The federal government initiated a livestock traceability program, following on the heels of several provincial programs. Initially, the federal traceability program was touted as a means through which Canada could increase its competitiveness in foreign markets. However, in the process of implementation, both Canadian industry and government officials are claiming unexpected advantages; i.e. tracking of livestock during environmental crisis such as floods and fires. The Conference Board of Canada, a moderate think tank, just published a study which recommends that all firms in the food supply chain need to be able to accurately trace products or ingredients one step forward and one step back in the supply chain. Many food industry firms in Canada already comply with the principle of one-step-forward and one-step-back because of export requirements, private standards, and/or their own internal food safety practices. However, current expectations are that traceability systems must all link together so that the entire food supply chain is covered.
I. Development of a Traceability Framework

In 2006, the Canadian Ministry of Agriculture committed to phase in the National Agriculture and Food Traceability System (NAFTS), and mandated the Industry-Government Advisory Committee (IGAC) on traceability to provide a forum for cooperation and coordination among governments and industry. In mid-2009, the Ministry pledged to develop a mandatory traceability system for livestock and poultry for the better management of animal health and food safety issues, as well as the expansion of market access and the improvement of efficiency. In order to deliver on its commitments, the federal government proposes to develop a national legislative framework for animal traceability.

The proposed legislation will strengthen Canada’s existing traceability framework under the Health of Animals Act, which already requires animal identification and elements of movement reporting. The existing legislation intends to enhance Canada’s ability to manage animal and human health issues, respond to disease outbreaks and natural disasters affecting agriculture, and manage food safety issues originating from the livestock sector. The proposed framework includes the six following elements and their specific regulatory requirements:

1) Animal Identification
2) Location Identification
3) Movement and Other Event Reporting
4) Authorized Uses and Sharing of Information
5) Compliance
6) Reporting and Record Keeping

(a) Animal Identification
The proposed framework intends to retain current requirements under the Health of Animals Act and permit further development of specific regulatory requirements. The specific regulatory requirements are as follows:

- The ability to confirm the identity of an animal either by determining if a unique identification device has been applied to an animal or by allocating a group (lot or flock) identification number;
- The ability to enable the use of alternative methods of identification for certain species (e.g. DNA, retinal scan) with evolution of science and technology;
- The ability to require the identification of imported animals in a manner consistent with existing requirements for domestic animals; and
- When there is industry support for the collection of the information, the ability to require the collection of information related to additional attributes of animals (e.g. breed, genetic enhancements).

(b) Location Identification
According to the Canadian Food Inspection Agency (CFIA), the identification of animal locations is crucial for the integrity of any traceability system. Premises identification and validation is a provincial responsibility and implementation has already been initiated in many provinces. In order to ensure consistency and allow for better location identification, the following specific regulatory requirements
have been proposed:

- The ability to require the identification of locations where animals are kept, assembled or disposed of;
- The ability to require that locations be identified prior to the movement of animals to and from those locations;
- The ability to maintain and link the identity of an animal with its birth place/origin and other key locations that the animal has inhabited within Canada; and
- The ability to easily identify the said locations that are registered as “linked”, i.e. premises which are considered as a single (animal health) unit because of the regular movements of animals/products between them.

(c) Movement and Other Event Reporting
The scope of movement information requirements, by species, would be developed through extensive industry-CFIA consultation. Once technology and industry infrastructure are in place, the framework would include the following regulatory requirements:

- The ability to relate the identity of an animal with important movements along the life-cycle continuum;
- The ability to require custodians of animals to report key animal movements during their lives, including the means of transportation used to move the animals;
- The ability to establish and record which animals came in contact with other animals during movement from one location to another;
- The ability to require the reporting of certain movement information at designated geographical check-points or zones (e.g. West Hawk Lake);
- The ability to require reporting of events (e.g. allocation, manufacture, distribution, sale, application, activation, replacement, retirement) related to approved means of identification (e.g. ear tags); and
- The ability to require custodians to report other events (e.g. animal importation and exportation).

(d) Authorized Uses and Sharing of Information
The current animal identification program in Canada requires collection of personal and confidential information. Some provincial governments also require the reporting of such information. To address stakeholders’ concerns about information protection and privacy, the following regulatory requirements may be developed:

- Ability to clearly define authorized and appropriate uses of traceability information. The information collected under this framework would only be used for those purposes;
- Ability to limit access to traceability information for use by provincial and federal governments, as well as others (e.g. veterinarians and emergency responders) entrusted to manage animal, human health and food safety issues; and
- Ability to allow access to aggregate and non-personal information contained within the traceability databases for purposes other than the management of health issues and emergencies such as: animal demographic studies, analysis of disease trends, simulations of
disease outbreaks.

(e) Compliance
The proposed framework would include provisions to promote compliance by the regulated parties. In order to achieve such compliance, the CFIA would take a progressive approach beginning with education, advice, and awareness building, followed by inspections and enforcement where necessary. In more depth, the framework would permit:

- The ability to apply penalties for unauthorized uses and disclosures of personal information collected under the framework;
- The ability to create prohibitions, e.g. failure to identify an animal prior to its sale; and
- The ability to develop and employ a compliance and enforcement program prescribing responsibilities for all stakeholders and defining contraventions of those provisions.

(f) Reporting and Record Keeping
The current animal identification program in Canada mandates the reporting of information to the appointed industry administrator, and not-for-profit industry-led organizations that collect information from those regulated parties. The proposed framework would use the same approach to require information reporting. It would permit:

- The reporting of animal and location identification data, and movement information in a prescribed format, manner and timeframe.
- Ability to conduct compliance verifications based on on-site records corresponding to the data submitted to industry-led administrators.
- Recording and retaining information corresponding to some events that may be excluded from the reporting requirements (e.g. record keeping requirements for movement of sheep 18 months of age or older under section 175.1 of the Health of Animals Regulations).
- Establishment of clear guidelines and schedules for the retention and disposition of personal and confidential data collected under the traceability framework.
- Expedited requirements for the reporting of traceability information during emergencies.

The proposed framework may be read at the following webpage:

II. Existing Traceability Regulations and Standards

Health of Animals Act
In 1990, the Canadian Department of Justice published the Health of Animals Act. This Act set numerous requirements for the importation, exportation, inspection, and disposition of animals. In regard to inspection, the Act states that an inspector or officer may require any person to present any animal, related documentation, or related record, if deemed necessary. The inspector may then reproduce and use any records presented, which may include approved tags and other traceability documentation.
The Health of Animals Act may be read at the following URL: http://laws-lois.justice.gc.ca/eng/acts/H-3.3/index.html.

**Can-Trace**

Apart from the Health of Animals Act, very few mandatory traceability requirements are in place at the federal level. However, voluntary standards are in place, including the standards outlined by Can-Trace. Can-Trace is a voluntary industry-led initiative that encourages communication within the supply chain, ensuring that the necessary framework for Canadian traceability is designed for implementation. Can-Trace resulted from the landmark governmental agreement in 2003, entitled the Agriculture Policy Agreement (APF). A national traceability solution was crucial in order to support and move forward with the APF, which led to the launch of Can-Trace in July of 2003. Can-Trace receives a portion of its funding from Agriculture and Agri-Food Canada through the Canadian Food Safety and Quality Program (CFSQP).

Can-Trace’s traceability standards are based on the philosophy that data must be “collected, kept and shared” by all participants in the food supply chain in order to achieve and maintain successful traceability. The standard is voluntary, multi-sector, and based on global standards. The Canadian Food Traceability Data Standard (CFTDS) outlines minimum elements for participants to follow, in order to establish successful traceability, and they are as follows:

<table>
<thead>
<tr>
<th>Mandatory Data</th>
<th>Optional Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lot Number</td>
<td>Animal Age</td>
</tr>
<tr>
<td>Product Description</td>
<td>Best Before Date</td>
</tr>
<tr>
<td>Product Identifier</td>
<td>Contact Information</td>
</tr>
<tr>
<td>Quantity</td>
<td>Country of Origin</td>
</tr>
<tr>
<td>Receipt Date</td>
<td>Date of Pack/Catch/Retirement</td>
</tr>
<tr>
<td>Receiver Identifier</td>
<td>Logistic Provider Identifier</td>
</tr>
<tr>
<td>Sender Identifier</td>
<td>Receiver Name</td>
</tr>
<tr>
<td>Ship Date</td>
<td>Sender License Number (seafood)</td>
</tr>
<tr>
<td>Ship From Location Identifier</td>
<td>Sender Name</td>
</tr>
<tr>
<td>Ship To Location Identifier</td>
<td>Shipping Container Serial Number</td>
</tr>
<tr>
<td>Shipment Identifier</td>
<td>Vehicle Identifier</td>
</tr>
<tr>
<td>Unit of Measure</td>
<td></td>
</tr>
</tbody>
</table>

More information on Can-Trace is available at its website: http://www.can-trace.org/.

**Quebec’s Provincial Traceability System**

Quebec, as the first province to adopt a traceability system, set up traceability infrastructure in 1998 at the provincial level. Stemming from a partnership between government and agricultural producers, Agri-Traçabilité Québec (ATQ) was created in 2001. Since then, ATQ has been responsible for implementing the traceability system, which has been governed by provincial regulations, including the Food Products Act, the Animal Health Protection Act, and the Regulation Respecting the identification and traceability of certain animals. The Food Products Act and Animal Health Protection Act allowed for the government to create traceability regulations, which led to the Regulation Respecting the identification and traceability of certain animals. This regulation sets forth all Quebec requirements for
animal identification, registration, tags, transit, and slaughter in relation to traceability. Quebec’s entire traceability system is based primarily on identification of livestock at birth. The system has three cornerstones which are as follows:

- **At birth**, animals including, but not limited to, beef and sheep are assigned a 15-digit identification number. This number is printed on identifier tags that follow the animal for life. An electronic tag is placed on the right ear and a visual, plastic tag is placed on the left.
- **All sites** including farms, pastures, auction sites, slaughterhouses, pathology and gathering centers, zoos, genetic evaluation stations, etc. are assigned a 7-digit identification number. This number makes it possible to track the movement of animals from site-to-site.
- **Any site transfer** of animals is required to be reported and recorded on identification tags.

Below is an example of an identification tag to reflect the three cornerstones:

![Identification Tag Example]

The Regulation respecting the identification and traceability of certain animals may be found at the following webpage: [http://www2.publicationsduquebec.gouv.qc.ca/dynamicSearch/telecharge.php?type=3&file=/P_42/P42R7_A.HTM](http://www2.publicationsduquebec.gouv.qc.ca/dynamicSearch/telecharge.php?type=3&file=/P_42/P42R7_A.HTM).


**Alberta’s Provincial Traceability System**

In addition to Quebec, Alberta also has an established traceability system. Its traceability system is made up of three key components: premises identification, animal identification, and animal movement tracking. Alberta has three Acts, which pertain to and set requirements for traceability: the Animal Health Act, the Livestock Identification and Commerce Act, and the Livestock Industry Diversification Act. In addition, Alberta introduced a Traceability Cattle Identification Regulation in 2010, which added tagging requirements and move-in reporting requirements for cattle.

More information on Alberta’s traceability system can be found at the website of Alberta’s Department of Agriculture and Rural Development (ARD): [http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/trace12895](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/trace12895).

**Manitoba’s Provincial Traceability System**

Manitoba currently has a well-established Premises Identification Program for traceability purposes.
The system, similar to Quebec’s, involves a unique number assigned to each premises (including farms, feedlots, pastures, hatcheries, sale and research facilities, etc.). The system has already proved useful during Canada’s last outbreak of avian influenza and allowed for the CFIA to locate farms at risk. Manitoba relies on the federal government for animal identification and movement record regulation.

More information on Manitoba’s Premises Identification Program can be found at: http://www.gov.mb.ca/agriculture/livestock/premisesid/pid01s02.html.

III. Proposed Traceability Regulations

The Canadian Government is currently working on two regulations, which will significantly impact the structure of the Canadian traceability system.

**Regulations Amending the Health of Animals Regulations**

The first proposed regulations are the Regulations Amending the Health of Animals Regulations. This is the first livestock sector to be regulated under the new legislative framework, and more sectors are likely to be regulated in the future under this framework. These amendments would allow for a formal agreement with a third-party administrator to establish and maintain a comprehensive database containing up-to-date information as to identification, movement, and location of all Canadian pigs. Information would be provided to the administrator directly by pig producers, whom would identify all pigs in their care and control them with traceability methods. The amendments prescribe four methods of identifying and tracing pigs, including approved tags, approved slap tattoos, ear tags, and ear tattoos. The slap tattoos will be applied to pigs heading to / exported for slaughter. The ear tags and tattoos will be applied to pigs for export.

The proposed amendments have been developed, under guidance by the Traceability IGAC, in response to growing concerns over possible disease outbreaks among pigs, which could negatively affect public health, livestock sectors, and tourism. The amendments intend to facilitate more rapid and efficient control in such an event.

The main objectives of the proposed amendments support the Canadian Food Inspection Agency’s (CFIA) strategies, including “a safe and accessible food supply and animal resource base,” the Government of Canada’s strategies, such as “a prosperous Canada through global commerce,” and the Canadian Pork Council’s (CPC) goals to “identify pathways where infected animals have moved, potentially infecting other farms and swine.” The objectives are as follows:

- Reduce the impacts of a disease outbreak or food safety issue resulting from or affecting the pig sector;
- Better protect public and animal health; and
- Support the Canadian pork industry in order to meet international export standards.

Comments on the proposed amendment will be accepted until August 13, 2012.

For more information, including the proposed text of the bill, please see the following webpage: http://www.gazette.gc.ca/rp-pr/p1/2012/2012-07-14/html/reg1-eng.html.
Bill S-11: Safe Food for Canadians Act (SFCA)
The second, and less traceability-specific, regulation is the Safe Food for Canadians Act (SFCA) also known as Bill S-11. The Government introduced this bill on June 7, 2012, and its second reading in the senate was completed on June 20. The bill intends to strengthen the Government’s ability to protect Canadians from unsafe food, and it will improve food oversight by:

- Instituting a more consistent inspection regime across all food commodities;
- Implementing tougher penalties for activities that put the health and safety of Canadians at risk;
- Providing better control over imports and exports; and
- Strengthening food traceability.

The Act will consolidate the Fish Inspection Act, the Canada Agricultural Products Act, the Meat Inspection Act, and food provision of the Consumer Packaging and Labeling Act. It will align inspection and enforcement powers for all food commodities thus improving food safety, reducing overlap, and providing for more easily understood and complied with regulations.

While the bill is only in its early stages, it includes framework for traceability regulations requiring identification of food commodities; records of their places of departure, destination, and location as they move; and provision of information to those who may be affected by them. The Act will also implement tougher fines for activities that put the health and safety of Canadians at risk, which may include (but not be limited to) improper traceability documentation. Previously, anyone convicted of a serious offence could have been fined up to a maximum of $250,000. Under the SFCA, penalties could be as high as $5 million, or in the most serious cases, even higher at the court’s discretion.


More information may be found on the Canadian Food Inspection Agency’s (CFIA) website: [http://www.inspection.gc.ca/1300991336455](http://www.inspection.gc.ca/1300991336455).

IV. National Traceability Service

On July 13, 2012, at the Calgary Stampede, the Canadian Government announced the creation of the Canadian Agri-Traceability Services (CATS). CATS is intended to be a single national livestock traceability system with robust data management capabilities. It will bring together the combined experience of the Canadian Cattle Identification Agency (CCIA) and Agri-Traceabilité Québec (ATQ), via a joint project steering committee, to reduce costs and simplify data reporting. Once it is established, CATS will provide traceability data services for a variety of stakeholders including the CCIA and ATQ. A total of $765,000 is being provided by the federal government to create the data system, as well as to help the CCIA and ATQ improve their data management capabilities.

CONCLUSION:
The Conference Board of Canada report mentioned in the Executive Summary section of this report concluded that while it might be ideal for companies to be able to trace a product or ingredient throughout the entire supply chain, such a process is extremely complex and prohibitively expensive. Furthermore, evaluations of this kind of system found little or no benefit to food safety, so it may not actually be a great improvement over the one-step-forward and one-step-back approach. Traceability is especially crucial during food safety incidents - both to speed up the response and to reduce the scale of product recalls, which benefits both consumers and the food industry. As the Canadian livestock traceability program progresses, post will report developments. At this time, there are already plans for implementation of traceability programs in other sectors. We will also report on any significant developments in those sectors.