

Canadian Swine Identification and Traceability

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Foreign or domestic animal disease is a critical economic risk that must be mitigated.

■ What are we trying to accomplish?

In the face of a disease outbreak, the Canadian Swine industry, in conjunction with government and other vested-interest parties, must be able to trace live animal movements and identify the associated premises, destinations, and transport vectors. We must zone Canada in a way that allows areas not affected by a disease outbreak to continue to trade. An interim measure proposed is to divide the country into two zones at West Hawk Lake, Manitoba. A prerequisite is that these zones must be recognized internationally.

Consequently, the Canadian Pork Council and its affiliated provincial associations, boards and commissions are developing a pragmatic and effective nation-wide identification and traceability system.

■ Why are we doing this? Why is it important?

Swine producers have always recognized the threat of, and cost of, a disease outbreak and have instituted strong bio-security systems/protocols to address this situation on farm.

However, the Foot & Mouth Disease outbreak in Europe in 2002 and the recent BSE outbreak in Canada have driven home the importance of having a thorough, and practical, identification & traceability system. A Foot and Mouth Disease outbreak in Canada is estimated to cost \$13 – 45 Billion.

Canada has traditionally held a very high health status on the world stage. However, it is recognized that Canada presently is not well equipped to deal with an outbreak in this country. The Federal government is committed to and has already directed that all livestock industries must have in place an acceptable and working system by 2006. Prior to the BSE outbreak, the Canadian Pork Council and its provincial affiliates started to develop a strategy and plan for our industry. This initiative is currently being vigorously pursued by the industry.

■ Background

On July 2002, the Canadian Pork Council's Board of Directors voted that the Pork Council "will play a co-ordinating role within the pork industry in the development of a national strategy and action plan towards ensuring eradication, and a capability for zoning, of foreign animal diseases affecting swine. The CPC will also continue to collaborate where possible with its counterparts in other livestock sectors as well as provincial governments, and there will be a particular focus on animal identification and location requirements."

As a follow up to this resolution, a National Working Committee was established to make recommendations to the Council's Board of Directors on Identification and Traceability based on the following objectives:

- To reduce the response time in the event of a foreign or domestic animal disease outbreak, which affects swine or other cloven-hoofed animals.
- To address the O.I.E.'s (Organization Internationale Des Epizooties) guidelines for zoning.
- To identify one or more alternatives which satisfy these first objectives, taking into account their cost and adaptability to other uses of animal identification information, for the Committee to consider (e.g. farm management, food product recall, end-product niche marketing).

Producers in Alberta are committed to working with this process and further support the following principles:

■ Principles for a Canadian I.D. & Traceability System

- The primary purpose of our identification and traceability system is for disease control and eradication. Producers risk management programs are incomplete without this system.

- Responses to O.I.E. (Organization Internationale Des Epizooties) guidelines and addresses the requirements for zoning.
- The system must be simple, pragmatic, workable and meet minimal requirements initially.
- The Canadian Food Inspection Agency (CFIA) must receive recognition from our trading partners. Our system must minimize any trade implications.
- Must be producer driven and producer controlled.
- The database must be universal for all cloven-hoofed animals.
- The database must be provincial owned/managed/collected and nationally coordinated. Other parties, such as the CFIA, having access to specified data under specified circumstances.
- Other players, such as government and packers, must have input and sign off on such a system. Compatibility with packer systems is desirable.
- Provincial pork associations, boards and/or commissions must control producer registrations, ID tags and tattooing.
- Livestock premise geo-referencing must be mandatory. Government regulations will be required.
- Identification other than for specific purposes will be by lot number as opposed to individual ID.
- A paperless trail and input system for producers is preferred.

Provincial pork organizations such as Alberta Pork will play an active role within the national context. They must “own” producers data, register producers, ensure universal GPS referencing and issue ID tags and tattoos.

■ **Geo-Referencing**

In the event of an outbreak, we need to know where the livestock and buildings are and what types and numbers of livestock are inside the buildings.

Plans are currently underway to have a consultant develop a national template for national geo-referencing by December 2003 to provide consistency and readability across Canada and across livestock commodities. The consultant will be reviewing the initiatives that have already taken place across Canada to avoid duplication. It is anticipated that the preferable approach is to have regional multi-stakeholder databases possibly contributing to the national one. However, it is important that the necessary information on all cloven-hoof species be collected, kept current and consistent.

- **It is essential that ALL livestock farms in Canada are geo-referenced**

Provincial swine organizations will have an important role in geo-referencing after the national parameters are set. Geo-referencing may be part of the new producer registration process.

- **Monitoring and Reporting**

It is clear that information will need to be collected every time hogs change locations. This refers to slaughter animals but will also include breeding stock, feeders pigs, etc.

The Canadian Pork Council has undertaken the task of determining what identifiers will serve the industry best. To this end, pilot studies (**Table 1**) across Canada have been initiated. These pilot studies involving both individual ID systems and group (lot) ID systems are being tested and developed. The time frame for this to be completed is this fall.

Individual identification of animals is necessary in conditions where lot integrity of groups cannot be secured or monitored. In production systems where commingling occurs, and where an “all-in all-out” protocol are not followed, allocating a number to every pig may be the only efficient tracking method. The pilot studies will determine the most cost-effective means under these circumstances.

Table 1. Traceability systems to be tested.

Identification System	Identifier Method			Traceability	
		Farrowing Site	Nursery		Finisher
Single individual	1	Electronic ear tag (HDX technology)	N/A	N/A	Application and activation at the farrowing site. Reading and recording at each move between different sites. Reading and recording at the abattoir.
	2	Anti-collision Radio Frequency Identification (RFID) tags	N/A	N/A	
Production site (s):	3	Ordinary tag	Ordinary tag	Shoulder slap	Identification of farrowing site. Recording of lot* transfer between farrowing site and nursery (if they are two different sites). Identification of nursery site (if that site is different from farrowing site). Recording of lot* transfer between nursery and finisher (if they are two different sites). Identification of finishing site. Individual reading and recording of all identifiers at the abattoir
Farrowing site	4	Ordinary tag	Pneumatic shoulder tattoo	Shoulder slap	
Nursery	5	Manual ear tattoo	Ordinary tag	Shoulder slap	
Finisher	6	Manual ear tattoo	Shoulder slap	Shoulder slap	
Lot identification	7				Movement between premises to be monitored

*Lot refers to the animals that are moved as a group from one site to another.

■ A National Database

The Canadian Pork Council is participating in conversations with other livestock groups in Canada with a view to form the “Canadian Livestock Identification Agency” (CLIA) to house our National Database for cloven-hoofed animals. This will mean a structure change to the already established Canadian Cattle Identification Agency. The swine industry will be responsible for determining the needs of its industry within the context of requirements necessary in the case of a national emergency. The data will be “owned” by the industry with other agencies accessing certain data under specific circumstances. A proposed structure for the new Canadian Livestock Identification Agency is shown below.

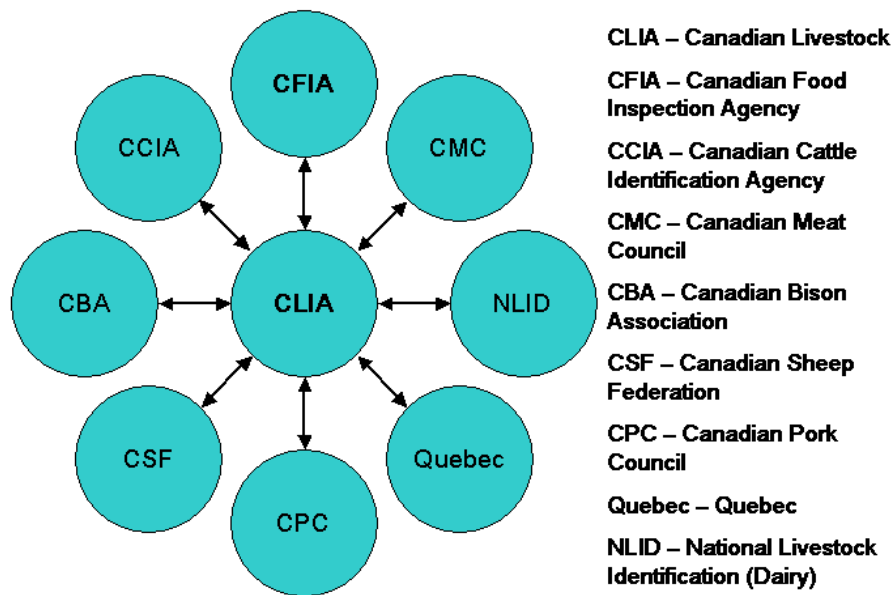


Figure 1 Canadian Livestock Identification Agency - Proposed Structure

■ Time Table

The Canadian Pork Council's time table for action is described below as of time of writing (**Figure 2**).

Figure 2. Canadian Pork Council's Timetable for Action

Activities	Financial years and quarters											
	2003-04			2004-05				2005-06				
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Determine data collection and transfer requirements												
National Swine Slaughter Database												
Determining livestock ID # scheme												
Geo-referencing swine premises												
Pilot studies: lot identification												
Pilot studies: individual identification												
Consultation with stakeholders												
Inform users												
Development and Implementation of a Regulation												
Readjustments												

■ Summary

Our industry continues to change. Future trends include but are not limited to:

- different types of production units
- more movement of hogs
- greater exports – Canada is export dependent

- greater assurance of food safety required by the general public
- our industry is vulnerable to outside forces

The pilot studies currently underway and described previously will help address in whole and in part, the above six points. In addition, other trends include:

- more people movement around the world leading to greater exposure risk to disease transmission
- disease outbreaks which are becoming media feeding frenzy events

As a producer I support the identification to traceability initiatives emphatically. However, I do have concerns on how our primary industry is to survive. The changes that have happened at the farm gate level over the past years have been substantial and with pressure from consumers, government and others, it is imperative that economics are examined. As we continue to “adjust” to market demands (international & domestic) and work towards a base platform for the “Canada Brand”, we must have a method of distributing production costs up the value chain.

■ Acknowledgements

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