CODEX ALIMENTARIUS COMMISSION

Food and Agriculture Organization of the United Nations

World Health Organization

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AGENDA ITEM 8 **NFSDU/43 CRD 15**

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON NUTRITION AND FOODS FOR SPECIAL DIETARY USES

Forty-third Session, Düsseldorf, Germany

7 – 10 March with report adoption by virtual mode on 15 March 20237-10 March, 2023

Other Business and Future Work

Comments by the Calorie Control Council

CALORIE CONTROL COUNCIL

Background

The definition and properties of dietary fiber were discussed within the Codex Committee for Nutrition and Foods for Special Dietary Uses (CCNFSDU) for many years in the 1990's and 2000's. While much of the scientific consensus and debate leading to the finalization of the definition supported a definition of dietary fiber at a degree of polymerization (DP) of 3 or more monomeric units, the final Codex definition adopted in 2009 states:

Dietary fiber means carbohydrate polymers[1] with ten or more monomeric units[2], which are not hydrolyzed by the endogenous enzymes in the small intestine of humans and belonging to the following categories:

- *Edible carbohydrate polymers naturally occurring in the food as consumed,*
- *carbohydrate polymers, which have been obtained from food raw material by physical, enzymatic or chemical means and which have been shown to have a physiological effect of benefit to health as demonstrated by generally accepted scientific evidence to competent authorities,*
- *synthetic carbohydrate polymers which have been shown to have a physiological effect of benefit to health as demonstrated by generally accepted scientific evidence to competent authorities.*

[1] When derived from plant origin, dietary fiber may include fractions of lignin and/or other compounds when associated with polysaccharides in the plant cell walls and if these compounds are quantified by the AOAC gravimetric analytical method for dietary fiber analysis: Fractions of lignin and other compounds (proteic fractions, phenolic compounds, waxes, saponins, phytates, cutin, phytosterols, etc.) intimately "associated" with plant polysaccharides are often extracted with the polysaccharides in the AOAC 991.43 method. These substances are included in the definition of fiber insofar as they are actually associated with the poly- or oligo-saccharidic fraction of fiber. However, when extracted or even re-introduced into a food containing non digestible polysaccharides, they cannot be defined as dietary fiber. When combined with polysaccharides, these associated substances may provide additional beneficial effects (pending adoption of Section on Methods of Analysis and Sampling).

[2] Decision on whether to include carbohydrates from 3 to 9 monomeric units should be left to national authorities.

Although the footnote of the Codex definition allows for national authorities to determine whether to allow for carbohydrate polymers with 3 to 9 monomeric units, the main Codex definition is recognized as 10 or more monomeric units. Further, while most countries permit edible carbohydrate polymers with demonstrated physiological benefits with 3 or more monomeric units to be classified as dietary fibers, since the 2009 Codex definition was adopted, some countries have adopted a definition recognizing only 10 or more monomeric units. This discrepancy presents risks to public health as well as potential trade barriers. Given the potential confusion and inconsistent application of the current Codex definition as well as the above discrepancies and unintended consequences, there is a need to reconsider the Codex definition to more clearly reflect 3 or more monomeric units as the threshold for a carbohydrate to qualify as a dietary fiber.

Introduction

Purpose and Scope

The purpose of this work is to reopen and reconsider the Codex definition for dietary fiber to drive towards a

clearer and more science-based definition which can be applied consistently to facilitate global harmonization and ensure fair trade, not to mention increase fiber consumption and improve public health. Such consideration could result in potentially removing the current footnote 2 and reflect that dietary fiber can be defined as carbohydrate polymers with 3 or more monomeric units. This work would not include other aspects of the relevant Codex Standards, but only focus on the definition for dietary fiber.

Relevance and Timeliness

Populations around the world fail to meet the recommended daily intake of dietary fiber and the World Health Organization (WHO) has indicated fiber intakes are “generally low” globally. Individuals are encouraged to consume more dietary fiber by national authorities and foods with added dietary fiber are important for bridging the fiber gap. While most countries recognize dietary fibers as those carbohydrate polymers with demonstrated physiological benefits with 3 or more monomeric units, a handful of countries have adopted definitions that recognize only carbohydrates with 10 or more monomeric units as dietary fiber. This has resulted in certain carbohydrates which provide a physiological benefit being recognized as a dietary fiber in some countries but not others which limits the availability of dietary fiber in certain regions and hinders bridging the fiber gap. Given that a major tenet of Codex is harmonization and removing potential barriers to trade, the Codex definition should be more aligned with the definition of dietary fiber that is more globally recognized.

Fiber is consistently recognized as a nutrient of concern and many people around the world do not consume sufficient dietary fiber to meet nutrient needs. This can have a negative health impact as dietary fiber aids in digestion, glycemic response, immune function, and weight management, among other benefits. Revising the Codex definition to align with many countries’ regulations can aid in ensuring more products with dietary fiber are available which could result in a key public health benefit.

Recommendation

CCNFSDU should revisit the definition for dietary fiber and request that a discussion paper following the general approach in this CRD be prepared for further consideration at the next CCNFSDU Session.