CODEX ALIMENTARIUS COMMISSION

Food and Agriculture Organization of the United Nations

World Health Organization

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Agenda Item 8 **CX/NFSDU 10/32/8**

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON NUTRITION AND FOODS FOR SPECIAL DIETARY USES
Thirty second Session

Crowne Plaza Hotel, Santiago, Chile
1 – 5 November 2010

DISCUSSION PAPER ON THE INCLUSION OF NEW PART B FOR UNDERWEIGHT CHILDREN IN THE STANDARD FOR PROCESSED CEREAL-BASED FOODS FOR INFANTS AND YOUNG CHILDREN (CODEX STAN 74-1981)

(Prepared by India)

1. INTRODUCTION:

During the 29th session of the Codex Committee on Nutrition and Foods for Special Dietary Uses (CCNFSDU), the Delegation of India proposed a separate standard for Processed Cereal-Based Foods for 'Underweight Infants and Young Children' so that nutritionally superior and energy dense composition in the proposed standard would help reduce the burden of undernutrition. After discussion, the CCNFSDU agreed that the Delegation of India with the support of other interested parties working electronically would revise the document in the light of comments of the current session and prepare a project document for the consideration. Subsequently, in the 30th & 31st sessions of CCNFSDU, India introduced revised proposals. In the 31st session of the CCFNSDU, it was agreed that an Electronic Working Group (EWG) chaired by India would prepare the revised discussion paper on the inclusion of new 'Part B' in the Standard for Processed Cereal-Based Foods, for consideration by the next session.

The member countries of the Electronic Working Group (EWG) are Australia, Belgium, Bolivia, Botswana, Canada, Colombia, European Union, Indonesia, Japan, Libya, Malaysia, New Zealand and USA.

The Discussion Paper has been therefore prepared to address the comments raised at 30th and 31st Sessions of the CCNFSDU as well as the comments and suggestions received from the members of EWG.

2. BACKGROUND

Undernutrition is a process that often starts in utero and may last, particularly for girls and women, throughout the life cycle. A stunted girl is likely to become a stunted adolescent and later a stunted woman. Besides posing threats to her own health and productivity, poor nutrition that contributes to stunting and underweight increases a woman's likelihood of adverse pregnancy and birth outcomes. Undernourished mothers also have a far higher risk of delivering babies with low birth weight – a condition that gravely heightens the baby's risk of death[1]. The inter-generational cycle of undernutrition, manifested as low birth weight is compounded further by gender discrimination exclusion and poverty.

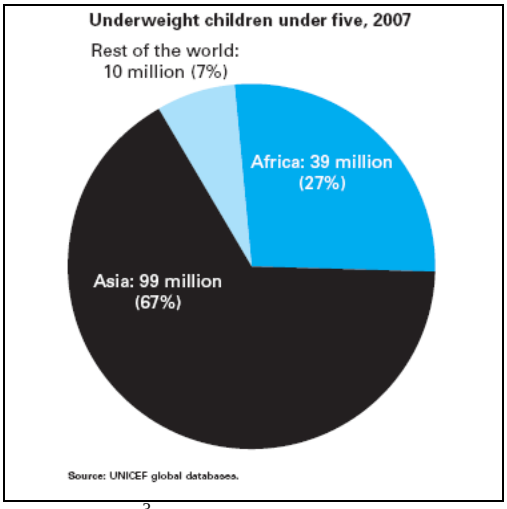
Globally it is estimated that undernutrition is responsible, directly or indirectly, for at least 35% of deaths in children less than five years of age. Undernutrition is also a major cause of disability preventing children who survive from reaching their full development potential. An estimated 32% or 186 million, children below five years of age in developing countries are stunted and about 10% or 55 million are wasted[2]. Millions of children in the developing world are at border line of normal and underweight and may slip into

[1] The State of World's Children 2009, Maternal and Newborn Health, United Nations Children's Fund (UNICEF), December 2008

[2] Indicators for assessing infant and young child feeding practices, Part 3, Country profiles, World Health Organisation, 2010

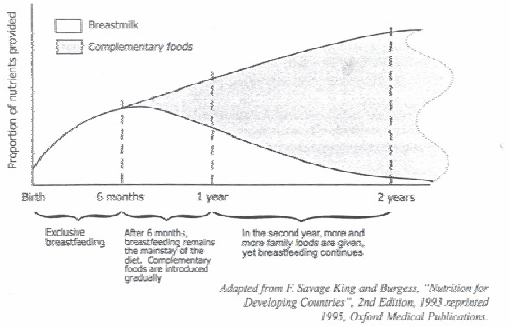
the category of underweight at any time due to one or another cause of malnutrition unless timely and appropriate interventions are made.

According to the State of World's Children 2009 by UNICEF, 148 million children under the age of five years in the developing world were underweight for their age in 2007 and two thirds of these children live in Asia alone. Together Asia and Africa accounted for 93% of all underweight children under the age of five years in the developing world.



Exclusive breastfeeding provides all essential nutrients required for the growth of the infant upto 6 months. With the growth of a child the nutritional needs too are increased, and adequate energy, protein and other nutrients are necessary. From six months onwards, when breast milk alone is no longer sufficient to meet all nutritional requirements, infants enter a particularly vulnerable period of complementary feeding during which they make a gradual transition to eating family foods. The incidence of malnutrition rises sharply during the period from 6 to18 months of age in most countries, and the deficits acquired at this age are difficult to compensate for later in childhood[3]. A recent WHO document stresses that appropriate nutrition in children 6-23 months of age requires interventions across the life span, from pregnancy into the first 2 years of life. It includes support for maternal nutrition, early initiation of breastfeeding, exclusive breastfeeding for 6 months, and the introduction of adequate complementary foods at 6 months with continued breastfeeding for 2 years of age or beyond[4]. The graph -1 above provides an understanding of the proportion of nutrients provided between birth and the age of 2 years as well as the widening gap in nutrition levels that needs to be fulfilled through complementary food which should be with energy dense food.

Graph -1: Proportion of Nutrients & widening gap



Considering the fact that undernutrition is a global problem and many countries across the world are facing the challenge of reducing the number of underweight children to achieve the Millennium Development Goals (MDGs), it is important that the needs of all the countries in terms of appropriate standards for the processed cereal based foods for underweight infants and young children is appreciated by the Codex Committee on Nutrition and Foods for Special Dietary Uses (CCNFSDU).

In the revised standard for Processed Cereal Based Foods for Infants and Young Children, (CODEX STAN 074-1981 Rev. 1-2006), the minimum cereal content of the final mix is fixed at 25% and the minimum standards for protein content are not defined for all the products. India along with some other member countries was of the opinion that since the processed / commercial infant foods form part of the complementary feeding in children under 2 years, the energy density, protein quantity and quality therefore are all important. Processed Cereal based foods providing energy density of 4kcal/g (16.74kj) and 12% protein would help in bridging the protein and energy gap of complementary foods in children under 2 years.

The purpose of inclusion of a new 'Part-B' for underweight children in the Codex Standards for Processed Cereal Based Foods for Infant and Young Children (CODEX STAN 074-1981 Rev. 1-2006) is to provide standards which would include specific provisions especially for enhancing the cereal content, minimum protein contents and energy density.

[3] Complementary feeding: Report of the global consultation, Summary of guiding principles, World Health Organisation, 2002

[4] Strengthening action to improve feeding of infants and young children 6-23 months of age in nutrition and child health programmes Report of proceedings, Geneva, 6-9 October 2008, World Health Organisation, 2008

It is essential that a new 'Part B' containing the higher cereal, protein and energy contents be added to the Codex Standard for Processed Cereal Based foods for underweight Infants and young Children (CODEX STAN 74-1981 Rev. 1-2006) for preventing and addressing the nutritional needs of underweight infants and young children.

3. RATIONALE FOR ASPECTS TO BE COVERED

The present proposal of India for addition of a new 'Part B' to the Standard for Processed Cereal Based Foods for Infants and Young Children (CODEX STAN 74-1981 Rev. 1-2006) is essential for meeting the challenge of improving nutrition of underweight infants and young children.

The key issues are as follows:

3.1 Cereal content in Cereal Based Foods to be at least 50%

The processed cereal based foods for infants and young children are based primarily on cereals since they are not only an important source of carbohydrates but also provide a good amount of protein and other nutrients like minerals and vitamins. By reducing the cereal content to 25%, as was done in the Revised Standard for Processed Cereal Based Foods for Infants and Young Children (CODEX STAN 74-1981 Rev. 1-2006), the pulse content, which is usually around 30-40% of cereal content, would also get reduced. If the pulse content is more than 30-40 per cent of the cereals, the texture and the taste of the final product would change and therefore the palatability of the final product is adversely affected. If the cereals and pulses together add up to only 40%, then the gap will have to be filled in by adding starchy roots and tubers such as yam, tapioca etc. that not only have very low nutritive value but also have certain toxic compounds like linamarine, cyanogenic glycosides etc. This may worsen the nutritional status of children already at risk.

In view of the above, laying down the minimum content of cereals in cereal based foods as 50%, will improve the nutritional density of the infant foods and will leave less scope for replacing the precious cereals with the cheap starchy roots.

3.2 Energy Density of the Cereal Based Foods to be minimum 4 kcal/g on dry weight basis:

WHO recommends[5] that complementary foods with low energy density can limit energy intake and the average energy density should not usually be less than 4.18 kJ /g (1 kcal/g) of reconstituted food. It also concludes that the breastfed infants older than eight months should receive at least three meals of complementary foods per day and that if the energy density of the diet is less than 4.18 kJ /g (1kcal/g), more than three meals would be needed.

Widespread prevalence of under-nutrition among infants and young children across the world is attributed to the consumption of low energy dense complementary foods after the age of six months. This necessitates ensuring an appropriate Codex Standard for processed cereal based foods for underweight infants and young children prescribing an optimum energy density.

In view of above, it is necessary that the energy density of processed cereal based foods for underweight infants and young children should not be less than 4.18 kJ / g (1 kcal/g) of the reconstituted food ready to consume 16.74 kJ (4 kcal) on dry weight basis. Fats and oils may be added to increase the energy density to more than 16.74kJ (4kcal/g) on a dry weight basis.

[5] Feeding and Nutrition of Infants and Young Children, Guidelines for the WHO European Region, with emphasis on the former Soviet countries, WHO Regional Publication European Series No. 87

3.3 Minimum protein content to be at least 12 g per 100 g on dry weight basis:

According to section 3.3.2 of the Revised Standard for Processed Cereal Based Foods For Infants and Young Children (CODEX STAN 074-1981 Rev. 1-2006), the protein content shall not exceed 1.3g/100 kJ (5.5g/100 kcal) for products defined under 2.1.2, which include cereals with an added high protein food which are or have to be prepared for consumption with water or other appropriate protein free liquid. It may be noted that for the item 2.1.1, there is no lower limit for protein content prescribed in the standard. Prescribing minimum protein content is essential as undernutrition and stunting peak in the age group of 6 to 24 months of age, which contribute to high prevalence of undernutrition globally. When minimum protein content is not prescribed, it leaves enough room for lowering the protein content even to an undesirable level. Prescribing minimum protein content will ensure adequate protein levels in these foods.

The minimum protein content of cereal based foods is required, since: (i) Protein Energy Malnutrition (PEM) is high; (ii) Milk intake is low; (iii) Protein intakes are low; and (iv) Infection rates are high in these age groups which increase both energy and protein requirements.

In the context of preventing undernutrition and management of underweight children globally, it is proposed that minimum protein content should be 12grams per 100 grams on dry weight basis in these products, or 3g/418kJ (3g/100 kcal).

4. Intended population

This proposal will cover processed cereal-based foods intended for feeding as complementary food from the age of 6 months onwards for underweight infants and young children, as well as infants and young children at risk for undernutrition, due to inadequate complementary feeding practices using local foods.

5. Differences between India's proposal and other proposals or standards

The Codex Standard for Processed Cereal Based Foods for Infants and Young Children (CODEX STAN 74-1981 Rev. 1-2006) stipulates that cereals should form at least 25% of the final mixture on dry weight basis, energy density should not be less than 3.34kJ /g (0.8 kcal/g) and mentions only a higher limit for the protein content cereal-protein mixtures (2.1.2) and does not prescribe any minimum protein content for these for the same.

The proposal from Ghana is aimed at mainly revising the guidelines on formulated supplementary foods for infants and young children. As stated in the document, Ghana proposes changes to serving size, fortification levels, ingredients and processing methods for the wide range of foods that together constitute Formulated complementary foods (FCF) in addition to addressing the issue of food safety etc. This proposal further takes into account the identified needs of moderately malnourished and 'at-risk' children aged 6–36 months.

India proposes to establish a new 'Part B' for underweight infants and young children above the age of 6 months in the Codex Standards for Processed Cereal Based Foods for Infant and Young Children (CODEX STAN 74-1981 Rev. 1-2006) to provide standards which would include specific provisions for enhancing the minimum cereal content to 50% along with increased energy density to 4.18 kJ /g (1 kcal/g) and prescribing minimum 12% protein content by dry weight.

The main difference between these two proposals is that India's proposal is for addition of Part 'B' of standards for processed cereal based foods for underweight infants and young children, while Ghana's proposal is mainly for revising the guidelines on formulated supplementary foods for infants and young children. The guidelines are guiding principles whereas a standard denotes specific acceptance of norms of ingredients and composition for the final products.

Proposed Project Document is Annexed.

Annex

PROPOSAL FOR INCLUSION OF NEW "PART B" FOR UNDERWEIGHT CHILDREN IN THE STANDARD FOR PROCESSED CEREAL-BASED FOODS FOR INFANTS AND YOUNG CHILDREN (CODEX STAN 74-1981 Rev. 1-2006)

PROJECT DOCUMENT

1. The purposes and the scope of the standard:

The main purpose of this 'India document' is to establish a new 'Part B' for underweight infants and young children above the age of 6 months in the Codex Standard for Processed Cereal Based Foods for Infants and Young Children (CODEX STAN 74-1981, Rev. 1-2006) to provide standards which would include specific provisions for enhancing the cereal content, energy density and prescribing minimum protein contents.

2. Its relevance and timeliness:

Globally it is estimated that undernutrition is responsible, directly or indirectly, for at least 35% of deaths in children less than five years of age. Undernutrition is also a major cause of disability preventing children who survive from reaching their full development potential. An estimated 32% or 186 million, children below five years of age in developing countries are stunted and about 10% or 55 million are wasted[6]. Millions of children in the developing world are at border line of normal and underweight and may slip into the category of underweight at any time due to one or another cause of malnutrition unless timely and appropriate interventions are made.

According to State of Worlds Children, 2009 by UNICEF, 148 million children under the age of five years in the developing world were underweight for their age in 2007 and two thirds of these children live in Asia alone. Together Asia and Africa accounted for 93% of all underweight children under the age of five years in the developing world.

Considering the magnitude of the problem of undernutrition it is necessary that all the efforts are focused towards reducing undernutrition which also includes setting up of suitable Codex Standards for processed cereal based complementary foods.

The new 'Part B' proposed by India is intended for all the underweight Infants and young children' as well as children at risk due to inadequate complementary feeding practices for preventing undernutrition later. It would also support progress towards achieving Goal 1 and 4 of the Millennium Development Goals (MDGs) that sets out to reduce hunger as well as to reduce the mortality rate by two thirds among children under five, by the year 2015.

The relevance of the new work was well supported by several delegations and observers and volunteered to join India to develop the revised version of the discussion paper.

3. The main aspects to be covered:

The proposed work focuses on following three key issues concerning underweight infants and young children including those at risk:

3.1 Cereal content in Cereal Based Foods should be at least 50%: The processed foods for underweight infants and young children are based primarily on cereals, as they are not only an important source of carbohydrates but also provide a good amount of protein and other nutrients like minerals and vitamins.

3.2 Minimum protein content should be at least 12%: The minimum content of protein in the processed cereal based foods for underweight infants and young children should not be less than 12% on dry weight basis and the quality of the protein should not be less than 70% of that of casein.

3.3 Energy Density: The energy density of processed cereal based foods for underweight infants and young children should not be less than 4.18 kJ / g (1 kcal/g) of the reconstituted food ready to consume or 16.74 kJ (4 kcal) on dry weight basis. Fats and oils may be added to increase the energy density above 16.74 kJ (4 kcal) on a dry weight basis.

4. An assessment against the Criteria for the establishment of work priorities:

[6] Indicators for assessing infant and young child feeding practices, Part 3, Country profiles, World Health Organization, 2010

The proposed addition as 'Part B' to the Codex Standard for Processed Cereal Based Foods for Infants and Young Children (CODEX STAN 74-1981 Rev. 1-2006) will ensure protection of consumer health and ensuring fair practices in the food trade addressing the needs of underweight infants and young children aged 6 months and above including those at risk.

5. Relevance to the Codex strategic objectives:

The proposed new work is in line with the Codex Alimentarius Commission Strategic Plan 2008–2013

Goal 1 – Promoting Sound Regulatory Framework- (specifically **1.1** Review and develop Codex standards and related texts for food safety and **1.2** Review and develop Codex standards and related texts for food quality)

Goal 2: Promoting widest and consistent application of scientific principles and risk analysis point no 11.

Goal 5: Promoting Maximum and Effective Participation of Members especially from developing countries

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

The proposal by Ghana which was discussed in the previous session of CCNFSDU, primarily aims at revising the guidelines (CAG/GL 08-1991). Ghana's proposal includes changes to serving sizes, fortification levels, ingredients which also includes cereals and legumes, processing methods. In addition it also addresses ready to use products, compressed bars etc. and food based fortification for formulated supplementary/complementary foods.

India's proposal focuses mainly on changes in cereal content and energy density and protein content in Processed Cereal-Based Foods for Infants and Young Children. India proposes that a part B may be added to the existing "CODEX STAN 74-1981, Rev. 1-2006", enhancing the minimum cereal content to 50% along with increased energy density to 4.18 kJ /g (1 kcal/g) and prescribing minimum 12% protein content by dry weight in these products.

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

None foreseen

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

None foreseen

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; the time frame for developing a Standard should not normally exceed five years:

ACTIVITY	Step / date
The 32nd CCNFSDU agrees the work to be undertaken	November 2010
34th Session of the Commission approves New Work	July 2011
Draft standard for new 'Part B' of Codex Stan 074-1981, Rev. 1 - 2006 is circulated for comments for consideration by 33rd Session of the CCNFSDU, 2010	Step 3/ Nov. 2011
Provisional adoption by the 35th Session of the Commission	Step 5/ July 2012
Final adoption by the 36th Session of the Commission	Step 8/ July 2013