

# Regulatory System Summary Project- Canada and Chile

Organized by: IAFP's International Food Protection Issues PDG

Moderator: DeAnn Benesh

Sponsored By



This webinar is being recorded and will be available to IAFP members within one week.

# Webinar Housekeeping

- **It is important to note that all opinions and statements are those of the individual making the presentation and not necessarily the opinion or view of IAFP.**
- **All attendees are muted. Questions should be submitted to the presenters during the presentation via the Questions section at the right of the screen. Questions will be answered at the end of the presentations.**
- **This webinar is being recorded and will be available for access by IAFP members at within one week.**

# Today's Panelists

**Jeffrey Farber**  
**Presenter**

**Constanza**  
**Vergara Escobar**  
**Presenter**

**DeAnn Benesh**  
**Moderator**

# DeAnn L. Benesh

DeAnn Benesh was a Global Scientific Affairs Manager at 3M and Neogen, where she provided leadership to global teams to engage in strategic local regulatory activities to drive recognition and acceptance of methods, and partners with government and non-government organizations in development of standards and methods.

She is now retired but remains active in several food industry groups:

- Member of the Microval General Council
- Participates in ISO IC34/SC9 as an expert participating in several Working Groups
- Past Chair of the IAFP International Food Protection Issues and Food Law PDGs
- Recipient of the IAFP Presidents Award (2021)
- Past President of AOAC INTERNATIONAL
- and a Fellow of AOAC INTERNATIONAL

DeAnn holds a Bachelor of Science degree in Medical Technology from the College of Pathology, University of Minnesota, Minneapolis, MN; a Mini-master's in international business from the University of St. Thomas, St. Paul, MN; and a Certificate in International Food Law through Michigan State University, East Lansing, MI.

# Dr. Jeffrey Farber

Dr. Farber is currently the Director of an international consulting firm, which does food safety consulting with various organizations and countries. In addition, he is a senior advisor for Index Biosystems, a Canadian biotechnology company working in the area of food traceability and authenticity. Dr. Farber is also an Adjunct Professor and member of the graduate faculty in the Department of Food Science at the University of Guelph, in Guelph, Ontario.

Dr. Jeff Farber most recently was employed as a Full Professor in the Department of Food Science at the University of Guelph, in Guelph, Ontario, where he was Director of the Canadian Research Institute for Food Safety and head of the Master's Program in Food Safety and Quality Assurance. Previous to that, he was the Director of the Bureau of Microbial Hazards in the Food Directorate of Health Canada, where he led a group of about 60 people working in various areas of microbial food safety and was instrumental in advancing the development of policy approaches on emerging microbial food safety issues in Canada and at a global level.

Dr. Farber has over 195 publications, plus numerous Book Chapters and has edited 5 books. He was Associate Editor of the International Journal of Food Microbiology for many years and has been on a number of Journal Editorial Boards. He is a Past-President of the International Association for Food Protection (IAFP) and Executive Director of the International Commission on Microbiological Specifications for Foods (ICMSF), a leading global think tank on emerging food safety issues. Dr. Farber also has extensive experience working experience at the international level, with organizations such as FAO, WHO and Codex Alimentarius. He was also recently appointed to the newly formed Science and Technology Advisory Group (STAG), under the umbrella of GFSI.

Dr. Farber has received numerous personal and team awards, winning 3 awards in 2020 from the International Association for Food Protection, and being nominated as a Fellow for The International Union of Food Science and Technology. As well, in 2022, Dr. Farber received an award from the American Frozen Food Institute for his exceptional work in improving the safety of the frozen food supply. In 2009, he won one of the highest awards presented to Federal Public Health Officials, the Prime Minister's Outstanding Achievement Award, for his work as the lead scientist for Health Canada on the deli-meat listeriosis outbreak. In 2023, Dr. Farber was awarded the prestigious IAFP President's Lifetime Achievement Award. He also was recently honored for his contributions to both our understanding of *Listeria* and the advancement of food safety, by having a new species of *Listeria* named after him - *Listeria farberi*.

Most recently, Dr. Farber was appointed into the Order of Canada. The Order of Canada is one of Canada's highest honours, and recognizes people who have made extraordinary and sustained contributions to the country. Dr. Farber was recognized for his significant contributions to improving food safety both within Canada and worldwide.

# Constanza Vergara Escobar

Constanza is a veterinarian and PhD candidate from University of Chile.

Constanza works in the Trade Regulatory Affairs Division from the Ministry of Foreign Affairs where she is engaging on the negotiation and implementation of SPS measures on trade agreements, representation at multilateral fora, such as APEC and Monitoring and coordination of sanitary access of aquaculture and forestry products.

Formerly, she works at the Chilean Food Safety and Quality Agency at the Ministry of Agriculture for 11 years, where she was an adviser in food microbiology, antimicrobial resistance and risk analysis for national regulation and international standards and coordinated the National initiatives on Biological Hazards, foodborne AMR, and participates in the elaboration and implementation of international technical cooperation project.

At IAFP she is the current vice Chair of IFPI PDG.



# **Regulatory System Summary (RSS) Project**

**International Food Protection Issues & Food Law  
Professional Development Groups (PDG)**

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# 2019:

## Ian Jenson proposal IFPI PDG

### Food Regulatory System: Australia

#### Political structure

The Commonwealth of Australia was formed in 1901 as a result of an agreement among six self-governing British colonies, which became the six states. The terms of this contract are embodied in the Australian Constitution. The Australian head of state is the Queen of Australia who is represented by the Governor-General of Australia with executive powers delegated by constitutional convention to the Australian head of government, the Prime Minister of Australia. The Government of the Commonwealth of Australia is divided into three branches: the executive branch, the legislative branch, and the judicial branch. The Australian system of government combines elements of the Westminster and Washington systems<sup>1</sup>

Responsibility for food safety is divided between the Commonwealth and the States and Territories.<sup>2</sup>

#### Food Policy

Food policy is cooperatively made by a forum of ministers from Australian and New Zealand government jurisdictions - the Australia and New Zealand Ministerial Forum on Food Regulation; or the Forum. The Forum Members are the decision makers in the system. The Forum is supported by the Food Regulation Standing Committee or FRSC. FRSC members include government department and agencies heads responsible for food regulation in each jurisdiction.<sup>3</sup>

#### Policy priorities

For the 2017-2021 period<sup>4</sup>, priority national actions are

- reducing foodborne illness, particularly related to Campylobacter and Salmonella
- supporting the public health objectives to reduce chronic disease related to overweight and obesity
- maintaining a strong, robust and agile food regulation system

#### Food Safety Regulation

Food Standards Australia New Zealand (FSANZ) is a statutory authority in the Australian Government Health portfolio. FSANZ develops food standards for Australia and New Zealand.<sup>5</sup> The standards in the Australia New Zealand Food Standards Code are legislative instruments under the Legislation Act 2003.

#### Food Safety Enforcement

The Code is enforced by state and territory departments, agencies and local councils in Australia, and the Australian Department of Agriculture, Water and Environment for food imported into Australia. The arrangements in each state differ significantly<sup>6</sup>

#### Imported Foods

The Department of Agriculture is responsible for administering two sets of requirements for imported food. These requirements are designed to:

- protect Australia against biosecurity risks,
- address food safety

<sup>1</sup> [https://en.wikipedia.org/wiki/Government\\_of\\_Australia](https://en.wikipedia.org/wiki/Government_of_Australia)

<sup>2</sup> <https://www.parliament.nsw.gov.au/about/Pages/The-Roles-and-Responsibilities-of-Federal-State-a.aspx>

<sup>3</sup> <https://foodregulation.gov.au/internet/fr/publishing.nsf/Content/Home>

<sup>4</sup> <https://foodregulation.gov.au/internet/fr/publishing.nsf/Content/current-activities>

<sup>5</sup> <http://www.foodstandards.gov.au/Pages/default.aspx>

<sup>6</sup> <http://www.foodstandards.gov.au/about/foodenforcementcontacts/Pages/default.aspx>

All imported food must meet biosecurity requirements to be allowed into the country. Once imported food has met these requirements foods are monitored for compliance to the Australia New Zealand Food Standards Code.<sup>1</sup>

#### Exported Foods

Around two-thirds of Australia's agricultural products are exported. The Department of Agriculture, Water and Environment<sup>2</sup> provides export controls and assistance on exporting goods from Australia.

#### Foodborne disease surveillance

The Australian Government established OzFoodNet in 2000 as a collaborative initiative with Australia's State and Territory health authorities to provide better understanding of the causes and incidence of foodborne disease in the community and to provide an evidence base for policy formulation. It is a member of the Communicable Diseases Network Australia,<sup>3</sup>

#### Potential changes in the system

The Forum has endorsed a plan to reform the Bi-national Food Regulation System. A key element underpinning the reform agenda is the development of a policy vision for the future which will guide a comprehensive review of the *Food Standards Australia New Zealand Act 1991* (FSANZ Act) and the Intergovernmental Food Regulation Agreement.

The reform agenda via progressed via three interconnected sub-projects:

- Food Regulation Agreement (FRA) – this project will review and modernise the FRA to create a new foundation document for the food regulatory system.
- Jurisdictional Consistency – this project will initially provide advice on whether inconsistent implementation of food standards causes cost and vulnerability to government and industry.
- Operations – this project will provide operational and functional improvements to the food regulatory system.

Separately, but in in close collaboration, the Australian Government will undertake the *FSANZ Act Review*. This Review will aim to streamline FSANZ operations and ensure it takes a risk proportionate approach to its work to deliver outcomes in a timelier manner to better facilitate industry innovation and trade opportunities while maintaining a safe food supply for the population.<sup>4</sup>

<sup>1</sup> <http://www.agriculture.gov.au/import/goods/food>

<sup>2</sup> <https://www.agriculture.gov.au/export>

<sup>3</sup> <https://www.health.gov.au/internet/main/publishing.nsf/Content/cdna-ozfoodnet.htm>

<sup>4</sup> <https://www1.health.gov.au/internet/fr/publishing.nsf/Content/Modernisation-of-the-food-regulation-system>



**2021:**

**Partner w/  
Food Law PDG**

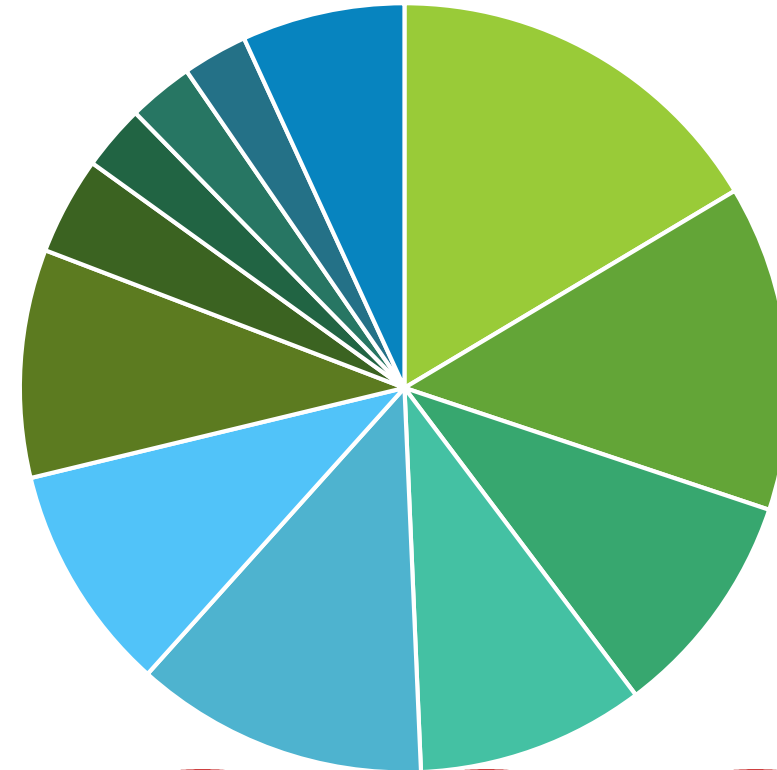
**Survey**

1. determine interest
2. Identify key countries

Established Team of volunteers

# Key Countries of interest identified

TOTAL Responses (32/35) = 91%



## Regulatory Systems Summary: COUNTRY

### Food Safety Policy & Regulatory Structure

*A general description of the country / territory and government structure. Does the country follow Common or Civil Law? A high-level general summary of country food safety policy. Components of the regulatory system including HACCP, Preventive Controls, Registration, etc. A list of the Food Safety Authorities and the responsibility of each of these entities.*

### Food Safety Standards

*General statements regarding standards for: microbiology, chemistry, labeling, packaging, additives, pesticides, contaminants, allergens, (organic certification?). Provide links when they exist.*

### Food Safety Enforcement & Compliance: DOMESTIC

*A brief description of what each regulatory agency does to ensure safe food within their country (e. g. inspection programs and frequency of inspections), training for regulatory personnel and industry, consumer education.*

### Food Safety Enforcement & Compliance: IMPORTED Foods

*A brief description of what each agency does to ensure the safety of imported foods. Does the country require the use of Official methods for testing? Are there import certification programs?*

### Food Safety Enforcement & Compliance: EXPORTED Foods

*A brief description of what each agency does to ensure safety of exported foods. Does the country have a regulatory agency focused specifically on food exports? Does the country have specific systems designed for export?*

### Laboratory & other program resources

*Does the country have a formal program for government recognition of labs for "Official" testing? Does the country have National Reference Labs specialized for specific organisms? (e. g. Salmonella)*

### Foodborne Disease Surveillance

*A list of the agencies responsible for surveillance, the types of food surveillance programs they have, and a brief description of how this surveillance is done.*

### International Communication & Harmonization

*List key international or regional connections and standards setting organizations in which the country participates: CODEX, ISO, AOAC, etc.*

### Future plans /considerations

*Any additional points that are important and/or unique to the country, but don't "fit" under other headers (e. g. anticipation of things that may be changing within the regulatory system).*

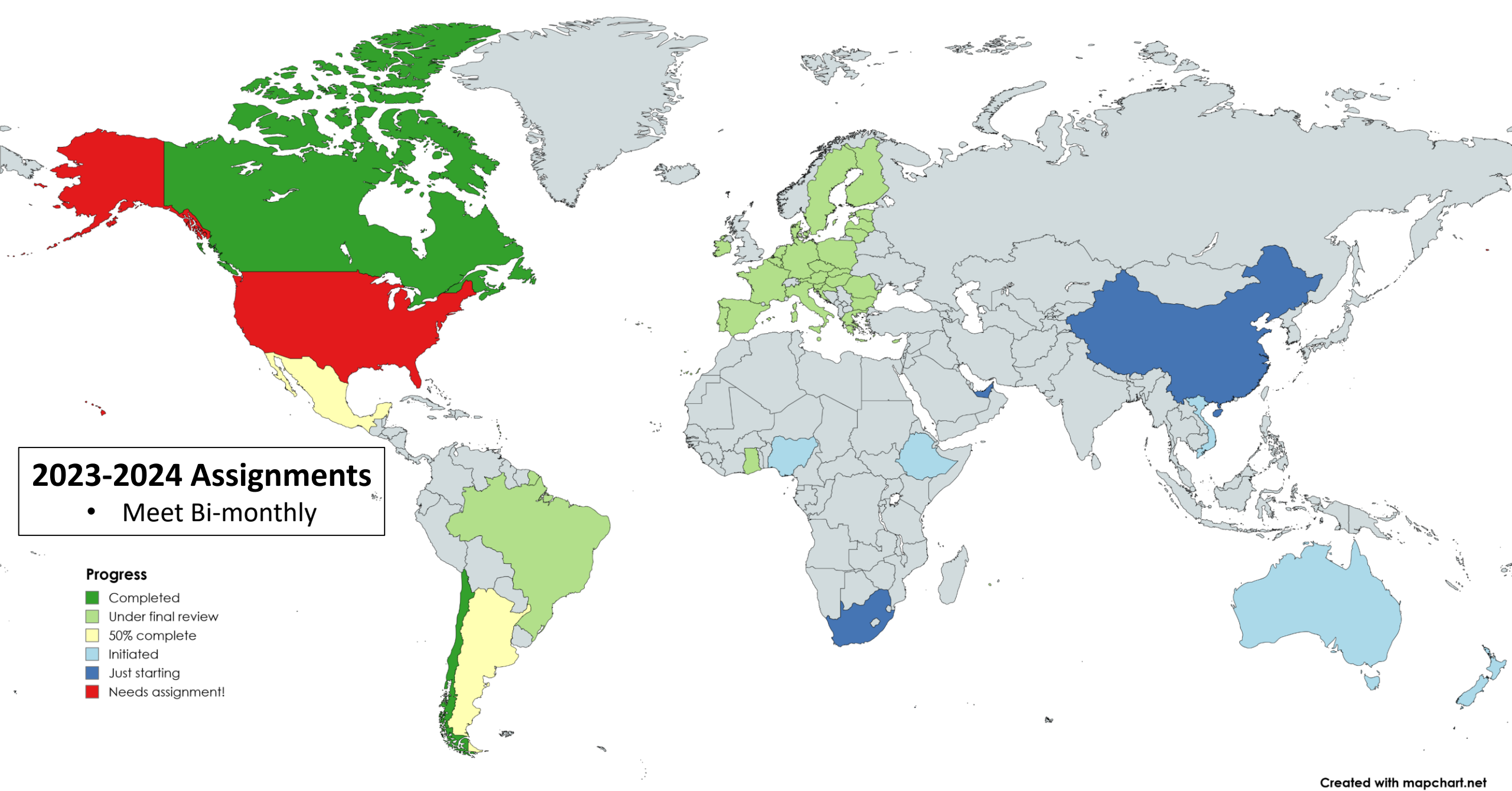
**2022:  
Created Format**

**Survey to confirm  
with BOTH  
IFPI & FL PDG  
Members**

# 2023-2024 Assignments

- Meet Bi-monthly

- Progress**
- Completed
  - Under final review
  - 50% complete
  - Initiated
  - Just starting
  - Needs assignment!



# Regulatory System Summaries

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## **Final Summaries:**

- Continue webinars (Aim: 2 countries, 2x/year)
- Store on IAFP site
- Country synopses to FPT (to create awareness)

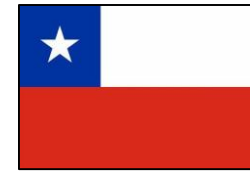
Would you like to participate? Please let us know!



CANADA

**Dr. Jeff Farber**

- **IAFP** – Past Pres / started the IFPI PDG/ 2023 IAFP Lifetime Achievement Award
- **Director** of the Bureau of Microbial Hazards
- **Exe Director** of Intl Commission on Micro Specifications in Food (ICMSF)
- **Director** of an international consulting firm, which does food safety consulting with various organizations and countries
- **Adjunct Professor** & member of graduate faculty Dept of FS at Univ of Guelph, ON
- **Appointed** into **The Order of Canada** (contributions WW)
- ***Listeria farberii***



CHILE

**Constanza Vergara Escobar**

- **Veterinarian** and PhD candidate, Univ of Chile
- **Ministry of Agriculture** - Chilean Food Safety and Quality Agency
  - Coordinated the National initiatives on Biological Hazards, foodborne AMR, and implementation of international technical cooperation projects
- **Ministry of Foreign Affairs** - Trade Regulatory Affairs Division
  - Negotiates the implementation of SPS measures on trade agreements
  - Represents Chile at multilateral forums such as: such as the APEC Food Safety Cooperation Forum (FSCF)
- **IAFP IPFI PDG** – Current Vice-Chair



## Regulatory Systems Summary: Canada

**Dr. Jeff Farber, Director, JM Farber Global Food Safety,  
Adjunct Professor, Dept. of Food Science, University of Guelph  
Guelph, Ontario, Canada**

# International PDG

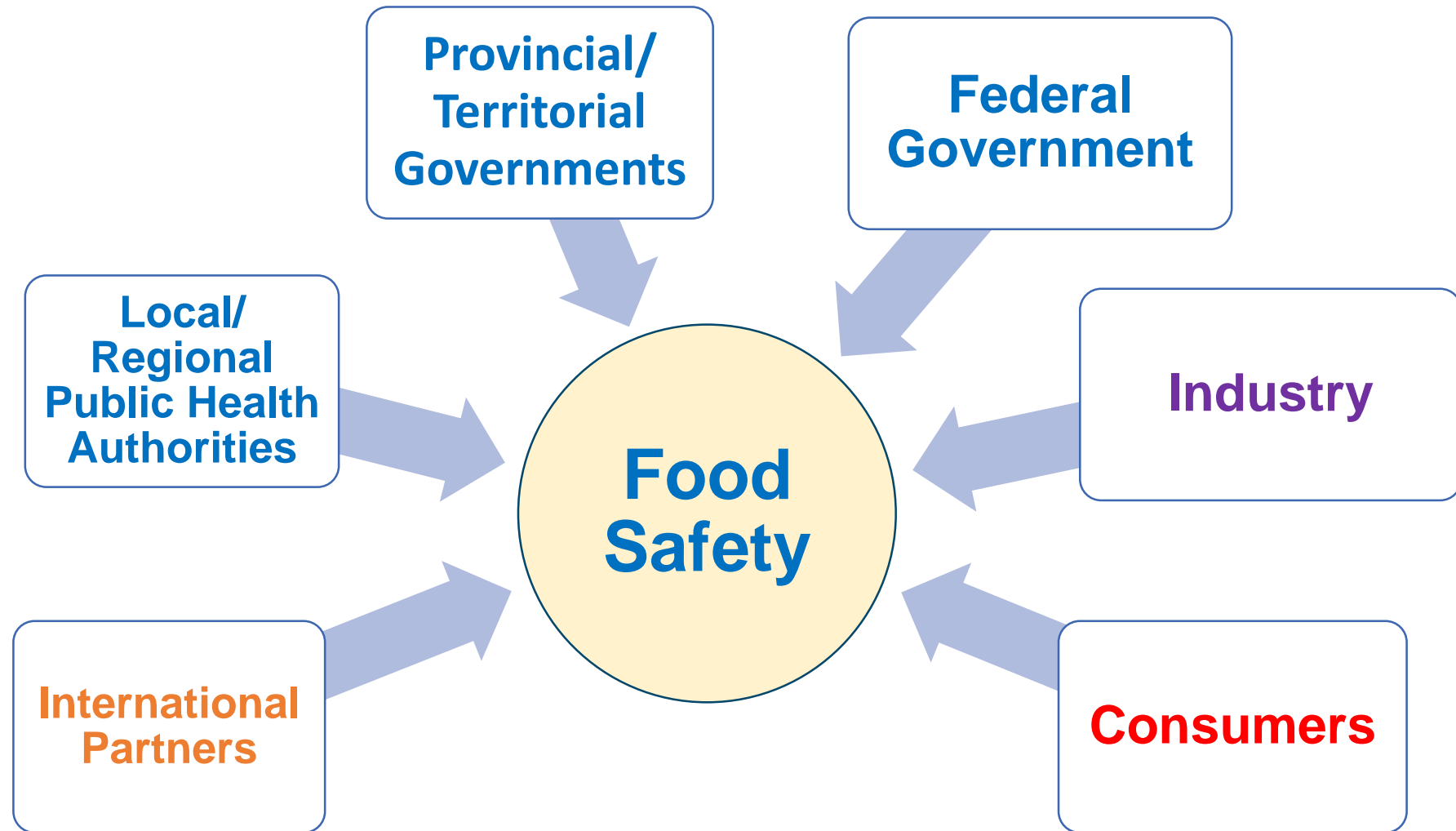


# Foodborne illness in Canada

- ❖ Every year, an estimated **1 in 8** Canadians (ca. 4 million) suffer from foodborne illness
- ❖ Over 11,500 hospitalizations and 240 deaths occur each year due to food-related illnesses
- ❖ Emerging microbial pathogens, Canada's aging population, and the globalization of the food supply, will likely have a large impact on the number of cases of foodborne illness in Canada in the future

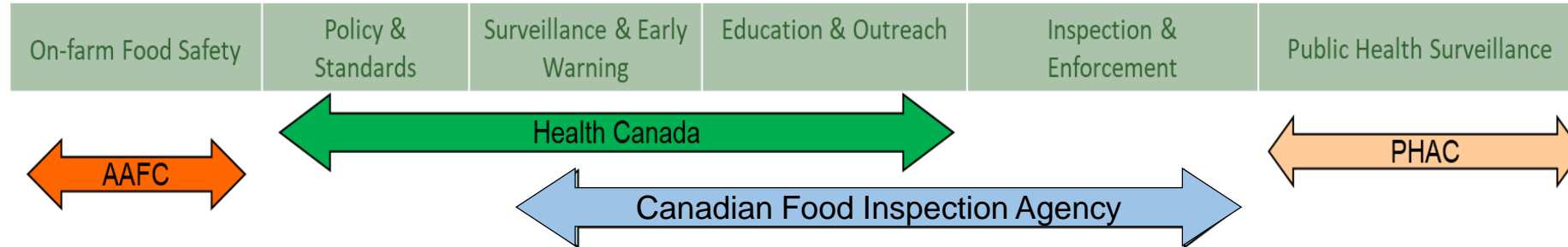


# Food Safety is a Shared Responsibility in Canada





# Canadian Food Safety – Key Federal Accountabilities



## Primary Responsibilities

Agriculture and Agri-Food Canada (AAFC)	Health Canada	Canadian Food Inspection Agency (CFIA)	Public Health Agency of Canada (PHAC)
<ul style="list-style-type: none"> <li>Contributes to research and development of on farm food safety programs</li> </ul>	<ul style="list-style-type: none"> <li>Administers health and safety elements for food under the <i>Food and Drugs Act</i> and its regulations</li> <li>Establishes evidence-based policies and standards</li> <li>Conducts health risk assessments in support of food safety investigations</li> <li>Conducts pre-market assessments of infant formula, food additives and novel foods</li> <li>Conducts scientific research, surveillance and monitoring activities to inform the development of appropriate risk management measures</li> <li>Provides advice and information to Canadians about potential risks to their Health</li> </ul>	<ul style="list-style-type: none"> <li>Administers the <i>Safe Food for Canadians Act</i> and its regulations as well as non-health and safety elements under the <i>FDR</i></li> <li>Enforces federal laws and regulations dealing with food</li> <li>Gauges industry compliance with food safety regulations through inspection/compliance verification of food producers and importers</li> <li>Investigates food responsible for foodborne illness outbreaks with food safety partners</li> <li>Facilitates voluntary food recalls and initiates as needed (with industry)</li> </ul>	<ul style="list-style-type: none"> <li>Acts as a first point of contact for federal government for human health impact of foodborne outbreaks</li> <li>Conducts public health surveillance</li> <li>Leads epidemiological investigations when investigation is in more than one province</li> </ul>

# Accountabilities for Other Levels of Government

Provincial / Territorial Governments	Local / Regional Public Health Authorities
<ul style="list-style-type: none"><li>▪ Regulate food processing within their jurisdiction</li><li>▪ Implement food safety programs</li><li>▪ Lead Outbreak investigations within their jurisdiction</li><li>▪ Communicate food safety messages to public</li></ul>	<ul style="list-style-type: none"><li>▪ Inspect food establishments in their jurisdiction</li><li>▪ Educate regarding food safety practices</li><li>▪ Report confirmed cases of foodborne illness to province/territory</li><li>▪ Investigate foodborne illness outbreaks; collect food samples; send samples to labs</li><li>▪ Conduct analyses of findings</li></ul>

# Food laws in Canada

- ❖ At the federal level of government, the ***Food and Drugs Act and its Regulations, (Food and Drug Regulations)***, generally apply to all food sold in Canada, including both imported and domestically produced food, at all levels of trade, such as inter-provincial or territorial and intra-provincial or intra-territorial
- ❖ The ***Safe Food for Canadians Act (SFCA) and the Safe Food for Canadians Regulations (SFCR)*** mainly apply to food that is imported or prepared for export or inter-provincial or inter-territorial trade for commercial purposes
- ❖ Together, they form the legislative foundation of federal food laws



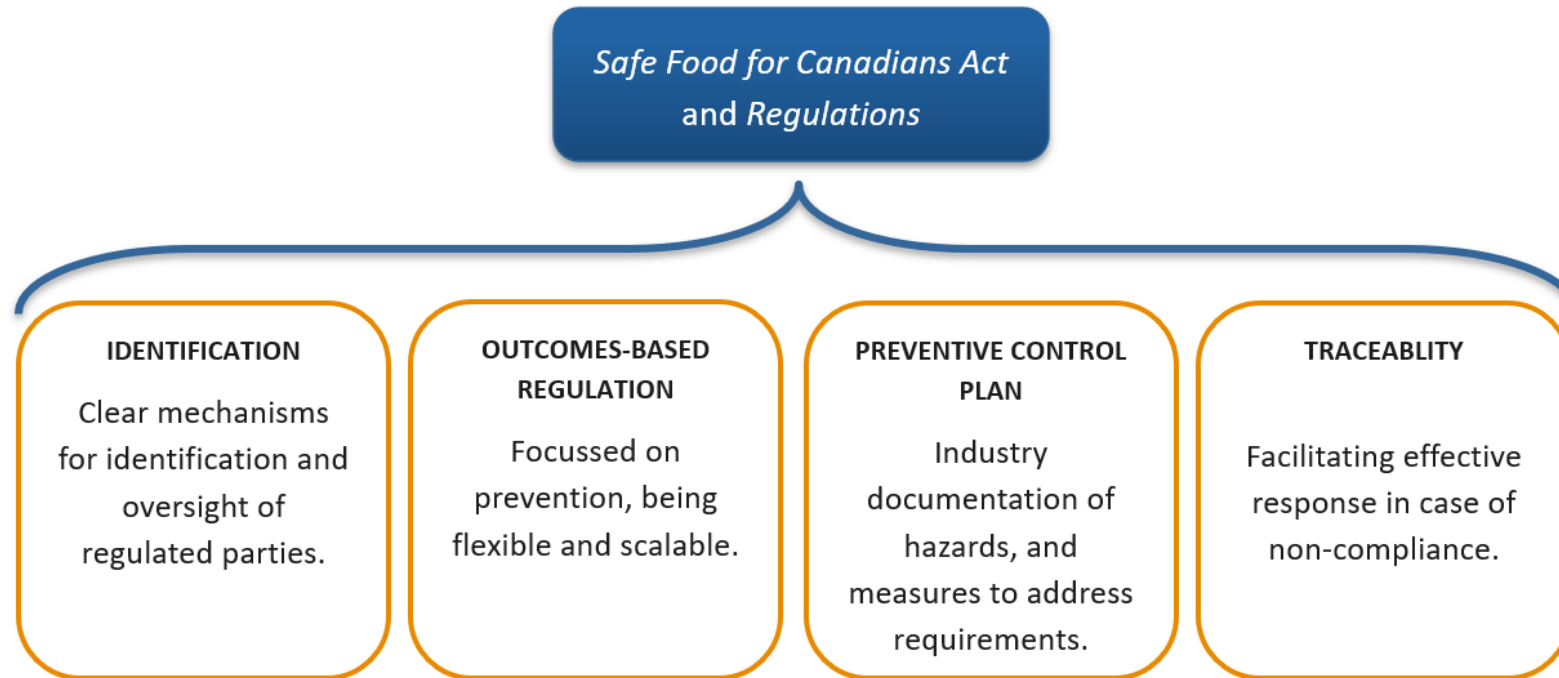
# Safe Food for Canadians Act

- ❖ The *Safe Food for Canadians Act* (SFCA) received Royal Assent in November 2012
- ❖ The passage of the Act set the stage for a **strengthened and modernized Canadian food safety system** that includes:
  - ✓ better protection for Canadians
  - ✓ enhanced controls over imported food
  - ✓ deterring deceptive practices, tampering and hoaxes; and,
  - ✓ tougher fines and penalties
- ❖ The *Act* makes Canadian businesses more competitive through:
  - ✓ reduced regulatory burden
  - ✓ improved inspection consistency and efficiency



# Supported by a strong regulatory foundation...

*Safe Food for Canadians Act* consolidated a number of CFIA inspection statutes and food provisions into a single set of food inspection regulations that apply to all food imported, exported and prepared for inter-provincial trade.



**...based on international standards and best practices, and a strengthened approach to risk management**

# Safe Food for Canadians – Regulations (SFCR)

- ❖ Part 1 - Interpretation
- ❖ Part 2 – Trade
- ❖ Part 3 – Licences
- ❖ Part 4 – Preventive Controls
- ❖ Part 5 - Traceability
- ❖ Part 6 - Commodity-specific requirements, including dairy products, eggs, processed egg products, fish, fresh fruits or vegetables, meat products and food animals
- ❖ Part 7 – Recognition of foreign systems
- ❖ Part 8 – Ministerial exemptions
- ❖ Part 9 – Inspection legends
- ❖ Part 10 – Packaging
- ❖ Part 11 – Labelling



# Microbial Standards

- ❖ Health Canada is the responsible authority for setting standards related to the presence of pathogens in foods, and CFIA plays a role in microbial monitoring and surveillance
- ❖ Currently, all the microbiological standards (both quality and safety) for foods sold in Canada reside in a document entitled “Interpretive Summary”
- ❖ In general, Health Canada will adopt/use Codex standards (CCFH), if such a standard does not currently exist in Canada



# Health Canada - Responsibilities for Food Safety - Chemicals

❖ Maximum residue limits (MRLs), maximum levels (MLs), guidelines, standards and tolerances for chemicals are limits established by Health Canada

## ❖ Responsibilities:

- ✓ Bureau of Chemical Safety – Chemicals
- ✓ Pest Management Regulatory Agency – Pesticides
- ✓ Veterinary Drugs Directorate - Veterinary drugs





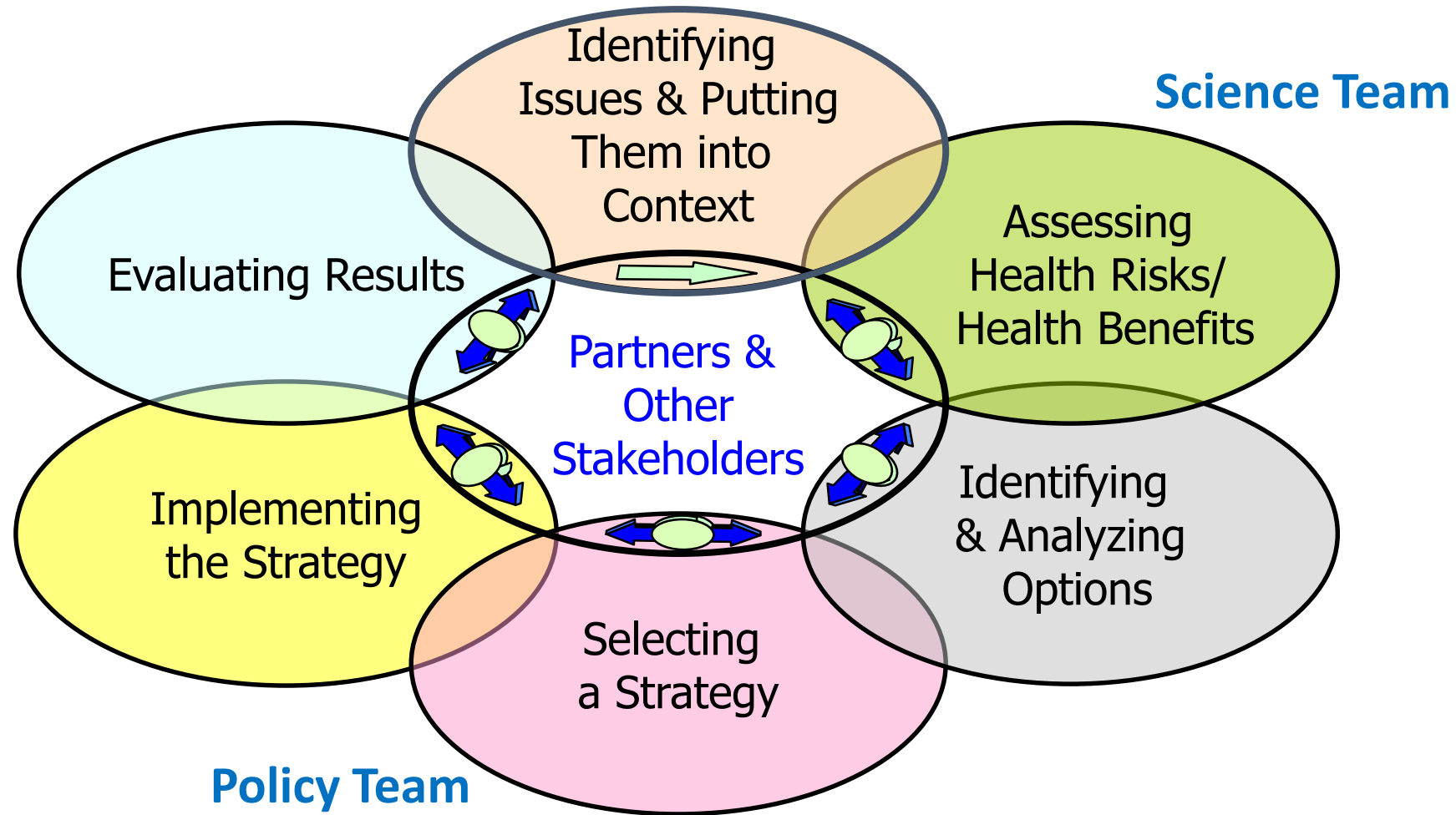
# Food Safety in Canada

## Health Canada's Decision-Making Framework

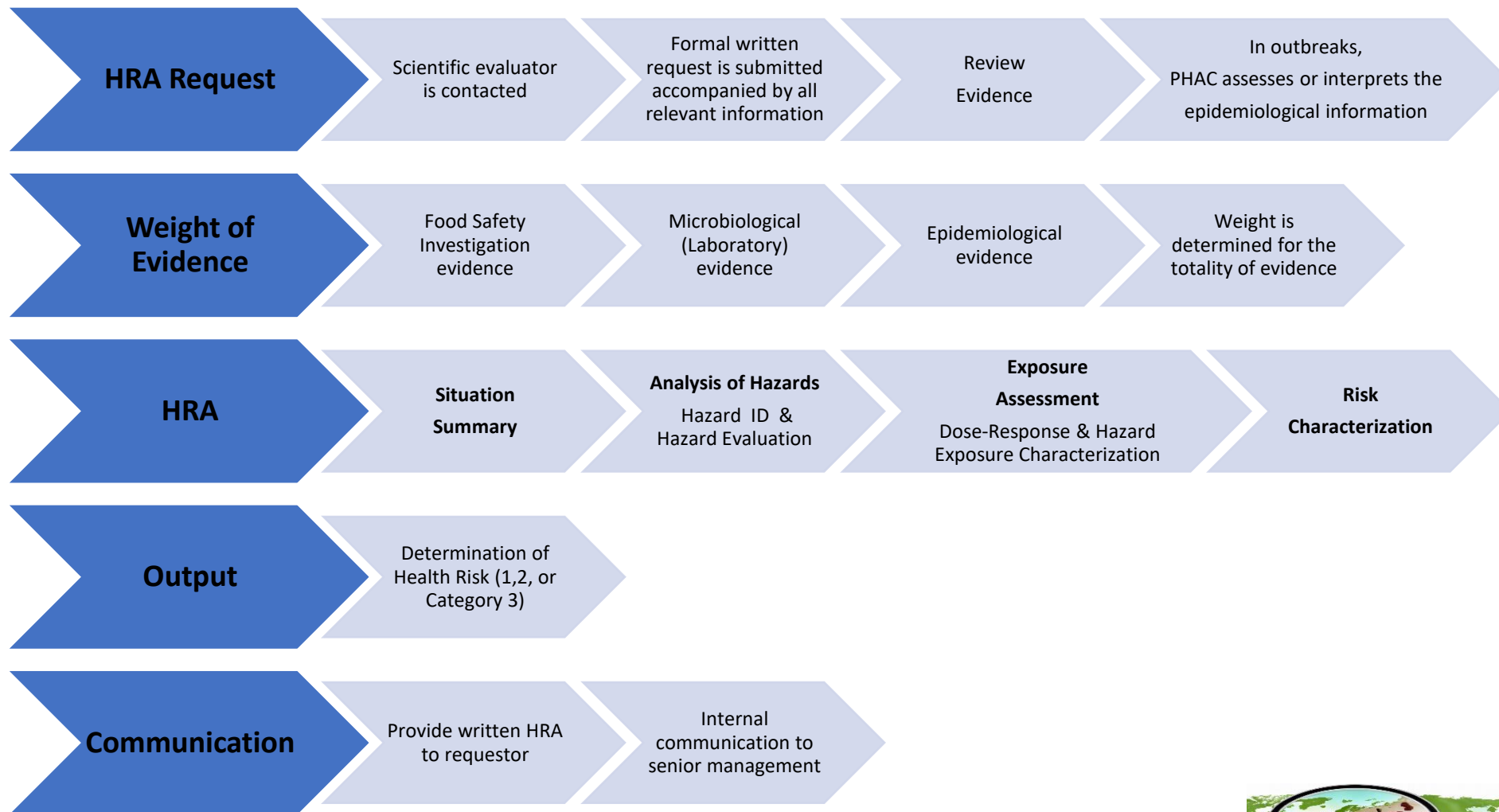
- Structured, systematic approach to identifying, assessing and managing health risks
- Emphasizes stakeholder consultation and communication
- Compatible and consistent with approaches developed at the international level by the Codex Alimentarius Commission and with the guidance on food safety risk analysis provided by FAO/WHO



# Risk Decision-Making Framework Diagram



# HRA Process Flow



# Consumer Education

- ❖ Health Canada is responsible for communications of issues related to food safety and nutritional quality of food, as well as the safety of veterinary drugs and pesticides
- ❖ In addition, it is responsible for raising public awareness on food safety to **First Nations** communities south of 60, as well as the development and dissemination of communication tools
- ❖ **CFIA** is responsible for communications related to the management of non-compliant food (e.g., **food recall notices**) and animal health issues, as well as the reporting of reportable animal diseases at the international level to the World Organisation for Animal Health (WOAH)
- ❖ **PHAC** is responsible for the communications of surveillance findings, issues with a human health impact, and educating consumers about food and waterborne disease pathogens, as well as the **reporting of reportable human diseases at the international level to the WHO**



UPDATED: NOVEMBER 2015



**SAFE FOOD HANDLING FOR  
PREGNANT WOMEN**

 Health Canada Santé Canada

**Canada**

UPDATED: NOVEMBER 2015



**SAFE FOOD HANDLING FOR  
IMMUNOCOMPROMISED INDIVIDUALS**

 Health Canada Santé Canada

**Canada**

UPDATED: NOVEMBER 2015



**SAFE FOOD HANDLING FOR  
ADULTS AGES 60 AND OVER**

 Health Canada Santé Canada

**Canada**

# Food Safety Enforcement/Compliance: Imported Foods

- ❖ The SFCR outlines the requirements for food businesses that *import* food to Canada, *export* food outside Canada and *trade* food inter-provincially
- ❖ A **Safe Food for Canadians (SFC) license** is required to import certain foods into Canada as identified in the CFIA's Automated Import Reference System (AIRS)
- ❖ It is the responsibility of the importer to make sure the food that they import is safe and that it meets Canadian requirements
- ❖ Importers need to develop and implement a **written preventive control plan (PCP)** outlining the measures and controls taken to ensure that the food they are importing is safe and fit for human consumption and complies with Canadian requirements before applying for an import license and before importing food
- ❖ Canada also has in place **recognition of foreign food safety systems and commodity specific food safety control programs**, as well as systems of inspection as part of a Canadian import control tool



# Canada–United States Regulatory Cooperation Council

Canada–United States  
Regulatory Cooperation  
Council

[Regulatory Cooperation  
Council: work plans](#)

[Regulatory Cooperation  
Council: success stories](#)

[Regulatory Cooperation  
Council: stakeholder corner](#)

## Overview

The Canada–United States (U.S.) Regulatory Cooperation Council provides a forum for stakeholders to:

- ❖ Discuss regulatory barriers to cross-border trade and investment
- ❖ Identify opportunities for alignment and cooperation

**The Council, founded in 2011, is governed by the Treasury Board of Canada Secretariat and the U.S. Office of Information and Regulatory Affairs**

### Its goals are to:

- ✓ Maintain/enhance the health, safety and security of Canadians and the environment
- ✓ Reduce costs to Canadian businesses and consumers
- ✓ Increase product choice in the Canadian market
- ✓ Help increase regulatory transparency & coordination btwn. Canada & the U.S.
- ✓ Reduce administrative burden on businesses

# Labs and Reference Services

- ❖ The Science Branch (SB) within the CFIA has responsibility for the 13 reference and research laboratories conducting testing and related activities that are used by the CFIA to verify that national and international standards for food safety, animal health, and plant protection are met
- ❖ Health Canada operates the Botulism Reference Service, the Vibrio Reference Service and co-runs the Food Virology Reference Service and the Listeriosis Reference Service with PHAC







Public Health  
Agency of Canada

Agence de la santé  
publique du Canada

Canada

# Public Health Agency of Canada

PROTECTING AND EMPOWERING CANADIANS  
TO IMPROVE THEIR HEALTH



# PHAC – Surveillance Programs

- ❖ FoodNet Canada
- ❖ Pulse Net Canada
- ❖ Enhanced National Listeriosis Surveillance
- ❖ National Enteric Surveillance Program
- ❖ Burden of Illness Studies
- ❖ Canadian Integrated Program for Antimicrobial Resistance Surveillance (CIPARS)
- ❖ Outbreak summaries





Public Health  
Agency of Canada

Agence de la santé  
publique du Canada

Canada

# FoodNet Canada

PROTECTING AND EMPOWERING CANADIANS  
TO IMPROVE THEIR HEALTH



# PHAC – FoodNet Canada

**FoodNet Canada collects information and samples at the community level on an ongoing basis for:**

- ❖ Human illness (exposure information and risk behaviours)
- ❖ Farm-to-fork continuum (**retail food, farm animals and local water**)

## **Surveillance Objectives:**

- Determine what food and other sources are making Canadians ill (**source attribution**)
- Determine significant risk factors for enteric illness
- Accurately track disease rates and risks over time
- Provide practical prevention information to:
  - ❖ prioritize risks
  - ❖ compare interventions, direct actions and advance policy
  - ❖ assess effectiveness of food safety activities and public health interventions and measure performance





Contents lists available at [ScienceDirect](#)

## Food Control

journal homepage: [www.elsevier.com/locate/foodcont](http://www.elsevier.com/locate/foodcont)



### Attributing salmonellosis cases to foodborne, animal contact and waterborne routes using the microbial subtyping approach and exposure weights

Matt Hurst<sup>a,\*</sup>, Andrea Nesbitt<sup>a</sup>, Stefanie Kadykalo<sup>a</sup>, Brendan Dougherty<sup>a</sup>,  
Juan Carlos Arango-Sabogal<sup>b</sup>, André Ravel<sup>b</sup>

<sup>a</sup> Centre for Food-borne and Environmental and Zoonotic Infectious Diseases, Public Health Agency of Canada, 370 Speedvale Avenue West, Suite 201, Guelph, N1H 7M7, Ontario, Canada

<sup>b</sup> Département de Pathologie et Microbiologie, Faculté de Médecine Vétérinaire, Université de Montréal, 3200 Rue Sicotte, Saint-Hyacinthe, Québec, J2S 2M2, Canada



# PulseNet Canada

**A critical surveillance system to quickly identify and respond to foodborne disease outbreaks**

- PulseNet Canada is a national surveillance system for ID and responding to foodborne disease outbreaks
- It is a **virtual electronic network** which ties public health labs of all provinces (plus some federal labs) together by linking their computers and databases
- The PulseNet Canada team at the National Microbiology Laboratory (NML) in **Winnipeg, Manitoba**, houses and manages the national databases; other NML labs in **Guelph** and **St. Hyacinthe**; this national network tracks all cases of foodborne illnesses
- ❖ PulseNet Canada performs molecular subtyping on *E. coli* O157:H7, *Salmonella*, *Shigella*, *L. monocytogenes* and *Vibrio* in close to real-time

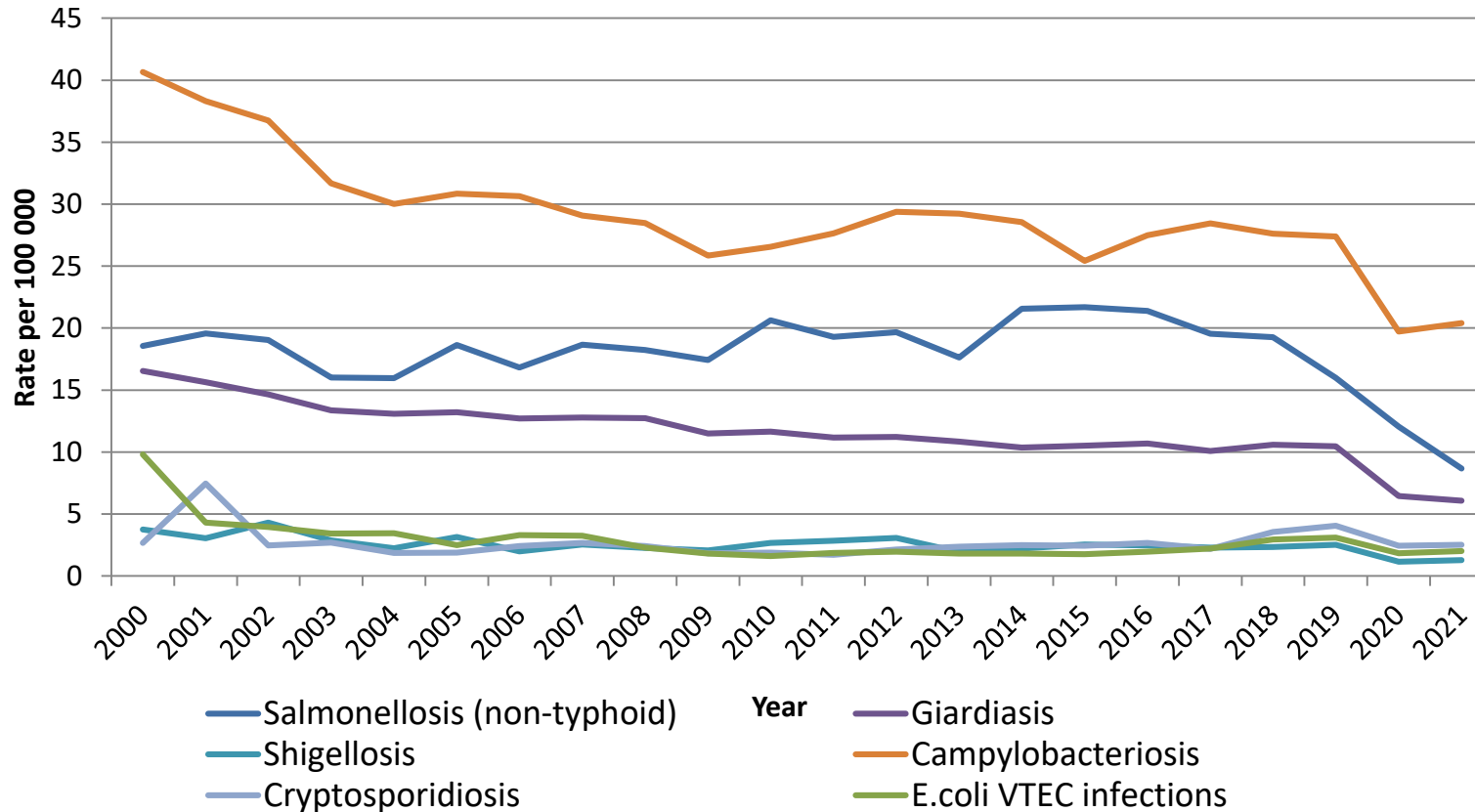


# Enhanced Listeriosis Surveillance

- ❖ A national enhanced surveillance program to improve the understanding of risk factors for invasive listeriosis
- ❖ Supports rapid investigation of outbreaks
- ❖ Collaboration with public health professionals (from local to federal) and with laboratories (from private/hospital labs to NML and other federal labs) via the CPHLN
- ❖ Inclusion of *L. monocytogenes* to the PHAC NESP list of organisms
- ❖ Centralized collection of standardized invasive listeriosis case follow-up questionnaires on all cases of listeriosis in all provinces and territories, except Quebec



# Top notifiable enteric diseases in Canada, 2000-2021



Source: Canadian Notifiable Disease Surveillance System



# International Communication & Harmonization

- Canada participates in a number of international standards organizations, such as ISO, AOAC, Codex Alimentarius, FAO/WHO and the World Organization for Animal Health (WOAH)



# Summary

- ❖ Canada's food regulatory modernization system is aligned with internationally-recognized standards
- ❖ Together with industry, academia and consumers, the GoC works to:
  - Better prevent foodborne outbreaks
  - Facilitate the removal of unsafe food from the market more rapidly; and
  - Strengthen Canada's reputation of having a world class food safety system
- ❖ Global Food Security Index 2022 report; **Canada ranked first out of 113 countries in terms of quality and safety**



# Acknowledgments


- ❖ Health Canada – Brian Harrison, Enrico Buenaventura
- ❖ PHAC – Andrea Nesbitt, Carolee Carson
- ❖ CFIA – Romina Zanabria, Suzanne Savoie



# Thank you for listening! Questions?

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# Regulatory Systems Summary: CHILE

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**International Food Protection Issues (IFPI) PDG**

June,4th - 2024

**Ms. Constanza Vergara,**

Undersecretariat of International Economic Affairs



# Food Regulatory System Overview

Ministry of Agriculture

**SAG**

**SERNAPESCA**

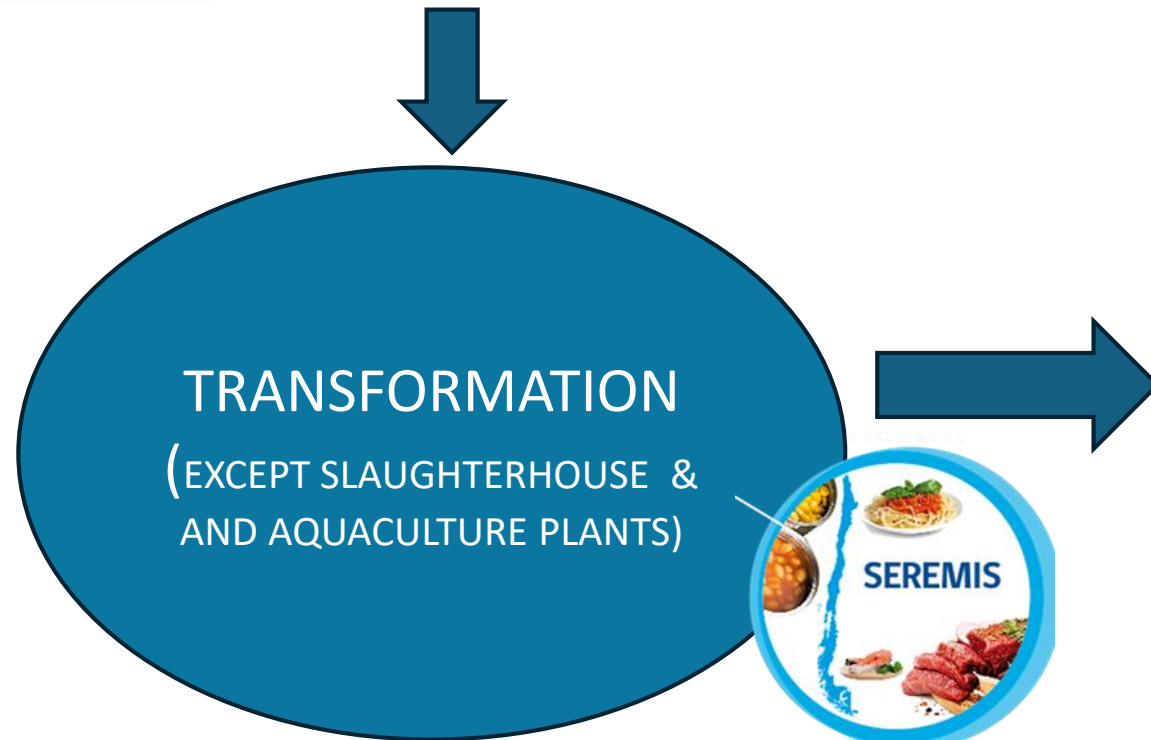
Ministry of Economy



Ministry of Health

**SEREMIS**

# FOOD CHAIN PRODUCTION PERSPECTIVE



# Food Safety Enforcement & Compliance: DOMESTIC



## Health Regional Secretaries (SEREMI)

- MoH reserves the right of testing all food products that are produced domestically
- regulate and supervise food production throughout the enforcement of the Food Sanitary Regulation (RSA) – Decree 977.

(<https://dipol.minsal.cl/departamentos-2/nutricion-y-alimentos/reglamento-sanitario-de-los-alimentos/>)

- establishes the sanitary conditions to which the production, import, processing, packaging, storage, distribution, and sale of food for human consumption must be adhered, to protect the health and nutrition of the population and ensure the supply of healthy and safe food.



## Agriculture and Livestock Service (SAG)

- Regulates specific concerning alcoholic beverages, certification of organic foods, animal products for human consumption (slaughtering and processing plants), and beef grading and labeling.
- regulates feed for animals, including pet food and feed supplements.



## National Fisheries & Aquaculture Service (SERNAPESCA)

- Requirements for food safety based on RSA, Codex Alimentarius and different destination markets throughout the Food Safety and Certification Manual  
([https://www.sernapesca.cl/manuales\\_y\\_publicaciones/manual-de-inocuidad-y-certificacion/](https://www.sernapesca.cl/manuales_y_publicaciones/manual-de-inocuidad-y-certificacion/))
- Reserves the right of ask for other requirements that may affect or influence the safety of fishery and aquaculture products



# Food Safety Enforcement & Compliance: IMPORTED



## Health Regional Secretaries (SEREMI)

- MoH reserves the right of testing all food products that are imported to the country.
- regulate and supervise imported food throughout the enforcement of the Food Sanitary Regulation (RSA) – Decree 977.

(<https://dipol.minsal.cl/departamentos-2/nutricion-y-alimentos/reglamento-sanitario-de-los-alimentos/>)

- All kind of food products.
- Non-compliance with Chilean regulations will result in the destruction of the product or the re-export of the imported product at the expense of the importer.



## Agriculture and Livestock Service (SAG)

- Since It oversees the prevention of the introduction from abroad of diseases or pests that may affect animals or plants and seriously damage agriculture.
- all establishments (slaughtering plant, cold storage, warehouses, processing plant, etc.), with interest to export their animal or plant products to Chile need to be authorized.
- Products regulated by SAG will be first reviewed by SAG and then by the regional office of MOH (SEREMI).



## National Fisheries & Aquaculture Service (SERNAPESCA)

- In the case of fishery or aquaculture products affected by marine toxins, it should be indicated that the certification requirements are based on international standards recommended by the Codex Alimentarius.
- In the case of farmed fish aquaculture products, the country of origin has a national residue control program and the product complies with Codex recommended standards for veterinary drug residues and contaminants.
- Establishment should be registered under SERNAPESCA registry.

# Food Safety Enforcement & Compliance: EXPORTED



## Health Regional Secretaries (SEREMI)

- Certify the food (processed food) was produced and elaborated in compliance of the Food Sanitary Regulation (RSA) – Decree 977.

(<https://dipol.minsal.cl/departamentos-2/nutricion-y-alimentos/reglamento-sanitario-de-los-alimentos/>)

\*Do not certify destination markets regulatory requirements.



## Agriculture and Livestock Service (SAG)

- Certify that animal products follow Codex alimentarius food safety standards or /and destination market regulation.
- Certify the fruits and vegetal products follow Codex alimentarius food safety standards or /and destination market regulation.
- Veterinary Drug residues, Foodborne pathogens, Pesticides MRL's, Contaminants ML.



## National Fisheries & Aquaculture Service (SERNAPESCA)

- Certify that fishery and aquaculture products follow Codex alimentarius food safety standards or /and destination market regulation.
- Establishment registration and verification ( HACCP / GMP)

# Laboratory & Other program resources



## Health Regional Secretaries (SEREMI)

- Network: 17 regional food surveillance laboratories + 1 Reference laboratory.
- National Public Health Institute is the reference laboratory where all isolates from food or patients related to foodborne outbreaks are derived from hospitals (public and private) or Regional Laboratories for confirmation and further characterization analysis.
- MoH conducts National Food safety surveillance program + each region will elaborate its own regional surveillance according to their own regional epidemiology.



## Agriculture and Livestock Service (SAG)

- Network: 3 regional laboratories + 1 central reference laboratory
- Veterinary Drug Residues control program (based on Codex and Market's regulation)
- Pesticides residues Program (based on Codex and destination market requirements)
- Foodborne pathogen program, (based on Destination Market requirements).



## National Fisheries & Aquaculture Service (SERNAPESCA)

- Network: Authorized laboratories + 2 Reference Laboratories (University Labs)
- According to the type of Establishment (A –C):
  - Food safety verification program
  - Lot food safety verification program

# Other programs: AMR



## Agriculture and Livestock Service (SAG)

- REDUCE Program: AM use reduction
- Non regulatory binding yet – voluntary
- Official List of Antimicrobial which will not be used by the farmer.
- To prepare animal production for banned AM.



## National Fisheries & Aquaculture Service (SERNAPESCA)

- PROA Program : AM use optimization
- Non regulatory binding – voluntary
- Compliance with the commitments assumed by the cultivation centers adhering to this program will result in obtaining an Official Certificate that will account for the efforts made to optimize the use of antimicrobials, as well as their incorporation into the official list of certified centers, available on the Service's website.

# Foodborne Disease Surveillance



- In Chile there is permanent and universal epidemiological surveillance of FBD outbreaks established in **Supreme Decree No. 158/04**, which regulates the "Regulations on the notification of notifiable communicable diseases" from MoH.
- Foodborne diseases are categorized of immediate notification.
- Chile is part of international networks (e.g. pulsenet, relavra)
- According to the report from 2011 to 2022 most common agents are:
  1. Salmonella
  2. Shiga toxin E. Coli
  3. S. aureus

## International Communication & Harmonization

- Chile actively participates in the World Trade Organization (WTO) and the Codex Alimentarius Commission.
- SAG houses the SPS office that notifies to the WTO's SPS Committee while the Secretariat of International Economic Relations (SUBREI) is responsible for Technical Barriers to Trade (TBT) notifications.
- MoA coordinates the National Codex Commission, with the involvement of MoH, MoE, Mo FA.
- Our food safety regulation is primarily based on Codex Alimentarius Standards.



# Non Food Safety Regulation: Nutritional Labelling

	1ª ETAPA	2ª ETAPA	3ª ETAPA	
✦ Calorías	100 (kcal/100ml)	80 (kcal/100ml)	70 (kcal/100ml)	↓ 30%
🧴 Sodio	100 (mg/100ml)	100 (mg/100ml)	100 (mg/100ml)	
🍞 Azúcares	6 (g/100ml)	5 (g/100ml)	5 (g/100ml)	↓ 16,7%
🧈 Grasas Saturadas	3 (g/100ml)	3 (g/100ml)	3 (g/100ml)	

% corresponde a la variación entre la primera y tercera etapa

ALTO EN CALORÍAS  
ALTO EN GRASAS SATURADAS  
ALTO EN AZÚCARES  
ALTO EN SODIO

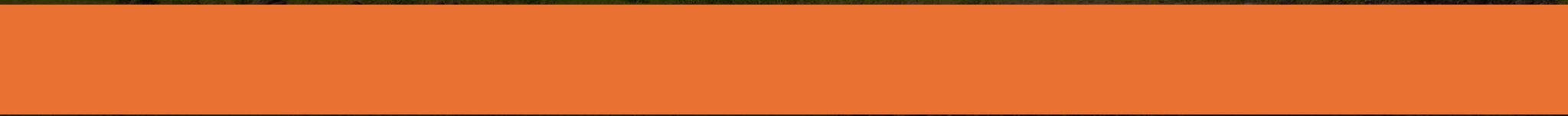


- **On the Top 5 causes:** Hipertension, Diabetes (non-communicable diseases)

Law 20.606 <https://www.bcn.cl/leychile/navegar?idNorma=1041570>



Thank you for your  
attention





# Questions?

# Upcoming Webinars:

June 5, 2024    Root Cause Analysis: Adopting Standard Practices for the Food Industry

June 17, 2024    How Can We Effectively Reuse Water End-To-End: Creating Equitable Future

June 26, 2024    Prioritizing Hazards in Infant Foods



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