans, peas, beet root, and sweet peppers. A finalised list of crops and the corresponding number of trials required to set a codex MRL is presented in Annex 1 of the draft guidance document.

45. Criteria to further refine the list of crops were also discussed. A recommendation on how to apply a limited list of criteria is also included in the draft guidance document.

46. The EWG recommends to establish a "Minor Crops Interest Group" to identify issues and find solutions to help facilitate MRL setting for minor crops.



## **5. Further Work of the EWG on Minor Uses and Specialty Crops**

47. **The EWG would like to finalize the “Guidance to facilitate the establishment of MRL on minor crops”.** This task will include incorporation of possible modifications to reflect the comments made during CCPR 46 session and the necessary editorial changes.

48. **The EWG would like to launch the first Minor Crop Interest Group.** During 2014 -2015 period, a first group will be established. The “Minor Crop Data Collection” table will be circulated once the call for priority list will be available and proposal for additional minor crops will be sent to the group of priority list. This pilot year will help to determine further the best strategy to gather data together for MRL submission to the JMPR in coordination with other international groups on minor crops.

## II. Discussion paper for guidance to facilitate the establishment of MRLs for pesticides for minor crops

49. The EWG aims to propose a guidance document on minor crops for CCPR work. This work was initiated by the EWG from 2008 and a draft document was proposed in 2010 (CX/PR10/42/13) before the issue of minor crop definition was raised. A new draft document is presented this year including the minimum number of trials for each commodity, the agreed criteria selected for crop selection and recommendations to facilitate minor crops MRL settings.

### 1. Minimum number of trials to for setting MRL on minor crops

50. For setting MRL on minor crops, it is recognised that, due to lower importance in term of consumption, a lower number of trials than for major crops may be required. A list of crops and the minimum number of trial to be considered by JMPR to set a MRL is presented in Annex 1. The methodology adopted to set this number of trials is presented in Annex 2. It was based on two tiers selection, the first tiers based on worldwide consumption and the second one on "local" consumption as defined in GEMS FOOD clusters. Additional criteria to refine the list of crops are recommended below:

- **Representative commodities from which extrapolation is made to a wide group.** This criteria is on line with CCPR practice encouraging crop grouping, extrapolation and group MRL setting to cover as many minor commodities. A sufficient data set must be available to reach this objective in particular when the whole group consumption is above the threshold of 0.5% total consumption (for example Stone Fruits, group 003). However, residue data of a representative commodity can be submitted to JMPR to establish MRL for itself and in this case application of criteria according to tiers one and two prevails. This approach is consistent with the general principle of the draft principles and guidance on the selection of representative commodities for the extrapolation of MRLs to commodity groups which establish that representative commodity is likely to be major in term of production and/or consumption.
- Seasonal crops that are major during part of the year.
- Large portion instead of average consumption.

51. The last two criteria can be used only on very specific cases and preferentially in combination and/or with other parameters.

52. It has to be pointed out that this minimum number of trials is a recommendation and that JMPR, based on expert judgment, can require as many trials as necessary to constitute what can be considered a data set robust enough to set reliable MRL. It is also recommended to the data submitter to present as many trials as possible.

53. It is proposed that this list of crops and the minimum number of trials may be revised every 5 years in order to take into account the changes in worldwide consumption level and additional crops entering the codex classification.

### 2. Identify data/labels available for submission

54. A simple excel spread sheet is proposed to collect needs, existing label, GAP, residue data available and/or on going to be used by Codex member to support MRL proposals for minor crops in the framework of CCPR schedule and priority lists. This "Minor Crop Data Collection" table (MCDC) is available in Annex 3.

55. An electronic "Minor Crops Interest Group" will be established each year to identify issues and find solutions to help facilitate MRL setting for minor crops. This work is done in collaboration with other activities of the OECD EGMU and the Global Minor Use group, so that there is not a duplication of effort.

56. This "minor crops interest group" will be consulted each year as soon as the draft schedule proposed by the priority list working group is available, the MCDC will be circulated. As member of the EWG on priority list, the chair of the Minor Crops Interest Group will compile the answers in line with the schedule. He will send to the EWG of priority list a proposal for additional commodities belonging to minor crops for which a sufficient number of trials have been identified.

57. The Minor Crops Interest Group will include:

- members and observers of CCPR covering all regions around the world;
- persons in charge of this issue (not necessary involved in Codex activities) proposed by delegates;
- OECD EGMU contact list;
- GMU contact list (in particular members of the data base working group).

### 3. Label

58. The Acceptance of residue field trial data available on a minor crop when there is no formal label available should be formalised by JMPR, the data should instead be accompanied by an official letter from a government agency that states the chemical is being used on the crop in that country and the letter outlines the use pattern (GAP) being used by growers in that country.

### 4. Global data set

59. It is recommended accepting residue trials from different regions of the world for setting MRLs on minor crops.

60. Provided these data are conducted within the required 25% variation of the GAP, the JMPR is encouraged to accept data from several countries to support the establishment of a Codex MRL. On the other hand, there should also be acceptance of submissions on priority chemicals that are bundled from multiple countries and submitted by just one country that has agreed to take the lead on behalf of others.

61. This proposal is strengthened by the recommendation of the draft OECD Revised Crop Field Trial Guidance concerning geographical distribution of residue trials: "Based on the current evidence residue data generated at similar GAP in different geographical regions/climatic zones may be used as a consolidated global dataset for MRL setting" (evaluated data confirmed consistently that the variability of data within regions/climate is significantly lower than variability from trials across region/climate).

62. Considering furthermore that JMPR performs the evaluation of the submitted information and estimates maximum residue levels regardless of whether it represents worldwide use or is limited to a region and that Codex MRLs are applicable on imported products regardless of their origin. The use of global data set seems particularly relevant at Codex level.

#### **5. Use of proportionality**

63. The use of proportionality was recommended during the 45<sup>th</sup> session of CCPR. The Committee agreed that it was applicable to insecticides, fungicides, herbicides and plant growth regulators and that application rate is the only deviation from cGAP.

64. It was also concluded that 100% scaled data could be used for large data set and that "at least 50% of trials at GAP may be requested on a case-by-case basis depending for example on the range of scaling factors", and that some trials at GAP might be useful as confirmatory data.

65. Note that it is likely that due to different agronomical practices and different climates, trials from different regions of the world would not always be conducted according to the same GAP in term of number of application and PHI and more than one parameter may vary between them. However for minor crops a more flexible approach may be acceptable and reasonable variations in cGAP could be acceptable on a case by case basis if they do not lead to underestimate the residue level (eg different number of applications with one further application before the consumable part of the crop has formed, without significant impact on residue level at harvest).

66. In any case if distribution of the data appears not robust enough, JMPR can ask for more residue trial to complete the distribution.

#### **6. Extrapolation**

67. The EWG strongly recommends using existing extrapolation rules to set group MRL on minor crops according to the recommendations of the EWG on the revision of the Codex Classification for Foods and Feeds. An approach has been proposed to identify the need for MRL on minor crops early in the priority list. This should allow for any active substance entering the priority list, to propose additional minor crops to the existing candidate crops and to identify the data package available worldwide. When group MRL could not be set (if insufficient trials were submitted for the representative(s) commodity(ies)) a limited number of additional trials could be planned to be available when the active substance is evaluated by the JMPR.

68. Extrapolation rules are in line with one of the criteria used to propose a minimum number of trials (cf Annex 1), in case a minor crop is a representative commodity for a group of crop and a MRL is intended for the whole group, a sufficient number of trials should be required to cover the total group consumption level. In case a MRL is set only for the minor crop, a specific number of trials is required but no extrapolation is allowed to other crops based on this limited data set without considering the weight of the group in term of total consumption.

**Annex 1: Minimum number of trials required for the establishment of MRL.****Table 1: List of crops and the minimum number of trials required for the establishment of MRL.**

(Yellow highlighting indicates crops that were considered for refinement during the year. Green highlighting indicates crops that were above the threshold value during tier one or that were considered to be of significant importance and for which a more than 6 trials are required.)

CODEX CODE	Commodity	Consumption weighted with population (g/hab/day)	% of total consumption	N° of Cluster > 0.5%	N° of Trials	Comments
		tier 1		tier 2		
<b>001</b>	<b>CITRUS FRUITS</b>					
FC 0003	Mandarin + mandarin-like hybrid	9.089	0.6%	6	6	
FC 0004	Orange, sweet, sour + orange-like hybrid	18.055	1.2%	11	6	
FC 0005	Shaddock or pomelo + shaddock-like hybrid	1.351	0.1%	1	5 <sup>3</sup>	
FC 0204	Lemon	4.153	0.3%	3	6 <sup>3</sup>	
FC 0205	Lime					
<b>002</b>	<b>POME FRUITS</b>					
FP 0226	Apple	25.025	1.6%	14	6	
FP 0227	Crab-apple	N/A	N/A	N/A	3	
FP 0228	Loquat (Japanese medlar)	available under GEMS/FAO code 619: fruit fresh nes	N/A	N/A	4	
FP 0229	Medlar	available under GEMS/FAO code 619: fruit fresh nes	N/A	N/A	4	
FP 0230	Pear	6.245	0.4%	2	6	
FP 0231	Quince	0.174	0.01%	0	4	
<b>003</b>	<b>STONE FRUITS</b>					
FS 0013	Cherries	0.979	0.1%	0	6	
FS 0014	Plum	3.182	0.2%	1	6	
FS 0240	Apricot	0.953	0.1%	0	4 <sup>3</sup>	
FS 0245	Nectarine	5.486	0.4%	4	5 <sup>3</sup>	
FS 0247	Peach					

<sup>3</sup> For extrapolation to a wider group of crops and a group MRL a greater number of field trials are required.

CODEX CODE	Commodity	Consumption weighted with population (g/hab/day)	% of total consumption	N° of Cluster > 0.5%	N° of Trials	Comments
		tier 1		tier 2		
<b>004</b>	<b>BERRIES AND OTHER SMALL FRUITS</b>					
FB 0019	Vaccinium berries (incl. Bearberry) (excl blueberries)	0.242	0.02%	0	4 <sup>4</sup>	data include blueberries and cranberries representative crop with low consumption value
FB 0020	Blueberries					see vaccinium berries
FB 0021	Currants, red, black, white	0.309	0.02%	0	4 <sup>4</sup>	
FB 0264	Blackberries	available under GEMS/FAO code 558: berries nes	N/A	N/A	4	
FB 0266	Dewberries, incl boysen- & loganberry	available under GEMS/FAO code 558: berries nes	N/A	N/A	4	
FB 0267	Elderberries	available under GEMS/FAO code 619: fruit fresh nes	N/A	N/A	4	
FB 0268	Gooseberries	0.057	0.004%	0	4	
FB 0269	Grape	17.946	1.2%	11	6	
FB 0271	Mulberries	available under GEMS/FAO code 558: berries nes	N/A	N/A	4	
FB 0272	Raspberries, red, black	0.195	0.01%	0	4 <sup>4</sup>	
FB 0273	Rose hips	available under GEMS/FAO code 619: fruit fresh nes	N/A	N/A	4	
FB 0275	Strawberry	1.335	0.1%	0	6	
<b>005</b>	<b>ASSORTED (SUB)TROPICAL FRUITS - EDIBLE PEEL</b>					
FT 0287	Barbados cherry (acerola)	N/A	N/A	N/A	4	
FT 0289	Carambola (= star fruit)	available under GEMS/FAO code 9024/603: Fruit. tropical fresh nes	N/A	N/A	4	
FT 0291	Carob (Locust Tree, St John's Bread)	0.068	-	N/A	4	no GEMS consumption data but FAO world production data/capita
FT 0292	Cashew apple	available under GEMS/FAO code 591: Cashewapple	N/A	N/A	4	

<sup>4</sup> Representative crop with low consumption value, a greater number of field trials may be required for extrapolation to a wider group of crops, considering the total level of consumption of the group.

CODEX CODE	Commodity	Consumption weighted with population (g/hab/day)	% of total consumption	N° of Cluster > 0.5%	N° of Trials	Comments
		<b>tier 1</b>		<b>tier 2</b>		
FT 0295	Date	2.249	0.1%	3	5 <sup>3</sup>	
FT 0297	Fig	0.305	0.02%	0	4 <sup>3</sup>	
FT 0300	Jaboticaba	N/A	N/A	N/A	3	
FT 0301	Jujube. Indian	available under GEMS/FAO code 619: fruit fresh nes	N/A	N/A	4	
FT 0302	Jujube. Chinese	available under GEMS/FAO code 619: fruit fresh nes	N/A	N/A	4	
FT 0303	Kumquats	available under GEMS/FAO code 512: citrus fruit nes	N/A	N/A	4	
FT 0305	Olive	2.036	0.1%	2	6	
FT 0307	Persimmon, Japanese	1.137	0.1%	0	4	
FT 0309	Rose apple				4	data was provided in 2013
FT 0312	Tree tomato	N/A	N/A	N/A	3	
<b>006</b>	<b>ASSORTED (SUB)TROPICAL FRUITS- INEDIBLE PEEL</b>					
FI 0326	Avocado	1.257	0.1%	0	4 <sup>4</sup>	
FI 0327	Banana	26.8	1.7%	14	6	
FI 0329	Breadfruit	available under GEMS/FAO code 9024/603: Fruit. tropical fresh nes	N/A	N/A	4	
FI 0331	Cherimoya	available under GEMS/FAO code 9024/603: Fruit. tropical fresh nes	N/A	N/A	4	
FI 0332	Custard apple	available under GEMS/FAO code 9024/603: Fruit. tropical fresh nes	N/A	N/A	4	
FI 0334	Durian	available under GEMS/FAO code 9024/603: Fruit. tropical fresh nes	N/A	N/A	4	
FI 0335	Feijoa (Pineapple guava)	available under GEMS/FAO code 9024/603: Fruit. tropical fresh nes	N/A	N/A	4	

CODEX CODE	Commodity	Consumption weighted with population (g/hab/day)	% of total consumption	N° of Cluster > 0.5%	N° of Trials	Comments
		tier 1		tier 2		
FI 0336	Guava	available under GEMS/FAO code 9024/603: Fruit. tropical fresh nes	N/A	N/A	4	Individual data provided in 2013
FI 0338	Jackfruit	available under GEMS/FAO code 9024/603: Fruit. tropical fresh nes	N/A	N/A	4	
FI 0339	Jambolan	N/A	N/A	N/A	3	
FI 0340	Java apple	N/A	N/A	N/A	3	
FI 0341	Kiwi fruit	0.442	0.03%	0	6	
FI 0342	Longan	available under GEMS/FAO code 9024/603: Fruit. tropical fresh nes	N/A	N/A	4	
FI 0343	Litchi	available under GEMS/FAO code 619: fruit fresh nes	N/A	N/A	4	
FI 0345	Mango			5	5	Individual data provided in 2013
FI 0346	Mangosteen	available under GEMS/FAO code 571: Mangoes. mangosteens. guavas	N/A	N/A	4	Individual data provided in 2013
FI 0350	Papaya	3.174	0.2%	3	5 <sup>4</sup>	
FI 0351	Passion fruit	available under GEMS/FAO code 9024/603: Fruit. tropical fresh nes	N/A	N/A	4 <sup>4</sup>	
FI 0352	Persimmon, American	1.137	0.1%	0	4	
FI 0353	Pineapple	5.880	0.4%	6	5	
FI 0354	Plantain	9.9	0.6%	15	6	
FI 0355	Pomegranate	available under GEMS/FAO code 619: fruit fresh nes	N/A	N/A	4	
FI 0356	Prickly pear (Indian fig)	available under GEMS/FAO code 619: fruit fresh nes	N/A	N/A	4	
FI 0358	Rambutan	available under GEMS/FAO code 603/9024: Fruit. tropical fresh nes	N/A	N/A	4	
FI 0359	Sapodilla	available under GEMS/FAO code 603/9024: Fruit. tropical fresh nes	N/A	N/A	4	

CODEX CODE	Commodity	Consumption weighted with population (g/hab/day)	% of total consumption	N° of Cluster > 0.5%	N° of Trials	Comments
		<b>tier 1</b>		<b>tier 2</b>		
FI 0360	Sapote, black	available under GEMS/FAO code 603/9024: Fruit. tropical fresh nes	N/A	N/A	4	
FI 0364	Sentul	N/A	N/A	N/A	3	
FI 0365	Soursop (Guanabana)				4	data was provided in 2013
FI 0367	Star apple	available under GEMS/FAO code 603/9024: Fruit. tropical fresh nes	N/A	N/A	4	
FI 0369	Tamarind (sweet)	available under GEMS/FAO code 619: fruit fresh nes	N/A	N/A	4	
<b>009</b>	<b>BULB VEGETABLES</b>					
VA 0380	Fennel, bulb	available under GEMS/FAO code 711: Anise. badian. fennel. corian and 463: Vegetables fresh nes	N/A	N/A	4	
VA 0381	Garlic	5.422	0.3%	1	5	
VA 0385	Onion, bulb	23.008	1.5%	14	6	
VA 0384	Leek	2.115	0.14%	1	5 <sup>4</sup>	Data grouped with leek as suggested
VA 0386	Onion, Chinese					
VA 0387	Onion, Welsh (Japanese bunching onion, multiplying onion)					
VA 0388	Shallot (i.e. dry harvested small onion)					
VA 0389	Spring onion					
<b>010</b>	<b>BRASSICA</b>					
VB 0041	Cabbage, head	23.316	1.5%	10	6	6 or more trials to set a MRL on Head Brassica (010B). Requirements to be validated by WG extrapolation group
VB 0402	Brussels sprouts				4	Individual data provided in 2013
VB 0405	Kohlrabi				4	Individual data provided in 2013



CODEX CODE	Commodity	Consumption weighted with population (g/hab/day)	% of total consumption	N° of Cluster > 0.5%	N° of Trials	Comments
		tier 1		tier 2		
VB 0400	Broccoli	6.141	0.4%	3	6	6 or more trials to set a MRL on Flowerhead Brassica (010A) requirements to be validated by WG extrapolation group (head/Brusselssprout (cauliflower/broccoli) Individual data are required
VB 0401	Broccoli, Chinese (Kailan)					
VB 0404	Cauliflower					
<b>011</b>	<b>FRUITING VEGETABLES, CUCURBITS</b>					
VC 0046	Melons, except watermelon	8.835	0.6%	5	6	
VC 0421	Balsam pear (Bitter cucumber, Bitter gourd, Bitter melon)	N/A	N/A	N/A	4	Individual data were provided in 2013
VC 0422	Bottle gourd (Cucuzzi)				4	Individual data were provided in 2013
VC 0423	Chayote (Christophine)				4	Individual data were provided in 2013
VC 0424	Cucumber	15.512	1.0%	9	6	
VC 0425	Gherkin	available under GEMS/FAO code 397:Cucumbers and gherkins	N/A	N/A	4 <sup>3</sup>	
VC 0427	Loofah, Angled (Sinkwa, Sinkwa towel gourd)	N/A	N/A	N/A	3	
VC 0428	Loofah, Smooth	N/A	N/A	N/A	3	
VC 0429	Pumpkins	7.641	0.5%	8	6	No new data was available
VC 0430	Snake gourd	N/A	N/A	N/A	3	
VC 0431	Squash, summer (courgette, marrow, zucchetti, zucchini)	available under GEMS/FAO code 394: pumpkins, squash and gourds			5	Individual data were provided in 2013 Note that courgette is part of the cucurbit group edible peel and that CXL could be obtained for the whole group based on a mix of cucumber and courgette trials.
VC 0432	Watermelon	30.001	1.9%	9	6	
<b>012</b>	<b>FRUITING VEGETABLES OTHER THAN CUCURBITS</b>					
VO 0444	Peppers, chili				5	Individual data provided in 2013
VO 0445	Peppers, sweet (incl. pim(i)ento) (bell pepper, paprika)				6	Individual data provided in 2013

CODEX CODE	Commodity	Consumption weighted with population (g/hab/day)	% of total consumption	N° of Cluster > 0.5%	N° of Trials	Comments
		tier 1		tier 2		
VO 0440	Egg plant (aubergine)	12.168	0.8%	5	6	
VO 0442	Okra (Lady's finger)	2,388	0.2%	2	5	
VO 0443	Pepino (Melon pear, Tree melon)	N/A	N/A	N/A	3	
VO 0447	Sweet corn (corn-on-the-cob)	<b>2.768</b>	<b>0.18%</b>	<b>3</b>	5	
VO 0448	Tomato	43.392	2.8%	14	6	
VO 0449	Fungi, edible (mainly wild, not including mushrooms)	1.142	0.1%	1	5	
VO 0450	Mushrooms (cultivated)					
<b>013</b>	<b>LEAFY VEGETABLES</b>					requirements to be considered by WG extrapolation group (head/open leaf)
VL 0269	Grape leaves	N/A	N/A	N/A	3	
VL 0460	Amaranth (Bledo)	Amaranthus caudatus available under GEMS/FAO code 9004/108: Cereals. nes	N/A	N/A	4	
VL 0464	Chard (silver beet)	available under GEMS/FAO code 463: Vegetables fresh nes	N/A	N/A	4	
VL 0465	Chervil	available under GEMS/FAO code 463: Vegetables fresh nes	N/A	N/A	4	
VL 0466	Chinese cabbage, type pak-choi				6	See head cabbage, no individual data
VL 0467	Chinese cabbage, type pe-tsai				6	See head cabbage, no individual data
VL 0469	Chicory leaves (sugar loaf)	available under GEMS/FAO code 372: Lettuce and chicory	N/A	N/A	4	
VL 0470	Corn salad (lamb's lettuce)				4	data was provided in 2013
VL 0472	Cress, garden				4	data was provided in 2013
VL 0473	Watercress	available under GEMS/FAO code 463: Vegetables fresh nes	N/A	N/A	4	

CODEX CODE	Commodity	Consumption weighted with population (g/hab/day)	% of total consumption	N° of Cluster > 0.5%	N° of Trials	Comments
		tier 1		tier 2		
VL 0474	Dandelion leaves	N/A	N/A	N/A	4	data was provided in 2013
VL 0478	Indian mustard (Amsoi)	available under GEMS/FAO code 358: Cabbages and other brassicas	N/A	N/A	4	
VL 0479a	Japanese greens: Chrysanthemum leaves (Chrysanthemum spp)				4	data was provided in 2013
VL 0479b	Japanese greens: Mizuna (Brassica rapa nipposinica)				4	data was provided in 2013
VL 0480	Kale (borecole, collards)	available under GEMS/FAO code 358: Cabbages and other brassicas	N/A	N/A	4	
VL 0481	Komatsuna	N/A	N/A	N/A	3	
VL 0482	Lettuce, head				5	Note that the Group 013A. Leafy greens including spinach is considered as major in term of global consumption.
VL 0483	Lettuce, leaf				5	
VL 0476	Endive				5	Individual data were submitted. European cluster might be above the threshold of 0.5%
VL 0485	Mustard greens	N/A	N/A	N/A	4 <sup>3</sup>	data was provided in 2013
VL 0492	Purslane	N/A	N/A	N/A	4	data was provided in 2013
VL 0495	Rape greens	N/A	N/A	N/A	4	data was provided in 2013
VL 0496	Rucola (arrugula, rocket salad, roquette)	N/A	N/A	N/A	4	data was provided in 2013
VL 0501	Sowthistle	N/A	N/A	N/A	3	
VL 0502	Spinach	4.776	0.3%	1	5 <sup>3</sup>	
VL 0505	Taro leaves	N/A	N/A	N/A	3	
VL 0506	Turnip greens (Namenia, Tendergreen)	N/A	N/A	N/A	3	
VL 0507	Kangkung (water spinach)	N/A	N/A	N/A	4	data was provided in 2013
VL 0510	Cos lettuce	N/A	N/A	N/A	4	data was provided in 2013

CODEX CODE	Commodity	Consumption weighted with population (g/hab/day)	% of total consumption	N° of Cluster > 0.5%	N° of Trials	Comments
		tier 1		tier 2		
<b>014</b>	<b>LEGUME VEGETABLES</b>					
VP 0061	Beans except broad bean & soya bean (green pods & immature seeds) (Phaseolus spp)	3.216	0.2%	1	5 <sup>3</sup>	No individual Data were submitted. however the consumption is very high for some countries
VP 0062	Beans, shelled (immature seeds)	3.216	0.2%	1	5	
VP 0063	Peas (green pods & immature seeds) (Pisum spp, Vigna spp)	3.014	0.2%	1	5 <sup>3</sup>	No individual Data
VP 0064	Peas, shelled (immature seeds) (Pisum spp, Vigna spp)	3.014	0.2%	1	5 <sup>3</sup>	
VP 0520	Bambara groundnut (immature seeds) (Voandzeia spp)	available under GEMS/FAO code 9016/203: Groundnuts and bambara Shelled/Bambara beans	N/A	N/A	4	
VP 0522	Broad bean (green pods & immature seeds) (Vicia spp)	0.485	0.03%	0	4	
VP 0523	Broad bean, shelled (immature seeds) (Vicia spp)					
VP 0541	Soya bean (immature seeds) (Glycine spp)	available under GEMS/FAO code 236: Soybeans	N/A	N/A	4 <sup>3</sup>	
VP 0542	Sword bean (young pods and bean) (Canavalia spp)	available under GEMS/FAO code 211: Pulses. nes	N/A	N/A	4	
VP 0553	Lentil (young pods) (Lens spp)	1.150	0.1%	1	5	
<b>015</b>	<b>PULSES (dry harvested)</b>					
VD 0070	Pulses	15.368	1.0%	9	6	Major representative crop: requirements to be considered by WG extrapolation group (pulses: bean dry/peas dry)
VD 0071	Beans (dry) (Phaseolus spp)					
VD 0072	Peas (dry) (Pisum spp, Vigna spp)					
VD 0523	Broad bean (dry) (Vicia spp)	1.049	0.1%	0	4 <sup>3</sup>	
VD 0524	Chick-pea (dry) (Cicer spp)	2.97	0.2%	1	5 <sup>3</sup>	
VD 0531	Hyacinth bean (dry) (Lablab spp)	available under GEMS/FAO code 211	0.1%	0	4 <sup>3</sup>	no individual data (pulse_nes)
VD 0537	Pigeon pea (dry) (Cajanus spp)	1.107	0.1%	0	4 <sup>3</sup>	
VD 0533	Lentil (dry) (Lens spp)	1.150	0.1%	1	5	

CODEX CODE	Commodity	Consumption weighted with population (g/hab/day)	% of total consumption	N° of Cluster > 0.5%	N° of Trials	Comments
		tier 1		tier 2		
VD 0541	Soya bean (dry) (Glycine spp)	12.443	0.8%	6	6	(soya /immature soybean)
VD 0545	Lupin (dry) (Lupinus spp)	0.378	-	N/A	4	no GEMS consumption data but FAO world production data/capita
<b>016</b>	<b>ROOT AND TUBER VEGETABLES</b>					
VR 0463	Cassava (Manioc, Tapioca)	29.103	1.9%	8	6	
VR 0469	Chicory, roots	0.111	0.01%	1	5	
VR 0494	Radish	available under GEMS/FAO code 463: Vegetables fresh nes	N/A	N/A	4	
VR 0497	Swede (rutabaga)	available under FAO code 463: Vegetables fresh nes	N/A	N/A	4	
VR 0498	Salsify (Oyster plant)	available under FAO code 463: Vegetables fresh nes	N/A	N/A	4	
VR 0504	Tannia (tanier, yautia)	0.118	0.01%	1	5	
VR 0505	Taro (dasheen, eddoe)	2.378	0.2%	6	5	
VR 0506	Turnip, garden	available under GEMS/FAO code 426: Carrots and turnips	N/A	N/A	4	grouped with carrot. no individual data. however turnip consumption are assumed to be very low compared to carrot's
VR 0508	Sweet potato	27.122	1.7%	5	6	
VR 0573	Arrowroot	available under GEMS/FAO code 149: Roots and Tubers. nes	N/A	N/A	4	
VR 0574	Beetroot	available under GEMS/FAO code 463: Vegetables fresh nes			4	Individual data were provided in 2013
VR 0575	Burdock, greater or edible				4	Individual data were provided in 2013
VR 0577	Carrot	8.990	0.6%	10	6	
VR 0578	Celeriac	available under GEMS/FAO code 463: Vegetables fresh nes	N/A	N/A	4	
VR 0583	Horseradish	available under GEMS/FAO code 463: Vegetables fresh nes	N/A	N/A	4	

CODEX CODE	Commodity	Consumption weighted with population (g/hab/day)	% of total consumption	N° of Cluster > 0.5%	N° of Trials	Comments
		<b>tier 1</b>		<b>tier 2</b>		
VR 0585	Jerusalem artichoke	available under GEMS/FAO code 149: Roots and Tubers. nes	N/A	N/A	4	
VR 0587	parsley. turnip-rooted	available under GEMS/FAO code 463: Vegetables fresh nes	N/A	N/A	4	
VR 0588	Parsnip	available under GEMS/FAO code 463: Vegetables fresh nes	N/A	N/A	4	
VR 0589	Potato	84.599	5.4%	16	6	
VR 0590	Radish, black	available under GEMS/FAO code 463: Vegetables fresh nes	N/A	N/A	4	
VR 0591	Radish, Japanese (Chinese radish, Daikon)	available under GEMS/FAO code 463: Vegetables fresh nes	N/A	N/A	4	
VR 0596	Sugar beet				6	
VR 0600	Yams	9.075	0.6%	5	6	
<b>017</b>	<b>STALK AND STEM VEGETABLES</b>					
VS 0469	Witloof chicory (sprouts)					
VS 0620	Artichoke globe	0.485	0.03%	0	4	
VS 0621	Asparagus	2.417	0.2%	0	4	
VS 0622	Bamboo shoots	available under GEMS/FAO code 463: Vegetables fresh nes	N/A	N/A	4	
VS 0623	Cardoon	available under GEMS/FAO code 463: Vegetables fresh nes	N/A	N/A	4	
VS 0624	Celery	available under GEMS/FAO code 463: Vegetables fresh nes	N/A	N/A	4	
VS 0626	Palm hearts	N/A	N/A	N/A	4	data was provided in 2013
VS 0627	Rhubarb	available under GEMS/FAO code 463: Vegetables fresh nes	N/A	N/A	4	
<b>020</b>	<b>CEREAL GRAINS</b>					
GC 0640	Barley	65.711	4.2%	17	6	
GC 0641	Buckwheat	0.133	0.01%	0	4	

CODEX CODE	Commodity	Consumption weighted with population (g/hab/day)	% of total consumption	N° of Cluster > 0.5%	N° of Trials	Comments
		tier 1		tier 2		
GC 0643	Hungry rice (fonio)	0.074	0.005%	0	4	
GC 0644	Job's tears	adlay or Job's tears (Coix lacryma-jobi) available under GEMS/FAO code 9004/108: Cereals. nes	N/A	N/A	4	
GC 0645	Maize (corn)	38.560	2.5%	16	6	
GC 0646	Millet	9.657	0.6%	4	6	
GC 0647	Oats	0,760	0.05%	0	4	
GC 0648	Quinoa	0.026	-	-	4	no GEMS consumption data but FAO world production data/capita
GC 0649	Rice	142.978	9.2%	16	6	
GC 0650	Rye	1.842	0.1%	3	5	
GC 0651	Sorghum (Chicken corn, Dari seed, Durra, Feterita)	12.730	0.8%	5	6	
GC 0653	Triticale	5.5	-	-	4	no GEMS consumption data but FAO world production data/capita. Extrapolation from wheat?
GC 0654	Wheat	145.865	9.4%	17	6	
GC 0655	Wild rice	N/A	N/A	N/A	3	
<b>021</b>	<b>GRASSES FOR SUGAR OR SYRUP PRODUCTION</b>					
GS 0658	Sorgho or sorghum, sweet	N/A	N/A	N/A	3	
GS 0659	Sugar cane				6	
<b>022</b>	<b>TREE NUTS</b>					
TN 0295	Cashew nut	1.129	0.1%	1	5 <sup>4</sup>	
TN 0660	Almonds	0.421	0.03%	0	4 <sup>4</sup>	
TN 0662	Brazil nut	0.022	0.001%	0	4 <sup>4</sup>	
TN 0664	Chestnuts	0.488	0.03%	0	4 <sup>4</sup>	
TN 0665	Coconut	8,920	0.6%	5	6	
TN 0666	Hazelnut	0.146	0.01%	0	4 <sup>4</sup>	
TN 0669	Macadamia nut	available under GEMS/FAO code 434: Nuts. nes	N/A	N/A	4 <sup>4</sup>	
TN 0672	Pecan	available under GEMS/FAO code 434: Nuts. nes	N/A	N/A	4 <sup>4</sup>	
TN 0673	Pine nut	available under GEMS/FAO code 434: Nuts. nes	N/A	N/A	4 <sup>4</sup>	

CODEX CODE	Commodity	Consumption weighted with population (g/hab/day)	% of total consumption	N° of Cluster > 0.5%	N° of Trials	Comments
		<b>tier 1</b>		<b>tier 2</b>		
TN 0675	Pistachio nut	0.168	0.01%	0	4 <sup>4</sup>	
TN 0678	Walnut	0.380	0.02%	0	4 <sup>4</sup>	
?	Arecanut	0.353	0.02%	0	4 <sup>4</sup>	No codex code found. But under the FAO code 236:Arecanuts
<b>023</b>	<b>OILSEED</b>					
SO 0090	Mustard seed	0.153	0.01%	0	4	
SO 0495	Rapeseed				6	No new data was provided
SO 0691	Cotton seed	5.875	-	0	4	expressed in raw commodities: standard industrial yield used. For cottonseed oil. a factor of 5 was applied from oil to seed: 1.175 x 5 = 5.875 g prod/hab/day
SO 0692	Kapok	0.145	-	-	4	no GEMS consumption data but FAO world production data/capita
SO 0693	Linseed (Flax-seed)	0.830	-	-	4	no GEMS consumption data but FAO world production data/capita
OR 0696	Palm fruit (oil)	9,578		3	6	
SO 0697	Peanut, shelled (groundnut)	6.077	0.4%	4	5	
SO 0698	Poppy seed	0.012	0.001%	0	4	
SO 0699	Safflower seed	0.045	0.003%	0	4	
SO 0700	Sesame seed	0.772	0.05%	0	4	
SO 0702	Sunflower seed	6.970	-	4	6	expressed in raw commodities: standard industrial yield used. For sunflower oil. a factor of 2.4 was applied from oil to seed: 2.904 x 2.4 = 6.970 g prod/hab/day
<b>024</b>	<b>SEED FOR BEVERAGES AND SWEETS</b>					
SB 0715	Cocoa beans	1.272	0.1%	0	4	
SB 0716	Coffee beans	2.515	0.2%	2	6	data was provided in 2013 calculation indicated total consumption is above the threshold value of 0.5%
SB 0717	Cola nut	0.091	0.01%	0	4	



CODEX CODE	Commodity	Consumption weighted with population (g/hab/day)	% of total consumption	N° of Cluster > 0.5%	N° of Trials	Comments
		tier 1		tier 2		
<b>027</b>	<b>HERBS</b>					
HH 0624	Celery leaves	available under GEMS/FAO code 463: Vegetables fresh nes	N/A	N/A	4 <sup>4</sup>	
HH 0720	Angelica, including Garden Angelica	N/A	N/A	N/A	4 <sup>4</sup>	
HH 0722	Basil	N/A	N/A	N/A	4 <sup>4</sup>	
HH 0723	Bay leaves	available under GEMS/FAO code 723: Spice. nes	N/A	N/A	4 <sup>4</sup>	
HH 0727	Chives	available under GEMS/FAO code 407: Leeks. other alliaceous veg	N/A	N/A	4 <sup>4</sup>	
HH 0730	Dill	available under GEMS/FAO code 723: Spice. nes	N/A	N/A	4 <sup>4</sup>	
HH 0731	Fennel	available under GEMS/FAO code 711: Anise. badian. fennel. corian and 463: Vegetables fresh nes	N/A	N/A	4 <sup>4</sup>	
HH 0733	Hyssop	N/A	N/A	N/A	3 <sup>4</sup>	
HH 0735	Lovage	N/A	N/A	N/A	3 <sup>4</sup>	
HH 0736	Marjoram (incl Oregano)	available under GEMS/FAO code 463: Vegetables fresh nes	N/A	N/A	4 <sup>4</sup>	
HH 0738	Mints	0.031	0.002%	0	4 <sup>4</sup>	
HH 0740	Parsley	available under GEMS/FAO code 463: Vegetables fresh nes	N/A	N/A	4 <sup>4</sup>	
HH 0741	Rosemary	N/A	N/A	N/A	4 <sup>4</sup>	
HH 0743	Sage and related salvia species	N/A	N/A	N/A	4 <sup>4</sup>	
HH 0745	Savory, summer, winter	available under GEMS/FAO code 463: Vegetables fresh nes	N/A	N/A	4 <sup>4</sup>	
HH 0749	Tarragon	available under GEMS/FAO code 463: Vegetables fresh nes	N/A	N/A	4 <sup>4</sup>	
HH 0750	Thyme	available under GEMS/FAO code 723: Spice, nes	N/A	N/A	4 <sup>4</sup>	

CODEX CODE	Commodity	Consumption weighted with population (g/hab/day)	% of total consumption	N° of Cluster > 0.5%	N° of Trials	Comments
		tier 1		tier 2		
HH 0751	Land cress	N/A	N/A	N/A	3 <sup>4</sup>	
<b>028</b>	<b>SPICES</b>					
HS 0624	Celery seed	available under GEMS/FAO code 463: Vegetables fresh nes	N/A	N/A	4	
HS 0730	Dill seed	available under GEMS/FAO code 723: Spice, nes	N/A	N/A	4	
HS 0731	Fennel, seed	available under GEMS/FAO code 711: Anise, badian, fennel, corian and 463: Vegetables fresh nes	N/A	N/A	4	
HS 0771	Anise seed	0,181	0.01%	0	4	
HS 0773	Caper buds	available under GEMS/FAO code 463: Vegetables fresh nes	N/A	N/A	4	
HS 0774	Caraway seed	available under GEMS/FAO code 711: Anise, badian, fennel, corian	N/A	N/A	4	
HS 0775	Cardamom seed	0.033	0.002%	0	4	
HS 0777	Cinnamon bark	0.061	0.004%	0	4	
HS 0778	Cloves. buds	0.019	0.001%	0	4	
HS 0779	Coriander, seed	available under GEMS/FAO code 711: Anise, badian, fennel, corian	N/A	N/A	4	
HS 0780	Cumin seed	available under GEMS/FAO code 711: Anise, badian, fennel, corian	N/A	N/A	4	
HS 0782	Fenugreek, seed	available under GEMS/FAO code 723: Spice, nes	N/A	N/A	4	
HS 0783	Galangal, rhizomes	N/A	N/A	N/A	4	data was provided in 2013
HS 0784	Ginger, root	0.504	0.03%	0	4	
HS 0786	Juniper, berry	available under GEMS/FAO code 711: Anise, badian, fennel, corian	N/A	N/A	4	
HS 0787	Liquorice, roots	N/A	N/A	N/A	3	

CODEX CODE	Commodity	Consumption weighted with population (g/hab/day)	% of total consumption	N° of Cluster > 0.5%	N° of Trials	Comments
		<b>tier 1</b>		<b>tier 2</b>		
HS 0788	Mace	available under GEMS/FAO code 702: Nutmeg, mace and cardamoms	N/A	N/A	4	
HS 0789	Nutmeg	available under GEMS/FAO code 702: Nutmeg, mace and cardamoms	N/A	N/A	4	
HS 0790	Pepper (black, white)	0.171	0.01%	0	4	
HS 0792	Pimento, fruit (allspice fruit)	available under GEMS/FAO code 689: Chillies and peppers, dry	N/A	N/A	4	
HS 0794	Turmeric, root	N/A	N/A	N/A	4	data was provided in 2013
HS 0795	Vanilla, beans	0.004	0.0002%	0	4	
<b>057</b>	<b>DRIED HERBS</b>					
DH 1100	Hops, dry	0.008	0.0005%	0	4	
<b>066</b>	<b>TEAS</b>					
DT 0446	roselle, dry	N/A	N/A	N/A	3	
DT 1110	camomile or chamomile				4	data was provided in 2013
DT 1111	Lemon verbena (dry leaves)	N/A	N/A	N/A	3	
DT 1112	lime blossoms	N/A	N/A	N/A	3	
DT 1113	mate (dry leaves)	0.335	0.02%	0	4	
DT 1114	Tea, green, black (black, fermented and dried)	1.676	-	-	6	data was provided in 2013 calculation indicated total would be below the threshold value of 0,5% however, consumption is very high in several countries and several safety alerts were reported

## Annex 2: Methodology

### Tiers 1 Calculation

69. Tier one ranking was calculated from GEMS/FOOD Cluster Diet as follow:

70. Items from the same origins were grouped together. Basic grouping was proposed to have only one item per crop if possible, which is more in line with the process of MRL setting and residue trials, for example all commodities containing wheat and wheat extracts were tentatively grouped together.

71. For each country, consumption data (GEMS/FOOD five years average: 2002-2007) were compiled in accordance with the predefined list for each group of commodities, the corresponding consumption value were added.

72. Then, each compiled consumption value was weighed with the corresponding country population and divided by the world population. The resulted sum for each commodity consequently simulates better the relative importance of each commodity in the world and was considered to fit better with the tier 1 approach.

73. Hence, for each commodity, the following calculation was realised:

$$\%_i = \left( \frac{\sum^c \frac{\text{consumption}_{i,c} \times \text{population}_c}{\text{population}_w}}{\sum^c \frac{\text{total consumption}_c \times \text{population}_c}{\text{population}_w}} \right) \times 100$$

- %<sub>i</sub>: percentage of the commodity "i" in worldwide
- consumption<sub>i,c</sub>: consumption of the commodity "i" in the corresponding country "c" (g/hab/day):
- total consumption<sub>c</sub>: total consumption (including sugars, beverages and commodities from animal origins, etc.) in the corresponding country "c" (g/hab/day):
- population<sub>c</sub>: population in the country "c" (hab)
- population<sub>w</sub>: world population (hab)

### Tiers 2 calculation

74. Tier 2 focuses on different existing consumption profiles within each cluster. Indeed a crop considered of minor importance calculated on a world basis could be of relative high importance in a national diet (depending on the quantity and variety of crops or commodities consumed in the country).

75. The clustering system gathers together similarities between diets and gets a good overview of consumption profiles in the world. Nevertheless, in order not to influence excessively the results by a high local consumption inside a cluster, and in addition since a very local consumption is in all likelihood not the commodity the most subjected to international trade and consequently for which a CXL is required, each country consumption was weighted by its population inside its cluster to get a better consumption profile of the cluster. This better takes into account the real number of consumer within each cluster.

76. Hence, for each commodity and each cluster, the following calculation was realised:

$$\%_j = \left( \frac{\sum^c \frac{\text{consumption}_{j,c} \times \text{population}_c}{\text{population}_z}}{\sum^c \frac{\text{total consumption}_c \times \text{population}_c}{\text{population}_z}} \right) \times 100$$

- %<sub>j</sub>: percentage of the commodity "j" in the cluster
- consumption<sub>j,c</sub>: consumption of the commodity "j" in the corresponding country "c" (g/hab/day):
- total consumption<sub>c</sub>: total consumption (including sugars, beverages and commodities from animal origins, etc.) in the corresponding country "c" (g/hab/day):
- population<sub>c</sub>: population in the country "c" (hab)
- population<sub>z</sub>: total population in the cluster (hab)

**Annex 3: Minor Crops Data Collection.**

**Active Substance (CX number)**

**manufacturer:**

**information from CCPR priority list:**

Expression of needs			Data AVAILABLE AND/OR PLANNED													
Country	Crop	Pest / diseases	Country	Crop	Pest / diseases	GAP (if available)			Label Y/N	Existing MRL			Data		data availability YEAR	Public Data Y/N
						Number of application	Rate kg/ha	PHI (days)		CODEX	Regional	National	available /ongoing/planned	Number of trials		
FRANCE	Asparagus	Beatle	France	Asparagus	Beatle	2	0.035	>200	N	-	UE: 0.01(*) default MRL	-	available	2	2012	Y
FRANCE	Fresh Beans without pods	Caterpillar	France	Flageolet	Caterpillar	2	0.02975	3	N	-	UE: 0.01(*) default MRL	-	Ongoing	4	2014	Y

**Annex 4: Members of the EWG**

<b>PARTICIPANTS</b>	<b>NAMES</b>	<b>E-mail</b>
Argentina	Laura Bonomi	lsbordi@senasa.gov.ar
	Codex argentina	codex@minagri.gob.ar
Australia	Alan Norden	Alan.Norden@apvma.gov.au
	Codex Australia	codex.contact@daff.gov.au
Belgium	Wim Hooghe	wim.hooghe@health.belgium.be
Brasil	Luis Rangel	luis.rangel@agricultura.gov.br
Canada	Jennifer Selwyn	jennifer.selwyn@hc-sc.gc.ca
	Peter Chan	peter.chan@hc-sc.gc.ca
Chile	Rodrigo Sotomayor	rodrigo.sotomayor@sag.gob.cl
Costa Rica	giannina lavagni	glavagni@meic.go.cr
	Roger Ruiz Zapata	rruiz@meic.go.cr
EFSA	Hemine Reich	Hermine.REICH@efsa.europa.eu
European Commission	Almut bitterhof	Almut.bitterhof@ec.europa.eu
	Codex Europa	codex@ec.europa.eu
	Volker Wachtler	volker.wachtler@ec.europa.eu
France (chair)	Florence G�rault	<a href="mailto:florence.gerault@agriculture.gouv.fr">florence.gerault@agriculture.gouv.fr</a>
	Jean-Claude Malet	<a href="mailto:jean-claude.malet@agriculture.gouv.fr">jean-claude.malet@agriculture.gouv.fr</a>
	Xavier Sarda	<a href="mailto:xavier.sarda@anses.fr">xavier.sarda@anses.fr</a>
	Micka�l Taillandier	<a href="mailto:mickael.taillandier@anses.fr">mickael.taillandier@anses.fr</a>
	Codex France	SGAE-CODEX-FR@sgae.gouv.fr
Germany	Karsten Hohgardt	karsten.hohgardt@bvl.bund.de
Ghana	Felicia Ansah-Amprofi	fampronge@yahoo.com
	Codex Ghana	codex@gsa.gov.gh
GMUS	Dan Kunkel	kunkel@AESOP.Rutgers.edu
Japan	Masashi_Kusukawa	masashi_kusukawa@nm.maff.go.jp
	Makoto Irie	makoto_irie@nm.maff.go.jp
	Japan Codex	codex_maff@nm.maff.go.jp
	Asako Ogawa	codexj@mhlw.go.jp
Kenya (Co Chair)	Lucy Namu	lnamu@kephis.org
Korea	Chan-Hyeok Kwon	chkwon@korea.kr
	Moo-Hyeog Im	imh0119@korea.kr
	Moon-Ik Chang	1004@korea.kr
	Young-Wook Son	s9918@korea.kr
	Codex Korea	codexkorea@korea.kr
Malaysia	Ili Safuraa Othman Ghani	ilisafura@doa.gov.my
		isafuraa@gmail.com
	Nursiah Mohamad Tajol Aros	nursiah@doa.gov.my
		nur.aros@gmail.com
Codex Malaysia	ccp_malaysia@moh.gov.my	

<b>PARTICIPANTS</b>	<b>NAMES</b>	<b>E-mail</b>
Mexico	Pamela Suárez Brito	psuarez@cofepris.gob.mx
	Denisse Guerra Della Valle	dguerra@cofepris.gob.mx
Morocco	Mohamed Akchati	akchati2000@gmail.com
Netherlands	Trijntje van der Velde	Trijntje.van.der.Velde@rivm.nl
OECD	Béatrice Grenier	Beatrice.Grenier@oecd.org
Thailand (Co Chair)	Pisan Pongsapitch	pisan@acfs.go.th
		pisanp@yahoo.com
	Panpilad Panpilad	panpilad@acfs.go.th
	Codex Thailand	codex@acfs.go.th
United States of America	Barbara Madden	madden.barbara@epa.gov
	Lois Rossi	rossi.lois@epa.gov
Uruguay	Graciela Fiorentino	gfiorentino@mgap.gub.uy
	Codex Uruguay	codex@latu.org.uy
WHO	Philippe Verger	vergerp@who.int