



**JOINT FAO/WHO FOOD STANDARDS PROGRAMME  
CODEX COMMITTEE ON CONTAMINANTS IN FOODS  
Eleventh Session  
Rio de Janeiro, Brazil, 3 – 7 April 2017**

To be held at the Windsor Marapendi Hotel, Rio de Janeiro, Brazil

Comments submitted by Brazil on agenda item 7 and 10

**CL 2017/25-CF Proposed draft Code of practice for the prevention and reduction of arsenic contamination in rice**

**General comments:** Considering that some important information will be available in 2019, we suggest to temporarily suspend the discussion and to conclude the work in 2020.

**Specific comments:**

3.6. Brazil supports the removal of the brackets

4.4.3 Under aerobic conditions, the rice shows higher uptake of cadmium. Therefore, if cadmium concentrations in rice are of concern in a geographic region, risk managers should ensure that implementation of arsenic control measures would not increase cadmium concentrations in rice to unsafe level<sup>1</sup>. If appropriate, risk managers may consider implementation of source directed measures for cadmium reduction in soil, water or fertilisers that are used for rice production<sup>2</sup>.

6.1 National or relevant food control authorities should share information on risks and benefits of consuming polished and/or husked rice among stakeholders in the light of arsenic concentrations and nutrient components,

In paragraph 6.3, Brazil propose to rewrite the sentence to:

6.3 Polished rice and husked rice polished at the higher polishing rate contains less inorganic arsenic, so polishing could be a mitigation measure for inorganic arsenic.

**CL 2017/28-CF Proposed draft Code of practice for the prevention and reduction of mycotoxin contamination in spices**

**General comments:**

Brazil supports the proposal to stop working on the annexes until there is information available about what fungi are involved in production of mycotoxins in spices and about at what stage the infection occur.

**Specific Comments:**

8. **Spices:** Dried components or mixtures of dried plants used in foods for flavouring, colouring, and imparting aroma. The term applies equally to spices in the whole, broken, ground and blended forms. Spices may include the aril (e.g. the mace of nutmeg), bark (e.g. cinnamon), berries (e.g. black pepper), buds (e.g. clove), bulbs (e.g. garlic), rhizomes (e.g. ginger, turmeric), seeds (e.g. mustard), flowers or stigmas (e.g. saffron), pods (e.g. vanilla), resins (e.g. asafoetida), fruits (e.g. chilli) and plant tops (e.g. ....).

*Brazil suggests to include an example of plant top spice*

11. ~~It is also recommended to encourage research studies on the factors affecting the formation of mycotoxins.~~

*Brazil suggests to delete this paragraph because research studies are not recommended practices for a code of practice.*

12. When appropriate, a proper crop rotation or sequence should be applied in order to regenerate the soil fertility and reduce the inoculum load of the relevant toxigenic fungi, to minimize the carry-over of moulds from one year to the next.

15. Recommended insecticides may be necessary to use, when conditions require, minimizing damage to source plants, which may later favour entry and development of toxigenic fungi; for example, through open galleries made by caterpillars.

17. The use of recommended soil fungicides in the process of farm soil preparation may be beneficial to reduce the inoculum load of toxigenic fungi. At sowing, use disinfected seeds to prevent mold and insects and carefully choose the planting season so that the collection of of plants takes place in the driest season. This good practice is essential in areas with warm and humid climate.

20. Spray irrigation should be avoided during the flowering period for all the spices coming from aerial parts of the plant. This could increase both the rate of normal dispersion of spores and the chances of source plant infection with toxigenic fungi. It is recommended also to avoid flood irrigation because it could spread disease throughout the field.

25. Spices coming from aerial parts of the plant that have fallen to the ground are known to be exposed to mould growth. Crops that are affected by mould or infected should be removed. Alternatively, the source plant that has fallen to the ground can be collected separately, if it is washed, cleaned, dried and evaluated for contamination prior to any inclusion within the main lot.

26. The soil under the plant should be covered with a clean sheet of plastic during picking to avoid commodities from getting contaminated by dirt or mixed up with mouldy parts of the plant that have fallen prior to harvesting. It is not applicable to spice rhizomes.

27bis. If possible, only the amount that can be processed in a timely manner should be picked in order to minimize growth of toxigenic moulds prior to processing.

34. Control of insect and rodent activity and maintenance of appropriate moisture levels and temperature in the storage room is essential. Insects and rodents can spread contamination and spoil the crop. ~~If possible, only the amount that can be processed in a timely manner should be picked in order to minimize growth of toxigenic moulds prior to processing.~~

*Brazil wonders if this temperature storage and the relative humidity (37 and 38) are applicable to all the spices covered by this Code of Practice.*

37. Store fresh material for spices or source plants in controlled temperature storage of 5 to 8 degrees Celsius. Care must be taken in cold storage to prevent condensation from the chiller units falling onto the product.

38. Relative humidity of storage conditions should be less than 75 %.

41. When necessary, prior to drying, the harvested products should be sorted to remove any visible organic debris or moldy products before washing with potable water. Prior to washing, there should be a selection process to eliminate any fresh source plant showing symptoms of fungal infection, and small portions of any contaminated fruit part should be removed, because they can contaminate a whole batch. This procedure can be carried out on the farm. The discarded materials should be properly disposed of in order to avoid the recontamination of the clean material.

*For better reading the text, the paragraph 49 should be moved to the paragraph 48.*

48. Drying methods:

1. Sun drying

a. Drying should not occur directly on the ground. Use trays, ~~tarpaulins~~, bamboo mats or drying yards, and make sure that these are clean as it is known that mould spores from previous use could re-contaminate

product during drying. Techniques for cleaning all of the above should be taught to farmers. Never use cow dung paste in bamboo mats to fill the holes.

*For coherence with paragraph 43.*

e. ~~In case of spices coming from fruits,~~ The layer of drying spices should not be more than 4 cm thick, the drying spices must be regularly raked (5-10 times per day) and protected during drying from rain and night dew. Spices should not be allowed to get re-wet during storage or any other time.

52. Fungal growth on stored spices is mainly influenced by temperature and relative humidity of the storage facility and the moisture content of the spice. Storage condition should keep the spices at moisture level of 12-14% and aw of 0.60.

*Paragraph 56 would be better placed in the end of the paragraph 54.*

54. Specific conditions to be utilized include the use of local ventilation systems that force the production of currents of cold, dry air to assure good ventilation, storage in a clean, dry place, and protection from dust, debris, insects ~~and~~ rodents or other animals and birds and should be isolated from areas of excessive human or equipment traffic. Product should be stored in well maintained warehouses that do not allow the ingress of water whether through leaks in the roof or walls or under doors, through open windows, etc.

*Brazil would like a clarification if the spices are in the bulk in paragraph 78.*

82. The manufacturer should specify tips for good use by the consumer to avoid mould growth which include avoiding contact with wet utensils and wooden spoons, closing containers tightly immediately after use, avoiding unnecessary stockpiling and checking the best-before date.