



**JOINT FAO/WHO FOOD STANDARDS PROGRAMME  
CODEX COMMITTEE ON NUTRITION AND FOODS FOR SPECIAL DIETARY USES**

**Thirty-ninth Session**

**Berlin, Germany  
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**JEMNU REQUEST FOR THE ESTABLISHMENT OF NITROGEN TO PROTEIN CONVERSION FACTORS FOR SOY  
AND MILK PROTEINS**

**Discussion Paper**

(Prepared by Canada and the United States of America)

## 1) Background

The current approved Codex methodology to determine protein content is to detect Nitrogen and then convert to protein using the appropriate conversion factor. There is currently some discussion in the scientific community about the appropriate nitrogen to protein conversion factors to use in the various matrices. Across Codex standards, there is no single universally agreed upon nitrogen to protein conversion factor for soy and milk.

At the 37th Session of the Codex Committee on Nutrition and Foods for Special Dietary Uses (CCNFSDU), the Committee raised the question about the appropriate nitrogen to protein conversion factors to be used for milk and soy protein in infant formula and follow-up formula. The Committee agreed to request advice from the Codex Committee on Methods of Analysis and Sampling (CCMAS) on the accuracy and appropriateness of 5.71 as the nitrogen to protein conversion factor for soy protein isolates used in formula for infants and young children and to consider the amino acid profile of the isolate. However, at the 37th Session of CCMAS (REP16/MAS), the Committee informed CCNFSDU that appropriate protein conversion factors were not part of the scope of CCMAS and noted that FAO and WHO could convene an expert panel to assess the scientific basis for protein conversion factors to answer the question of appropriate protein conversion factors for use by Codex.

## 2) Joint Expert Meetings on Nutrition (JEMNU)

The Joint Expert Meetings on Nutrition (JEMNU) was established to provide scientific information and advice to the committees of the Joint FAO/WHO Food Standards Programme (i.e. Codex) or Member Countries. At the 38th Session of the CCNFSDU, the Committee was asked to consider the draft proposal prepared by the Secretariat on the amendment to Section 6 "Selection of risk assessor by CCNFSDU", paragraph 33 of the nutritional risk analysis principles to include JEMNU as a primary source of scientific advice. The Committee agreed to forward the proposed amendments to Section 6, Paragraph 33 to the Commission for adoption.

As evidence reviews and JEMNU meetings are funded through extra budgetary funds, Codex committees or Member Countries which are requesting advice have to collaborate with FAO/WHO in identifying sources of funds for a meeting. Funding for JEMNU is now available to initiate an expert meeting to provide advice to CCNFSDU on appropriate nitrogen to protein conversion factors.

## 3) Protein Conversion Factors Questions

The Committee was reminded at the 38th Session of CCNFSDU that Step 1 of the Terms of Reference and Rules of Procedures of JEMNU states the need for the Codex body or Member Countries requesting information or scientific advice from JEMNU to formulate the PICO questions necessary for JEMNU to respond to specific requests. To ensure the questions asked to JEMNU provide the Committee with the appropriate advice, draft questions have been developed for consideration by the Committee.

- 1) Are the existing nitrogen to protein conversion factors appropriate for determination of protein? Prioritization of the commodity could be based on the most common protein sources used in infant formula and follow up formula (i.e. milk and soy based proteins) and move on to others if resources are sufficient.

- 2) If not, is there sufficient evidence to establish internationally agreed upon nitrogen to protein conversion factors for the prioritized commodities (i.e. milk and soy based proteins)? The outcome should include internationally agreed upon nitrogen to protein conversion factors for soy and milk proteins based on the best available science.
- 3) If there is conflicting information preventing the establishment of internationally agreed upon nitrogen to protein conversion factors for the prioritized commodities:
  - a. What is the JEMNU recommendation for the most appropriate conversion factors to be used in Codex standards? The outcome should include recommended nitrogen to protein conversion factors for soy and milk proteins based on the best available science.
  - b. What information gaps need to be addressed to develop universally applicable nitrogen to protein conversion factors?