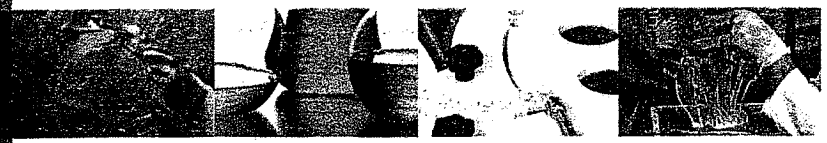
Canadian Food Inspection Agency | Agence canadienne d'inspection des aliments

Canadian Food Inspection Agency



Science and regulation...

working together for Canadians

Taiwan delegation – Opening Meeting September 10, 2012

Tom Graham, National Inspection Manager, National Operations

Canada

二、開場資料一

Mission

Dedicated to safeguarding food, animals and plants, which enhances the health and well-being of Canada's people, environment and economy.

Canada

The Canadian Food Inspection Agency (CFIA)

Canada

Canadian Food Inspection Agency

Safe Food	Animal Health	Plant Protection

• Fish & seafood
• Dairy
• Egg & egg products
• Meat & poultry products
• Honey, maple products
• Fresh Fruit & Vegetables
• Processed products
• Imported food
• Fair Labelling Practice
	• Animal Health
	  • Veterinary Biologics
	  • Humane Transportation
	• Feed
		• Plant Protection
		• Seed
		• Fertilizer

Canada

CFIA Legislative Authority

1. Agriculture and Agri-Food Monetary Penalties Act
2. Appropriation Acts
3. Canada Agricultural Products Act
4. Canadian Food Inspection Agency Act
5. Consumer Packaging and Labelling Act
6. Feeds Act
7. Fertilizers Act
8. Fish Inspection Act
9. Food and Drugs Act (as it relates to food)
10. Health of Animals Act
11. Meat Inspection Act
12. Plant Breeders' Rights Act
13. Plant Protection Act
14. Seeds Act

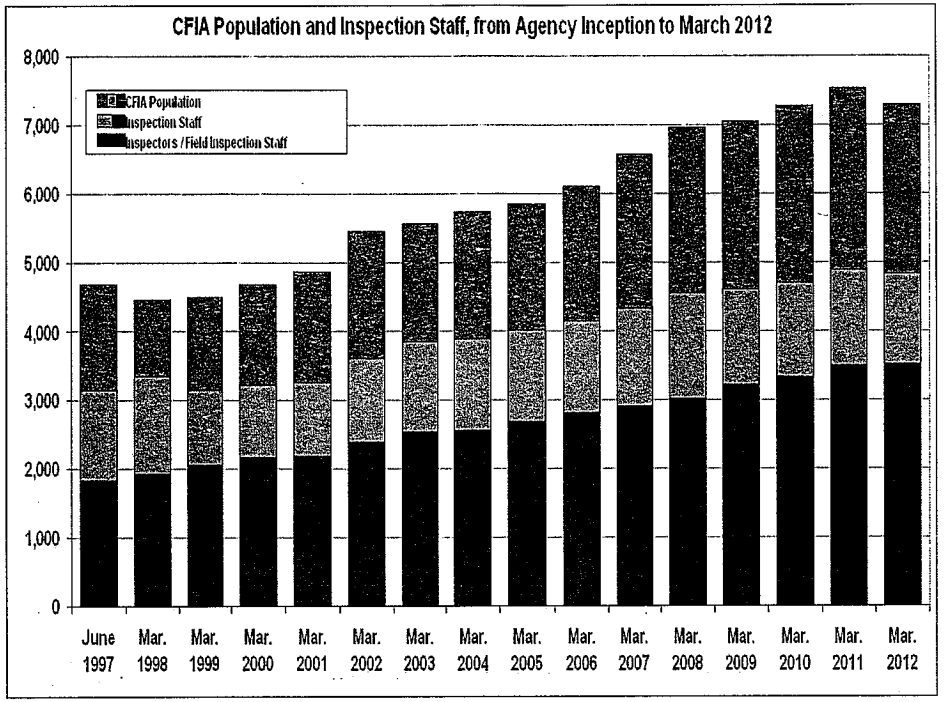
Canada

Enforcement and Compliance Activities

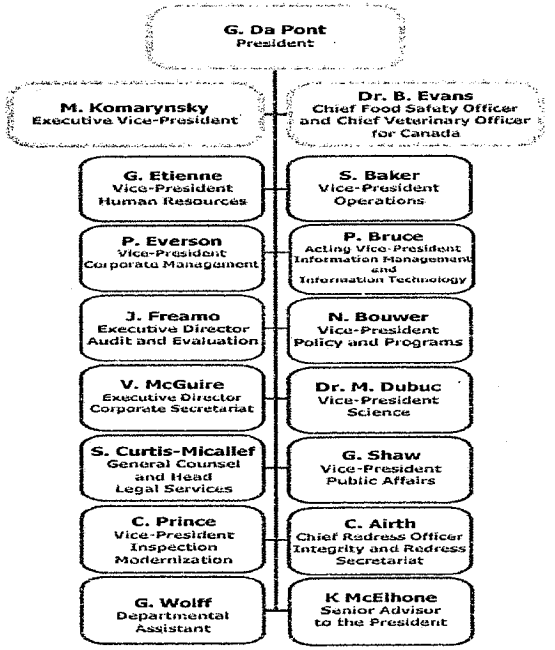
The CFIA uses a risk-based approach to verify that domestically produced and imported products meet Canadian standards and regulations.

Regulated parties are responsible for complying with all acts and regulations that apply to them, including those administered and enforced by the CFIA.

Canada



Senior Management Structure



Policy and Program Branch

- Establish policies that advance and support Agency priorities (e.g. BSE policy, Listeria policy)
- Design and modernize Agency programs to enable effective front-line service delivery

Canada

Operations Branch

Ensure efficient, effective and uniform front-line delivery of Agency's programs

Operations Branch is responsible for the delivery of the following types of activities:

- Registration & licensing
- Compliance and enforcement activities
- Service for fees activities
- Incident management activities (recalls)
- Contact with industry clients

Canada

Science Branch

The Science branch is responsible for:

- Laboratories operations
  - Laboratory sample tracking system
- Research and development
- Biohazard containment and safety
- Plant pest surveillance

Canada

Overview of the Meat Inspection Program

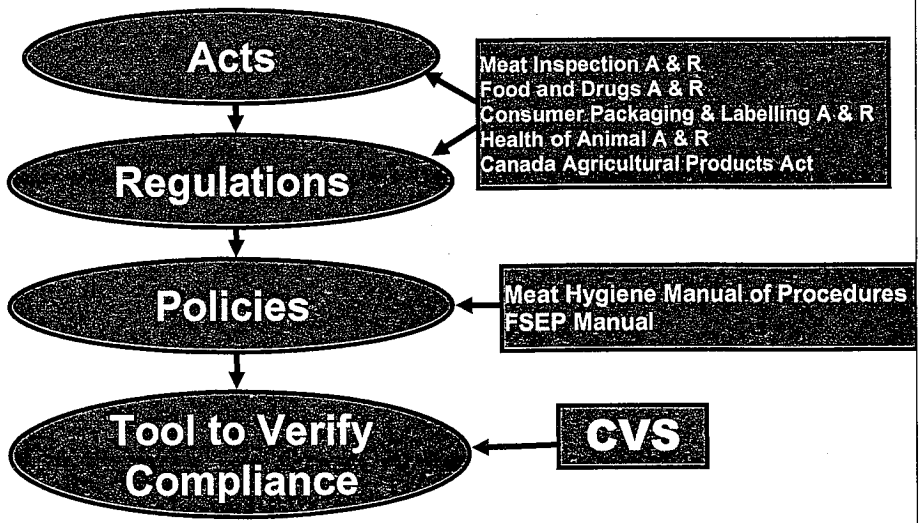
Canada

Meat Program Purpose

- To provide consumers with sound, safe, non adulterated, correctly labelled meat products of Canadian and foreign origin
- To identify disease problems in producer flocks and herds
- To prevent the introduction of exotic animal diseases into Canada via meat products
- To provide producers and operators with the potential for export outlets for meat products

Canada

Overview of the Meat Inspection Program



Meat Hygiene Manual of Procedures (MOP)

The MOP describes:

Policies, Control Programs, Export Requirements

- What is required
- What has to be done

For example, the Taiwan requirements, the BSE policy, the E.coli O157:H7 policy can be found in the MOP

Canada

Food Safety Enhancement Program (FSEP)

- FSEP specifies requirements for an effective Hazard Analysis Crtitical Control Points (HACCP) system
- FSEP is based on the principles of HACCP developed by the Codex Alimentarius Commission
- FSEP is mandatory in registered Meat & Poultry establishments

Canada

Compliance Verification System (CVS)

A tool used by Inspectors to:

- Verify an operator's compliance with regulations
- Document and communicate verification results
- Follow-up on non-compliant situations
- Take enforcement action when situations of non-compliance are identified and have not been corrected by the operator as required.

Canada

Food Safety Enhancement Program (FSEP)

Canada

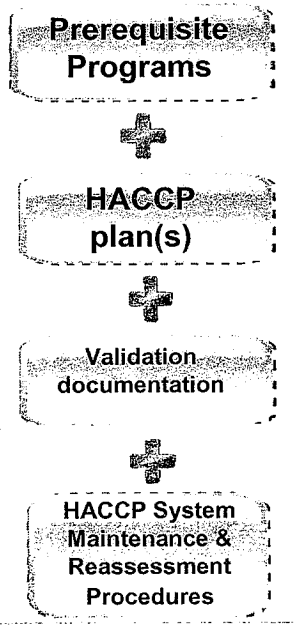
HACCP

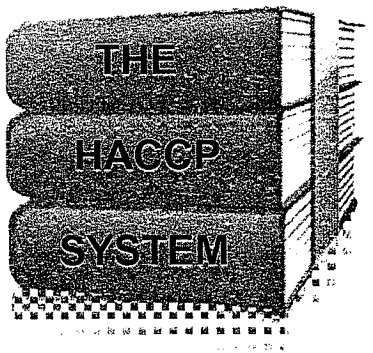
Hazard Analysis and Critical Control Point

HACCP is an internationally recognized, science based, food safety system

HACCP is designed to prevent, reduce or eliminate potential food safety hazards

Canada





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Prerequisite Programs

There are seven (7) prerequisite programs:

- Premises
- Transportation, Purchasing, Receiving, Shipping and Storage
- Equipment
- Personnel (Training, Good Manufacturing Practices)
- Sanitation and Pest Control
- Recall Program
- Operational prerequisite programs
    - Allergen control program
    - Food additives and nutrients
    - Food processing aids

Canada

The HACCP plan must include

1) A description of the product
2) A list of all ingredients and incoming materials
3) A process flow diagram
4) A plant schematic
6) All identified hazards
7) The determination of CCP and other control measures
8) The critical limits for each CCP
9) The monitoring procedures for each CCP
10) The deviation procedures for each CCP
11) The verification procedures for CCP
12) The record keeping for CCP

Canada

Validation

Documentation must be provided by the regulated party to demonstrate that the Critical Control Points:

- Work in theory
- Work in practice

CFIA may also request validation documentation for control measures covered by prerequisite programs that can lead to a food safety incident if not capable of controlling the specified standards

Canada

HACCP System Maintenance

Procedures must be developed and implemented by regulated parties to keep their HACCP system up-to-date and a true reflection of the controls in place

A HACCP log book must at least contain the following information:

- A description of the changes
- Where the changes occurred in the HACCP system
- The dates when changes are implemented, reassessed and, if necessary, validated
- The signature or initials of responsible person who ensures the changes are implemented effectively
- The revision date or number that correlates with document changed

Canada

HACCP System Reassessment

Procedures must be developed and implemented by regulated parties to ensure that the HACCP system currently in place is complete and effective

Regulated parties must reassess their HACCP system:

- Whenever any changes or situations occur that could affect the hazard analysis or alter the HACCP system
- At least annually

Canada

The Compliance Verification System (CVS)

Canada

Compliance Verification System (CVS)

The CVS is a standardized risk based inspection tool which is used for CFIA's meat, feed, rendering, animal transportation and animal traceability inspection programs.

Canada

Compliance Verification System (CVS)

- CVS includes:
  - Verification tasks with detailed procedures
  - Guidance for inspectors on the verification process
  - Reporting tools
- CVS is integrated with enforcement options

Canada

Verification tasks

The verification task provides instructions to follow by inspectors when performing activities necessary to verify the Establishment's compliance to the regulations.

Canada

Specific SRM Verification Tasks

Task 1.3.01 – SRM Control Program

- Specific to slaughter establishments
- Frequency: at least once per day
- On-site verification

CFIA Inspectors must verify

- SRM CCP Monitoring for aging and identification of cattle as Under Thirty Months (UTM) or Over Thirty Months (OTM)
- Application of OTM identification marking
- Removal of entire spinal cord
- Etc. See Task 1.3.01 for more details

Canada

Organization of Verification Tasks

The verification tasks are organized into 7 sections

Section 1:	Food Safety (e.g. Specified Risk Material (SRM) Tasks
Section 2:	Non Food Safety
Section 3:	Export
Section 4:	HACCP System Design
Section 5:	Animal Welfare and Animal Health
Section 6:	Program Specific Tasks (other than meat)
Section 7:	Sampling

Canada

Specific SRM Tasks

Task 1.3.02 – SRM Control Program

- Specific to slaughter establishments
- Frequency: at least once per month
- Record review

CFIA Inspectors must verify relevant records that show

- The date of SRM removal, staining, shipping, transporting or receiving
- The weight of the SRM, as well as the number of cattle carcasses if applicable, that are transported or received
- Etc. See Task 1.3.02 for more details

Canada

Specific SRM Tasks

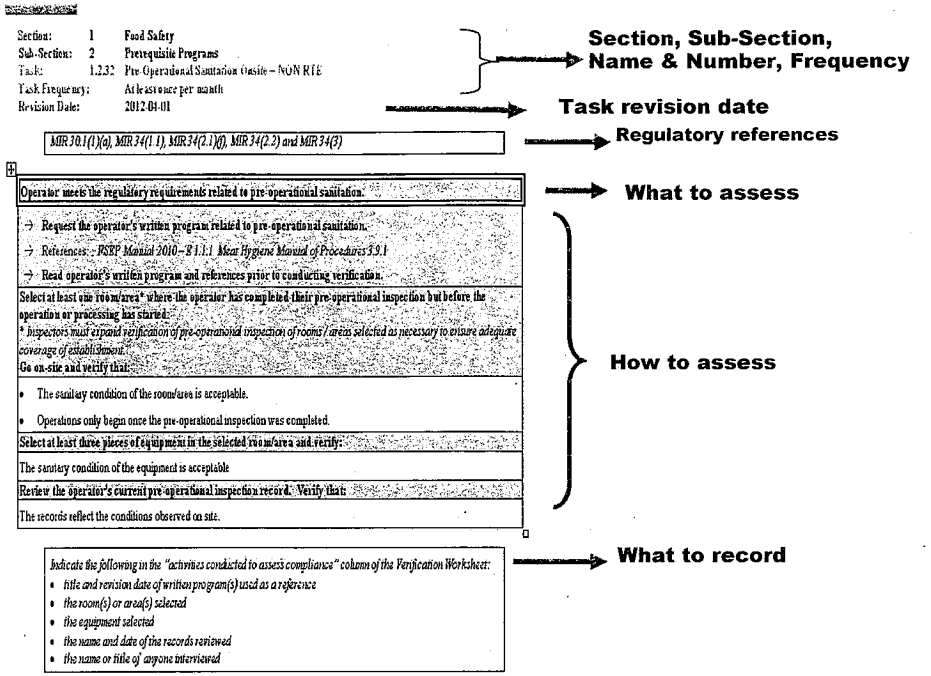
Task 1.3.20 – SRM Control Program

- Specific to stand alone boning establishments
- Frequency: at least once per week
- On-site verification

CFIA Inspectors must verify

- SRM CCP Monitoring; vertebral column from OTM carcasses containing dorsal root ganglia are removed and treated as SRM
- Receiving and handling of OTM carcasses
- General food hygiene to prevent cross contamination
- Etc. See Task 1.3.20 for more details

Canada



Specific SRM Tasks

Task 1.3.21 – SRM Control Program

- Specific to stand alone boning establishments
- Frequency: at least once per month
- Record review

CFIA Inspectors must verify relevant records that show

- The date of SRM removal, staining, shipping, transporting or receiving
- The weight of the SRM, as well as the number of cattle carcasses if applicable, that is transported or received
- Etc. See Task 1.3.21 for more details

Canada

CVS Task Frequency

CVS Tasks Frequencies are determined by using the CVS Risk Based Strategy (RBS).

Advantages of a RBS:

- Provides a systematic method of prioritizing inspection activities based on inherent risks
- Utilizes inspection data for the purpose of risk management
- Improves effectiveness of inspection by allocating limited inspection time to risk factors which may cause food-borne disease

Canada

Verification Process

The CVS Manual of Procedure defines steps the inspectors are to follow:

- Step 1 Preparation for the verification
- Step 2 Gather information to determine compliance
- Step 3 Assign compliance level
- Step 4 Communicate results and actions required
- Step 5 Assess operator's action plan
- Step 6 Follow-up
- Step 7 File Maintenance

Canada

Documentation

The CVS utilizes three documents:

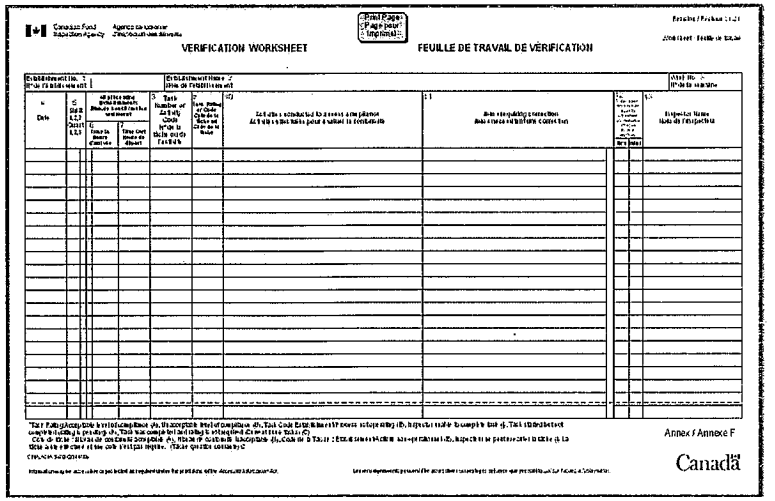
- Verification Worksheet
- Verification Report
- Corrective Action Request (CAR)

Canada

The Verfication Worksheet

- Internal CFIA document
- Contains facility information
- Used to record daily presence for US eligible establishments
- Identifies the verification task(s) performed
- Identifies the applicable rating or code for activities performed in lieu of a Verification Task
- Identifies the activities conducted to assess compliance
- References the CAR number, if applicable
- Identifies any items requiring correction which did not result in a CAR

Canada


VERIFICATION WORKSHEET

FEUILLE DE TRAVAIL DE VÉRIFICATION

Annex / Annexe F

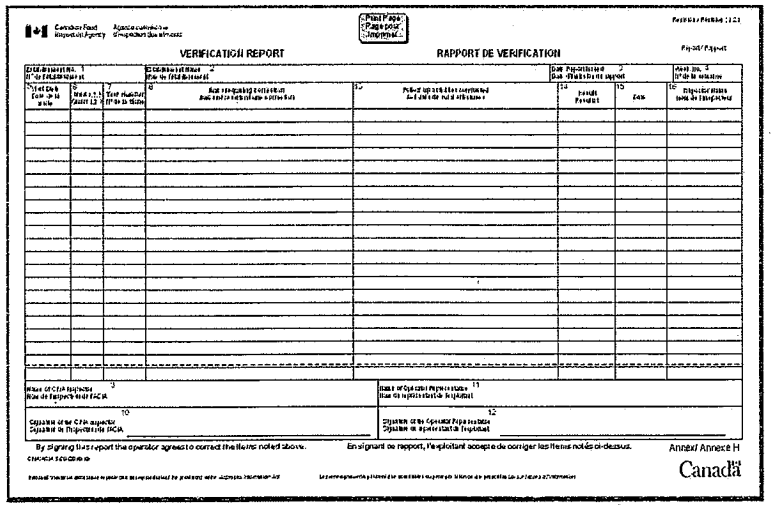
Canada

Canada

The Verification Report:

- Is provided to the Operator
- Identifies the CAR number if any CARs were generated.
- Identifies any items requiring correction which did not result in a CAR as listed on the Verification Worksheet

Canada



VERIFICATION REPORT

RAPPORT DE VERIFICATION

Canada

The Corrective Action Request (CAR)

- A CAR is issued to an operator by CFIA Inspector(s) whenever a Verification Task is rated unacceptable
- The CAR describes the non-compliance and requires the operator to implement corrective measures by
  - Providing an acceptable action plan by a date specified by the inspector
  - Effectively implementing the corrective and preventative measures by a date specified by the inspector
- The CAR also describes the information gathered during the follow-up inspection

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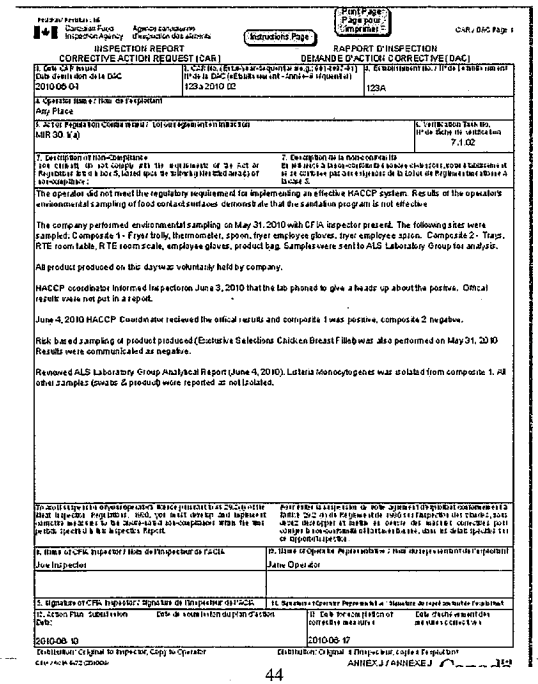
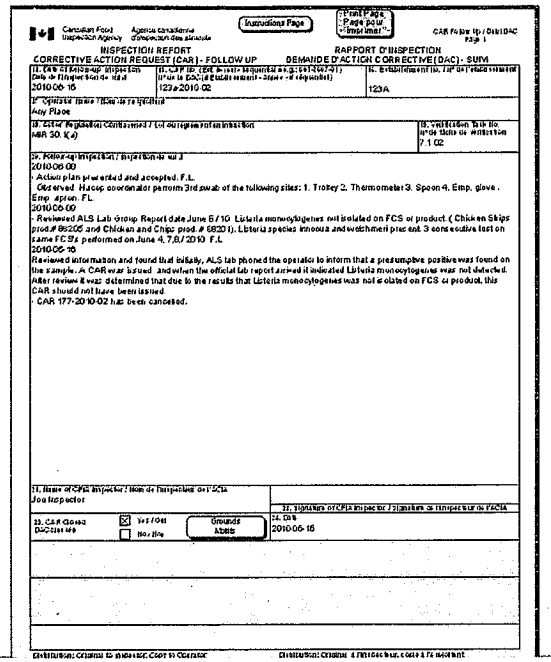


INSPECTION REPORT
CORRECTIVE ACTION REQUEST (CAR)

RAPPORT D'INSPECTION
DEMANDE D'ACTION CORRECTIVE (DAC)

Canada



INSPECTION REPORT
CORRECTIVE ACTION REQUEST (CAR) - FOLLOW UP

RAPPORT D'INSPECTION
DEMANDE D'ACTION CORRECTIVE(DAC) - SUIVI

2010-06-16

123a-2010-02

123A

Any Plant

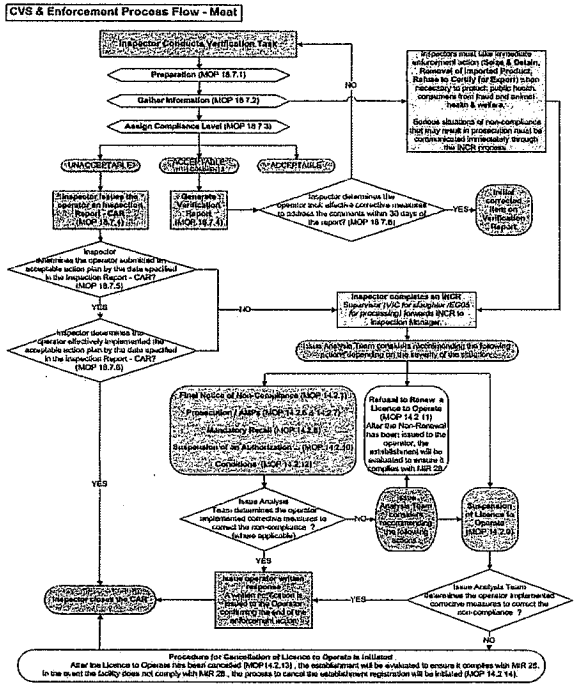
7.1.02

2010-06-09
- Action plan presented and accepted. F.L.
Observed Haccp coordinator perform 3rd swab of the following sites: 1. Trolley 2. Thermometer 3. Spoon 4. Emp. glove . Emp apron FL
2010-06-09
- Reviewed ALS Lab Group Report date June 8/10 Listeria monocytogenes not isolated on FCS of product (Chicken Strips prod.# 66205 and Chicken and Chips prod.# 68201). Listeria species innocua and welshimeri present 3 consecutive test on same FC S performed on June 4, 7,8/ 2010 F.L
2010-06-16
Reviewed information and found that initially, ALS lab phoned the operator to inform that a presumptive positive was found on the sample. A CAR was issued and when the official lab report arrived it indicated Listeria monocytogenes was not detected. After review it was determined that due to the results that Listeria monocytogenes was not detected on FCS of product, this CAR should not have been issued
- CAR 177-2010-02 has been canceled.

Joe Inspector

2010-06-16

Canada



Enforcement – CFIA Approach

- Compliance is normally achieved through a co-operative approach between the regulated party and the Canadian Food Inspection Agency (CFIA)
- This approach generally involves regulated parties correcting instances of non-compliance through the development and implementation of corrective action plans
- The CFIA may pursue other enforcement actions depending on the extent and severity of the non-compliance and the ability of the regulated party to correct the situation.

Canada

Quality Management System (QMS)

- Tool used widely throughout the CFIA to assess, improve and report on the quality of CFIA inspection staff activities
- Integral component of CVS to ensure uniformity and consistency
- Conducted by
  - Supervisors
  - Program Specialists
- Includes a
  - File review
  - On-site review with each inspector

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CFIA 15 ACIA

Fifteen years of internationally recognized expertise / Quinze années d'expertise reconnue à l'échelle internationale

Canadian Food Inspection Agency

Our vision:
To excel as a science-based regulator, trusted and respected by Canadians and the international community.

Our mission:
Dedicated to safeguarding food, animals and plants, which enhances the health and well-being of Canada's people, environment and economy.

Beef inspection procedures and BSE mitigating strategies in Canada

September 10th, 2012
Taiwan Food and Drug Administration (TFDA), Division of Food Safety

Canada

RDIMS #3339448v1

二、簡報資料 二

Canada's Beef Slaughter Industry

For Cattle Only	West		East		Total
	Alberta	British Columbia-Saskatchewan - Manitoba	Ontario	Quebec – Atlantic	
2011	2,140,437		575,979	173,211	2,889,627*
2010	2,439,796	6,058	577,819	186,632	3,210,305
2009	2,362,377	73,589	546,341	156,732	3,139,039
2008	2,269,387	243,256	566,838	174,398	3,253,879
2007	2,163,647	226,374	601,166	208,208	3,199,395

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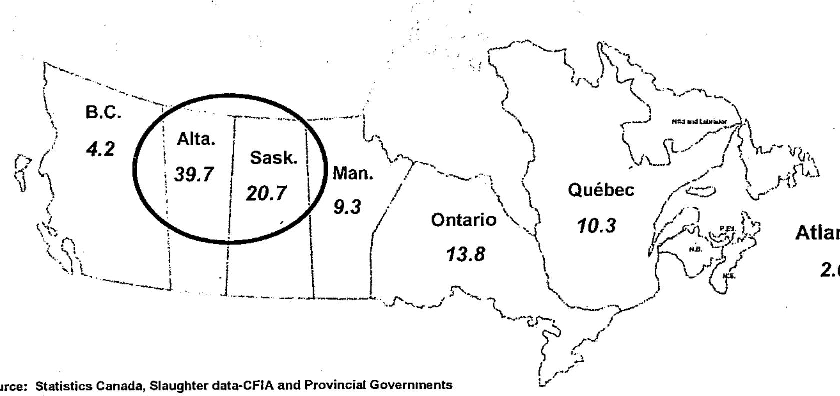
Canada

Canada's Beef Industry

Distribution Of Cattle and Calf Inventory (% of Total Inventory)

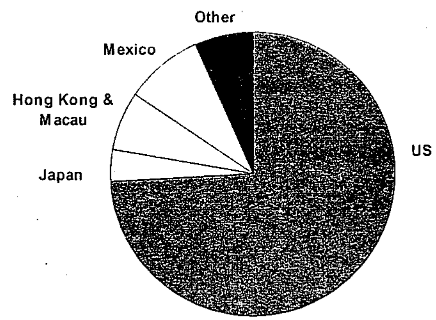
Canadian Cattle Facts (as of January 1st, 2012):		
~ 95,105 farms	*12,5 million heads*	*3.5 million slaughtered (2011, cattle and calves)*



Source: Statistics Canada, Slaughter data-CFIA and Provincial Governments

Canadian Beef and Veal Export Markets

- Beef production has grown by 87% since 1970
- Prior to market disruption due to BSE, 69% of production was exported
- 50% of Canada's beef and cattle production is exported, with 74% of beef going to the U.S.



2011 = 336,954 tonnes
$ 1.33 billion

Source: Statistics Canada

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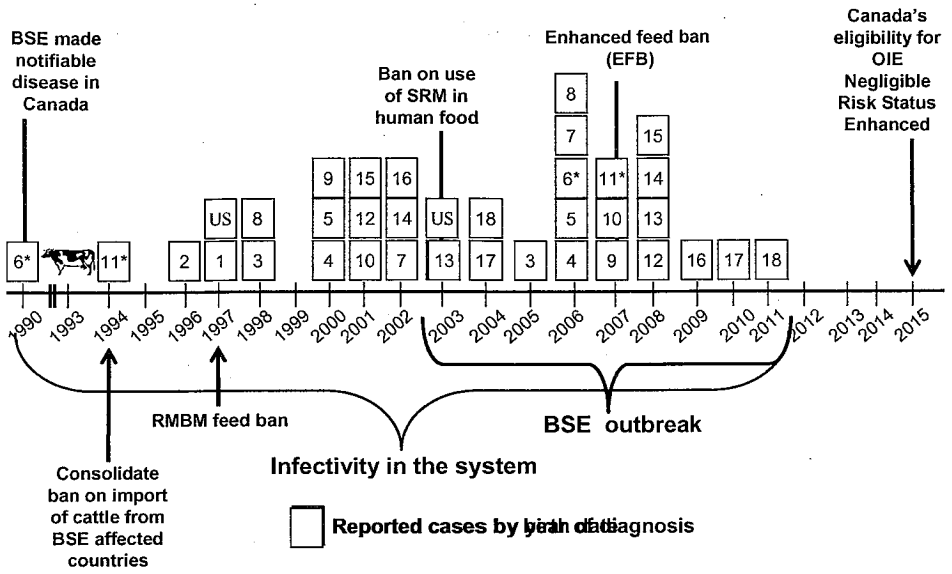
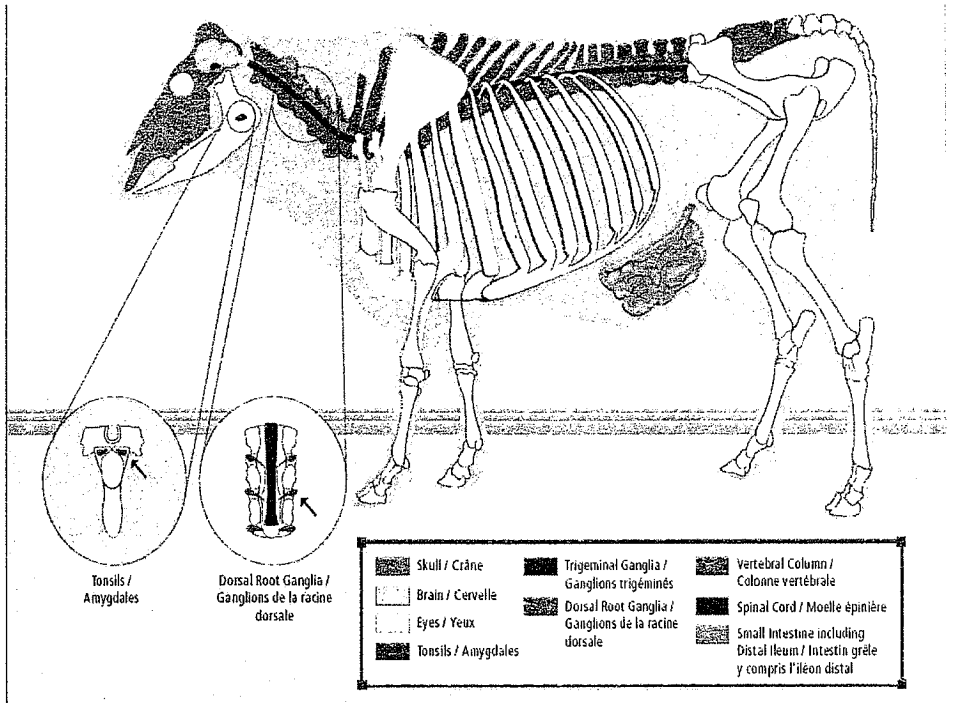
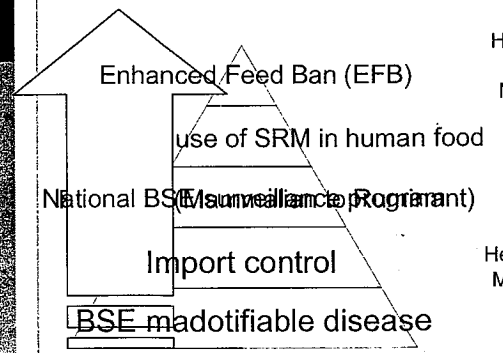
Time Line of BSE outbreak in Canada





Keys Pillars of the BSE control



Legal basis

Health of Animals Act & Regulations
Feeds Act & Regulations,
Meat Inspection Act & Regulations
Fertilizers Act & Regulations

Health of Animals Act & Regulations
Food and Drugs Act & Regulations,
Meat Inspection Act & Regulations

Health of Animals Act & Regulations
Food and Drugs Act & Regulations,
Feeds Act & Regulations
Meat Inspection Act & Regulations

Health of Animals Act & Regulations
Meat Inspection Act & Regulations

Reportable Diseases Regulations

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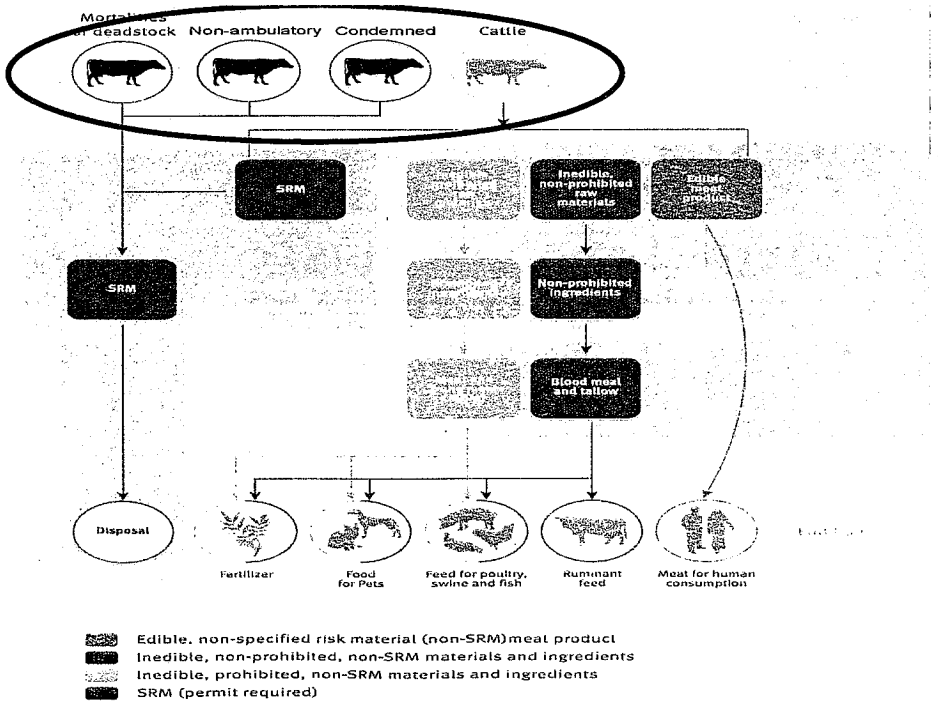


Ante-mortem

Operator responsibilities

- **Ante-mortem examination**
  - **screening**
- **Segregation**
  - disease
  - neurologic abnormalities
  - chemical residues
  - contaminated animals
  - animal welfare

Ante-mortem

CFIA responsibilities

- **Ante-mortem inspection**
- **Animal Welfare**
  - **Transport**
  - **Humane handling**

BSE suspect cases - Abattoir

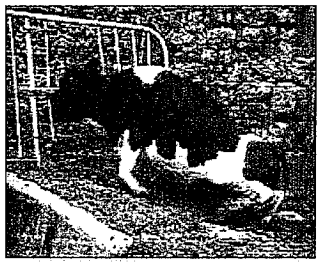
Any changes in :

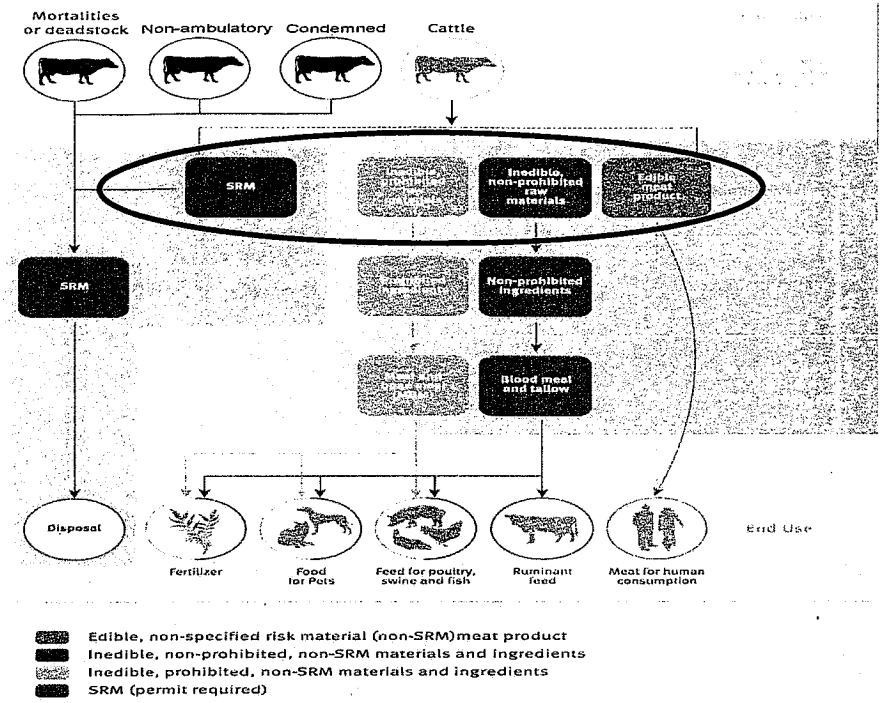
- Locomotor status such as weakness, abnormal head carriage, ataxia, circling, changes in gait;
- Sensory status such as kicking, blindness, head pressing, head shyness, hypersensitivity to light, touch and noise;
- Mental status such as apprehension, change in behaviour, abnormal ear position, nervousness, apprehension about passing through entrances, teeth grinding, aggressive behaviour.

BSE surveillance program - Abattoir

Handling '4 D' animals

- Found dead, including DEAD on arrival and dead in the barn;
- Non-ambulatory or "DOWNER" cattle;
- Condemned on ante-mortem inspection (DISEASE)
- DISTRESSED



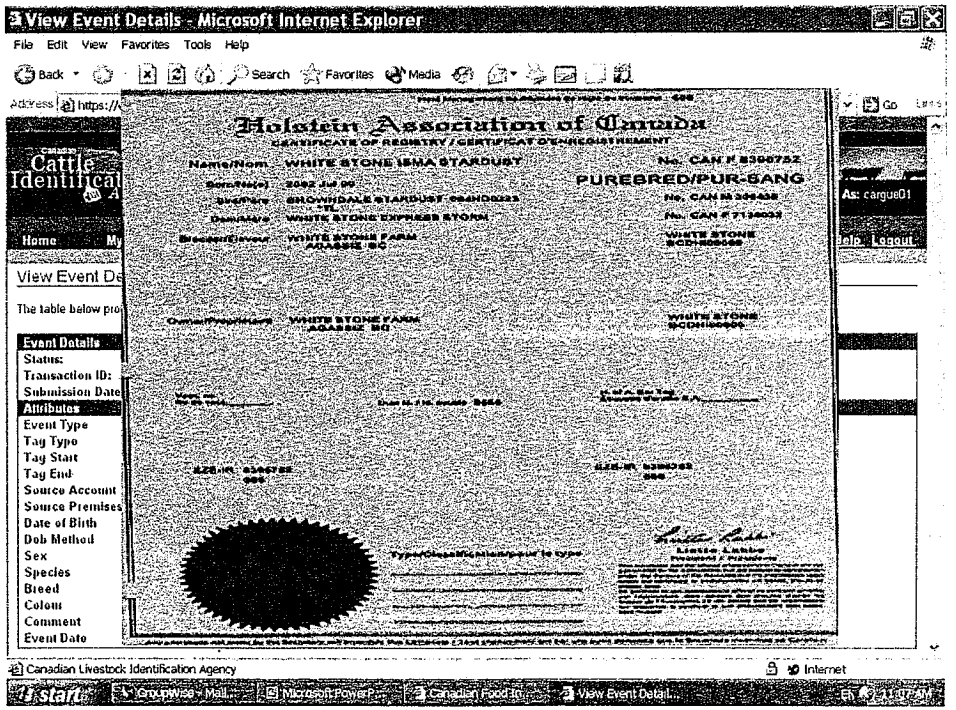


Age determination (Documentation)

- The Canadian cattle identification program for cattle has been introduced in 2001. This make RFID identification mandatory for all cattle.
- Producers should provide **accurate and actual birth date** information to the operator. CFIA ensure accuracy and validity of the information provided.
- Any accepted documentation that indicates the actual birth date are valid. (e.g. CCIA database, ATQ database, RBA database or certificate)

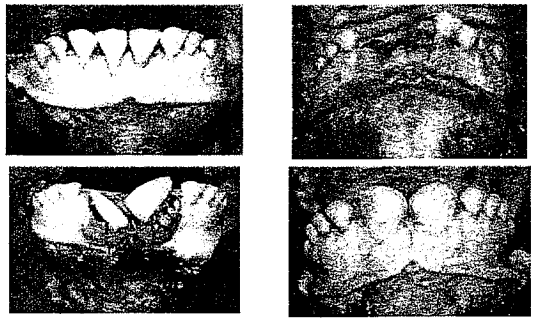
Stunning procedures

1. **Air injecting penetrating percussion device not permitted**
2. **Pithing rods not allowed**
3. **Externalized OTM brain tissue treated as SRM (Prevention of cross-contamination)**



Age determination (dentition)

< 30 months (UTM)

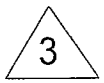


30 months and + (OTM)

Carcass identification

Carcass derived from an animal aged 30 months or older (OTM)

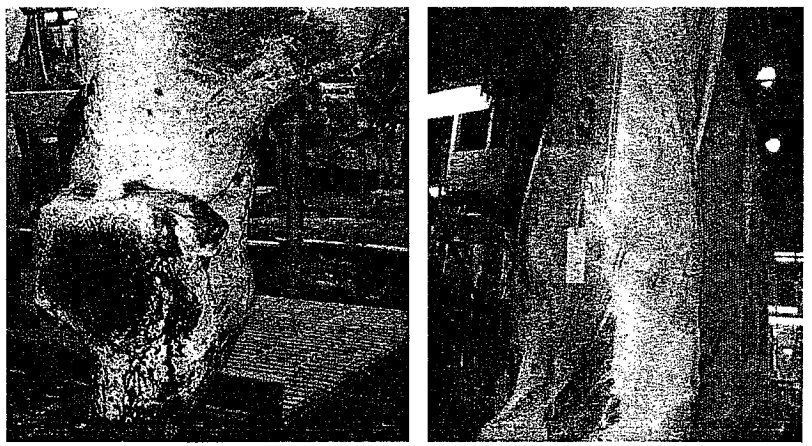
- Colour tag around tongue.
- Colour tag on the carcass.
- Marking on head.
- Both sides marked with number: 3



OR **3**

OTM Carcass identification

OTM Carcass identification



Sticking and bleeding

- Harvesting for human purposes
- Not harvested… See next slide.

Prevention of cross-contamination

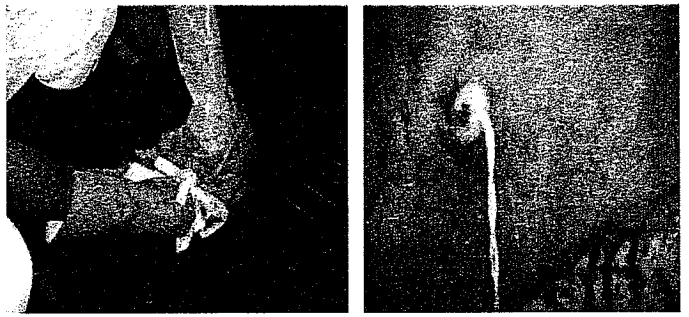
A. Blood:

Blood will be considered non-SRM if any of the following methods is used to prevent cross-contamination with SRM:

1. **Age verified UTM animals.**
2. **Non-penetrating stunning device.**
3. **Closed blood collection method e.g. Hollow knife**
4. **CFIA approved method e.g. plugging of stun hole with tampons, cork plugs, edible grease etc.**

Prevention of cross-contamination…

Plugging of stun hole:



Prevention of cross-contamination…

B. Nasal drip from OTM animals:

-Will be considered SRM from double stunned or miss stunned animals.

Prevention of cross-contamination...

C. OTM face plate (Head hide):

-will not be considered SRM, if grossly visible brain material is removed by trimming, washing, scraping or vacuuming.

D. Floor waste:

-will be considered SRM in areas where SRM is handled except in and around areas where the distal ileum or OTM vertebral columns are removed.

E. Wastewater (Slaughter establishments):

-Material retained in the pre-treatment screening system of 4 mm mesh size will be considered SRM.

Head removal

- **Head Removal and Cleaning**
  - Dedicated tools to separate the head : See next slide
  - The head must be clean, properly prepared and presented to the inspection in a satisfactory manner
  - Palatine tonsils are removed from the head of all cattle during the preparation the head.

Dedicated tools

Separate knives or tools must be used for severing the spinal cord to remove the head of OTM cattle.

These knives/tools must be identified by a color coding or other visual system.

Evisceration & Carcass Splitting

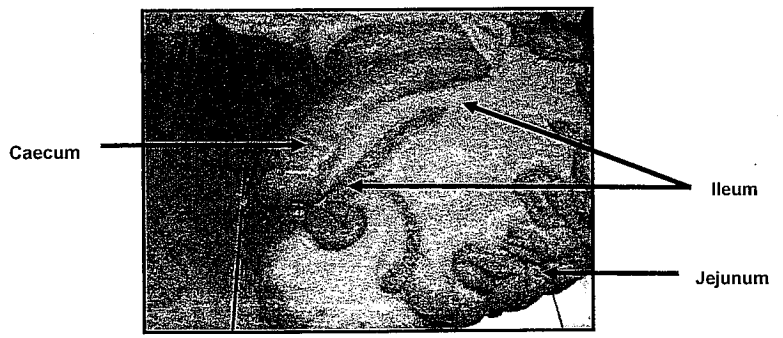
- The opening should not result in carcass or viscera contamination
- Viscera must be appropriately presented to the CFIA inspector
- Carcass splitting
  - The operator has the **option either to use dedicated equipment or to ensure that the equipment used on an OTM cattle carcass is cleaned and sanitized before being used on a UTM cattle carcass.**

Spinal cord removal

- **Carcass Trimming**
- **Spinal Cord Removal**
  1. The Spinal cord shall be removed from the carcass with the appropriate tools such as vaccuum, knive, etc . The use of link chain glove shall be avoided unless it is covered by a intact rubber glove.
  2. Operator shall immediately identify any miss split carcasses and rework them to ensure that the spinal cord is properly removed in the evisceration area.
- **Carcass Washing**
  - all carcasses shall be washed to remove blood and bone dust

SRM: Distal ileum

1. Remove entire small intestine OR
2. Remove the ileo-cecal junction and at least 200 cm of the uncoiled small intestine proximal to the ileo-cecal junction



Microbial Control & Interventions

WHAT
Generic *E.coli, Salmonella & E.coli* $O_{157}H_7$

WHERE
Pre-evisceration, Post Wash & Pre-shipment

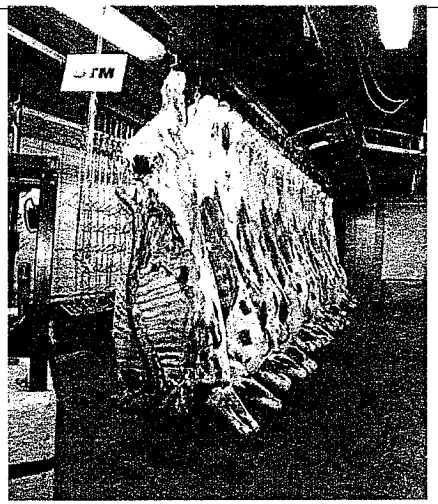
HOW
- Lactic acid, pasteurisation, hot water, Peroxyacetic acid, Chlorine, Bromous acid
- Prewash…

OTM carcass identification

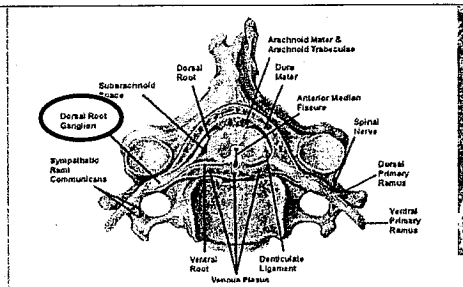
Staining of the vertebral Column of OTM carcass

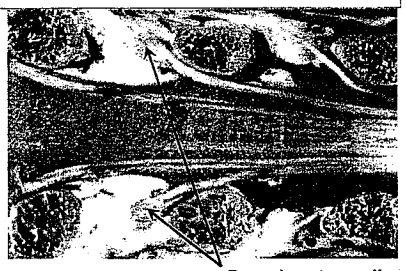
Segregation of OTM carcasses

OTM carcasses are segregated in the cooler and during boning procedures.

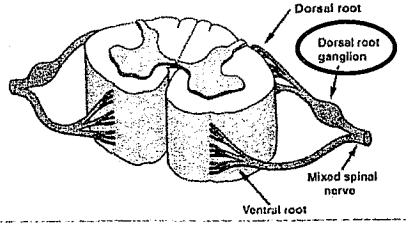


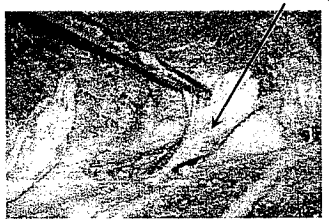
Dorsal Root Ganglia Removal





Dorsal root ganglia

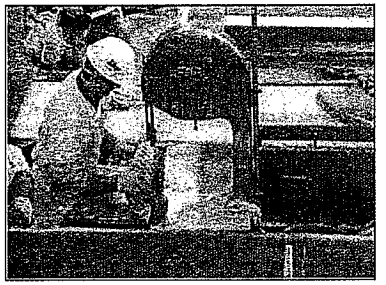




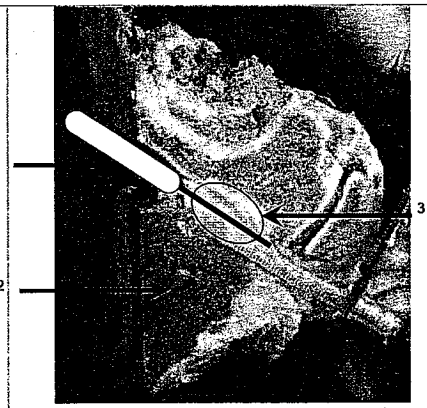
Removal of DRG

OTM carcass sides or quarters with the vertebral column attached (i.e. DRG not removed) can be shipped under CFIA permit from a federally registered slaughter establishment to another federally registered establishment if the controls are in place.

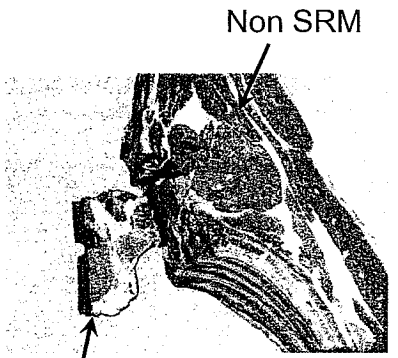
To ensure complete removal of the dorsal root ganglia (DRG), the vertebral column of OTM cattle, excluding the vertebrae of the tail, the dorsal and transverse processes of the thoracic and lumbar vertebrae, and the wings of the sacrum, must be removed and disposed of as SRM.



Removal of DRG



1 : vertebral canal
2 : vertebral body
3 : Area where the DRG can be found



CFIA Inspection

Head

- Tongue shall be palpated
- Incisions shall be made through the center of the internal pterygoid and external masseter muscles
- Medial retropharyngeal, lateral retropharyngeal, parotid and mandibular lymph nodes are to be exposed, examined visually and carefully
- CFIA verification of dentition (as applicable)

CFIA Inspection

Viscera

- Lungs shall be visually inspected and palpated
- Right and left tracheobronchial, cranial and caudal mediastinal lymph nodes shall be incised and examined
- Liver shall receive a visual inspection and be thoroughly palpated
- Hepatic lymph nodes shall be incised and examined
- Exterior and interior of the heart shall be visually inspected

CFIA Inspection

Viscera

- Mesenteric lymph nodes are to be visually examined
- Spleen shall be visually examined and palpated
- Reticulum, rumen, omasum and abomasum are to be visually inspected
- Rumino-reticular junction shall be visually examined
- Kidneys are visually examined (as applicable)

CFIA Inspection

Carcass

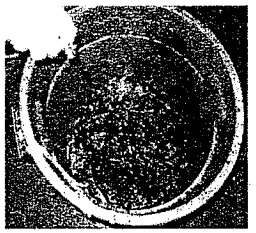
- Dressed carcass shall be subjected to a careful inspection, externally and internally
- Joints and outer muscular surfaces shall be examined
- The body cavities, the diaphragm and its pillars, the peritoneum, the pleura and the neck shall be observed

Staining of SRM

SRM must be stained in the inedible products area using CFIA approved dye

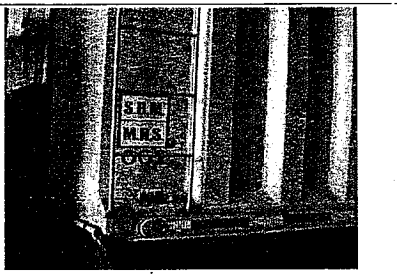
What has to be stained?

- SRM removed from cattle carcasses
- Solids screened from the waste water
- Floor waste
- Carcasses or parts of carcasses containing SRM (e.g. OTM vertebral column containing DRG)
- SRM removed from dead stock (DOAs) and condemned animals.



CFIA permits required for:

- Transportation of SRM
- Receiving of SRM



No person shall transport SRM unless:

- SRM is stained in accordance with the legislation.
- SRM is in a container marked on the outside with " **Specified Risk Material - Matériel à risque spécifié**" in both official languages

Staining of SRM

If the SRM is not removed from dead stock (DOAs) and condemned carcasses, mark the carcass with a wide stripe down back of the head and length of spine using a dye colour that must contrast with the animal's coat colour.

• If SRM is not segregated from other inedible materials, all inedible materials mixed with SRM must be classified and stained as SRM

Responsibilities: Operators

- **Produce safe and suitable meat products.**
- Develop, implement and maintain control programs, as part of their HACCP system, that demonstrate ongoing and effective control over hazards associated with meat.

Special attention must be taken on:

- Control over contamination (fecal, ingesta, milk)
- Control over SRM
- etc.

Animal Welfare Program

Responsibilities: Operators

Daily record of SRM removal, staining or receiving:

- Name and address
- Date of SRM removal and staining
- Weight of SRM and OTM carcasses/sides containing DRG as well as the number of those carcasses
- Number of DOAs and condemned at ante-mortem
- Dye used for staining
- Carcass tags on dead animals (CCIA or ATQ)
- Date of SRM shipment
- Name and address of the persons or company transporting SRM and the final destination.

Records must be retained for 10 years

Responsibilities: CFIA

- **Thorough familiarity with the control programs established by the operator;**
- **Verify full compliance with relevant regulations and policy through the completion of relevant CVS tasks and other inspection records as required; and**
- **Certify the product for exportation**

Responsibilities: Operators

Exportation of beef or beef products:

- Products prepared in registered establishments.
- Products prepared according to the requirements of the importing country.
- Product is certified for export.
- Registered establishment is approved for export

* The operator may be subjected to other restrictions based on importing country's requirements

References

Laws

Health of Animals Act: http://lois.justice.gc.ca/eng/H-3.3/index.html
Meat Inspection Act : http://lois.justice.gc.ca/eng/M-3.2/index.html

Regulations

Health of Animals Regulations:
http://lois.justice.gc.ca/eng/C.R.C.-c.296/index.html
Meat Inspection Regulations, 1990:
http://lois.justice.gc.ca/eng/SOR-90-288/index.html

Meat Hygiene Manual of Procedures

http://www.inspection.gc.ca/english/fssa/meavia/man/mane.shtml

SRM Policy

http://www.inspection.gc.ca/english/fssa/meavia/man/ch17/annexde.shtml

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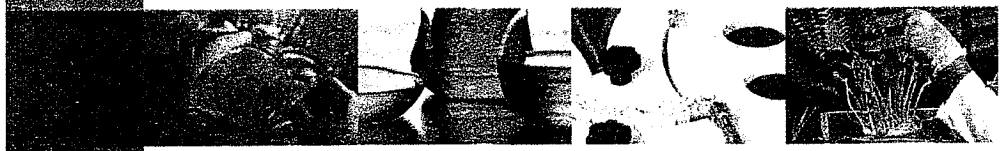


Taiwan Food and Drug Administration (TFDA), Division of Food Safety visit to Canada

BSE risk mitigating and monitoring measures

Dr Bachir Djillali
Animal Health Division, CFIA September 10th, 2012

Canada

Summary

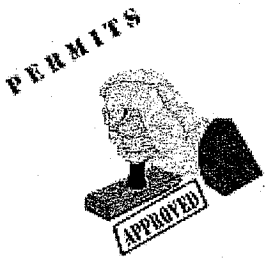
- BSE risk mitigating measures
- BSE Surveillance

*H of A Regs – **Permit** requirement*

Except in accordance with a permit no person shall…

receive, remove from any premises, use, convey (other than from one area to another on the same premises), treat, store, export, sell, distribute, confine or destroy

…SRM…



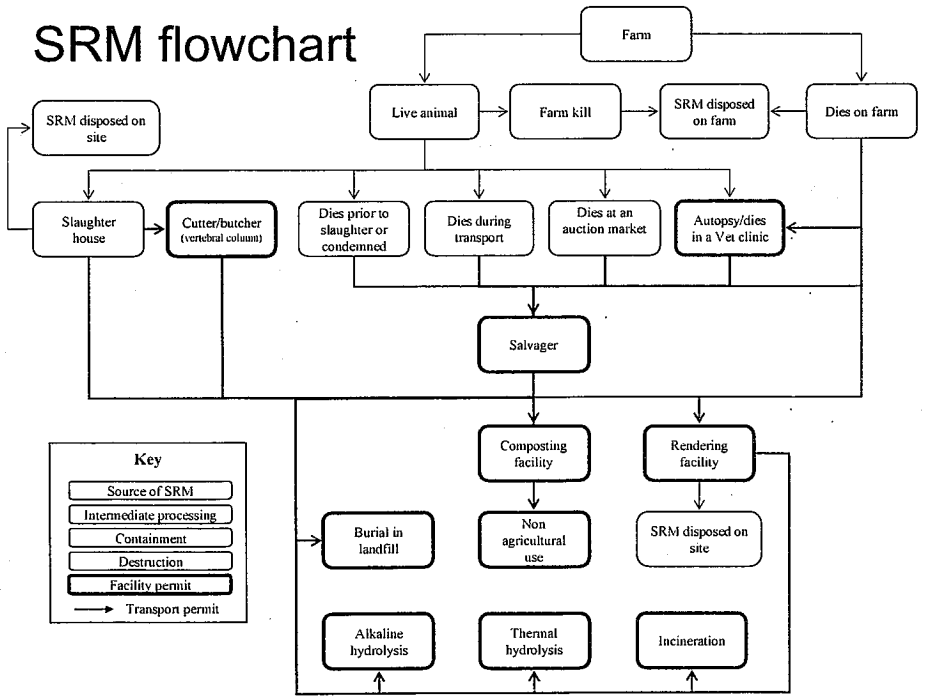
SRM are segregated at source and redirected for disposal or destruction to ensure that …

- the consequences of any potential cross contamination that might arise in a complex network of rendering, feed production, transportation, storage and end use are eliminated

The flow of SRM is controlled by …

- segregation and staining SRM at source
  - all SRM, including the entire carcass of dead stock or animals condemned as unfit for human consumption where SRM are not removed, are segregated, stained, placed into a dedicated, leak proof container with a label indicating that the contents are SRM
  - where SRM are not segregated, all inedible waste is handled as SRM
- restricting the transport, intermediate processing, destruction and disposal of SRM to operators/facilities with a valid permit issued by the CFIA
  - subject to an on-site inspection prior to issuance with follow up inspections through the year

SRM flowchart

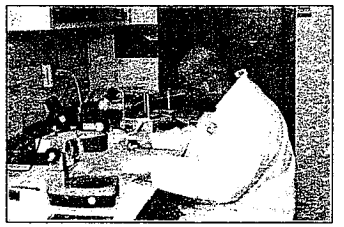


BSE Surveillance

BSE Surveillance

- **Canada introduced a passive surveillance in conjunction with the rabies program**

- **An active BSE surveillance program was implemented in 1992 – consistent with OIE guidelines.**



Monitoring the cattle population for BSE…

- a long history of testing
  - from 1992 - a national program based on the requirements of the World Organization for Animal Health (OIE)
    - targeted cattle displaying clinical signs consistent with BSE (clinical suspects)
    - goal was to determine if BSE was present
    - over 10,500 animals tested prior to 2003
    - supported by:
      - an education and awareness program from 1989
      - compulsory notification and investigation of all BSE suspects from 1990

The detection of BSE in Canada

- 1993 - a cow originally imported from the UK
  - from 1990 imports from the UK were banned
  - previously imported animals were placed under a monitoring program
  - all those still alive in 1993 were re-exported or destroyed
- 2003 - a Canadian born cow

From 2003 the testing program was enhanced …

- new objectives:
  - to gain a more accurate picture of the level of BSE
  - to determine the effectiveness of the 1997 feed ban
- in addition to testing clinical suspects, the following groups of cattle are targeted:
  - 4-D cattle over thirty months of age
    - animals found dead (dead stock)
    - animals that are non-ambulatory (downers)
    - animals presented for emergency slaughter (dying)
    - animals sent to slaughter that are found to deviate from normal behaviour or appearance at ante mortem inspection (diseased)

... surveillance is augmented by a Federally funded reimbursement program

- facilitates the identification & testing of targeted animals
- a key component of enhanced BSE surveillance
  - to assist farmers with disposal costs for test negative cattle ($CA75)
  - to assist veterinarians with sample collection ($CA100)
  - to offset the costs incurred by the dead stock and rendering industry for holding carcasses pending test results ($CA80)
  - some provinces provide additional financial reimbursements
    - e.g. Alberta tops up the payment to farmers so that the total reimbursement amounts to $CA225

... many more cattle are being tested for BSE

- from 2004 to July 2012 over 360,000 cattle have been tested from a variety of sources
  - on farm
    - 14 of the 18 BSE cases identified in Canada have been detected on farm
  - rendering & dead stock operations
  - federal and provincial abattoirs (condemned animals)

Canada

BSE cases in Canadian born cattle

Case no.	Type	Location	Birth cohort	Year detected	Age (years)	BSE strain
1	Beef	Slaughterhouse – AB	1997	2003	5.9	C-BSE
*	Dairy	Slaughterhouse – USA	1997	2003	6.7	C-BSE
2	Dairy	Farm – AB	1996	2004	8.2	C-BSE
3	Beef	Farm – AB	1998	2005	6.8	C-BSE
4	Beef cross	Farm – AB	2000	2006	5.7	C-BSE
5	Dairy	Dead Stock Facility- BC	2000	2006	5.9	C-BSE
6	Beef cross	Farm – MN	1990	2006	16.5	H-BSE
7	Dairy	Farm - AB	2002	2006	4.2	C-BSE
8	Beef cross	Farm - AB	1998	2006	8.6	C-BSE
9	Beef	Farm - AB	2000	2007	6.6	C-BSE
10	Dairy	Dead Stock Facility- BC	2001	2007	5.5	C-BSE
11	Beef	Farm – AB	1994	2007	13.7	L-BSE
12	Dairy	Farm – AB	2001	2008	6.1	C-BSE
13	Dairy	Dead Stock Facility- BC	2003	2008	5.1	C-BSE
14	Beef	Farm – AB	2002	2008	6.4	C-BSE
15	Dairy	Farm – BC	2001	2008	7.8	C-BSE
16	Dairy	Farm – AB	2002	2009	6.7	C-BSE
17	Beef	Farm – AB	2004	2010	5.9	C-BSE
18	Dairy	Farm – AB	2004	2011	6.4	C-BSE

BSE suspect cases – On farm

A BSE suspect case is defined as a bovine of 24 months of age or older exhibiting **at least three (3)** of the following signs upon clinical examination:

1. nervous, aggressive or apprehensive behavior;
2. abnormal head carriage and/or abnormal posture;
3. lack of co-ordination (ataxia) or difficulty in turning or rising from a lying position;
4. poor body condition and/or showing a decrease in milk production;
5. hesitation at doors, gates or barriers;
6. increased sensitivity to touch, sounds or sight stimuli;
7. muscle tremors or trembling.

Canada

Insights into the evolution of BSE through a birth cohort analysis

Canada

BSurvE …

- is a tool to analyse BSE test data (www.bsurve.com)
  - developed by BSE experts* for the European Commission
  - based on the epidemiology of BSE and extensive testing results from UK and Europe
  - calculates the number of surveillance points generated as a guide to the adequacy of a country's BSE testing program
  - enables a birth cohort analysis to be undertaken
  - inputs required
    - age distribution of the cattle population
    - test results stratified by age and surveillance stream

*Prattley DJ, Morris RS, Cannon RM, Wilesmith JW, Stevenson MA. A model (BSurvE) for evaluating national surveillance programs for bovine spongiform encephalopathy. Preventative Veterinary Medicine. 2007. 81:4, pp 225-235

Canada

OIE surveillance points

- surveillance samples are weighted according to the value of the information provided by each animal tested
- points are allocated to an animal on the basis of which sub-population it belongs to and its age
  - clinical suspects
  - 4Ds (dead, down, dying, diseased)
- the number of points assigned to a particular animal reflects the overall value of an animal of a certain age from one of the sub-populations in terms of detecting BSE

Canada

OIE surveillance sub-population			
Routine slaughter	**Fallen stock**	**Casualty slaughter**	**Clinical suspect**
Age ≥ 1 year and < 2 years			
0.01	0.2	0.4	N/A
Age ≥ 2 years and < 4 years (young adult)			
0.1	0.2	0.4	260
Age ≥ 4 years and < 7 years (middle adult)			
0.2	0.9	1.6	750
Age ≥ 7 years and < 9 years (older adult)			
0.1	0.4	0.7	220
Age ≥ 9 years (aged)			
0.0	0.1	0.2	45

Canada

OIE prescribes Type A surveillance for countries that have reported BSE …

- cattle should be sampled from at least 3 of the 4 surveillance streams
- points targets, which can be accumulated over 7 years, are set based on the size of the adult cattle population size (Canada = 5 to 6 million)
- Canada's target is 300,000 points

… over 1,500,000 points have been accumulated to date from more than 360,000 BSE tests

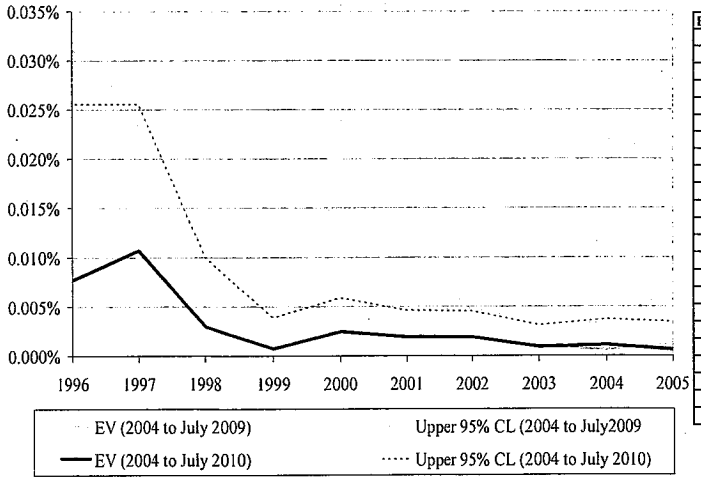
Canada

OIE points target and a birth cohort analysis

- OIE points provide an indication that Canada is sampling at a sufficient intensity to detect BSE at a certain level in the cattle population
- A birth cohort analysis is a powerful tool that enables trends in exposure to the BSE-agent to be monitored over time, it provides objective evidence whether BSE is being effectively controlled or not

Canada

Birth Cohort prevalence - the impact of one additional BSE case detected since Canada's 2010 OIE BSE update



Birth Cohort	BSE cases	Cum points
2009	0	15
2008	0	1,007
2007	0	11,846
2006	0	51,236
2005	0	106,779
2004	1+1	150,222
2003	1	179,035
2002	3	193,027
2001	3	190,406
2000	3	148,931
1999	0	94,809
1998	1	55,613
1997	3	34,336
1996	1	21,815
1995	1	15,796
1994	0	9,064
1993	0	4,886
1992	0	2,526
1991	1	1,040
1990	0	752
1989	0	259
1988	0	33
Total	18+1	1,273,401

Canada's BSE test results confirm …

- that BSE is being effectively controlled
  - the 1997 feed ban had a dramatic impact on the evolution of a small scale epidemic
  - Canada's feed ban is epidemiologically effective
- the prevalence of BSE is very low within any particular birth cohort
  - if the feed ban had not so effectively arrested amplification and reduced recycling many more animals would have become infected, leading to a larger number of BSE cases than the small numbers that have arisen

Canada

BABs in perspective

- do not indicate that the feed ban is failing
  - BABs provide evidence of limited opportunities for recycling of BSE infectivity NOT amplification
    - a small amount of contaminated feed is sufficient for transmission BUT amplification requires significant recycling
- will not lead to a resurgence in an epidemic
  - the ongoing application of the feed ban, particularly with enhancements implemented from July 2007 to exclude SRM from the entire terrestrial and aquatic animal feed chains, ensures that even those limited opportunities for recycling that have occurred in the past as a result of cross contamination will significantly reduce risk

Canada

Conclusions for Canada's feed ban

- Canada has an epidemiologically effective feed ban
  - dramatically limited exposure to the BSE-agent
  - the prevalence of BSE in Canada is extremely low
  - BSE is being effectively controlled
    - Canada continues to be categorized as a Controlled BSE-risk country under guidelines introduced by the OIE in 2007

Canadian Food Inspection Agency | Agence canadienne d'inspection des aliments

Canadian Food Inspection Agency

Canadian livestock traceability system

Our vision:
To be a world-class science-based regulator trusted and respected by Canadians and the international community.

Our mission:
Dedicated to safeguarding food, animals and plants which enhances the health and well-being of Canada's people, environment and economy.

Canada

二、簡報資料（四）

Political direction

- Federal, Provincial and Territorial Ministers of Agriculture and Food announced the need for:
  - (2006) enhanced National Agriculture and Food Traceability System beginning with livestock and poultry and
  - (2009) a mandatory comprehensive national system for livestock will be in place
- Four sectors have been prioritized: bovine, ovine, porcine and poultry
  - Interest from other sectors: cervid, equid, caprine
- Development of traceability systems supported by legal and funding framework

Content

- Direction provided
- Role and responsibilities
- Description of traceability systems
- Compliance verification and enforcement
- Conclusion

The players and their responsibilities

- Canadian Food Inspection Agency
  - Regulator
  - Compliance verification and enforcement
  - Managing sanitary issues
- Agriculture and Agri-Food Canada
  - Financial and program support
  - Policy development
- Provincial and Territorial governments
  - Regulator
  - Managing sanitary issues
  - Identification of holdings (premises)

The players and their responsibilities

- Managers of traceability systems
  - Administer traceability database and system, test identifiers, communications
  - Non-profit organizations
    - Canadian Cattle Identification Agency (CCIA), Calgary – 1998
    - Agri-Traçabilité Québec (ATQ), Montréal – 2001
  - Agreements between service providers and governments
- Producers' groups
  - Set sector-specific traceability policies
  - Communicate with producers

Policies

- Traceability systems are built on three pillars:
  - The identification of animals, products
  - The movement information of identified animals, products
  - The identification of holdings (premises)
- System compatible with OIE guidelines
- National targets identified by Federal, Provincial and Territorial Governments

Current identification requirements

- Under the Federal *Health of Animals Regulations*, mandatory identification of cattle and bison (2001) and sheep (2004);
  - Animals uniquely identified (ISO 11784) before leaving farm of birth
- All dairy cattle in Canada; beef cattle and sheep in Quebec
  - A RFID tag in one ear and a dangle tag in the other (same number):
- Beef cattle and bison outside Quebec
  - One RFID tag (phasing out bar-coded tags)
- Sheep outside Quebec
  - One metal tag (phasing-in RFID)

Examples of identifiers approved for cattle


Allflex FDX

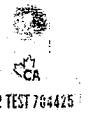

Allflex HDX


Nedap


Ketchum


Y-Tex


Destron


Zee Tags

Current event reporting requirements

- Information which must be reported to a traceability database:
  - The allocation, distribution, issuance of identifiers
  - The slaughter of cattle and bison and the receipt of its carcass by a rendering plant, dead stock operator, veterinary clinic
  - Import and export of cattle, bison and sheep
  - Loss and replacement of identifiers
- In Quebec, more events must be reported:
  - Tag application shortly after birth and tag activation
  - All movements from birth to slaughter except if movement remains within the same custodianship and within 10 km

Projected traceability requirements

- Federal regulatory initiative for porcine traceability
  - Publication in Part I of the Canada Gazette on July 14, 2012
  - All movement of pigs would be reported
  - Pigs identified uniquely or as a group
- Federal regulatory initiative
  - Enhancement of current bovine, ovine and bison components of the program
  - Introduction of requirements for equid, cervid and caprine
  - Movement reporting supporting Canada's ability to zone
  - Would come into force in 2015

Cattle birth date submission

- Reporting cattle birth date information to traceability database is mandatory in Quebec (2001) and Alberta (January 1, 2009)
  - Represents 6.7 million cattle (51% of national herd)
  - Cattle birth date information has also been reported voluntarily
- Actual birth date or birthing start date (means the day of the first head of livestock born as part of a herd)
- CFIA has proposed mandatory submission throughout the country
- Audit or verification procedures in place
- Supports specified risk management policy and export certification

Compliance verification and enforcement

- CFIA inspectors verify that cattle, bison and sheep are identified once they leave farm of origin.
- Over 25 full-time employees allocated to deliver traceability activities nationally
- Compliance verification information are collected by CFIA inspectors at regional and national levels
- Inspections indicate a very high level of cattle identified once they had left the farm of origin
  - 95-99% at Auction markets, Federal abattoirs
  - 90-99% at Domestic Abattoirs
- Enforcement tools include warnings, monetary penalties and prosecutions

Conclusion

- Currently, mandatory traceability systems for cattle, bison and sheep with strong emphasis on animal identification
- Direction provided in the development of national traceability systems in agriculture and food, starting with cattle, sheep, hogs and poultry
- Partnership between Federal Government, Provincial and Territorial Governments, National Industry Associations and Service Providers.

Canada

For more information

Canadian Cattle identification Agency
www.canadaid.com/

Agri-Traçabilité Québec
www.agri-tracabilite.qc.ca

Can-Trace
www.can-trace.org

Canadian Food Inspection Agency
www.inspection.gc.ca

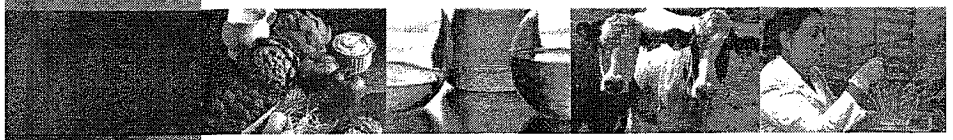
On-Trace
www.ontraceagrifood.com

Alberta
www.agric.gov.ab.ca

二、簡報資料(五)

Canadian Food Inspection Agency | Agence canadienne d'inspection des aliments

Canadian Food Inspection Agency



Canada's Feed Ban

Overview of Regulations and Compliance Program

Sergio Tolusso – CFIA Animal Feed Division

Presentation to Taiwan Delegation

Ottawa, Ontario

September 10, 2012

Our vision:
To excel as a science-based regulator, trusted and respected by Canadians and the international community.

Our mission:
Dedicated to safeguarding food, animals and plants which enhances the health and well-being of Canada's people, environment and economy.

Canada

Overview

1. **Introduction**
2. **Canada's 1997 Ruminant Feed Ban**
3. **Canada's 2007 Enhanced Feed Ban**
4. **Feed / Feed Ban Compliance Program Overview**
5. **Summary**

CFIA National Feed Program

Objectives

- Contribute to the production of safe, high quality meat, milk, and eggs for human consumption.
- Enable livestock producers to manufacture or purchase safe, nutritious feeds to optimize livestock production.
- Promote consumer protection and a fair marketplace.

National Feed Program – Example Activities

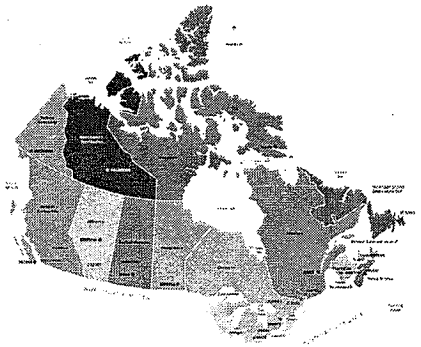
- establishing standards and policies for feeds;
- evaluating and approving ingredients for use in livestock feeds;
- monitoring feeds for the presence of residues of chemicals, pesticides, contamination by heavy metals, mycotoxins etc.;
- inspecting establishments involved in the production and distribution of feeds and feed ingredients for compliance with national regulations.

Linkage to CFIA Strategic Outcomes

A safe and accessible food supply and plant and animal resource base.

(Source: CFIA Report on Plans and Priorities 2012/13)

Canada's 1997 Ruminant Feed Ban



Canada's 1997 Ruminant Feed Ban

- Feed ban implemented following 1996 WHO recommendation that all countries implement ruminant-to-ruminant feed ban to check the spread of BSE (and vCJD)
- US-FDA implemented very similar feed ban at same time
- Feed ban implemented as a secondary control measure in North America (to strict import controls)

Canada's 1997 Ruminant Feed Ban

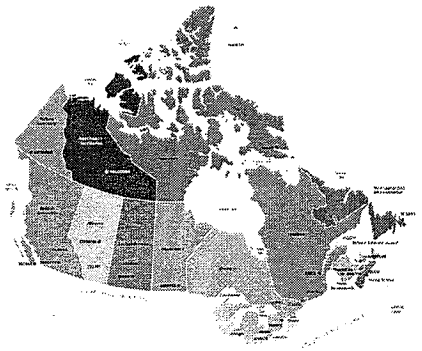
- Canada implemented a mammalian-to-ruminant feed ban (with exceptions) in August 1997
- Most proteins derived from mammals can't be fed to ruminants (cattle, sheep, goats, deer, elk etc.)
- Exceptions:
  - Proteins from swine & equines
  - Milk, blood, gelatin and animal fats from all species
- Exceeded scope of WHO recommendation

Canada's 1997 Ruminant Feed Ban

Feed ban requires manufacturers, users, vendors and feeders of animal proteins and feeds to have procedures and records in place to demonstrate that:

- **segregation of prohibited animal proteins is maintained to prevent feeding to ruminants of adulterated or cross-contaminated ruminant feeds;**
- **labels of products comprising or containing prohibited proteins carry warnings against feeding the products to ruminants; and**
- **records of distribution for proteins and feeds are being kept to facilitate tracing throughout the animal feed and animal production chain.**

Canada's 2007 Enhanced Feed Ban



Enhancements – Why make changes?

✓**Detection of BSE in Canadian cattle herd**

- o **first native-born BSE case - May 2003;**
- o **subsequent BSE case detected since 2003; and**
- o **CFIA experience from BSE case investigations**

✓**Recommendations of international animal health experts**

✓**CFIA experience enforcing 1997 ruminant feed ban**

Key Elements

1. Prohibits SRM from use in animal feed, pet food and fertilizers
2. Controls SRM to prevent exposure to BSE from other pathways.
3. Enhanced 1997 feed ban regulatory framework

Key Element 1

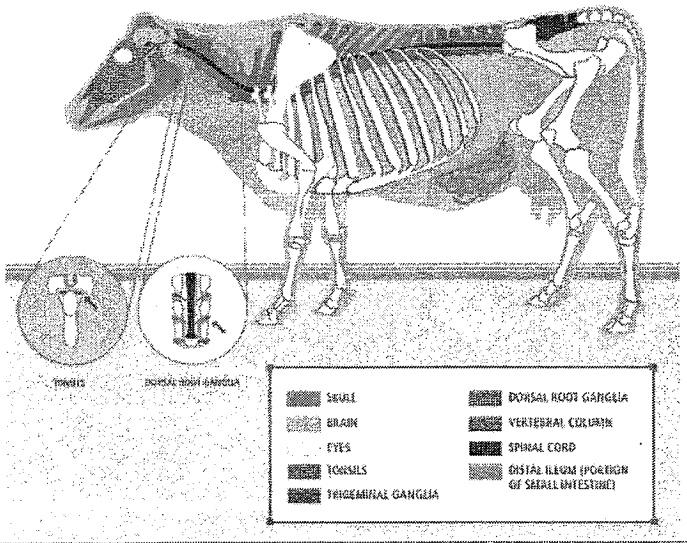
1. Amendments in 2007 prohibit SRM from use in animal feed, pet food and fertilizers

   Scope of SRM = complete list of SRM prohibited from food in July, 2003 ("full SRM feed ban")

   - **From cattle of all ages -** distal ileum (portion of small intestine)
   - **From cattle 30 Months and Older (OTM) -** skull, brain, trigeminal ganglia, eyes, tonsils, spinal cord and dorsal root ganglia

   Prohibition applies to SRM removed from healthy slaughter cattle + cattle dead stock + condemned carcasses (whole carcass if SRM not removed)

Key Element 1



Key Element 2

2. Controls SRM from source to end points (disposal, destruction or alternative use) so that these tissues do not re-enter human or animal food chains.

   CFIA permits required for the collection, conveyance, receipt, processing, use, export, containment or destruction of abattoir SRM and the carcasses of cattle that die or that are condemned before slaughter for human consumption by (for example):

- **SRM collectors and transporters**
- **Renderers**
- **Dead stock collectors**
- **Landfills**
- **Incinerators**

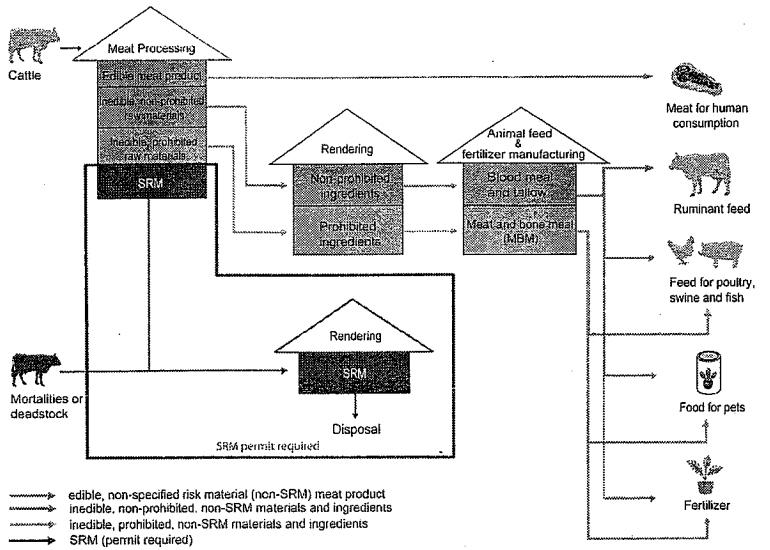
Key Element 3

3. Enhanced feed ban regulatory framework implemented in 1997

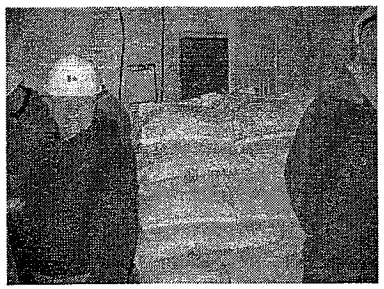
   Examples:

- Extend record keeping period from 2 – 10 years
- MBM/feed labelling statement more direct
  - ***Feeding this product to cattle, sheep, deer or other ruminants is illegal and is subject to fines or other punishment under the Health of Animals Act***
- Require procedures to recall products
- Mandatory certification of exported rendered products

Canada's Enhanced Feed Ban



Feed / Feed Ban Compliance Program Overview



CFIA's Responsibilities

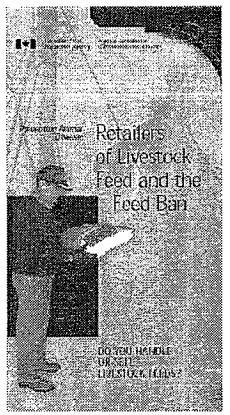
The CFIA is responsible for:

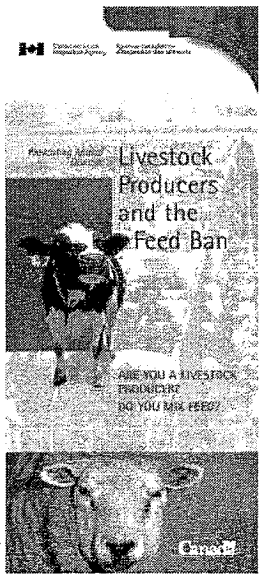
- Generating compliance
- Verifying compliance; and
- Enforcement

of the feed ban (*Health of Animals Regulations*).

CFIA's Activities

Generating awareness and compliance





CFIA's Activities

Verifying compliance

Accomplished by way of inspection activities at various types of facilities along animal and feed chain, including:

- inedible rendering plants;
- commercial feed manufacturers;
- feed retail outlets; and
- on-farm feed manufacturers and ruminant feeders.

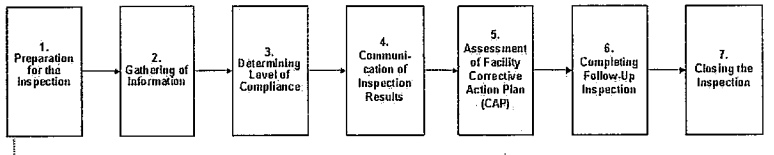
Compliance Verification System (CVS) - Objectives

System designed to :

- Integrate all compliance activities into one uniform system
- Highlight industry accountability
- Provide CFIA inspection staff with :
  - clearly defined tasks to enhance uniform delivery
  - effective enforcement strategies

CVS Inspections - Process Flow

Aligned to …



Roles and Responsibilities

Canadian Food Inspection Agency

- Assess compliance of regulated parties under the applicable Acts and Regulations.
  - A risk-based approach taken to inspection frequency
- Take enforcement action (includes product detention) when there are reasonable grounds to do so.

Roles and Responsibilities

Facility Operators

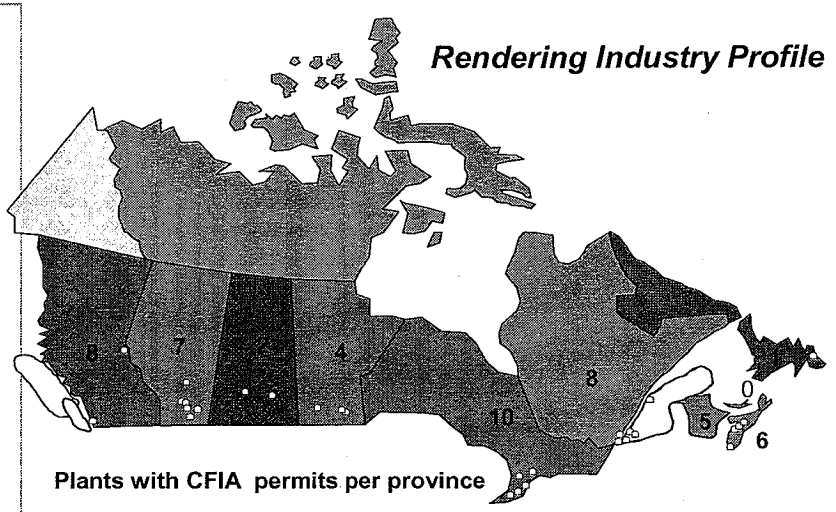
- Ensure all products comply with applicable legislation
- Take effective action to bring the facility or the product into compliance when non-compliances are identified.
- Provide assistance to CFIA inspectors while they carry out their inspection duties under the ***Feeds Regulations*** and the ***Health of Animals Regulations***

Roles and Responsibilities

CFIA Inspectors

- Perform scheduled verification task assessments in accordance with established frequencies and procedures
- Gather information about the facility to assess compliance to the ***Feeds Regulations*** and the ***Health of Animals Regulations***

Rendering Industry Profile



Plants with CFIA permits per province

Total = 51

Rendering Plants – Risk Categorization

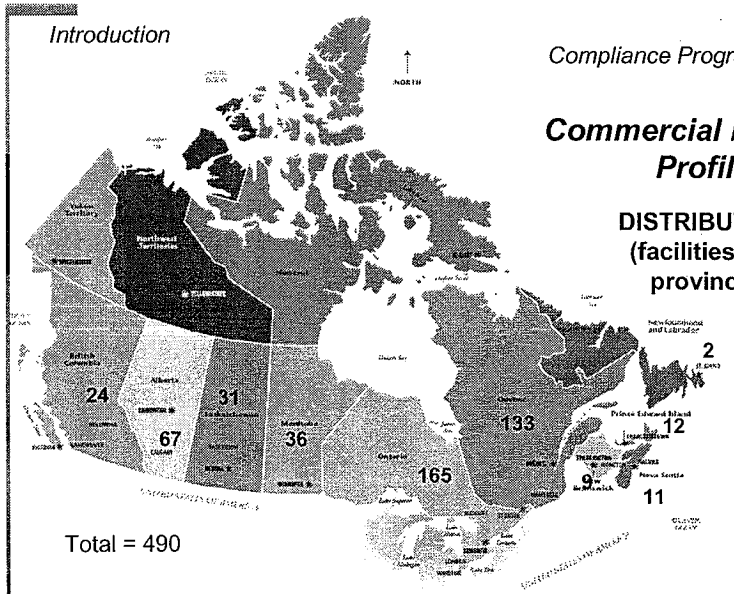
Risk Category	Context: **BSE Transmission Risk**
1. Process SRM in combination with PM and/or non-PM	**HIGHEST**
2. Process SRM (stand alone)	
3. Manufacture BOTH non-Prohibited and Prohibited Material	
4. Manufacture only Prohibited Material	
5. Manufacture only non-Prohibited Material (PM)	**LOWEST**

Rendering Plants - Frequency of Inspection

Facility Risk Category	2012-13 CVS
1. Process SRM, PM and/or non-PM	**4 inspections/year**
2. Process SRM (stand alone)	**4 inspections/year**
3. Both Non- and Prohibited Material	**4 inspections/year**
4. Prohibited Material only	**2 inspections/year**
5. Non-Prohibited Material only	**1 inspection/year**

Commercial Feed Mill Profile

DISTRIBUTION (facilities per province)



Total = 490

Commercial Feed Mills – Risk Categorization

Risk Category

1. HIGH TSE + HIGH Medications
2. HIGH TSE + Low Medications
3. Low TSE + HIGH Medications
4. Low TSE + Low Medications

HIGHEST

LOWEST

Feed Mills - Frequency of Inspection

Facility Risk Category	2012-13 CVS
1. HIGH TSE + HIGH Medications	**Task frequency is 1-3 times per year**
2. HIGH TSE + Low Medications	**Task frequency is 1-2 times per year**
3. Low TSE + HIGH Medications	**Task frequency is 1-2 times per year**
4. Low TSE + Low Medications	**Task frequency is 1 time per year.**

Compliance Rates

Performance Indicator	Current Performance 2011	Target
Extent to which feed renderers comply with the Feed Ban (without major deviations)	100%	≥ 95% compliance
Extent to which feed mills comply with the Feed Ban (without major deviations)	97.5%	≥ 95% compliance

CFIA's Activities

Enforcing the feed ban

Minor non-compliance identified by CFIA during inspections is most often resolved by corrective actions taken by the operator voluntarily and confirmed by CFIA by way of follow-up inspections.

Major non-compliance can be addressed by CFIA by way of:

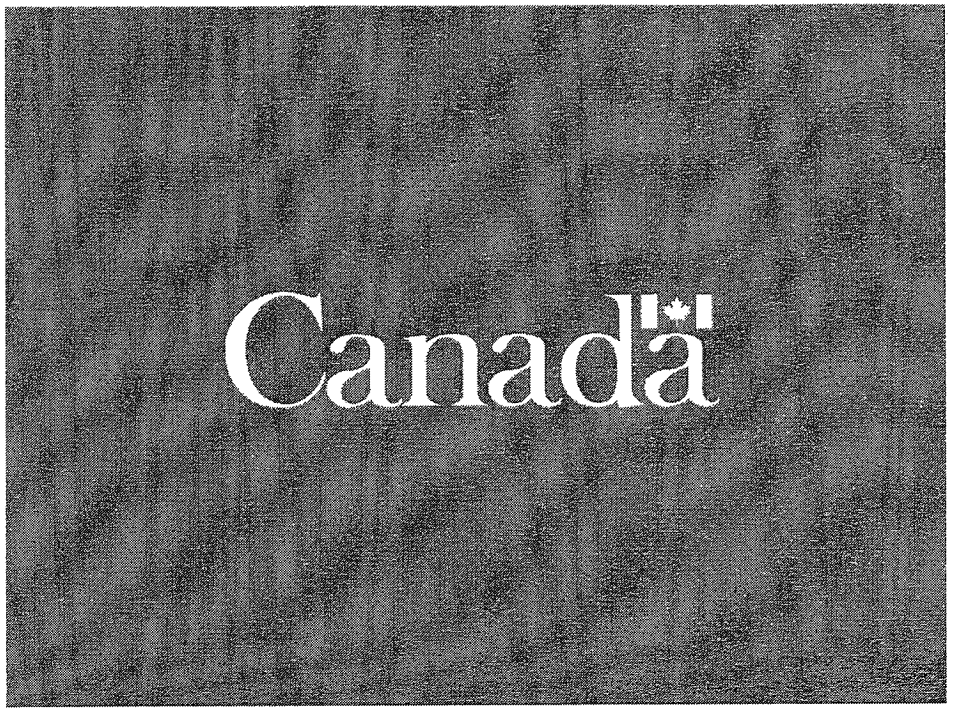
- **Product recall / detention;**
- **Amendment / suspension /cancellation of CFIA permits;**
- **Monetary penalties / Official warnings; and**
- **Prosecution**

Enforcing the Feed Ban

CFIA Action	2006 - 2007	2007 - 2008	2008 - 2009	2009-2010
Prosecutions	0	0	2	0
Monetary Penalties	3	6	3	2
Official Warnings	3	2	3	0
Fine / Penalty Amounts (CDN$)	$9,600	$20,000	$12,000	$9,200

Summary

- Canada pro-actively implemented a ruminant feed ban in 1997 that exceeded WHO recommendations
- On the basis of the detection of BSE in 2003 and other factors, enhancements to the feed ban were implemented in 2007
- CFIA actively inspects and enforces feed ban regulations at facilities involved in the production and distribution of feed and feed ingredients


Canada