Canada’s Risk-Based Approach to Inspection
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Purpose

• Introduce how Canada is modernizing its approach to inspection of sanitary and phytosanitary measures to address evolving challenges

• Discuss the benefits and considerations of Canada’s modernization of its approach to inspection
Changing Landscape

• Increasing demand for new and innovative products

• Evolving and more complex systems of production

• Changing role of inspection

• Resource constraints for regulators
Adapting Through Modernization

Past
- Solid foundation based on traditional business models
- Resource allocation based on service needs within programs
- Decisions based on variety of inputs

Today
- More systematic, objective, and evidence-based

Future
- Resource allocation based on data and risk-analysis tools and greatest impact
- Decisions also informed by mathematical models
Standard Inspection Procedure

**Past**
- Prescriptive
- Based on **WHAT** is inspected
- Hardcopy inspection records with various tracking tools
- Decentralized advice and guidance

**Today**
- Outcome based and adaptive
- Based on **HOW** to inspect
- Single digital database for inspection records and tracking
- Nationally consistent advice and guidance
Establishment-based Risk Assessment Model (ERA) for Food

**Inherent Risk Factors**
- Type of operations
- Commodity
- Type of products
- Volume
- Processing steps
- Direct distribution to vulnerable population

**Mitigation Factors**
- Additional processes
- International scheme certification
- 3rd Party audit
- Control of incoming supplies
- QA personnel
- Sampling plan

**Compliance Factors**
- Inspection results and impact assessment
- History of enforcement actions
- Recalls
- Food safety confirmed complaints

**Result**
(Level of Risk)

ERA will support
- Priority setting
- Work planning
- Program design
- Resource allocation
- Oversight activities
- Laboratory capacity mobilization

**Establishment questionnaire**

**Inspection Data**
Importer Risk Assessment Model (IRA): Under Development

**Inherent Risk Factors**
- Commodity
- Type of products
- Volume of imported product
- Product directly targeting vulnerable populations

**Mitigation Factors**
- Food Safety System Recognition / Equivalency

**Compliance Factors**
- Inspection results and impact assessment
- History of enforcement actions
- Recalls
- Food safety confirmed complaints

**Result**
(Level of Risk)
- Priority setting
- Work planning
- Program design
- Resource allocation
- Oversight approach
- Inspection priorities
- Offshore verification

CFIA Databases
Development of a Risk Assessment Model for Inspection

Step 1: Identification of factors associated with safety risk

Step 2: Selection of risk factors

Step 3: Risk factors’ criteria weighting, risk attribution at the sub-product level and design of the model

Step 4: Testing of the Model (Pilot project)

Step 5: Performance assessment of the model outputs
Example ERA Output

National Establishment-based Risk Assessment Results

- Very low risk: 66% (33
- Low risk: 20% (10
- Medium risk: 10% (5
- High risk: 4% (2

Legend:
- Very low risk
- Low risk
- Medium risk
- High risk
Example ERA Output

Cumulative Establishment-Based Risk Assessment Results

85% of establishments are responsible for approx. 10% of the cumulative risk
Benefits of Risk-Based approach to Inspection

• An evidence-based approach to support risk-based decision making coupled with uniform inspection procedures to allow similar risks to be treated with similar rigor, creates a system that is:

  – Adaptable to emerging trends

  – Able to identify areas in need of improvement in compliance and mitigation approaches

  – Able to recognize industry efforts to mitigate risk as well as their compliance history
Considerations

- Risk assessment models and standard inspection procedures are part of a broader risk management strategy.

- Canada’s modernization of inspection activities is supported by broader efforts to modernize Canada’s regulatory and legislative framework and requires support from regulatory authorities and industry.

- Modernization is a continual process; development of a risk assessment model requires ongoing verification and maintenance.

- Implementation of modernization often requires specialized knowledge and resources and can require specialized training and tools.
References

- The Canadian Food Inspection Agency website:  
  - www.inspection.gc.ca

- Peer-reviewed articles on the establishment-based risk assessment model:
  
  - Zanabria, R., et al., Selection of risk factors to be included in the Canadian Food Inspection Agency risk assessment inspection model for food establishments, *Food Microbiology* (2017)
  - Racicot, M., et al., Quantifying the impact of food safety criteria included in the Canadian Food Inspection Agency risk assessment model for food establishments through Experts Elicitation, *Food Control* (2018)

- For questions or comments on the establishment-based risk assessment model please email: cfia.ерamodel-modeleere.acia@canada.ca

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Questions?