ATQ
Agri-Traçabilité Québec
ISO 9001-2008 Certified

ATQ: 10 YEARS OF KNOW-HOW

Principles Essential to the Successful Development of Traceability

As a new legislation was about to enter into force in Quebec, representatives of the bovine, ovine and porcine sectors came together to prepare a study on the pillars required to implement traceability in their production. In September 2001, following this common effort, Agri-Traçabilité Québec, a non-profit organization, was created to operate the first traceability database for crop and livestock products. Among the activities carried out during the first years of traceability implementation, the following components significantly contributed to the successful development of Quebec traceability system which, let us mention it, is now recognized worldwide.

Legislation: a Guarantee of Success

The implementation of legislation taking into account particularities of the various crop and livestock productions while supporting the objectives of traceability will ensure the participation of producers and industry stakeholders. All are of the opinion that the traceability system existing since 2002 in the livestock sector (3 productions: bovine (dairy and beef), ovine and cervid) could not have been successfully implemented without legislation. Indeed, when using voluntary implementation, ensuring an acceptable level of efficiency for a traceability system would be challenging.

Producers benefited of a first generation of tags subsidized by MAPAQ. This, combined with legislation, contributed to the successful implementation of traceability.

Industry and Government Collaboration: a Must

The *Règlement sur l'identification et la traçabilité de certains animaux* aims improving food safety and competitiveness of Quebec agricultural producers. Sharing of responsibilities between all the links of the chain is essential to develop and maintain a traceability system that is comprehensive, effective and sustainable over the long term.

The mobilization of all links of the chain, government (MAPAQ), animal breeders, specialized associations and agricultural stakeholders, allows to guide the traceability system regarding animal identification and movement follow-up in various premises in the province, according to the needs of all. The different stakeholders can this way integrate traceability responsibilities through their common activities.

Also to implement traceability into new productions, the involvement of specialized resources on various committees help ATQ to properly identify the needs of all and to share information on the progress in traceability know-how in Quebec and Canada.

Moreover, ATQ is supported by other committees involved in the development of traceability projects in agricultural sectors not covered yet by legislation.

Communication: a Mutual Involvement

Agricultural producers and industry stakeholders have a lot of questions when a system is implemented. The establishment of a well-trained customer service ensures adequate transmission and collection of information. All information regarding tag selection, types of markings available, tag ordering, birth, purchase, sale or death of animals declarations is processed by this service. This is why opening Customer Service 24 hours a day, 7 days a week has been essential in the early establishment of the traceability system.

Mr. Antoine Doyon, Owner

Ferme Thomas inc.
Bovine production - Grain-fed calf

The agricultural world was hit by many health crises in the 1980s and 1990s, and many affected bovine production, including calf production. These have led to significant economic losses in the sector. In the 1990s, it was suggested in Quebec to create a system to ensure traceability from the farm to the table. At this time, I had the chance to go in France and Holland with a delegation to learn more about what they were doing in terms of traceability.

Now that a traceability system is implemented in Quebec, it is possible to quickly know the source of contamination, and when it will go to the consumer, to promote our grain-fed calf products.

Bovine producers have been involved actively in the traceability system for 10 years. The system works well in general. Having only one choice of tags for all the province facilitates herd management regarding the identification of calves entering the farm. This makes the risk of error lower. Of course, a few small problems such as tag occasional losses have been encountered. Identifing calves and declaring their movements are also an additional task that producers have to deal with every day; this takes time.

Quebec bovine producers have been doing their part since the inception of the system, so we are looking forward that product traceability reach the table, and expect this to happen in the near future.

ATQ continues to regularly transmit information to its many clients to inform them about the development of traceability, the results of pilot projects and tags distributed in the province.

Tags: the Basis of Traceability

Since the establishment of the Quebec traceability system, pilot projects have been initiated on farms to improve tag retention. Currently, six pilot projects analyzed four generations of different tags, formats, shapes, strength and brands.

Distribution of ATQ Tag Retention Projects Over 10 Years

Tag generation	Period	Main objectives of pilot projects	Sample composition (All bovines)
1st	September 2001 to December 2002 (16 months)	Mass identification of all adult cattle in Quebec	-
1st	January to September 2003 (8 months)	Comparison of tag backside part retention by type of panel and button	9 dairy farms 472 animals
2nd	January 2005 to July 2006 (18 months)	Comparison of retention for 3 generations of bovine tags in loose housing premises	7 farms 1,678 animals
3d	January 2007 to December 2010 (48 months)	More in-depth follow-up on retention for the 3 generations of bovine tags on stall and loose housing animals, further documenting the effects of tagging and the external environment of animals. Combo tag (electronic chip and panel) testing on a sample of animals studied in the global 4-year project.	16 dairy farms; • 5 in loose housing; • 11 in stall housing; More than 2,000 animals 5 dairy farms (in the same study group) 136 animals re-tagged;
Comparisons of tags	2008 to 2011 (36 months)	Study of tags from different providers: Allflex, Reyflex and Destron.	5 dairy farms 240 animals
Prototypes tested	December 2008 to December 2011 (36 months)	Study of high breaking strength tags.	5 beef farms only 143 animals
4nd	February 2009 to February 2012 (36 months)	Retention of Ultraflex bovine tags (4th generation) on stall and loose housing animals.	7 dairy farms 400 animals

From 2007 to 2010, the participation of industry members and government on the bovine tag committee helped ATQ and the manufacturer Allflex to develop the new Ultraflex tag. This one made with an ultraflexible plastic that fits snugly behind the ears of cattle with its rounded shape, is distributed since March 2011 and appears to be better adapted to Canada farms conditions.

Tools to Facilitate Traceability: Continuously Evolving

Always on the watch for innovations in this field, ATQ pays continuous attention on the different solutions available on the market and performs tests to provide quality and efficient products to farmers.

Over the last 10 years, ATQ has worked to develop tools (ATQ Direct and FormCLIC) that are easy to use and compatible with stickreaders using RFID technology. These tools significantly help industry members to electronically collect and transfer traceability data.

On the other hand, livestock transportation is a concern because it is also an important link in the chain of custody. Although no solution is yet available on the market, ATQ is continuing research to find a technology capable of reading the tags of a large number of animals at loading and unloading.

A dynamic Database: from Theory to Practice

The ATQ IT team, which ensures the protection and safekeeping of information regarding the industry, works diligently to the development and improvement of a multi-species database named Agri-Trace™. ATQ had to face several challenges during the implementation of the database so that it takes into consideration the reality of the various links in the chain of production and the complexity of traceability declarations. Indeed, the early versions of the ATQ database helped to highlight important differences between theory and practice. With 10 years of experience in traceability, it was possible to refine the system, allowing ATQ to offer a traceability solution on various communication tools. Migration of Agri-Trace™ to a Web platform provides a much more efficient solution, which will allow adaptation to evolving and constantly growing needs of our main users (producers, partners, etc.). Agri-Trace™ will also provide a marketable version outside Quebec.

Means Undertaken to Increase Expertise in Traceability

Over 10 years ago, traceability was poorly documented. Therefore, ATQ had to make its own experiences and observations during the first years that, let's mention it, were very turbulent not to say highly challenging, the organization being faced to various imponderables. Very little reading tools and even less management software were available. The decision to provide electronic tags and implement automated information transfer was revolutionary. The Quebec distinguished itself by its choices and forced the development of tools that even today improve the management of several farms. The system is in place, we can now measure its impact.

Other Pilot Projects of Agri-Traçabilité Québec

1. Identification and traceability of lettuce
2. Bovine meat processing
3. Lobster identification
4. Automated reading of the various types of tags on the market
5. Livestock transportation
   - *Transfer of information*
   - *Animals identified by lot*
6. Electronic identification and traceability of cervids
7. Evaluation of reading tool operation and FormCLIC software use
8. Table eggs traceability

Appraisal of Various Clients and In-the-Field Pilot Projects

ATQ uses various means to further develop the concepts of traceability. In this sense, ATQ is a pioneer in this field. The team works in connection with industry and closely cooperates with the Government (MAPAQ). ATQ created automated appreciation surveys to understand and assess the real needs of industry and diversify its activities by developing pilot projects in different sectors of livestock production. There are more than a dozen pilot projects completed to date.

Major Challenges for the Next 10 Years

Traceability remains a growing concern in Quebec, Canada, and other countries.

To remain a reference in the area of traceability and maintain its leadership, ATQ must:

- Strengthen and expand the concepts of traceability in the Quebec livestock transport sector so that this link of the food chain becomes regulated and integrated into the Quebec traceability system;
- Remind to producers and stakeholders the importance of regularly update changes occurring in their herds in order to prevent epidemiological crisis and ensure access to foreign markets;
- Add value to the current system to facilitate declarations for producers and stakeholders;
- Establish effective partnerships for the advancement of research and development of efficient tools and technological solutions;
- Monitor trends, stay abreast of new technological tools and developments in all sectors.

Mr. Guy Auclair, Director

Direction de la santé animale et de l'inspection des viandes, MAPAQ.

«We have come such a long way in 10 years. When the bovine industry and the Government of Quebec decided to put forward a traceability system to track the movement of animals, they demonstrated an extraordinary vision. In doing so, Quebec adopted a valuable tool to act quickly when the situation commanded and thus demonstrated to buyers and consumers that the products they buy and consume are safe. But all this has not been without pitfalls. Much energy and effort have been made, sometimes even ahead of technology. Initially, there was considerable reluctance, but the BSE cases detected in 2003 gave us reason. Agri-Traçabilité Québec has been a driving force in this case and has quickly established itself as a world leader in the field of traceability.

All those who contributed to this reputation can be proud. Consumers are increasingly demanding and it is now inconceivable to market a agri-food product without using traceability mechanisms. Now, we must consolidate our gains, further structure the sharing of information from different sources and facilitate access to this information; here is the challenge that lies ahead.»

Reduction of Administrative Burden Resulting from Traceability and Agricultural Insurances

Since January 1st, 2009, La Financière agricole du Québec (FADQ) uses data from Quebec traceability system to establish the insurable volume for "lambs" and "feeder calves". This operation, made possible with changes to the ATQ system, facilitates the work of producers and partners regarding the conformity of information required by the management of the Farm Income Stabilization Insurance (FISI) program.

Highlights of the First 10 Years

- Electronic reading and transfer of animal identification numbers
- Multiple ways offered to report events (ATQ Direct, FormCLIC, Customer Service)
- Confirmation of the actual real age of animals, which provides an advantage for the export of livestock products
- Service of automated herd inventory transfer, which allows users to verify quickly their records
- Support to partners in the process of obtaining a subsidy for electronic equipment purchase
- Obtaining ISO 9001; 2008 certification

© : RB

ATQ
Agri-Traçabilité Québec
ISO 9001-2008 Certified

Agri-Traçabilité Québec
Maison de l'UPA, 555, Roland-Therrien blvd.
Suite 050 Longueuil, Québec J4H 4E8
Phone: 450 677-1757
Toll free: 1 866 270-4319
Fax: 450 679-6547
Toll free fax: 1 866 679-6547
Website: www.atq.qc.ca