Livestock Traceability

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Food Safety Industry Day

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What is Traceability?

- farm to fork -

Information

Crop Traceability

Livestock Traceability

Food Processing Traceability
Livestock Traceability is the ability to track individual or groups of animals - be it livestock or poultry - Throughout their lifetime either backwards or forwards.
Government Approach
Traceability in the World – Int’l Standards

Government Approach

WORLD ORGANISATION FOR ANIMAL HEALTH
Protecting animals, preserving our future

www.oie.int/en
Traceability in Canada

Canadian Traceability
National Agriculture and Food Traceability System (NAFTS)

Traceability systems are important, effective tools that can be used for many things, including:

- Protection of Animal Health
- Public Health
- Food Safety

They can help reduce response time, limiting economic, environmental and social impacts of emergency situations such as disease outbreaks.
National Agriculture and Food Traceability System species:

- Bovines (beef cattle, dairy cattle, bison)
- Swine
- Sheep
- Farmed Cervids (elk, reindeer)
- Equine
- Poultry (commercial and non-commercial)
Traceability in Canada

National Agriculture and Food Traceability System to enhance:

- Emergency Management
- Market Access
- Industry Competitiveness
- Consumer Confidence
Traceability in Canada – Why?

National Agriculture and Food Traceability System enhances **Emergency Management**
Traceability in Canada – Why?

National Agriculture and Food Traceability System enhances Market Access
Traceability in Canada – Why?

National Agriculture and Food Traceability System enhances Industry Competitiveness
Traceability in Canada – Why?

National Agriculture and Food Traceability System enhances Consumer Confidence
BIG ENOUGH TO SUPPLY
SMALL ENOUGH TO SERVICE

WHY XL FOODS? LEARN MORE HERE
Livestock Traceability in Canada – 3 Pillars

Livestock Traceability is based on 3 pillars

**Premises Identification**
Unique identification of land parcels

**Animal Identification**
Unique identification of individual animals or homogenous groups of animals

**Animal Movement**
Ability to track animal movements from premises to premises
What is Premises Identification (PID)?

Premises Identification (PID)

is a unique identifier associated with a geographic location.
What is Animal Identification?

**Animal Identification** is a unique identification of individual animals or homogeneous groups of animals.
Canadian Cattle Identification Agency (CCIA)

- Administer Canadian Livestock Tracking System (CLTS) database for:
  - Beef Cattle
  - Dairy Cattle
  - Bison
  - Sheep

- Authority under the federal Health of Animals Regulations

- Administers issuance of federally approved RFID tags

- “Retire tags”, both approved and revoked, in the CLTS within 30 days of the animal’s death or slaughter, including dead stock
Alberta Pork

- Authority under the Alberta Animal Health Act’s *Swine Traceability Regulation*
  - Pigs
  - Farmed Wild Boar
  - Dead stock

- Came into effect July 1, 2014 at the same time as the federal regulation

- Administers the issuance of federally approved swine identifiers
  - Shoulder Slap tattoo
  - Approved tag

- Registered tattoo in Alberta will have five digits and should end in the number six

- Number is listed on a Swine producers card
What is Animal Movement?

**Animal Movement** is the ability to track animal movements from premises to premises.
Animal Movement: Reporting

Alberta Livestock Manifest

Ensure the following:

- Manifest is filled out completely, correctly and legibly
- Includes a description of Livestock
- Retain copies of producers’ Bills of Sale
- Retain manifest records for 10 years
Animal Movement: Reporting

**Alberta Pork manifest**

<table>
<thead>
<tr>
<th>Receiver (Destination)</th>
<th>Premises ID of Destination</th>
<th>Receiver (or Representative's) Name (please print)</th>
<th>Premises Name</th>
<th>Destination / Exporter Reference (optional)</th>
<th>Head Use</th>
<th># Head Rec'd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comments</td>
<td></td>
<td>Receiver (or Representative's) Signature</td>
<td></td>
<td>Received Date &amp; Time</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td># Head Rec'd</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ensure the following:

- Manifest is filled out completely, correctly and legibly
- Any swine arriving at the facility accompanied by Manifest
- Receivers must submit the manifest to Alberta Pork within 48 hours after receiving a load
- Receivers must retain manifest records for 5 years
Important to both Government and Industry:

- Preparing for, responding to and recovering from animal health, human health and food safety emergencies

- Ensuring that production capacity and market access are not jeopardized

Why is Livestock Traceability Important?
Ensuring Production Capacity

Canada’s largest food-service provider requires 64 million pounds of traceable beef per year.
Chart results are based on Beef volumes (excluding edible offal) at 5 Year average (2007 – 2011). Statistical data for edible offal is only available for Export; not for consumption in Alberta and Canada.
## Economic Benefits Of Animal Tracing In The Cattle Production Sector

<table>
<thead>
<tr>
<th>If tracking time could be reduced from:</th>
<th>Loss avoided from decreasing tracking time to two days</th>
<th>Loss as a percentage of value of the Texas cattle production sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 days to 2 days</td>
<td>$3.4 billion to $7.2 billion</td>
<td>20% to 44%</td>
</tr>
<tr>
<td>7 days to 2 days</td>
<td>$2.1 billion to $6.8 billion</td>
<td>13% to 43%</td>
</tr>
<tr>
<td>4 days to 2 days</td>
<td>$78,000 to $2.4 billion</td>
<td>&lt; 1% to 13%</td>
</tr>
<tr>
<td>3 days to 2 days</td>
<td>$26,000 to $207,000</td>
<td>&lt; 1% to &lt;1%</td>
</tr>
</tbody>
</table>

Annual costs of the NAIS for the Texas cattle industry were estimated to be $112 million.

**Source:** Levan Elbakidze (Texas A&M University) August 2007.
Created by the department and industry working together:

- Traceability will support industry standards for commerce
- The traceability system for the beef cattle industry will enhance the competitive position of the industry
- Traceability will expand as appropriate technology to support initiatives as available
- Industry standards will drive tolerance ranges for tag readability and retention
- Producer information must remain confidential
Legislative Support

- **Federal Health of Animals Act**
  - RFID (Radio-frequency Identification) tagging requirements from Herd-of-Origin to tag-retirement at death (natural or slaughter)

- **Alberta Livestock Identification Act (LICA)**
  - Livestock Transportation: provincial requirements for the recording and/or reporting of livestock movement (beef cattle, dairy cattle, horses and sheep)
  - Livestock Inspections
Legislative Support

- **Alberta Animal Health Act (AHA)**
  - Includes all domestic animals, excluding pets
  - Enables full traceability and swift response to disease issues
  - Authority for decisive response, including diseases threatening public health
  - Proclaimed (in part) on January 1, 2009 with these traceability regulations:
    - Traceability Premises Identification Regulation
      - Animal Owners, except those who are never in care/control of their animals, must have a PID Account and at least one PID Number
      - Operators of Commingling Sites must have a PID Account and PID Numbers for each operation
Legislative Support

- Alberta *Animal Health Act (AHA)*
  - Traceability Cattle Identification Regulation
    - Tag calf within 10 months of age or before they leave the farm-of-origin, whichever comes first
    - Record the calves age in the CLTS within 10 months of age or before they leave the farm-of-origin, whichever comes first
    - Feedlots feeding over a 1,000 head annually report the “move-in event” individual animals into the CLTS (effective March 1, 2010)

- Swine Traceability Regulation (Proclaimed July 1, 2014)
  - Application of Swine Identifier
  - Full movement reporting
Support for Industry

Food Safety Systems
Producer Program

Livestock Welfare
Producer Program

Animal Health Biosecurity
Producer Program

Traceability Technology
Adoption Program

• Cow/Calf RFID
Technology

• Feeder Cattle RFID
Technology

• Sheep RFID
Technology

RFID Reader Loan-Out
Program
Support for Industry

Boots-On-the-Ground

Ag-Info Centre
310-FARM (3276)

Ag Field Office Administrator
12 Staff across province

Alberta Pork Traceability Coord
1-877-247- PORK (7675)

CCIA MFR Team
11 Staff across province

LIS Livestock Inspectors
Approx. 90 Staff across province
Traceability Protects!
Your Animals – Your Livelihood – Our Future

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www.agriculture.alberta.ca/traceability
Age-verification (AV): An Assurance Added Program
Determining Age in Cattle

- **Dentition**
  - Not preferred by international trading partners
  - Variation in hormonal development/maturity
  - A trained individual visually examines the incisor teeth to determine age at plant

- **Age Verification**
  - Preferred by international trading partners and most accurate
  - Birth date information in the national CLTS database
  - Entered by original owner and accessed by plants
What is Age-verification (AV)?

The process of linking an animal’s birth date to its unique, federally-approved CCIA RFID ear tag

- 3 Step Process:
  - Maintain on-farm birth records
  - Tag each animal with a unique, federally approved CCIA RFID ear tag
  - Upload birth data into CCIA’s Canadian Livestock Tracking System (CLTS)

Can only be completed by the original cattle owner!
Mandatory in Alberta and effective as of January 1, 2009

The original owner of all calves born in Alberta, after January 1 2009 must do the three-step process

Must occur within 10 months of age or prior to leaving the farm-of-origin, whichever comes first!

AV records must be maintained for 10 years!
Chart results are based on Beef volumes (excluding edible offal) at 5 Year average (2007 – 2011). Statistical data for edible offal is only available for Export; not for consumption in Alberta and Canada.
How AV Helps Alberta’s Industry

**Market Access**

- Data Integrity
  - AV “birth-date event”
- Source Verification
- Permitting
  - Import requirements for cattle 5 years or older

**Industry Competitiveness**

- Animal Health Management
- Product Differentiation
- Supply Chain efficiency
- Aids in making a trace-back more efficient and effective
How AV Helps Alberta’s Industry

Emergency Response

- Disease investigation and response
- Surveillance
  - “at risk” animals for chronic diseases can be identified
- Permitting
  - Off-farm transport of SRM

Consumer Confidence

- Source Verification/Product Branding
- Food Safety
  - Age impacts on what can be used
What’s in a Birth Date?

Over 30 month cattle – almost 15% of slaughterhouse waste must be removed and destroyed.

All cattle – a portion of the small intestine must be removed.

Age mistakes slow/stop the line costing money and cause concern with export markets.
Issues

- Dentition not Accurate
  - Not preferred process by international markets
  - Some teeth erupt before 30 months
  - Can result in premature aging of animals

- Lack of Data in National Database (CLTS)
  - Not everyone participating
    - Process driven by value of retaining markets
    - Lack of birthdate and the plant defaults to dentition method to age verify
Issues

- Data Integrity in National Database (CLTS)
  - Inaccurate birthdate information
  - No check n’ balance in CLTS database
  - On-farm record management issues

- if not caught at feedlots in-take/processing will result in animals being sent to the plant and discounted
  - MFRs notified too late to be able to contact herd-of-origin for purpose of fixing data

The Result?
- Breakdown of trust in value chain as animals bought in good faith as correctly AV’d
• At any one time, 40,000 ships are carrying animals and animal products
• Movement of animals and animal products is expected to double by 2020
Traceability Protects!
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