

Mr. Chairman and Members of the Committee, thank you for the opportunity to participate in this hearing on issues related to the recent BSE-positive cow found in Washington State and the resulting need for the United States to implement an animal identification and tracking system. Respected Senators, Ladies and Gentlemen, I am very happy to report to you today on the experiences with animal tracking in Switzerland.

To introduce myself, I am currently a scientific collaborator in a joint venture of the Swiss Association for Artificial Insemination and the Swiss College of Agriculture, where I am doing research and development in animal breeding. For education, I received my doctorate in animal breeding from the Swiss Federal Institute of Technology in Zurich, and was for four years a postdoc at Cornell University in Ithaca, New York. But I am here today because for four and a half years from its inception, I was CEO of the Tierverkehrsdatenbank AG (TVD AG, the Animal Tracking Corporation) in Switzerland. The TVD AG is the entity responsible for the design, implementation and operation of the Swiss animal identification and tracking system.

Restoring Trust in the Swiss Beef Supply through an Animal Tracking Database

In the nineties, Switzerland - suffering under outbreaks of BSE resulting from imported feedstuff - was subject to a ban on the import of Swiss animal products by European and other countries. After due consideration of this, and of the danger of contagious diseases to the Swiss national herd, the Swiss veterinary authorities concluded there was an urgent need for an up-to-date animal tracking system. The solution had not only to address the problem of animal health, but also help restore trust in Swiss animal products and promote food safety. A survey of animal tracking systems in other countries was conducted in 1998 by the Swiss Federal Veterinary Office and an expert panel. No suitable solution was found. The existing systems were found unsatisfactory for several reasons:

Many were too complicated or based on outdated technology

Many of the solutions did not reflect the realities of the agricultural environment

Many of the solutions were too technology and theory driven

Many were government run and suffered a high cost of ownership

The Swiss veterinary authorities concluded that the most effective solution would be to rely upon the private sector for the solution. The advantages this would bring were:

Faster set-up and a more quickly operational system

Increased support by the stakeholders due to the fact that the new system and data collected could be more easily used for other purposes

Because the solution would be, in effect, a monopoly, strong government influence and regulation would be necessary. The Swiss parliament passed a law governing the creation and operation of the animal tracking system for Switzerland, and continues to provide oversight of the operations of the TVD AG.

Encourage Private Sector Involvement from the Inception

To engage the involvement of the private sector in the design of the system, a competitive bid process under WTO rules was chosen. To participate in the competitive bid process, a consortium of interested Swiss agricultural organizations formed the TVD AG. I was chosen to serve as CEO. The organizations that came together did so because they recognized the impact and the potential the central animal tracking database could have on their business. They judged it to be in their interests to participate. Together with our technology partner, the Swiss subsidiary of the American company Computer Sciences Corporation, we bid and won the contract.

I understand there is great interest in how the private sector and the Swiss government arrived at a collaborative effort. At the beginning, the Swiss government visited with all important agricultural organizations on how to define certain technical aspects of the system. Many of the organizations did not support the Swiss government's vision of the system. More or less every organization had its own version of the animal identification plan, and some wanted to offer their services to run the database. But fortunately, the Swiss government had already a very strong opinion on how the final solution should look: a central database run by an independent company collecting data directly from the system participants.

After not being able to change the government's opinion, the organizations decided that it was in their interest to follow the government's plan. The fear that any one company or organization could run the future centerpiece, the animal tracking database, was a strong motivation for all important organizations to create a new, neutral company (TVD AG) in order to participate in the bid. It was soon obvious that everyone had to pull together. The pressure of Swiss products actually being banned or risked to be banned by other countries made it very obvious to everyone that an animal tracking database was needed. And many agricultural organizations had more trust in a private company (especially if they themselves would be a shareholder) to run the database than if a government agency would do so.

At the same time the organizations tried to influence the government in such a way that they obtained access to the database, so that they could use the valuable data collected by TVD AG for their own purposes. There was recognition that this data has great value to the organizations. Access rights are given according to the following principle: data about the animal goes with the animal and data about the premises are accessible only by those having a contract with the premises (or at least the premises have the possibility to deny access to their data). The Swiss animal tracking database system has therefore an elaborate functionality on access rights.

Some organizations were motivated to join in because they can obtain the data cheaper from TVD AG, rather than collecting it themselves. In fact, several organizations have stopped collecting their own data and instead have asked TVD AG to collect the data they need. With the efficiencies gained through using the animal tracking database, the agricultural organizations are more or less forced by their members to get their data from the animal tracking database to avoid reporting to multiple organizations. Another incentive to cooperate is that certain data resides solely in the animal tracking database, hence certain value-added services can be offered only in collaboration with TVD AG. In Switzerland it was not very obvious for the animal organizations to collaborate with the government, but laws and common sense and in some cases also pressure by the producers made it possible.

Focus on Quick Wins and Offer Subsequent Refinements

We knew that it would take time and be difficult to gather information on the complete national herd. It was decided therefore to take an iterative process, with early implementation, focus on quick wins and refinement based on experience. Features of the solution are:

A common numbering scheme (animal identification) and data collection system according to EU requirements

Common processes implemented nationwide rather than different processes by cantons (corresponding to your states)

The ability to exchange data with existing sources, including the incorporation of existing identification systems

A user-friendly interface optimized for the realities of the users. This is now Internet based and very cost effective

Multiple data entry systems (cards, readers, Internet, batch file transfer etc.) with strong data access functionality

A solution which takes into account the needs of the user for training and support, and the difficulties of implementation in the field

A solution that integrates the business processes

A fully scalable solution easily expandable for additional needs of the public and private sectors

All basic services of the solution were fully operational within 6 months of winning the contract. Enhancements, especially for improving data quality, and provision of additional services, were added on an iterative and step-by-step basis over time.

Self-Sustainability of the System was in Place from the Beginning

The Swiss parliament decided that funding for setting up the entire system would be provided by the Swiss government but that operational costs have to be covered by the users. That means the producers, traders and slaughterhouses.

In Switzerland we therefore started with a fee associated with the ear tags applied to the animals (\$2.00 per calf in 1999, \$4.00 since January 2004), and since 2003 also a fee (\$4.00 since January 2004) per slaughtered animal to provide funding of the operational costs. Since these fees are uniformly applied, the system is fair, and the cost can be passed on uniformly to the consumers, without penalizing the producers. In addition, and of crucial importance to the success of the system, it was decided that the database would be made available for commercial value-added services, provided that the owners of the data gave their consent. Thus, today not only producers can use the database for their inventory purposes, but also agricultural organizations (e.g. breeding associations), government organizations, slaughter houses (meat packers), supermarket chains, and soon even consumers. In particular some food safety and quality programs operated by the supermarket chains rely on the animal-tracking database. We expect others to follow. This provides an additional source of revenue, which helps fund the operation of the whole animal-tracking system. Over time, the cost to the government for running the animal identification and tracking system (excluding investments) was reduced from 60% in 1999 to less than 20% in 2003 and completely self-funding since the start of 2004.

Data Quality Assurance and Compliance are Critical

Another crucial aspect of the solution is the data quality. I cannot stress enough how important this aspect is. The value of the solution is directly dependent on the quality of the data. We have found in Switzerland that the best way to promote good quality is firstly through streamlined processes, secondly with value-added services already mentioned (the animal holders have an incentive to participate), and especially by rewards for good quality data and penalties for missing or false data. Each user is responsible for the correctness of his data. Those with high quality receive a financial reward from the agricultural department, as the costs of prevention are lower than the costs of correction.

Lastly, we have an inspection process. Each user must perform his own inventory control on a regular basis. In addition, audits by the cantonal authorities are conducted on a periodic basis, at least 10 % of the participants are checked per year. Our data quality has increased enormously over time, and the need for staff in our office for data correction has dropped substantially.

Another aspect I would like to emphasize is the value of the business processes associated with the system. These have been consistently refined over five years in Switzerland and the experience gained is extremely valuable. The processes are more crucial to the success of the solution than the software itself. We and our partners from CSC Switzerland have invested greatly in the processes and provide the expertise that we need. Experience is what counts for designing and running the business processes (ordering and delivery of ear tags, notification of births, movements and slaughter etc.).

We have a constantly evolving system and plan to offer additional value-added services, more refined food safety, and increased use of radio frequency ear tags and automation. This will all be introduced on a measured, step-by-step, and cost effective basis.

We also consider cooperation with foreign countries as desirable. The agriculture business is global. Animals are imported and exported. Their data should go with them. Diseases cross state and country boundaries. It is essential that cooperation in health and food safety becomes an international norm. We are therefore very happy to cooperate with you as you set up your animal tracking system.

Lessons Learned from the Swiss Experience

Regarding lessons learned from our five years experience with nationwide animal tracking, I would state the following:

Set-up a central database which serves not only for fighting animal diseases but as a tool for all organizations interested in animal identification.

Do not try to do things too cheaply. The costs of correction are greater than the costs of prevention.

But gain experience before making major investments. Use a step-by-step process, and examine the results after each step. Be practical. Avoid the dominance of theory and technology. The key success factors are the processes, training and acceptance.

Provide adequate training and support for the end users. The end-user domain is where the problems will occur. End users who are well supported by a help desk accept the solution much better. We initially underestimated the size of this need in Switzerland.

Allow the maximum value to be made from the data collected. Regulate access rights to protect the rights of the data owners, but impose no more data access restrictions than really necessary. Make sure the benefit goes to the owners of the data B that means to the end users. Involve third parties such as supermarket chains early in the process in order to add to the value for the end users. Reward the good end users.

Start with a new database but minimize extra costs by taking over existing data. But be careful not to make things too complicated and costly by catering to everything, which already exists in order to satisfy certain groups. There must be common procedures and standard interfaces.

Use the Internet to reduce cost and training needs for the smaller end users.
Use a single central database to reduce costs and minimize response time for impact analysis. 48 hours is your stated target for a US solution, but that is much longer than is necessary or desirable.

Maintain trust in the solution. The government is the protector of the interests of agriculture, and of public health, rather than a dictator and cost generator. Involve the end users in the decision making process. An end user must for example be involved in decisions regarding access to his data. Communication to all involved is vital. A process for handling end-user feedback is also vital.

Lastly I would encourage you all to come to Switzerland and see yourself what we have in our solution. Talk to end-users and familiarize yourselves with the expertise we have built up. You are most welcome, and we would be very happy to collaborate with you.

Thank you very much!

