# REPORT ON A STUDY TOUR OF EID WITHIN NLIS (S&G) IN VICTORIA
### Prepared by Sheep Producers Australia's Product Integrity Committee

Representatives of Sheep Producers Australia (SPA), Wool Producers Australia and state farming organisations visited Victoria to look at the progress of the implementation of an electronic identification (EID) NLIS Sheep and Goats (NLIS S&G) system. The group visited The Australian Lamb Company (ALC) abattoir at Colac, a Shelford property using EID for on-farm management and Ballarat saleyards from 29-30 October 2018.


**BACKGROUND**


Since 2010 the Victorian State Government has made a number of investments aimed at increasing the voluntary adoption of the NLIS EID of sheep and goats including funding research, demonstrations, extension activities, electronic tag subsidies and producer grants for the purchase of equipment.

In August 2016, then Victorian Minister for Agriculture Jaala Pulford announced mandatory electronic identification of sheep and goats, to be phased in over six years. Electronic tagging commenced with sheep and goats born on or after 1 January 2017. Processor scanning commenced 31 December 2017 and saleyard scanning on 31 March 2018. Property to property (P2P) movements also commenced on 31 March 2018 for sheep and goats born on or after 1 January 2017. All sheep and goats born interstate from 1 January 2019 onwards will require electronic tagging before leaving a Victorian property and implementation will continue until 2022 when all sheep (and goats) regardless of age must be tagged with an EID before leaving their Victorian property. Sheep and goats born in other states, regardless of when they were born, will still be able to enter Victoria identified with a visually readable NLIS tag.

The Victorian Government committed a $17.06 million Sheep and Goat Transition fund to support the mandatory implementation including (but not limited to):

1. Cost neutral tags for producers for the first 12 months, at $0.35 for the lowest priced electronic NLIS (Sheep) tag for 2017 lambs and kids.

2. Funding for the purchase and installation of infrastructure (hardware and software) required to meet the regulatory obligations of the electronic NLIS (Sheep & Goats) across 10 industry sectors including:
   - Producers: Up to $3000 per applicant (applicants must fund at least 50% of costs) for weighing equipment with EID readers fitted, lamb marking cradles and software. Total package $750,000.
   - Stock agents: Eligible for 100% funding to meet mandatory requirements, per agent office, up to $2500 for hardware and associated software. Total package was $150,000.
   - Transporters: Eligible for up to $2500 (and fund 50% of the costs) for wand and panel readers and software. Total package was $100,000 for transporters.
   - Saleyards: Two-part funding process allowing for planning and decision-making to occur for the correct equipment to meet mandatory requirements and then funding for readers and software, assessed on a case-by-case basis (total package $2.8 million)

- Abattoirs: Eligible to apply for readers and software to allow them to meet their mandatory obligations, as well as funding for optional infrastructure to help industry benefit from the commercial opportunities associated with EID e.g. carcase tracking and lairage scanning equipment. Applications for optional infrastructure were considered on a case by case basis. Total package $2.8 million.

3. Access to technical support and consultants

4. Training and extension activities

Agriculture Victoria (Ag Vic) staff Ben Fahy (Manager Livestock Traceability) and Michael Bretherton (Acting Director Sheep Electronic Identification) provided the following assessment of progress to date:

**Abattoirs**

In total, 23 Victorian abattoirs considered two types of infrastructure they could install, depending on size, to enable them to meet their mandatory obligations:
    a) Basic, e.g. wand reader and software for exchanging information with the NLIS database
    b) Panel reader and software for exchanging information with the NLIS database

Abattoirs were also able to apply for funding for optional, non-essential NLIS-related equipment such as carcase tracking systems and equipment for scanning tags on sheep arriving in the lairage.

The abattoirs were able to specify the equipment they needed and to choose their supplier/s. Equipment (EID readers, EID implanted gambrels, etc.) and software suppliers included Aleis, Cedar Creek, ITP, Vertison, Triton, Emydex and Neopos.

The study group visited the ALC abattoir in Colac and observed EID tag reading equipment. Issues overcome in ensuring the equipment worked effectively (e.g. electro-magnetic interference with readers) were viewed and discussed. ALC reported that EID implementation dramatically simplified re-introduction of carcases to their correct lots after being retained on the 'retain rail' for further trimming or inspection. EID technology does not have any effect on processing speed, however abattoirs are required to ensure that readers operate at all times. Scanning rates in abattoirs reported by Ag Vic range from 93% to 99.6% with routine uploading by all plants of 'kill files' to the NLIS database. The group heard that the larger Victorian abattoirs purchase about 70% of their lamb kill over-the-hooks.

**On-farm use of EIDs**

Some Victorian producers have been using EID for a number of years to improve on-farm lamb performance, such as for growth rates, feed type and lambing percentage. Carcase feedback from the abattoir is essential to monitor performance of bloodlines and management techniques. The group heard from producer Will Hansen who has used EID and abattoir feedback to improve on-farm performance and more recently, carcase data information to increase ewe numbers and lamb turn-off per hectare.

**Degradation of EID tags on farm**

Agriculture Victoria has been monitoring EID tags for longevity. The major issue is not longevity but incorrect placement too close to the tip of the ear, or upside down with the transponder on the back of the ear, increasing the likelihood of losses.

**Saleyards**

Victorian saleyards were encouraged to design their own solutions, specific to their needs:
- Equipment required, ranging from wand scanners to 3-way draft/readers (Aleis 'Hamilton' draft reader), including installation
- Software
- Wi-fi
- Tablets and iPad data collection tools.

Funding requests were assessed by a funding committee and approved by the Minister. Saleyards commenced mandatory scanning and uploading to the NLIS database on 31 March 2018.

The group visited the Ballarat saleyard which had recently relocated to its new location and facilities at Miners Rest. The day of the group's visit was only the second sheep and lamb sale at the new site. Ballarat is one of the largest Victorian saleyards and 64,000 sheep and lambs were put through the yards at the time of the visit.

The Ballarat saleyard has nine off-loading ramps each with a 3-way Aleis 'Hamilton' Draft reader installed. A further Te Pari Racewell automatic reader/drafter which includes a scale will also be installed to allow auto-drafting of boxed mobs, weighing of selected lots and EID reading of mobs only partly delivered to an abattoir. Of the nine 3-way drafts the bigger agents have two each. Sheep and lambs are received from midday the day before and on the morning prior to the 9am sale. Drafting takes around 18 hours for a total sale of 64,000 sheep and lambs. About 70% of animals are drafted at least once. EID apparently makes little difference to the drafting rate. Agents provide the saleyard with NVD numbers, scanned EIDs and pen allocations – which is all cross checked in the software.

Ballarat saleyard manager Jonathon Crilly said they developed their own software which some agents use and some use their own or commercial software. The Ballarat saleyard office collects all information from the agents via tablets and wi-fi, which is aggregated and uploaded to the NLIS database in a matter of hours. Despite early scepticism, the agents have been very cooperative and were observed on the day calmly going about their business.

Currently agents are required to take remedial action where the read rate of a line of sheep or lambs is below 80%. This typically occurs when mobs contain a significant number of untagged sheep. This will be increased to 90% in March 2019 with the expectation that Ag Vic will move the 'action level' to 98% in the future. The 'action level' is a trigger for corrective action. To achieve this target, non-tagged animals will need to be re-tagged with emergency post breeder tags. As they will already have been drafted the simple solution will be to identify the pen they were drafted into, run the tag past the appropriate reader and tag the animal in the pen. Non-reading tags if present will be difficult to identify, particularly in a saleyard environment with a high volume of animals. Identification and re-tagging of such animals is important to ensure that animals do not go

unidentified on despatch to an abattoir or another property. Ag Vic suggest that in cattle NLIS the non-read rate is 0.01%.

**EID tag cost**

Prior to the 2016 mandatory implementation, tags were available through the Victorian Government website ranging from $0.77 - $1.50 per tag. In the first year of mandatory implementation, tags were made available to producers, through the transition package, at $0.35 for the lowest priced electronic NLIS (Sheep) tag for 2017 lambs and kids.

The Victorian Government has secured tags at wholesale prices through a competitive tag tender process with tag manufacturers and has continued to subsidise the remaining cost price per tag. The Victorian Government also operates an online tag ordering service. With the tender, subsidy and online tag ordering service, the minimum tag price is $0.45 in 2018 and will be $0.55 in 2019. This is available to all Victorian producers and is below the cost in adjoining states of about $1.40. In the past, the Victorian Government has invited other states and territories to be involved in its tag tender process. The tag tender contract duration is three years, with the possibility of a two-year extension. Tag manufacturers include Allflex, Shearwell, Leader Products and Datamars.

**Hardware costs**

For saleyards, the Aleis 'Hamilton' draft reader costs approximately $40,000 per unit, including wireless synchronisation, Bluetooth software capability and installation. The cost of equipping a large abattoir is up to $150,000 while smaller abattoirs is up to about $50,000. Very small abattoirs may only need a wand reader.

For plants interested in carcase tracking, gambrels with implanted EIDs cost about $3 more than the same gambrels without transponders. Readers need to be installed along the chain including the retain rail to record gambrels as they pass.

**COST OF A NATIONAL ROLL-OUT**

Should there be an agreement to rollout the system nationally, a costing estimate needs to be prepared to allow the Federal Government to consider a grant to allow abattoirs and saleyards to implement the equipment and software required.

**SUMMARY**

The consensus within the tour group was that the EID system being implemented in Victoria is on track to meeting the requirements of the National Standards Traceability Performance Standards. However, it would be prudent to subject the system to independent testing to determine its performance compared to the mob-based system. Jurisdictional staff are responsible for monitoring and enforcing livestock traceability and the NLIS in each state in accordance with their state and territory legislation. They are represented in a SAFEMEAT Special Working Group: Jurisdictional Traceability Working Group (JTG). This would be the appropriate group to determine the methodology needed to evaluate the system.

The group concluded that other questions to consider would be:

What problems could be expected to occur within the EID system?
The importance of producers correctly and diligently recording P2P movements would be essential.

What benefits could be expected from a national roll-out, other than those already mentioned?
Office administration for data upload would be greatly reduced.

Key aspects for consideration of a national roll-out:
- Price of tags and opportunities for a price reduction via a national tag tender or similar scheme and/or the creation of a national online tag ordering service.
- Carcase feedback from abattoirs and ownership of data collected by processors.
- Assessment of infrastructure requirements and resource capability of abattoirs, saleyards and jurisdictions to determine funding needed to meet the requirements of an EID system.
- Adequate extension prior to and during implementation, to all sectors but particularly to producers and agents, including promoting the benefits of an EID system such as on-farm management and rapid traceback in emergency situations.

**Next steps**

Since the trip, SPA has formally engaged with SAFEMEAT to request that the JTG develop a methodology for testing the Victorian EID system, once P2P transfers have been implemented for 12 months. The methodology to test the system must then be carried out by a truly independent body. Testing could potentially commence in April 2019 provided the methodology has been developed and approved. Once this testing has been completed a report will be sent to governments and industry bodies to facilitate consideration of the appropriateness of moving to a national EID based NLIS (S&G) system.