CODEX ALIMENTARIUS COMMISSION

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World Health Organization

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Agenda Item 8(b) **CX/FH 12/44/11**

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON FOOD HYGIENE

Forty-fourth Session

New Orleans, United States of America, 12 – 16 November 2012

Discussion paper on a code of hygienic practice for low-moisture foods

Prepared by the United States of America with input from Australia, Canada and the United Kingdom

Background

1. Prior to the 43rd session of the Codex Committee on Food Hygiene, a meeting of the Working Group on New Work Priorities was held. The Working Group decided the proposal for new work on revising the *Recommended International Code of Hygienic Practice for Spices and Dried Aromatic Plants* should be submitted to the Commission for approval, but because the Committee determined that a horizontal approach should be used to the extent possible, it was also agreed that a discussion paper on a draft *Code of Hygienic Practice for Low-Moisture Foods* should be prepared for consideration by the 43rd session. The paper (CRD 16) was prepared by the United States, with input from Australia, Canada and the United Kingdom. The Committee suggested that the *Recommended International Code of Hygienic Practice for Spices and Dried Aromatic Plants*, as well as codes of practice for other commodities such as tree nuts could become annexes to a *Code of Hygienic Practice for Low-Moisture Foods.* The Committee also agreed that the United States would further develop the discussion paper for a *Code of Hygienic Practice for Low-Moisture Foods* as outlined in CRD 16 for consideration by the 44th session of CCFH.

2. The CCFH had considered new work on low-moisture foods prior to its 43rd session. At the 40th session of CCFH, the UK suggested that new work on a *Code of Hygienic Practice for Cocoa and Chocolate Production and Processing* should be considered. The Committee agreed to the publication of a circular letter to obtain information relevant to such an effort. At the 41st session, the Committee considered new work in this area, but gave first priority to work on revising the *Code of Hygienic Practice for Collecting, Processing and Marketing of Natural Mineral Waters* (CAC/RCP 33-1985) and second priority to the work on revision of *Principles for the Establishment and Application of Microbiological Criteria for Foods* (CAC/GL 21-1997). The Committee agreed with the conclusion of the working group that work on a *Code of Hygienic Practice for Cocoa and Chocolate Production and Processing* could be reconsidered in the future. There was discussion about expanding the scope of a code of hygienic practice to other low-moisture foods at the time the code of hygienic practice for chocolate was initially proposed. At the 43rd Session of CCFH, Peru recommended new work on a *Code of Hygienic Practice for the Production and Processing of Cocoa (Cacao) and Chocolate.*

3. Low-moisture foods have historically been considered to present a minimal risk of causing illness, because they do not support the growth of pathogens. However, over the last few decades, a number of outbreaks of salmonellosis in a number of different countries have been associated with the consumption of ready-to-eat low-moisture food products, including chocolate, milk powder, powdered infant formula, raw almonds, breakfast cereals, dry spices and seasonings, paprika-seasoned potato chips, infant cereals, peanut butter, sesame, desiccated coconut and children's snacks made of puffed rice and corn with a vegetable seasoning. In many cases the number of *Salmonella* consumed that resulted in illness was low. In addition, illnesses due to *Escherichia coli* O157:H7 have also been attributed to low-moisture foods such as nuts. These outbreaks underscore the need to ensure appropriate hygienic practices in the production of low-moisture foods.

4. Codex currently has a number of Codes of Hygienic Practice for low-moisture foods, including the *Code of Hygienic Practice for Dried Fruits* (CAC/RCP 3), *Code of Hygienic Practice for Desiccated Coconut* (CAC/RCP 4), *Code of Hygienic Practice for Dehydrated Fruits and Vegetables*

(CAC/RCP 5), *Code of Hygienic Practice for Tree Nuts* (CAC/RCP 6), *Code of Hygienic Practice for Ground Nuts (Peanuts)* (CAC/RCP 22), and *Code of Hygienic Practice for Spices and Dried Aromatic Plants* (CAC/RCP 42). There is currently interest in revising these codes to incorporate updates in scientific knowledge and in consolidating codes where practical. One suggestion from Australia is to combine the *Code of Hygienic Practice for Dried Fruits* (CAC/RCP 3), the *Code of Hygienic Practice for Desiccated Coconut* (CAC/RCP 4), the *Code of Hygienic Practice for Dehydrated Fruits and Vegetables* (CAC/RCP 5), and the *Code of Hygienic Practice for Spices and Dried Aromatic Plants* (CAC/RCP 42) into one document and to combine the *Code of Hygienic Practice for Tree Nuts* (CAC/RCP 6) and the *Code of Hygienic Practice for Ground Nuts (Peanuts)* (CAC/RCP 22) into one code.

Recommendations:

5. In view of the risks to public health described above that have been attributed to low-moisture foods and the Committee's decision to move toward more general guidance. it is recommended that CCFH consider developing a *Code of Hygienic Practice for Low-Moisture Foods*.

6. It is envisioned that the Code would have annexes that would address specific commodities and incorporate and update the various codes of practice related to low-moisture foods that are currently available. This is described in the project document that is included with this discussion paper. (See Appendix 1).

Scope of a Code of Hygienic Practice for Low-Moisture Foods

7. The *Code of Hygienic Practice for Low-Moisture Foods* would apply to the control of hazards in foods with a water activity of 0.85 or below that are exposed to the processing environment following a microbial inactivation step, products that are not subjected to an inactivation step, or products in which low-moisture ingredients that may be contaminated with pathogens such as *Salmonella* are added after an inactivation step. These products are produced in a dry environment in which wet cleaning and sanitizing are minimal, because water presents a risk for growth of *Salmonella*, and potentially other pathogens, in the environment and subsequent contamination of product. The code would be applicable to various products that include, but are not limited to, peanut butter and other nut butters, cereals, dry protein products (such as dried dairy products, soy protein, rice protein), confections (such as chocolate), snacks (such as spiced chips), tree nuts, desiccated coconut, seeds for consumption (e.g., sunflower, sesame and pumpkin seeds), and spices.

Aspects to Be Covered by a Code of Hygienic Practice for Low-Moisture Foods

8. The *Code of Hygienic Practice for Low-Moisture Foods* would follow the structure of the *General Principles of Food Hygiene*, and include only provisions of particular importance for the safety of low-moisture products.

Need for Expert Scientific Advice

9. FAO/WHO can facilitate this effort by calling for data on microbiological and other hazards in low-moisture foods (including those noted in the scope), and the role of various agricultural and manufacturing practices in enhancing or mitigating these hazards for consumers. FAO/WHO should include the entire farm-to-table continuum, including primary production, processing and marketing. Based on this information, FAO/WHO could prioritize low-moisture foods, similar to the approach that was used for fresh fruits and vegetables. This would provide information for the Committee in determining the scope of the document and the need and the priority for annexes on specific commodities.

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Appendix I

PROJECT DOCUMENT

Development of a Code of Hygienic Practice for Low-Moisture Foods

1. Purpose and Scope of the Standard

The Code of Hygienic Practice for Low-Moisture Foods would apply to the control of microbiological hazards in foods having a water activity of 0.85 or below that are exposed to the processing environment following a microbial inactivation step, products that are not subjected to an inactivation step, or products in which low-moisture ingredients, which may be contaminated with pathogens, are added after an inactivation step. The Code would be applicable to various products that include, but are not limited to, peanut butter, cereals, dry protein products (such as dried dairy products) confections (such as chocolate), snacks (such as spiced chips), tree nuts, desiccated coconut, seeds for consumption, and spices.

2. Relevance and Timeliness

A number of outbreaks have been linked to low-moisture foods and have implicated *Salmonella* and *Escherichia* coli O157:H7. These outbreaks underscore the need to ensure appropriate hygienic practices in the production of such foods. Codex has currently a number of Codes of Hygienic Practice for low-moisture foods and there is an interest in updating them.

3. Main aspects to be covered

The Code of Hygienic Practice for Low-Moisture Foods would follow the structure of the Recommended International Code of Practice General Principles of Food Hygiene, and include only provisions of particular importance for the safety of low-moisture foods. It would include:

- Minimizing contamination at primary production
- Preventing the entry and spread of enteric pathogens in the processing facility
- Hygienic practices and control where the low-moisture food is exposed to the environment
- Hygienic design principles for buildings and equipment
- Procedures to prevent or minimize the growth of *Salmonella* in the facility
- Validation of control measures to minimize or prevent hazards
- Procedures for verification of control measures

4. Assessment against the *Criteria for the establishment of work priorities*

4.1 The Code needs to be revised in order to meet the General criterion: Consumer protection from the point of view of health, food safety, ensuring fair practices in the food trade and taking into account the identified needs of developing countries.
The proposed work is directed primarily at the control of microbial hazards such as *Salmonella* spp. and *E. coli* O157:H7, which are common public health problems world-wide. This document will provide guidance to all countries on the hygienic productions of these products.

4.2 Consideration of the global magnitude of the problem or issue
There is the potential for contamination of products covered by this Code from multiple sources and under different processing environments.

5. Relevance to the Codex strategic objectives

The proposed work directly relates to the following Codex Strategic Goals from the 2008-2013 Strategic Plan.

Goal 1: Promoting Sound Regulatory Frameworks

The development of this Code is consistent with the development of international standards, guidelines and recommendations based on scientific principles for the reduction of health risks along the entire food chain. This Code will provide important information for all countries in order to achieve a higher level of food safety.

Goal 2: Promoting the widest and consistent application of Scientific Principles and Risk Analysis

Risk analysis as it applies to food safety across the food chain is an internationally accepted discipline and will require ongoing and sustained input from Codex, its parent organizations and national governments to promote its understanding and application at the international and national levels.

Goal 3: Strengthening Codex Work-Management Capabilities

More expeditious and efficient work by Codex is necessary to provide members and international organizations with the standards, guidelines and recommendations that they need. In light of recent outbreaks implicating low-moisture foods, this work will be very timely.

Goal 5: Promoting Maximum and Effective Participations of Members

The development of this Code should generate interest and participation from all country members. We anticipate having a first face-to-face meeting following by an electronic working group using email exchanges and web meetings.

6. Information on the relation between the proposal and other existing Codex documents

The revised Code will build on the General Principles of Food Hygiene (CAC/RCP 1-1969) and will provide additional recommendations, as needed. In addition, a review of existing Codex codes of hygienic practice will be done to determine whether they adequately address the products identified in the scope in order to avoid duplication of efforts.

7. Identification of any requirement for and availability of expert scientific advice

We anticipate that there may be a need for scientific advice from FAO/WHO (JEMRA) on the pathogen-specific hazards associated with various food types. We will be seeking expert advice from FAO/WHO to determine which low-moisture foods represent the highest priority. The advice will then be used to better define the Scope of the document and determine if annexes should be used to include specific guidance due to the variety of food products included in the Scope.

8. Identification of any need for technical input to the standard from external bodies so that this can be planned for

In addition to scientific expert advice from JEMRA, technical input may be requested from the International Commission of Microbiological Specifications for Foods, especially if the working group would want to entertain the development of microbiological criteria.

9. The proposed time-line for completion of the new work, including the start date, the proposed date for adoption at Step 5, and the proposed date for adoption by the Commission

Proposed time lines:

A five-year timeline is proposed for the completion of the Code of Hygienic Practice for Low-Moisture Foods. A proposed draft annex would be ready for initial discussion by the CCFH in 2013, with a proposed date for adoption at Step 5 in 2015 and adoption at Step 8 in 2016.