APPENDIX VIII

PROPOSAL FOR NEW WORK ON THE DEVELOPMENT OF A CODE OF PRACTICE FOR THE PREVENTION AND REDUCTION OF TROPANE ALKALOIDS CONTAMINATION IN FOOD AND FEED

PROJECT DOCUMENT

(For approval)

1) Purpose and scope of the project

The purpose of the proposed new work is to develop a code of practice (CoP) to prevent and reduce tropane alkaloids contamination in food and feed. The scope of the work is to complete a CoP to prevent and reduce tropane alkaloids (TAs) contamination in food (e.g. cereal grains, dried legumes, herbs and spices, herbal teas, baby foods and leafy green vegetables such as spinach) and feed, particularly derived from *Datura*, for various stakeholders including farmers, food and feed manufacturers, competent authorities, and consumers.

2) Relevance and timeliness

Food aid contaminated with TAs was determined to cause food poisoning outbreaks in the Republic of Uganda and the Republic of South Sudan in 2019. These events affected more than 300 people and even resulted in deaths. The *Joint FAO/WHO expert meeting on tropane alkaloids* [1] (FAO/WHO, 2020) provided expert scientific advice on TAs in processed and unprocessed food products. To develop appropriate risk management measures in the United Nations World Food Programme (WFP) supply chains, it was recognized that limits expressed as physical toxic *Datura stramonium* seed contamination of cereals and grains will be beneficial for screening purposes at the field level. An *FAO/WHO guidance document on physical Datura stramonium seed contamination* [2] was developed and published in 2020 to address this. Since then, global reports of TA contamination and poisoning in plant-based foods have continued to emerge (e.g. Reports of tropane alkaloid poisonings and analytical techniques for their determination in food crops and products from 2013 to 2023[3]).

The 17th Session of the Codex Committee on Contaminants in Foods (CCCF17, 2024) agreed to follow up on the findings of these documents and consider the development of a code of practice and project document for consideration by CCCF18.

3) Main aspects to be covered

This work will address measures for preventing TA contamination in food and feed, including pre-harvest agricultural mitigation strategies related to *Datura* weeds control. It will also address post-harvest measures such as sorting grains and seeds to remove *Datura* seeds, sorting *Datura* plants from leafy green vegetables, and extra precautions for processed food (including cereal-based food for infants and young children). Furthermore, since foodborne illnesses caused by TA can also occur at the household level, the CoP would also include some consumer practices.

4) Assessment against the criteria for the establishment of work priorities

(a) Consumer protection from the point of view of health and fraudulent practices. To protect consumer health, exposure to TAs should be prevented or reduced. A CoP providing recommendations to farmers, food and feed manufacturers, competent authorities, and consumers will help prevent contaminated food and feed from entering the market.

(b) Diversification of national legislation and apparent resultant or potential impediments to international trade. The development of a CoP is needed to ensure that information on recommended practices for preventing and reducing TA exposure is available to all member countries. It will also provide the means to enable exporters to minimize the risk of TAs and assist in compliance with any MLs that may be established in the future.

(c) Scope of work and establishment of priorities between the various sections of the work. The CoP will address all relevant measures for preventing or reducing TAs at the different steps in the food and feed chain.

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1 https://cdn.who.int/media/docs/default-source/food-safety/jecfa/summary-and-conclusions/tropane-alkaloids-expert-meeting_30-march-3-april-2020_executive-summary.pdf?sfvrsn=f6c51fc1_5
https://openknowledge.fao.org/server/api/core/bitstreams/6f846395-4481-46ca-850d-8953ae8ccb38/content

2 https://openknowledge.fao.org/server/api/core/bitstreams/cdcafea7-63dd-4c7c-a767-34b168a3904c/content

3 Gravador, R. S., Haughey, S., Meneely, J., Greer, B., Nugent, A., Daniel, C. S., & Elliott, C. (2024). Reports of tropane alkaloid poisonings and analytical techniques for their determination in food crops and products from 2013 to 2023. Comprehensive Reviews in Food Science and Food Safety, 23, e70047. https://doi.org/10.1111/1541-4337.70047

(d) Work already undertaken by other international organizations in this field. Several bodies and organizations, such as Joint FAO/WHO Expert Committee on Food Additives (JECFA), Food and Agriculture Organization (FAO), World Health Organization (WHO), and World Food Programme (WFP), have undertaken work on TAs and can be consulted in developing a CoP. These organizations have made recommendations but have not offered a CoP.

5) Relevance to Codex Strategic Goals

(a) Goal 1: Address current, emerging, and critical issues in a timely manner. Establishing a CoP to prevent or reduce TAs in food and feed will address the current need for guidance to ensure consumers' health.

(b) Goal 2: Develop standards based on science and Codex risk-analysis principles. This work will apply risk analysis principles in developing a CoP, using scientific data and recommendations from FAO/WHO and other recognized expert bodies to support a reduction in consumers' and animals' exposure to TAs (to control levels in feed).

(c) Goal 3: Increase impact through the recognition and use of Codex standards. The proposed CoP ensures that information on recommended practices to avoid and prevent TAs consists of current best practices and is available to all member countries, especially those with fewer resources to devote to this topic.

(d) Goal 4: Facilitate the participation of all Codex Members throughout the standard-setting process. Developing a CoP through the Codex Step process will inform all Codex members and observers_about recommended practices to prevent and reduce TAs.

(e) Goal 5: Enhance work management systems and practices that support the efficient and effective achievement of all strategic plan goals. A CoP will help develop and implement effective and efficient work management systems and practices by providing basic guidance for countries and producers to keep highly TA-contaminated food out of the marketplace.

6) Information on the relationship between the proposal and other existing Codex documents

Standard for certain pulses (CXS 171-1989), *Standard for sorghum grains* (CXS 172-1989), *Standard for maize* (corn) (CXS 153-1985), *Standard for wheat and durum wheat* (CXS 199-1995) and *Standard for oats* (CXS 201-1995) include a provision that the products "shall be free from the following toxic or noxious seeds in amounts which may represent a hazard to human health", including *Datura* species. The weed control measures in the *Code of practice for weed control to prevent and reduce pyrrolizidine alkaloid contamination in food and* feed (CXC 74-2014) are also relevant.

7) Identification of any requirement for any availability of expert scientific advice

The Joint FAO/WHO Expert Meeting (FAO/WHO, 2020) and other risk assessment bodies, such as the European Food Safety Authority (EFSA) (EFSA CONTAM Panel, 2008, 2013, 2016, 2018, and 2022), have already provided expert scientific advice.

8) Identification of any need for technical input to the standard from external bodies

There is no identified need for additional technical input from external bodies.

9) The proposed timeline for completion of the new work, including the starting date, proposed date for adoption at Step 5, and the proposed date for adoption by the Commission.

Work will commence in 2025 following CCCF18's recommendation and approval by the 48th Session of the Codex Alimentarius Commission in 2025. Completion is expected by 2028.