

SHEEP CATCHER II

SUMMARY

Sheepcatcher II (SC2) was a national exercise held to audit the National Livestock Identification System for Sheep and Goats (NLIS-S&G) against the Primary Industries Ministerial Committee (PIMC) endorsed National Livestock Traceability Performance Standards (NLTPS). It was held between the 2 June and 5 July 2016. SC2 aimed to evaluate the tracing system of sheep and goats to identify areas where the system could be improved.

HISTORY

The NLIS-S&G was implemented in 2006 to enhance Australia's capacity to identify and trace sheep and goats from property of birth to slaughter or export. As a result of a SAFEMEAT Partnership (December 2005) endorsed the first tracing exercise held in July 2007 (*Sheepcatcher I*), modifications were made to improve the operability of the NLIS-S&G.

In August 2015, the NLIS-S&G Advisory Committee agreed that a second tracing exercise would be undertaken to provide guidance for enhancements of the mob-based system.

METHODS

Participants:

- All state and territory primary industry jurisdiction (except the Northern Territory).
- Each jurisdiction participated with differing levels of resources applied to the task.
- Exercise control staff from AHA located in Canberra.

Selection process:

- 60 sheep and goats allocated to states based on average population of sheep in the jurisdiction for the previous three years¹
- Staff from export abattoirs, saleyards, export depots and private properties randomly selected sheep/ goats from randomly selected sites.
- Sheep or goats were captured and individual photos of the animal were taken (n=56/60) or pertinent information was recorded (n=4/60).

Tracing:

- Exercise Control requested the nominated state/territory primary industry officers to trace individual animals and to report back within the desired timeframe.
- All jurisdictional NLIS project coordinators received a list of tags to trace between 8.50am and 9.05am on 2 June 2016 via email.

¹ Data was obtained from Meat and Livestock Australia (MLA), 2015, Australian Bureau of Statistics (ABS), 2011-12 Survey, Combination of ABS, 2011-12 Survey and MLA, 2015

- All participating jurisdictions engaged in the outbreak as if it were a disease outbreak.
- Staffing usually proportionate to the workload placed on the jurisdiction (average two staff members per animal requiring tracing).
- Tracing protocols are usually included in the Animal Health Standard Operating Procedures (SOPs) for each jurisdiction.
- The criterion for success were Standards 1.1, 1.2, 3.1 and 3.2 of the NLTPS (see results). In the assessment against a Standard it only took one breakdown in the traces to render the trace incomplete and therefore not able to meet the Standard.

RESULTS

AgSOC benchmarks

AgSOC established two benchmarks for the performance of the NLIS-S&G; short-term traceability (98%) and long-term traceability (95%), which were drawn from the Decision Regulation Impact Study (DRIS) and based on the NLTPS.

Standard 1.1

Within 24 hours of the relevant CVO being notified, it must be possible to determine the location(s) where a specified animal was resident during the previous 30 days.

TABLE 1: NATIONAL TARGET OUTCOMES MEASUREMENT - STANDARD 1.1

	Sheepcatcher I		Sheepcatcher II	
Number of animals traced	37	62%	54	90%
Number of properties traced to	143		99	

Table 1 shows a marked improvement in the traceability of sheep and goats nationally compared to that experienced for Sheepcatcher I. However, the results fall short of the AgSOC benchmark of 98%.

Standard 1.2

Within 24 hours it must also be possible to determine the location(s) where all susceptible animals that resided concurrently and/or subsequently on any of the properties on which a specified animal has resided in the last 30 days.

TABLE 2: NATIONAL TARGET OUTCOMES MEASUREMENT - STANDARD 1.2

	Sheepcatcher I		Sheepcatcher II	
Number of animals traced	27 head	46%	30 head	50%
Number of properties traced to	1,608		12,085	
Number of cohort animals	461,669		1,013,095	

Table 2 shows little improvement in the traceability of sheep and goats nationally compared to the benchmark set in SC1. The results fall a long way short of the AgSOC benchmark of 95%.

The main reasons for not meeting standards 1.1 and 1.2 are:

- Difficulty verifying slaughter of saleyard lines often split and killed over several days.
- Failure of saleyard post-sale documentation to reconcile with abattoir kill.
- Incomplete NVDs.
- The lack of on-farm storage of NVDs. The NVDs were not kept for the required timeframes as stated in the NLIS-S&G Business Rules.
- The lack of resources for tracing against the 24 hour time constraints.
- The 24 hour reporting period was not adjusted for the exercise as it was for the 14 and 21 day points.
- The difficulty of tracing cross-border stock movements

Standard 3.1

Within 14 days of the relevant CVO being notified, it must be possible to determine all locations where a specified animal has been resident during its life.

TABLE 3: NATIONAL TARGET OUTCOMES MEASUREMENT - STANDARD 3.1

	Sheepcatcher I		Sheepcatcher II	
Number of animals traced	51	86%	58	97%
Number of properties traced to	168		186	

Table 3 shows an encouraging improvement in the traceability of sheep and goats nationally compared to the SC1 benchmark. The results effectively meet the AgSOC benchmark of 98%.

Standard 3.2

Within 21 days of the relevant CVO being notified, it must also be possible to determine the location of all susceptible animals that resided concurrently with a specified animal at any time during the specified animal's life.

TABLE 4: NATIONAL TARGET OUTCOMES MEASUREMENT - STANDARD 3.2

	Sheepcatcher I		Sheepcatcher II	
Number of animals traced	20	34%	30	50%
Number of properties traced to	874		77,102	
Number of cohort animals	184,270		27,668,095	

Table 4 shows limited improvement in the long term traceability of sheep and goats nationally compared to SC1. The results fall a long way short of the AgSOC benchmark of 95%.

The main reasons for not meeting standards 3.1 and 3.2 are:

- Incomplete NVDs.
- The lack of on-farm storage of NVDs. The NVDs were not kept for the required timeframes as stated in the NLIS-S&G Business Rules. Due to the age of some of the sheep, some movements were outside the legal requirements to retain.
- The difficulty of tracing cross-border stock movements.
- The lack of resources for tracing against the time constraints.
- Reluctance of supply chain entities to provide archived NVDs in a timely manner per requests.
- The tracing of older stock that were born prior to the introduction of the NLIS S&G in 2010.
- Staff disengagement due to length of the exercise and requirements to perform normal duties and participate in real outbreaks.

Transaction Tagging v Non-transaction Tagging

The NLIS-S&G Advisory Committee agreed at the July meeting that it would be beneficial to compare the results of those states that utilise mandatory transaction tags with those that do not use transaction tags and instead rely on listing all tag PICs in the description of sheep table of the sheep and goat NVDs to be accurately completed.

The comparison only provides a qualitative insight and cannot be validated by a statistical test because of the small sample size of sheep with transaction tags. The comparison examines 11 animals traced with the use of transaction tags and 49 animals traced where

producers have the option of either recording recorded on the NVDs or using transaction tags.

Table 5 shows a comparison of the two approaches. It should be noted that the mandatory transaction tag system shows an improvement in traceability with the system being very strong in the back tracing of sheep and goats and improves upon the mainstream system for the forward tracing of sheep and goats.

TABLE 5: COMPARISON OF TRANSACTION TAGGING V NON-TRANSACTION TAGGING

	Standard 1.1	Standard 1.2	Standard 3.1	Standard 3.2
Transaction Tag	100%	73%	100%	91%
Other	95%	57%	82%	25%