

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of the
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World Health
Organization

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Agenda Item 4

NFSDU/39 CRD/24

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

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Comments of European Vegetable Protein Association (EUVEPRO)

EUVEPRO COMMENTS ON CRD 5:

Discussion Paper by Canada and the United States of America for a JEMNU REQUEST FOR THE ESTABLISHMENT OF NITROGEN TO PROTEIN CONVERSION FACTORS FOR SOY AND MILK PROTEINS

Background: At the 38th session of CCNFSDU, Nitrogen Conversion Factors (NCF), which are used to convert a total nitrogen value to a protein value when using either Kjeldahl or combustion techniques, were a topic of discussion while considering Agenda Item 5: Review of the Standard for Follow-Up Formula (CODEX STAN 156-1987). At issue was the inclusion of a reference for use of a NCF of 5.71 for soy protein in Footnote 2 of the proposed revised standard. During the plenary session, the FAO representative addressed this issue directly, making the following points:

- Nitrogen determinations are an estimate of total protein, so are approximate in nature
- Determining the true protein content of a sample is not possible using a simple conversion of nitrogen to protein.
- Changing the established conversion factor would likely have a major impact on the evaluation of agricultural products as well as formulation, product labelling, and possibly dietary recommendations for all products containing the protein source affected by the change.
- If such a change were considered for soy, then the committee should consider whether this should also be considered for other food categories, and trigger a need to review all the conversion factors.

At the conclusion of this session, the Committee amended the footnote and dropped all reference to an NCF of 5.71 for soy, instead leaving it at the established value of 6.25. The footnote now reads

“2) For the purpose of this standard the calculation of the protein content of the final product ready for consumption should be based on $N \times 6.25$, unless a scientific justification is provided for the use of a different conversion factor for a particular product. The protein levels set in this standard are based on a nitrogen conversion factor of 6.25. For information the value of 6.38 is used as a specific factor appropriate for conversion of nitrogen to protein in other Codex standards for milk products.”

JEMNU Request: As noted in NFSDU/39 CRD/5 discussion paper submitted by the United States and Canada, there is still no clear consensus in the scientific or regulatory communities regarding NCFs. EUVEPRO is supportive of the call for an expert panel to review the available data on the factors that are currently in use for the determination of total protein content of food or feed. However, the current proposal to limit the review to only soy and milk is not appropriate. We would argue that, if such a review is to be conducted by JEMNU, that the mandate be for a review of conversion factors used for ALL protein sources currently available in the food supply chain in order to assure fair competition. These include (in addition to soy and milk) protein from pea and other legumes and pulses (e.g., lentils and chickpeas), algae (in all forms, including microalgae and others), rice, wheat, corn, oats, potatoes, chia seeds, hemp, quinoa and other grains, eggs, meat, fish, and poultry, and also others ingredients such as rice flour which may contain proteins, and other potential protein sources such as cocoa powder, collagen, and/or milkfat globule membrane.

When considering this request, we would also urge the committee to consider other potential consequences of a review of the scientific basis for conversion factors. As noted above, while they have been extremely valuable tools for the determination of proteins content, these factors only facilitate estimates of total protein, not absolute amounts. Even so, they have facilitated an effective measurement in trade for over 100 years.

One potential outcome of the scientific assessment would be a recommendation to replace currently used protein measurement techniques with a more accurate method. This was the recommendation of FAO following a technical workshop entitled “Food energy-methods of analysis and conversion factors”(1). They recommended determining protein content by summing the weights of each individual amino acid (the building blocks of proteins) measured using amino acid analysis techniques. However, there is currently no official AOAC method for amino acid determination in foods. Establishing a universal method for all food sources and matrixes would come at significant expense to CODEX and would likely take several years to complete.

Reference:

1. FAO Food and Nutrition Paper 77; “Food energy-methods of analysis and conversion factors”, Report of a technical workshop, Rome, 3-6 December 2002; ISSN 0254-4725