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Food Regulatory Development

Decisive Contribution of the Food Industry Sector

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OVERVIEW

Examples of Decisive Input from Industry in Food Regulatory Measures

Management of Transfatty Acids

Management of Gluten Sources







Regulatory Measures Are Part Of A Risk Management Continuum



RISK MANAGEMENT

Food Regulatory Measures vs Risk to Public Health and Safety?





RISK MANAGEMENT

FAO / WHO Risk Analysis Paradigm





MANAGING HEALTH RISK

Managing Potential Risks Stemming From These Products Should Include Multiple Levers Of Action: Regulatory And Non-regulatory Measures

□Use various Instruments from a Tool Box of Risk management Tools



Toolbox of Risk Management Measures



SHARING THE EXAMPLE OF: TRANSFATTY ACIDS IN FOOD

What Are Trans Fats (TFA)?

- Most Of The TFA In Our Diets Comes From "Industrially Produced TFA"
- Natural TFA Found At Low Levels In Ruminant Meats (Beef, Lamb) And Dairy Products And "Industrially Produced TFA" Which Are Formed During Partial Hydrogenation Of Liquid Vegetable Oils To Harden Them And Make Them More Stable

UWhy Are TFA Bad For Health?

- Increase LDL-cholesterol The "Bad" Cholesterol And Lower HDL-cholesterol The "Good" Cholesterol
- Worse Than Saturated Fats Which Only Raise LDL-cholesterol
- Thus Increase Risk Of Cardiovascular Disease
- Canadian Context
 - Canadians Had Among The Highest Intake Of TFA
 - TFA Were Massively Introduced In Food Production Because Of Their Stability And To Replace Saturated Fats





TRANS FAT INTAKE IN 1995 CANADA VS. OTHER COUNTRIES



Hulshof et al. (1999); Zhou et al. (2003); Ratnayake and Chen (1995)



JUSTIFIED NEED FOR ACTION

Rationale

- Transfatty acids (TFA) clearly demonstrated as leading to an unacceptable risk at the level of their presence in food
- Discretionary Use of Transfats (from industrial sources through Partially Hydrogenated Oils)



the fatty acid chain [1]. Straight chains are more easily

Keywords Trans fat, Risk Assessment, Intakes, Food Supply, Monitoring 9



PRE-REQUISITE FOR ACTION: INPUT FROM INDUSTRY

Rationale

- □ Identified Viable and Cost-Effective Replacement Options for TFA in Processed Foods
- Cost of Implementing Replacement Options
- Alternative Actions/ Interventions in the Meantime





Possible Actions

Mandatory Declaration Of TFA On The Label (Part Of The Nutrition Facts Table) – Implemented

□ Identified Viable And Cost-effective Replacement Options For TFA In Processed Foods

Novel Food Regulation: Enabled new sources of Oil Seeds





IMPACT OF NUTRITION LABELING POST-2005: SUCCESS IN REMOVING TRANSFATS





IMPORTANCE OF MIX OF MEASURES

QRisk Communication About The Effects Of Transfats

- Work With Manufacturers To Implement Voluntary Approach Of TFA Reduction = Product Reformulation Progressively undertaken
- Approval Of New Variety Of Oil Seeds, As Novel Foods, To Diversify Options For TFA Replacement





TOWARDS REGULATION

- □ Measure Contemplated : Limits Of TFA In Food
 - Max Of 2% Of TFA In Fats (Margarines, Spreads, Vegetable Oils)
 - Max Of 5% Of TFA As Proportion Of Fats In Other Foods
- Levels Playing Field For All Industry and Provides A Predictable Future For Formulation
 - Imports Seem To Have Higher Levels)
- Cost Burden To Industry Is Minimal



- □Net Health Benefit \$5 Billion \$9 Billion Over 20 Years
- □ Justified Sanitary Measure :
 - Fulfils The Risk Analysis Rationale
 - Justified By The "Specific Canadian Situation"





REGULATORY MEASURE IMPLEMENTED

- Banning Sources of Industrial Transfats: Partially Hydrogenated Oils
- □Alignment with Canada's major trading partner: the USA
- **Justified Sanitary Measure :**
 - Fulfils The Risk Analysis Rationale and the Public Health Objectives
 - Minimum Disturbance to the Stream of Commerce





IMPORTANCE OF INPUT FROM INDUSTRY

□Identify and Characterize the Issue:

- How much PHOs are used
- How difficult it is to replace
- Technical and economic implications





□Support the development of a robust position internationally (fulfilling the SPS and TBT requirements)



FAO / WHO Risk Analysis Paradigm





"The interactive exchange of information and opinions throughout the risk analysis process concerning hazards and risks, risk-related factors and risk perceptions, among risk assessors, risk managers, consumers, industry, the academic community and other interested parties, including the explanation of risk assessment findings and the basis of risk management decisions." (Codex, 2001)





RISK COMMUNICATION GOALS

- □ To Ensure That All Information And Opinion Required For Effective Risk Management Is Incorporated Into The Decision-making Process
- To Promote Engagement Of All Interested Parties In The Risk Analysis Process
- To Facilitate Consistent, Transparent And Effective Decision-making
- To Promote Understanding Of The Decision And Decision-making Process





EXAMPLE 2: MANAGEMENT OF FOOD ALLERGENS AND GLUTEN SOURCES

The Issue: Celiac Disease

- Celiac disease is a lifelong medical condition observed in genetically susceptible individuals.
- □ Symptoms are related to the ingestion of the **gluten protein** found in **wheat and related grains**.
- □ Exposure to gluten can lead to a series of **immune-mediated adverse reactions**
- □ **Progressive deterioration** of the lining of the small intestine can also occur.
- □Individuals with celiac disease have an increased risk of developing other diseases including
 - osteoporosis,
 - lymphoma and type I diabetes mellitus.
 - increased risk of reproductive problems.
 - growth failure and delayed puberty in Children
- □ It is estimated that Celiac disease affects approximately 1% of the population worldwide





ACTION GUIDED BY CODEX

Beyond the Gluten Free Standard

Require the Declaration of Sources of Gluten in Food





IMPORTANCE OF ANALYTICAL METHODS

Need to Rely on Methods to Implement the Measure



INTERNATIONAL STANDARDS



¹ The most updated version of the method should be used, in application of ISO/IEC 17025. The present list of methods reflects the amendments adopted by the 42nd Session of the Codex Alimentarius Commission in 2019.



CODEX STAN 118-1979

5.2 Method for determination of gluten

Enzyme-linked Immunoassay (ELISA) R5 Mendez Method.

CSX 234-1999

PART A - METHODS O	F ANALYSIS BY COMMODITY	CATEGORIES AND NAMES	\frown
Gluten-free foods	Gluten	Enzyme-Linked Immunoassay R5 Mendez (ELISA) Method Eur J Gastroenterol Hepatol 2003: 15: 465-474	



GLUTEN ANALYSIS IN CODEX ALIMENTARIUS

Codex Alimentarius Type 1 method for gluten analysis in food

Standard CXS 234-1999 (adoption from 2019)

R5 ELISA

Gliadin

Need to have a method that works on complex food matrices: e.g., processed foods

Need to have Method that distinguishes sources of Gluten





SOLUTION





HOW CAN WE STRUCTURE INPUT FROM INDUSTRY SECTOR IN EGYPT



