

Recommendations for Policy on Traceability Implementation for the Canadian Beef Cattle Industry



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EXECUTIVE SUMMARY

The purpose of this paper is to present policy recommendations on behalf of the beef cattle industry as it relates to the next steps of implementation of the Federal/Provincial/Territorial agenda to have a mandatory comprehensive national system for livestock traceability (animal identification, premise identification and movement reporting) in place in 2011.

These recommendations remain consistent with the principles outlined in the CCA's 2007 Principles of Traceability document and as updated in 2010.

The concluding opinion of the Auction Market Applied Research Project (auction market study) is that any requirement for collection and reporting of RFID tags above the global average read accuracy documented in this research (93%) may impact auction markets' ability to conduct business at a reasonable pace (speed of commerce) and costs to a level that may not be sustainable.

The industry supports the draft CCIA Cattle Implementation Plan dated January 21, 2010 as the appropriate roadmap for the Canadian beef cattle industry's traceability system. However, the timelines noted in the plan are unachievable given the limitations of the technology as reported in the auction market study. Research on new tag technology as well as tighter standards may provide a more reasonable and expeditious solution to readability and speed of commerce.

Canadian Beef Cattle Industry Policy Recommendations for Traceability

To accommodate a phased-in approach for a mandatory comprehensive traceability system for beef cattle:

- In consultation with the beef industry, develop national regulations with consistent delivery standards and with direct funding support for technology development and implementation by industry stakeholders.
- In consultation with the beef cattle industry, develop the regulations with a non-punitive, educational approach for a period of time until field studies demonstrate that the technology supports the satisfactory speed of commerce.
- Premise ID must be completed prior to the implementation of movement reporting. National standards for assigning premise ID are imperative and must be consistent for all provinces. The definition of premise ID for the beef cattle industry is the home quarter or headquarters of the registered operator.
- The implementation of all aspects of traceability is dependent on technology solutions that do not impede the normal business practises of the industry (commerce). Prior to the implementation of movement reporting, software technology required to download the data from the tag readers and have it in a format that is transferable to the CCIA must be readily available to producers nationally.
- The CCIA Cattle Implementation Plan for animal movement reporting has been developed for phased implementation. The phase for read-in at backgrounders/feedlots receiving 1,000 head or more from another premise is an achievable next step, provided the premise ID and technology prerequisites noted above have been met. Feedlots and backgrounders below this threshold will be encouraged to voluntarily participate.

Additional Considerations

- Further research on the tag technology could be the most cost effective and expeditious solution to enhancing the readability of the tags regardless of equipment and placement.
- One option for the auction market phase in particular that addresses animal health risk factors is to begin with the move-in and/or move-out of breeding cattle as an interim step.
- Investments in the value-added attributes of the traceability system, such as information sharing and value chain innovation, will be required to ensure ongoing producer support.
- Promote the fact that the industry is taking a proactive position on developing a Biosecurity Standard that will enhance the preventative measures for animal health risk. This is as important, or perhaps more so, to the Canadian animal health and welfare system as it is to traceability.

PURPOSE

The purpose of this paper is to present policy recommendations on behalf of the beef cattle industry as it relates to the next steps of implementation of the Federal/Provincial/Territorial agenda to have a mandatory comprehensive national system for livestock traceability (animal identification, premise identification and movement reporting) in place for June 2011.

The purpose and value of traceability include:

- Disease control, response and eradication
- Market access as OIE standards are incorporated into trade agreements
- Consumer confidence (domestic and international)
- Product differentiation (consistent with the value proposition for the marketing strategy)
- Production and genetic improvement (only achieved with information sharing)

The CCA convened a traceability taskforce in 2010 to ensure the beef cattle industry advances a unified position and policy on the implementation of traceability.

PRINCIPLES DOCUMENTS (2007 CCA Principles of Traceability & 2010 Industry (AB) Principles)

The 2007 principles of traceability is the beef cattle industry's fundamental position. These are:

A. The scope of traceability for beef cattle:

- i. Shall not impede or delay commerce;
- ii. Costs of the system must not result in the industry becoming non-competitive;
- iii. The technology must be capable of reading ID at a rate which accommodates normal commerce;
- iv. Tolerance ranges for readability must be acceptable to the industry standards;
- v. Producer information must remain confidential.

B. That the CCA supports the CCIA definition of premise ID for the beef cattle industry as the home quarter or headquarters of the registered operator.

C. The CCA defines tracking movement of beef cattle as only those points of movement in the life of an animal where a change of premise takes place and that at these points data is submitted upon the arrival of the animal.

A supplementary statement of principles also consistent with the 2007 principles was signed by a number of Alberta organizations in 2010. This document is appended to this paper.

SYNOPSIS OF CFIA LEGISLATIVE AND REGULATORY FRAMEWORK AND IGAC PROCESS

Objective

To create an enabling legislative and regulatory framework to support the management of animal and related human health issues; to facilitate a rapid response to emergencies resulting from disease outbreaks, natural and other disasters in the livestock and poultry sectors; and to enhance food

safety by collecting, reporting, holding and sharing timely, accurate and relevant traceability information among authorized users.

Introduction

Traceability is defined as the ability to follow an item or group of items, including animals, plants, food products and agricultural inputs such as feed, seed or ingredients – from one point in the supply chain to another. For the purposes of this concept and consultation paper, the focus will be farm-to-slaughter traceability of livestock and poultry species.

The federal government proposes to develop a new federal statute and/or amend existing legislation and regulations to implement a federal framework for farm-to-slaughter traceability for cattle, sheep, hogs and poultry separate from food and agricultural inputs.

The proposed approach is in line with international guidelines established by the OIE. Canada's present system partially but not completely meets these international guidelines.

Personal and confidential information is anticipated to be collected under the new framework. The framework will have strong provisions for the protection of this information. These provisions will outline authorized access to, and intended uses of, traceability information, and will prescribe penalties for misuses and unauthorized disclosure.

Elements of a Traceability Framework

1. Animal Identification
2. Premises Identification
3. Movement and event reporting
4. Authorized use and sharing of information
5. Compliance and enforcement
6. Reporting and Record Keeping

Additional Considerations for a Traceability Framework

- Cost-sharing
- Standards
- Management of a single window information portal

The Industry Government Advisory Committee (IGAC) process has created some challenges. While its mandate is to be an advisory body, the government half of the Industry/Government committee has led the process with less transparency than was expected for a collaborative initiative. One of the fundamental flaws in the undertaking of livestock traceability is that provincial governments have been allocated responsibilities for the premise identification system. Although standards were expected to be established by IGAC, there is little evidence of a standard being applied by the provinces for assigning and validating premise ID.

Inconsistent and unconnected premise identification will not support efficient and effective movement reporting, which together represent two-thirds of the traceability elements. Further challenges with the animal ID tags add to the problem and will be discussed later.

AUCTION MARKET PILOT PROGRAM

The CCIA has produced a Key Findings report (attached) on Phase I of the recently concluded Auction Market Applied Research Project. It was noted that the Alberta auction market pilot study produced similar results, although that report was not available at the time of the task group meeting.

The purpose of the auction market research project was to evaluate commercial equipment available today in a cross section of auction markets (3 equipment vendors; 8 markets). The evaluation focussed on the accuracy of tag readability and impact on business processes (speed of commerce) under various structural conditions in the auction markets.

Key Findings

- The location of the tag reading equipment had more impact on business processes than the design of the system.
- The consistency of read accuracy per system varied from week to week and market to market (weekly range of 91-94 %; average = 93%). Factors such as electrical interference, tags and tag placement, animal behaviour and the size of cattle were found to impact results.
- The preliminary cost estimates for the hardware installation in 150 auction markets across Canada is approximately \$8.6 million. This does not account for software, maintenance, data submission or installation in buying stations and assembly yards.
- The speed of commerce is less impacted if the tags are read when the cattle leave the auction ring and are placed in loading pens or are read as they are loaded on the trucks for departure (move-out).

The concluding opinion of the study is that the RFID scanning hardware provided a global weekly read accuracy of 91 to 94 per cent with a global accuracy of 93 per cent. Resolution of identified tag issues (no tags, bar coded tags or tags that didn't read) would have increased read accuracy by 0.6 per cent. Any requirement for collection and reporting of RFID tags above the read accuracy documented in this research may impact auction markets' speed of commerce and costs to a level that may not be sustainable.

It appears from this study and reported observations that the tag technology is a more limiting factor than the reading equipment. Inconsistency in the readability of the tags within product brand is as concerning as it is across all approved tag types. Tag manufacturers must be challenged to create solutions for Canada. Tighter standards and less choice for tags could provide a solution to this problem.

PREMISE IDENTIFICATION PLAN

Premise identification, the critical element of a traceability system, is currently the most dysfunctional aspect of the whole scheme. Provincial governments have the responsibility for implementing premise ID within their provinces. To date, no standard is evident for assigning premise ID numbers or validating location identifiers against existing land title registries.

The principle on premise ID, as stated in 2007, remains the industry's position: That the definition of premise ID for the beef cattle industry is the home quarter or headquarters of the registered operator.

Clearly, as beef cattle and some cull dairy cattle move from one province to another on a daily basis, a single standard of premise identification is critical to facilitate the movement reporting even for a move-in event.

CATTLE IMPLEMENTATION PLAN

The industry supports the draft CCIA Cattle Implementation Plan dated January 21, 2010 as the appropriate roadmap for the Canadian beef cattle industry's traceability system. However, the timelines noted in the plan are unachievable given the limitations of the technology as reported in the auction market study.

Timetable for the Phased In Implementation of Premises ID and the Transition to Animal Movement Tracking*

Phase	Proposed Timelines & Related Information
Animal Movement	
Groups that are currently required to report are: Renderers, packers / processing plants, exporters, importers, dead stock operators <i>Lists below are to be cleaned up in accordance with the existing regulations to ensure that there is no misinterpretation of the existing reporting requirements.</i>	
1	September 01, 2009
The business case to define program support that is based on the real costs and business issues is made available to all participants to support their business planning and implementation approach. Applied research projects to demonstrate movement reporting technology and tools in auction marts are commenced, in conjunction with other pilot projects on a national basis.	
2	January 01, 2010
Backgrounder or feedlot over 1,000 head per annum	
3	January 01, 2011
4H Clubs and exhibitions, veterinary clinics, artificial insemination companies, are required to report movement. Creation of the regulatory framework to support movement reporting is required.	
4	January 01, 2012
Auction marts, assembly yards, and sale yards, all animal move-in activity will be reported as long as technology is sufficient to support the "speed of commerce" and funding is available	
5	January 01, 2013
All animal move-in activity at all sites will be reported with the exemption of linked premises, linked commingling premises, as well as farm-to-farm non-inspected sales Exemptions are pending risk assessments, resources and enforcement	

*Source: CCIA

Using the basic plan and providing some policy options for a staged implementation process that is compatible with the proposed regulatory framework should provide the industry and the Federal Government with the necessary policy provisions to advance the beef cattle traceability system in a

manner acceptable to both groups. The timing of each stage will be dependant on the ability to implement appropriate technology and methods in a manner consistent with industry principles for traceability.

CANADIAN BEEF CATTLE INDUSTRY POLICY RECOMMENDATIONS FOR TRACEABILITY

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- The CCIA Cattle Implementation Plan for animal movement reporting has been developed for phased implementation. The phase for read-in at backgrounder/feedlots receiving 1,000 head or more from another premise is an achievable next step, provided the premise ID and technology prerequisites noted above have been met. Feedlots and backgrounders below this threshold will be encouraged to voluntarily participate.

Additional Considerations

- Further research on the tag technology could be the most cost effective and expeditious solution to enhancing the readability of the tags regardless of equipment and placement.
- One option for the auction market phase in particular that addresses animal health risk factors is to begin with the move-in and/or move-out of breeding cattle as an interim step.
- Investments in the value-added attributes of the traceability system, such as information sharing and value chain innovation, will be required to ensure ongoing producer support.
- Promote the fact that the industry is taking a proactive position on developing a Biosecurity Standard that will enhance the preventative measures for animal health risk. This is as important, or perhaps more so, to the Canadian animal health and welfare system as it is to traceability.

APPENDIX A

Guiding Principles for Beef Cattle Traceability

In July 2009, the federal agriculture minister and most of the provincial agriculture ministers committed to a mandatory comprehensive national traceability system for livestock by 2011, with the implementation of this system supported by national funding and regulatory framework. The ministers also committed to engage key industry groups on the timing of implementation for each species. They also committed that the Growing Forward policy framework and Agricultural Flexibility Fund will provide support for key elements of the national system.

In light of the ministers' July 2009 agreement, the Alberta Department of Agriculture and Rural Development, Alberta Beef Producers, Canadian Cattlemen's Association, Alberta Livestock and Meat Agency, Canadian Cattle Identification Agency, Canadian Beef Breeds Council, Beef Industry Alliance and Livestock Inspection Services recognize the need to operate under a set of guiding principles for beef cattle traceability as these organizations work in partnership towards a national traceability system.

These organizations all share the common goal of strengthening our world class animal health and food safety system in Canada and recognize that traceability, which includes the three pillars of premises identification, animal identification and animal movement tracking, forms a key piece of such an animal health and food safety system.

In August 2007, the Canadian Cattlemen's Association worked with its provincial member associations to develop a paper that clarified the industry position on the scope and implementation on traceability. The purpose of this document is to establish an acceptable common understanding of traceability among government and industry partners, based on the CCA principles, as we move to a national beef cattle traceability system.

For the purposes of these principles, movement tracking of beef cattle occurs only at those points of movement in the life of an animal where movement to a premise controlled by a different owner or operator takes place and at these points, data is submitted upon the arrival of the animal. For example, tracking of pasture to pasture movement would not be required when the producer is moving cattle within the producer's own operation.

These traceability principles are explained further below:

Principles of Traceability for the Canadian Beef Cattle Industry

1. Traceability will support industry standards for commerce.

The technology utilized for traceability for the beef cattle industry will accommodate the way the industry conducts commerce. The highest volume of cattle is sold in the fall of each year at auction marts located around the provinces. At auction marts, several thousand calves per day are assembled, handled and transferred. In addition to auction marts, beef cattle are sold directly to feedlots and through other industry sales. The technology utilized for traceability will support industry standards at these points of handling or sale of cattle. Also, movement reporting to community pastures or other similar co-mingling sites should only be required when a suitable

technology solution is found in partnership with industry.

2. The traceability system for the beef cattle industry will enhance the competitive position of the industry.

Traceability is a critical element of a robust and internationally recognized animal health and food safety system. Progressive implementation of traceability will occur only when there are identifiable benefits and the available technology results in acceptable incremental costs. Any cost will be assessed against a measurable value of real benefit such as the mitigation of foreign animal disease impacts, protection against loss of market access, increased market value, or enhanced market access. Identification of these benefits and a phased-in approach to implementation will encourage industry adoption and acceptance of traceability.

Those in the value chain, or in the regulatory environment, who receive benefit from the system should expect to bear their share of the cost of the system so that the primary producer is not overly or inequitably burdened in comparison to others.

3. Traceability will expand as the appropriate technology to support initiatives is available.

The expectation is that a reasonable rate of reading the ID tags respects the speed of normal commerce. For example, tags and readers need to be capable of functioning at an acceptable standard for lots or groups of cattle moving through an alley or weigh scale, rather than being read or scanned individually.

4. Industry standards will drive tolerance ranges for tag readability and retention.

All stakeholders recognize that the beef cattle tagging system that underpins traceability will not, under existing technology, achieve a rate of 100 per cent tag retention or 100 per cent readability. Establishing and accepting tolerance ranges and a practical enforcement policy will help industry and government implement a successful beef cattle traceability system.

5. Producer information must remain confidential.

A producer's information collected through the beef cattle traceability system is confidential unless a producer provides consent for disclosure, the collected data is disclosed in aggregate, or disclosure to government is necessary for dealing with animal health or food safety purposes.

Signed by:

Alberta Beef Producers
 Alberta Agriculture and Rural Development
 Canadian Cattlemen's Association
 Alberta Livestock and Meat Agency
 Canadian Cattle Identification Agency
 Beef Industry Alliance
 Canadian Beef Breeds Council
 Livestock Inspection Services

APPENDIX B

Phase One of the Auction Market Applied Research Project Key Findings

This project did not employ any unusual measures or allow intervention to ensure tag reads. When visually identified tag issues such as no tags or bar-coded tags were noticed, these issues were then documented by the field research associate. This research reflects the read accuracy and impact on business process that would exist if these systems were installed in auction markets across Canada utilizing current business process and activity.

Impact on Business Process Efficiency and Effectiveness and Speed of Commerce

Every auction market has a unique design configuration and process flow. The design of the RFID system must also be unique and located in an area that is well integrated with normal process flow in order to be efficient.

The location of the system had more impact on business process than the design of the system.

The installations at the receiving area had some impact on speed of commerce, between seven to 10 minutes per some groups and a few minutes on others. The total impact per day exceeded two hours in some instances.

Installations at the sale ring (both before and after) had the least impact on process efficiency as the cattle must flow through to the sale ring whether before or after. Markets speed of commerce was impacted between a few to 14 minutes on a sale day.

Systems not aligned with process flow had significant negative impact on speed of commerce.

The consistency of read accuracy per system varied from week to week and market to market. This may be a result of numerous factors including: electrical interference; tags or tag placement; animal behaviour; and size of cattle.

Two single alley systems processed 12 per cent of the total head. These systems had the lowest variance of three per cent between the low weekly read accuracy of 96 per cent and high of 99 per cent. Global accuracy was 97 per cent. The narrow alley structure reduced flow of cattle at high processing periods.

Two dual alley systems processed 15 per cent of the total head. The weekly accuracy ranged from 86 to 93 per cent with a global accuracy of 90 per cent. This was the lowest overall reading in the project and the highest day over day variance of seven per cent.

Five wide alley systems processed 72 per cent of the cattle. The variation in group size accuracy was the highest at eight per cent (88 to 96 per cent) showing a definitive trend

of higher accuracy in smaller groups. Weekly accuracy ranged from 90 to 94 per cent with a global accuracy of 93 per cent.

Identify the Business Case Regarding Feasibility and Cost/Benefit to Enable Traceability

The preliminary cost estimates, based on only one RFID hardware system at each of the estimated 150 auction markets in Canada is approximately \$8.6 million. This cost estimate does not include software, or installations at buying stations and assembly yards.

It was determined that auction markets will have additional operating costs resulting from administration and submission of the tag reporting to the CLTS, maintenance on the hardware and the likelihood of additional personnel. Preliminary estimated annual operating costs for the industry, including maintenance and warranty, is estimated at almost \$2.6 million not including software, computers, capital cost of equipment or any additional increased staffing costs.

There were no direct benefits to the auction markets identified as a result of having RFID hardware installed in Phase One. Phase Two will explore potential benefits based on the integration of commercial software.

Delivers an Opinion on the Feasibility of the Existing Hardware/Software Supporting Full Traceability

The RFID scanning hardware provided a global weekly read accuracy of 91 to 94 per cent with a global accuracy of 93 per cent. Resolution of identified tag issues (no tags, bar coded tags or tags that didn't read) would have increased read accuracy by 0.6 per cent.

Any requirement for collection and reporting of RFID tags above the read accuracy documented in this research may impact auction markets speed of commerce and costs to a level that may not be sustainable.