



46th Joint Coordination Meeting of Arab and CCNE Codex Contact Points

**PREPARATION FOR THE 45th SESSION OF THE
CODEX ALIMENTARIUS COMMITTEE (CCMAS)**

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[March] [4th], 2026



Agenda Item 7.2

SAMPLING PLANS FOR BULK MATERIALS AND HETEROGENOUS LOTS INCLUDING MYCOTOXINS

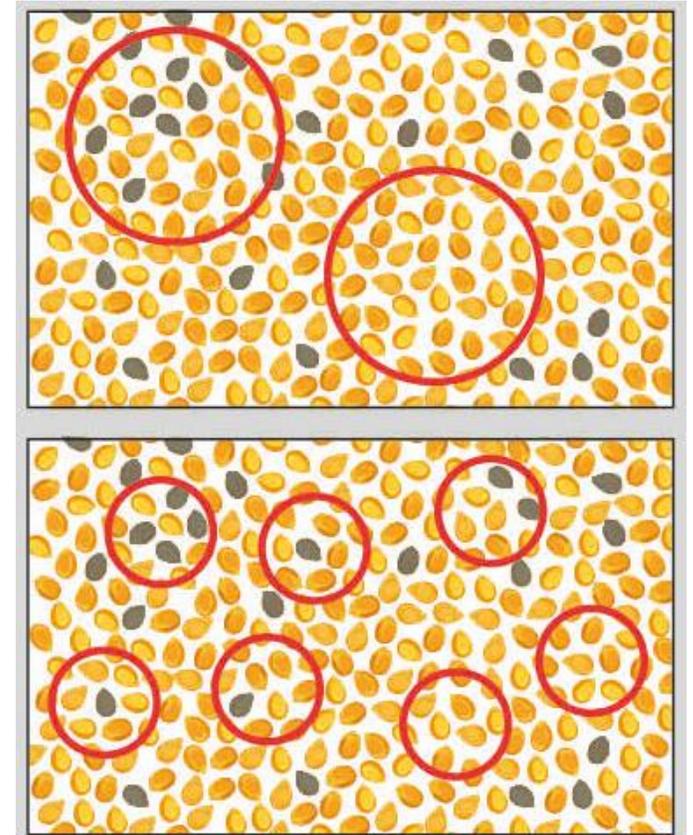
DOCUMENT NUMBER: **CX/MAS 26/45/11**

PREPARED TO SUPPORT THE PARTICIPATION OF CODEX COMMUNITIES
OF PRACTICE SUPPORTED BY GFORSS

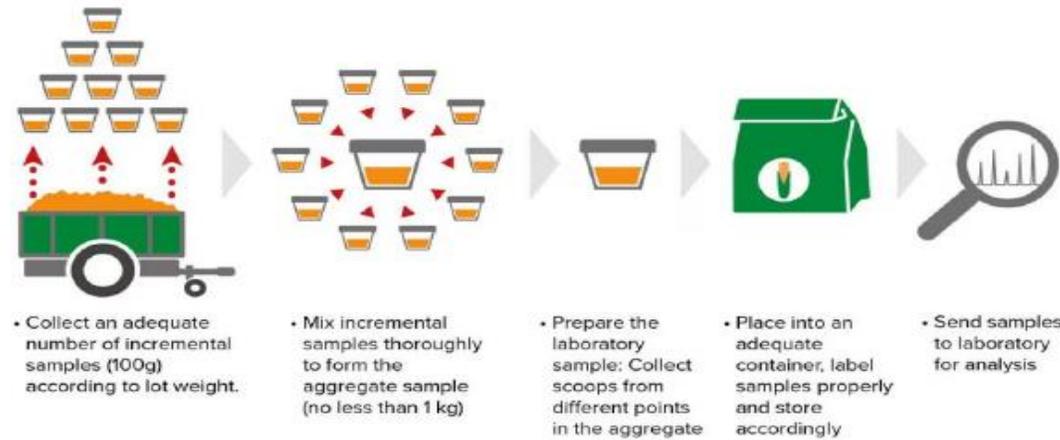
BACKGROUND (Agenda Item 7.2)

At CCMAS44 (2025), the Committee reviewed sampling plans under CXS 234-1999 and CXS 193-1995, and discussed about suitability of current approaches for **bulk and heterogeneous lots**, specially for mycotoxins.

It is noted that localized contamination “pockets” may be masked by composite sampling, increasing the risk of adequate classification so of conform decision.



THE DISCUSSION PAPER PRESENTED IDENTIFIED TECHNICAL LIMITATIONS IN EXISTING PLANS AND SUGGESTED EXPLORING ALTERNATIVE METHODOLOGIES, INCLUDING BAYESIAN APPROACHES



An Electronic Working Group led by Newzeland and cochared by Germany proposed **developing general guidance for acceptance sampling of heterogeneous bulk materials, as an annex to CXG 50-2004 (General Guidelines on Sampling)** , in close collaboration with the CCCF

CCMAS 45 is invited to:



Consider whether to initiate **new work to develop general guidance for acceptance sampling plans** for bulk and heterogeneous lots, with a specific focus on mycotoxins.

Decide **on the appropriate format for such guidance** (e.g., as an annex to **CXG 50-2004** or another Codex instrument).

Inform CCCF and other relevant committees of the discussions and request their views on the need and scope of such guidance

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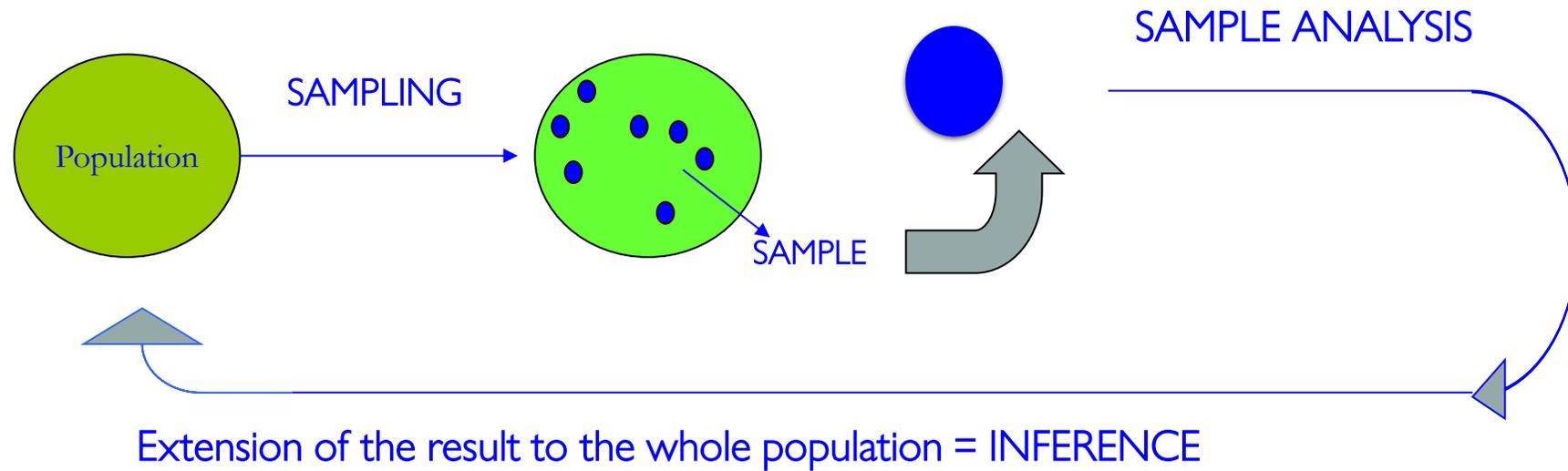
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AIMS OF SAMPLING

The sampling is very important:

- ✓ To make decision (compliance)
- ✓ to protect consumer's health
- ✓ to guarantee transparent trade transactions
- ✓ to achieve reliable data at any level (compliance, exposure assessment...)
- ✓ And also to avoid food waste (false positive)...

The main objective of a reliable sampling plan is to collect data from a sample from which is possible to extend the acquired information to the whole population.



Main problems with mycotoxines

- The existing sampling plans for mycotoxins under CXS 193 were developed based on assumptions of **homogeneous distribution** of contamination.
- **The working document prepared** demonstrates that mycotoxins may occur in a **highly heterogeneous manner**.



DOCUMENT ANALYSIS

- **Lack of Risk Evaluation:**

The prepared document give diagnosis that current plans (CXS 193) lack a real risk evaluation. Some examples are given and demonstrate the big difference in acceptance probability (37% vs. 0.26%)



- **Utility-Based Approach:**

it propose the shift to a **utility-based approach** as balances health risks against economic costs



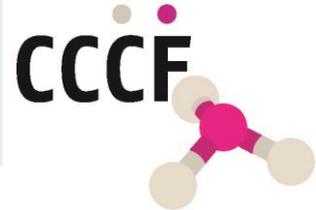
- **Call for Practical Guidance:**

New methods must be globally applicable and clear and should be simplified by practical guidance to support implementation



TECHNICAL COMMENTS

*Clear coordination is required **between CCMAS and CCCF** in order to avoid duplication of work. CCMAS should focus on the statistical and sampling design, while CCCF should define acceptable risk levels based on toxicological considerations.



The proposed **utility-based approach** represents an important scientific improvement. However, this approach is complex and requires :

- advanced statistical expertise,
- reliable data,
- and appropriate electronic tools,

which may be difficult to implement for countries with limited resources.

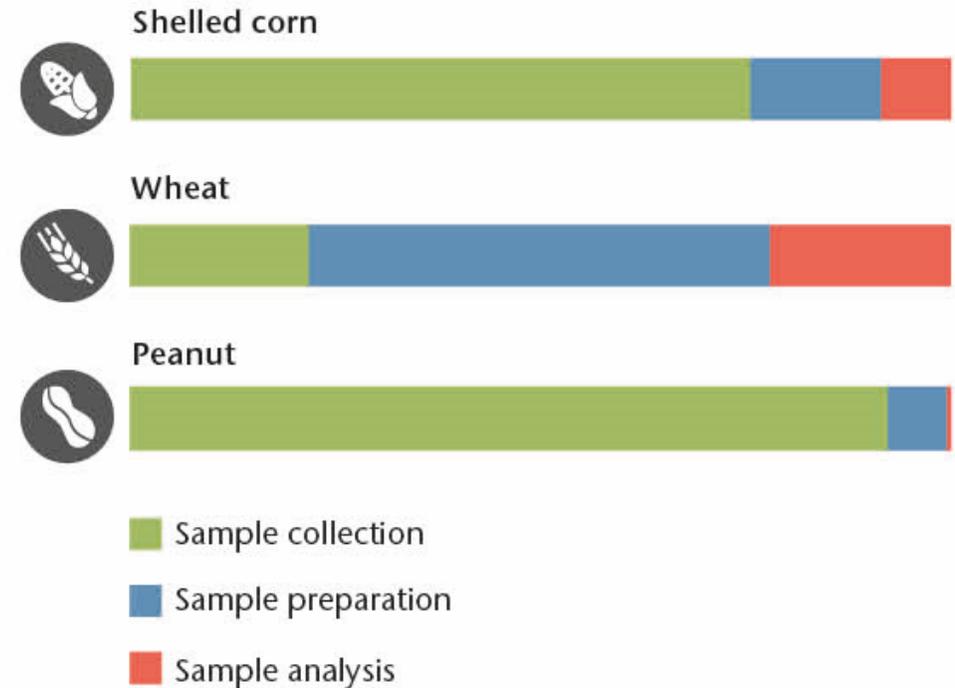


Some GAPS are identified, INCLUDING:



- ✓ Lack of **representative and recent global** contamination data
- ✓ **External factors impacts such as climatic variability between countries which affect contamination so it can limit the representativeness of data.**
- ✓ For analysed data , we have:
 - Lack of information on analytical performance by food matrices,
 - Lack of data on sample preparation
 - and grinding methods

**Different steps and
result influence**



NEW WORK AND REGIONAL IMPORTANCE

- ▶ For this work, Commodities concerned **have a high regional importance** such as cereals, nuts, spices, oil seeds,...
- ▶ This work is very important to ensure both **consumer protection and economic effects**.
- ▶ The alternative approaches based on real Risk, is important for **resource optimization** and reduction of destructive and non effective control



OPERATIONAL CHALLENGES

- ▶ but, we insist that **data should be representative** and contain **detailed technical informations**
- ▶ future plans should be clear and simplified with **developed tools** to facilitate harmonized implementation and should be also accompanied by **capacity-building actions**

RECOMMENDATIONS (PROPOSED POSITION)

1. **We support** the adoption of this guidance as an annex to the **General Guidelines on Sampling (CXG 50-2004)**
2. **Approve** the initiation of new work to develop general guidance for acceptance sampling plans for bulk and heterogeneous lots, with a particular focus on mycotoxins,
3. **Support** implication (CCCF) and their active participation on risk levels based on toxicology,



BASED ON SOME GAPS IDENTIFIED AND REGIONAL CHALLENGES, WE RECOMMEND TO:

Ensure that the scope of the new work includes:

1. Developed **methodology** to evaluate the risks of current sampling plans
2. Practical guidance document related to **the utility-based approach**
3. Developed **electronic support** for calculating risks and utility
4. Developed **clear mechanisms** for collecting representative data and analyzing global contamination



