

## TRACEABILITY

### NORTH AMERICAN EXPERIENCE

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### Traceability of food is essential tool in reassuring consumers and traders that food is safe

- Traceability, including tracing and tracking, has been part of our food systems for decades.
- Food contaminations caused by chemical (dioxins) and microbiological (E. coli 0:157) hazards
- Occurrence of infectious diseases such as Foot and Mouth Disease and Bovine Spongiform Encephalopathy (BSE)



### In the past food safety tended to concentrate on the food processing sector.

- The production of safe food entails that those who produce, process and trade food recognize that they have that primary responsibility.
- It includes farmers, slaughterhouse operators, food processors, transport operators and distributors at wholesale and retail.



## Definitions of terms

- ISO: “ability to trace the history, application or location of an entity by means of recorded identifications”
- Codex : “ability to follow the movement of a food through specified stage(s) of production, processing and distribution.”



## Tracing

- Capability to identify the **origin** of a particular unit and/or batch of product located within the supply chain **by reference to records held upstream**



## Traceability is not new

- Grading and recording systems exists for meats, eggs, grains, fruits and vegetables, registered seed, purebred livestock, and the segregation systems for canola, malting barley, wheat.
- Systems were developed to “grade” product for establishing price, to provide particular product attributes to buyers, to improve genetics and control diseases, and enable recall of product.



## Canada



## Elements driving tracking and tracing food products in Canada

1. Food safety and recall effectiveness.
2. Market access
3. Specific content, quality or other product attributes.
4. Animal health and control of contagious livestock diseases
5. Supply chain partners



## The Traceability Strategy

- Enabling regulations on traceability for animal health and for food recalls
- National integrated systems
- For traceability but also for product differentiation, market segmentation, and value-chain management



## The Traceability Strategy

- One step forward/one step back
- Enabling technologies such as radio-frequency identification, bio-metrics and genetic identification are evolving



## Canada's Agricultural Policy Framework

1. Traceability systems by industry
  - Objective of 80% product traceability by 2008.
2. Development of data management standards for traceability systems



## Can-Trace Initiative

Any standards created for food product traceability in Canada must be:

- internationally compatible,
- whole chain in scope,
- capable of accommodating multiple commodities,
- and based on the EAN.UCC standards.

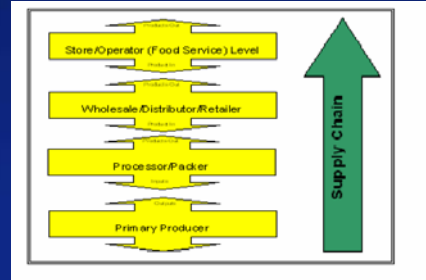


## Can-Trace Initiative

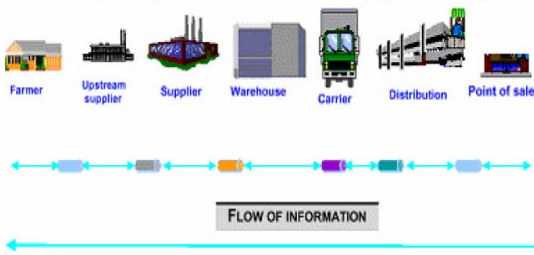
- Standards must facilitate relatively cost efficient tracing for the commodities they cover
- Should leverage existing infrastructure and data management and capture solutions;
- Identify and incorporate any unique Canadian requirements into the international standards



Under a one-up/one-down system each participant within the food supply chain is responsible for maintaining records about the products they receive and where they were shipped to, or sold.



Associating a flow of information with the physical flow of products



## Canadian Cattle Identification

- Mandatory program
- Individual identification of all cattle beyond their herds of origin
- Approved ear tags bearing numbers that are unique to each animal
- Compliance levels now at 97%
- By January 1, 2005 Radio Frequency Identification (RFID) tags.



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## DNA traceability

- Maple Leaf Food, has developed a system that allows tracking of a finished pork product back to the farm origin using DNA, nature's bar code.
- DNA-based tracking systems for meat exploit natural variations in the DNA code.



## UNITED STATES



## Traceability in the U.S. Food Supply

- Private sector traceability systems in the United States are extensive
- The food industry has developed a substantial capacity to trace
- Traceability systems are a tool to help firms manage the flow of inputs and products to improve efficiency, product differentiation, food safety, and product quality



## Public Health Security and Bioterrorism Preparedness and Response Act of 2002

- As part of the Bioterrorism Act 2002, FDA established regulations regarding registration, prior notice, administrative detention and record maintenance.



## Bioterrorism Act 2002

Applies to all domestic persons (excluding farms and restaurants) who manufacture, process, pack, transport, distribute, receive, hold or import food intended for human or animal consumption in the U.S. and foreign facilities that manufacture, process, pack or hold food intended for human or animal consumption in the U.S.



## Bioterrorism Act 2002

- Based on one up/one down model
- Guidance to businesses engaged in production and distribution of meats, poultry and eggs



## Farm Security and Rural Investment Act 2002

### Country of Origin Labelling (COOL)

Country of Origin Labelling is required for beef, pork, lamb, fish, shellfish, fresh fruit, vegetables, and peanuts



## Country of Origin Labelling (COOL)

Supplier responsible for initiating country-of-origin declaration must establish and maintain records that substantiate the claim



## National animal identification system

The system is designed to identify any agricultural premise exposed to a foreign animal disease so that it can be more quickly contained and eradicated.



## Main elements of NAIS

- Identifying and registering premises associated with the animal agriculture industry
- NAIS capable of tracing a sick animal or group of animals back to the herd or premises that is the most likely source of infection
- includes the premises number allocator, premises registration systems, and a national premises information repository



## Wisconsin Livestock Identification Consortium

Wisconsin enacted in April 2004 a Premises Registration Act for which anyone who keeps, houses or co-mingles livestock need to register their premises no later than November 1, 2005



## Mexico



## Biosafety bill

Mexico sells two types of beef:

- Products processed at certified Federal Type Inspection (TIF) plants and those that are not.
- TIF plants have the technology needed to respond promptly to foreign meat traceability requirements



## Biosafety bill

- Mexico operates an export traceability system that complements the TIF certification.
- A pork industry traceability is also evolving.
- Implementation of a nationwide livestock traceability program will reduce disease risks



**Thank You**

