Health Canada's Food Chemical Safety Programs

(Risk Assessment & Risk Management of Chemical Contaminants in Food)

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The responsibility for food safety at the Federal level in Canada is shared between Health Canada and the Canadian Food Inspection Agency

Health Canada sets health-related standards and policies and conducts risk assessments.

CFIA is responsible for compliance and enforcement.

Mandate of Food Chemical Safety Programs

To work to ensure that Chemicals are NOT present in food at levels that lead to adverse health effects for Canadians

Who We Are, What We Do

Food Research Program Delivery

- Research and method development: identification of chemicals in food
- Development of Chemical Exposure Data
- Surveillance
- Support to CFIA
- Standardization of analytical methodologies

Occurrence/Exposure Data

Toxicology Research

-Research and method development:
- Identification of adverse health effects associated with chemicals in foods

Hazard Identification / Hazard Characterization

Chemical Evaluation (Chemical Health Hazard Assessment Division)

- Health Risk Assessment
-Pre-market evaluation
-Development of standards/guidelines
-Policy Development
-Development of risk management strategies
-Information / Communication

Health Risk Assessment/ Communication
Policy Development

Core Activities in the Bureau of Chemical Safety

- Pre-market Review (food additives, food packaging materials, processing aids, etc.)
- Scientific Research
- Analytical Method Development and Surveillance
- Risk and Benefit Assessment
- Policy Development
- Standard Setting

Chemicals That May Enter The Food Supply

- **Food Additives (preservatives, flavours)**
- **Food Packaging Materials**

Pre-market

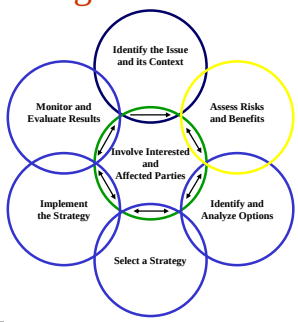
- **Agrochemicals (Pesticides and Veterinary Drugs)**

PMRA-VDD

- **Natural Toxins (fungal, algal, microbial)**
- **"Processing-induced" chemicals (Acrylamide, Furan, Chloropropanols, etc.)**
- **Contaminants (metals, POPs, etc…)**

Post-market

Health Canada's Decision Making Framework



Risk Management Priorities for Environmental Contaminants. Reduce Exposure to:

- persistent organic pollutants (POPs) (such as Dioxins/Furans, PCBs, old pesticides);
- emerging contaminants (such as PBDEs, PFCs, etc.);
- priority toxic elements (such as lead, methylmercury and cadmium);
- "ionic toxicants" (such as perchlorate).

Risk Management Options for Environmental Contaminants

- Regulatory Tolerances in Specified Foods
- Guidelines (e.g. action levels)
- Codes of Practice
- Advice to Consumers
- Engagement of Food Producers and Food Industry as part of HACCP plans
- Regulation of Emissions to the Environment (e.g. elimination of specific point sources of contamination)
- Multiple Strategies

Lead in Food Risk Management Strategies Currently in Use

- Established Regulatory Tolerances and Guidelines
- Codes of Practice
- Changes to Food Production and Packaging Practices
- Reduction of Lead Emissions to the Environment
- Consumer Advisories

Methylmercury in Fish Risk Management Strategies

- Consumer Advisories Targeting Sensitive Sub-Groups of the Population
- Guidelines or Regulatory Tolerances
- Reduction of Mercury Emissions to the Environment

DRIVERS FOR EFFECTIVE RISK MANAGEMENT

- Based on sound science (research, surveillance / monitoring, risk assessment).
- Effective risk communication at every stage of the decision-making process.
- Multiple strategies.
- Realistic and achievable.
- Measurable outcomes.

RISK MANAGEMENT CHALLENGES

CHALLENGES

TO ENSURE THAT THE SELECTED RISK MANAGEMENT STRATEGIES HAVE THE INTENDED EFFECT AND DO NOT RESULT IN UNINTENDED NEGATIVE EFFECTS.

CHALLENGES

DIFFERENT RISK MANAGEMENT STRATEGIES FOR THE SAME CONTAMINANT IN DIFFERENT COUNTRIES MAY CONFUSE CONSUMERS.

CHALLENGES

PRIORITIES FOR RISK MANAGEMENT BASED ON SCIENCE DO NOT ALWAYS MATCH CONSUMER PERCEPTIONS OF WHAT OUR PRIORITIES SHOULD BE

CHALLENGES

INCREASING CALLS TO MEASURE OUTCOMES OR PERFORMANCE OF SELECTED RISK MANAGEMENT STRATEGIES

These challenges illustrate the importance of

- Ongoing research and surveillance
- Accurate and timely risk assessments
- Well thought out risk management strategies
- Clear and concise risk communication
- Collaboration