NZ paddock to European plate – **the new reality of traceability**

New Zealand lives largely by livestock farming. Beef, lamb, whole milk powder, cheese and other animal products are 44% of our export income. A simple fact that makes livestock traceability a particularly critical issue for this nation.

Biosecurity, food safety and export market access – they all require some system of livestock identification and traceability that is truly effective and up to international expectations. And the latter are rising fast!

In New Zealand's main markets and among competing agricultural producers, there has been a dramatic tightening of requirements for traceability throughout food supply chains. This includes the ability to track and trace the location, movement and management of meat- and milk-producing animals from their early days of life to slaughter/death. The concept of "paddock to plate" traceability is definitely becoming a reality.

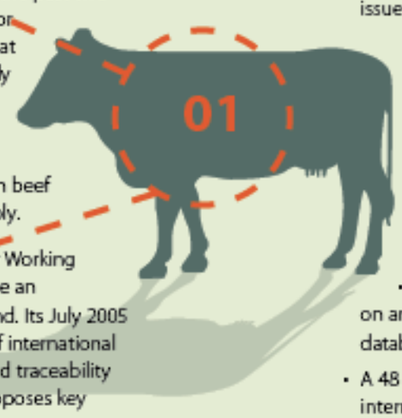
New rules and systems for this are being put into place in the European Union, United States, Japan, Australia and elsewhere (recall Peter Stevens' articles in SCAN issues 11, 12). In these and other markets, there is a rising demand for equivalent traceability in those countries from which products are imported. Where an actual biosecurity or food safety incident demonstrates that this is, in fact, not the case then market access may swiftly be denied to whole categories of product or producers.

Our livestock industry is now well aware of the risks. Traceability is "an insurance policy we cannot afford to do without," is the blunt view of Neil Taylor, former Meat New Zealand head. He and other industry leaders recognise significant market access risks in not having equivalent traceability to our export markets and to competing nations.

Of course, the meat industry has long recognized the most fundamental of biosecurity threats to New Zealand farming posed by Foot & Mouth, BSE and other animal diseases. The Foot & Mouth hoax on Waiheke Island last May was another reminder of how devastating this virus, if not rapidly identified and contained, could be to livestock farming and production nationwide. It was also a test of existing traceability systems, which seem to have stood up well in this particular circumstance.

Review

In context of all biosecurity and market access issues, livestock traceability has been under close review by the industry and Public Sector agencies over the past two years. Early in that period, analysis done for New Zealand Trade & Enterprise found that our existing systems compared reasonably well with six other countries, but lagged behind Australia and Uruguay. The work also reinforced the fact that no-one is standing still, particularly on traceability in beef production for domestic and export supply.



The Animal Identification and Traceability Working Group was set up in early 2004 to propose an improved national system for New Zealand. Its July 2005 consultation report is a detailed review of international developments, and existing databases and traceability capabilities in this country. The report proposes key elements for a new national system.

The Group defines livestock traceability as: "The ability to quickly identify and track a specified individual animal or group of animals from the property of birth through to slaughter/death." This includes the ability to identify any animal at the centre of a biosecurity or food safety case; to trace back to all other animals with whom it has had contact; and to track forward to any relevant product further along the supply chain.

The report notes that New Zealand has good traceability in meat processing and distribution to market. When it comes to live animals, many producers and handlers have developed their own traceability systems to meet specific commercial needs or industry good requirements. However, there is limited data exchange between them or "inter-operability" – something widely recognised as fundamental in good traceability systems.

New Zealand's existing livestock databases with traceability attributes include Agribase, held by AgriQuality, and the associated National Livestock Database. Together these have comprehensive data on dairy, beef and deer herds including individual animal identification for bovine Tb testing purposes. The seperate Livestock Improvement Corporation's "MINDA" database on dairy herds, has very limited individual animal identification.

Proposals

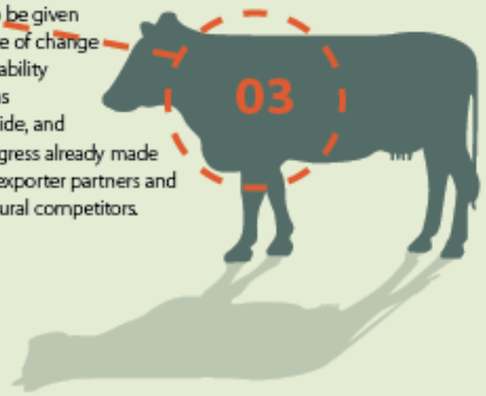
The Working Group proposes building on these to create a new national system for all New Zealand's beef and dairy cattle and farmed deer. The initial focus on cattle and deer reflects the international trend for tighter traceability first in relation to beef production. In future, it is proposed that the system be extended to sheep and pigs.

The Working Group proposals were finalised in December after submissions by many stakeholders, including GS1 New Zealand. Key elements are:

- Identification of each animal (cattle and deer) and each property with unique numbers. The animal number to be issued before first movement from the farm of birth.
- Standardised devices for identifying each animal, probably a tag read manually and/or electronically (in the latter case, using RFID or radio frequency identification technology).
- Mandatory data on each animal's location, movements and slaughter/death to be held in a central database, which is operated by a designated provider on behalf of all system users.
- Scope for non-mandatory, "transactional" data on animal health, for example, to be collected in the database.
- A 48 hour traceability requirement, in line with international best practice. Individual animals can be located within this timeframe.

In regard to each element, the Working Group has avoided any recommendations on the technology and systems that could or should be used. Those are critical decisions to be made by a governance body now formed to take the proposals forward. Likewise, decisions are pending on all aspects of structure and funding for the system.

The Working Group proposes that the system be in place for voluntary use from 1 October 2006 and for mandatory use from 1 October 2007. Timeframes are tight, as they need to be given the pace of change in traceability on farms worldwide, and the progress already made by our exporter partners and agricultural competitors.



The GS1 View

GS1 identification standards are the ideal basis for livestock traceability in New Zealand.

Our open, global standards can be used to uniquely identify animals, herds, farms, and livestock owners, managers and intermediaries – and thereafter, to maximize the opportunity for data exchange and inter-operability between everyone in the supply chain.

GS1 is ideally placed to support world-class livestock traceability with a system proven to be open and global, and to enable robust separation of identification from the other two core elements of any livestock traceability system:

- Identification tags that are read manually and/or electronically; and
- A central database holding all relevant data on animals, farms etc so that it can be updated and accessed by users.

We believe the best system for New Zealand will avoid proprietary numbering and tagging systems, which reduce flexibility and are fundamentally at odds with the requirement for traceability that meets global requirements in all respects. The best system will also ensure that the central database is under administration independent from the other elements, and this includes the issue of unique identifiers.

This is the basis of GS1 New Zealand submissions on a national traceability system. We have indicated support for key elements proposed by the Working Group (December 2005). We note that critical decisions on identification and tagging systems, and the central database are yet to be made.

GS1 New Zealand can issue, on request from producers, a unique 13-digit GTIN (Global Trade Item Number) for each animal and a 14-digit GTIN for each herd, property or owner.

We also propose that the GS1 bar code standards be adopted for use in conjunction with GS1 identification standards – and also that EPC (electronic product code) be adopted for use with RFID. Tags, readers and other items that support use of these standards can then be sourced in open markets, at lowest competitive cost to the livestock industry.

It is important to build understanding throughout the industry that traceability is not just about tagging and the associated hardware, but a conceptual framework that can be applied to production and supply chains for any form of goods (be they meat or cheese, vegetables or canned fruit, auto parts or garments).

GS1 is contributing to development of national traceability in the livestock farming industries of Australia, Europe and Brazil.