finalreport

ANIMAL PRODUCTION

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PDS Kingaroy - Demonstrating the on-property management benefits of using the National Livestock Identification Scheme (NLIS)"

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Abstract

Nineteen members of the Kingaroy Beef Plan group investigated the practical use of NLIS technology for their business management. Activities included participants investigating the use of electronic weighing and recording equipment, key profit driver analyses and visits to a saleyard and export abattoir. Three products were assessed and a system chosen for lease on 6 participating properties. Participants found the equipment was accurate and easy to use. All producers initially experienced frustrations in collection and downloading of data. These problems were resolved with regular use. The group found that it was imperative to engage a company representative to install the equipment and troubleshoot initial problems. This group represented cattle owners with herds from 50 to 400 head. The economics of the technology for such operations was found to be questionable. For most of the participants a set of scales and a manual data entry would suffice, except for stud operators and producers with more demanding data collection requirements. The PDS was a valuable learning experience in the use of technology and its role in ensuring market integrity. 6 members of the group will now be using the technology on a regular basis with other members using some aspects of the technology.

Executive Summary

The National Livestock Identification System (NLIS) was introduced in July 2005 to provide whole-of-life identification and traceability of livestock from birth to abattoir or export. Such a system underpins the integrity of the biosecurity needed for Australia's beef export industry. An important selling point for our beef customers around the world is the traceability that NLIS affords us in the case of any disease outbreak. Participants in the Producer Demonstration Site (PDS) viewed a Japanese TV commercial for a major hamburger chain, and appreciated that food safety is a big issue for our international beef buyers and the presence of NLIS gives our overseas consumers greater confidence in buying a quality beef product. However all this comes at a cost for the producer of $5.00 +/tag with is not insignificant. The electronic tag however can provide an important platform for producers to improve records and keep performance indicators of individual animal's production traits. This PDS set out to see how the group could use NLIS and the electronic tags as a management tool. The expense of purchasing the NLIS tag could then be seen as an advantage rather than another bureaucratic cost.

The PDS started in 2008 and since this time the Beef group producers have investigated software and hardware that can be used for management records in conjunction with NLIS tags. There is a wide range of options that producers can adopt and it is difficult for a single business to ascertain individually what may be appropriate and most cost effective for their business. The Beef group undertook a series of learning activities which included practical demonstrations with hardware and software representatives, property visits to producers that are using the technology and a supply chain tour to investigate the use of NLIS from paddock to plate. The participants of the PDS were left in no doubt as to the importance of NLIS at the Oakey abattoir. The manager impressed upon members that NLIS is one of the most important tools the Australian beef industry has to ensure the continuance of our export markets. NLIS is a significant advantage for marketing our beef in competition with other exporting countries.

As part of the overall information exchange within the PDS, a co-operator from each group trialled the use of herd recording software to relate their experiences to others within the groups. The use of the equipment during the trial has prompted 6 producers to continue using the technology available albeit with shared equipment. Most of the participating members could not justify the costs of the equipment for their smaller operations.

Monitoring weights, weight gains and identifying higher performing cow groups has been a benefit of the technology for the group members using the systems trialed. One property has been using the software to track herd treatments and this will prove beneficial for any LPA auditing that may take place on the property. The technology proved to be very valuable in avoiding mis-read tag numbers which can cause no end of problems for operators. This was clearly demonstrated at one on-property demonstration where manual recording resulted in 2 mis-read numbers which were later corrected by referring to the electronically collected data. In time it is hoped that prices for readers and recording equipment will become more economically viable for smaller producers.

This PDS has been able to demonstrate the benefits of NLIS technology to 19 businesses to be used as an effective tool in better management on some of those places. For all the businesses involved in the process, participation has clearly shown the benefits of NLIS downstream in the value chain and its importance as a tool for maintaining market share. Although there will not be a 100% take-up of the technology for management in the group there is a far grater appreciation and understanding of the value of NLIS.

Contents

1 Background

While the biosecurity benefits of the National Livestock Identification System to the national beef industry are undisputed, at an average price of $3.50 for tags and $4.00 for boluses, the immediate cost to producers has been quite significant. Therefore it is crucial that producers get as much value for money from NLIS devices as possible. From 1 July 2005, all cattle had to be indentified with an NLIS device prior to moving off-property.

Tags (or boluses) applied at branding or weaning, represent an excellent opportunity to collect individual animal and/or herd information electronically for use in improving business management and consequently financial returns. By using 'smart'* scale indicators, spreadsheets and/or tailored software systems, performance information can be recorded, retrieved and analysed with greater speed and accuracy. Collection of such data as; growth rates, weaning rates, reproductive performance and meeting market specifications will enable significant gains in key beef industry production parameters.

2 Project Objectives

By 30 May 2010, members of the Kingaroy Beef Group will have:

1. Trained selected producers in the use of NLIS for recording management data.
2. Demonstrated the management and financial benefits of using NLIS to record and retrieve individual animal and/or herd production data quickly and accurately at appropriate intervals.
3. Recorded all relevant data that can then be analysed to assist/improve business management decisions by:
    - Defining key production parameters (key profit drivers) for each demonstration property.
    - Identifying the appropriate methods/software for electronically recording production information on demonstration properties.
    - Monitoring NLIS tag retention and read rates on demonstration properties[1].
    - Providing evidence that compliance obligations under Livestock Production Assurance (LPA) are being met by participating businesses.

In addition to the contractual objectives, the project principally aims to provide learning opportunities for participants to evaluate the value of adopting the use of NLIS tags for management benefits for their businesses.

3 Methodology

Training and education programs on the use of NLIS as a management tool were conducted for smaller properties in the Kingaroy area. Various types of software and hardware available for use by producers was demonstrated. Visits to properties using NLIS tags, attending Dalby cattle sale to witness pre-sale recording of NLIS tags, visiting the Oakey abattoir to see how trace-back occurs and analysing key profit drivers in the beef business were activities included in this PDS..

The information gleaned from hardware demonstrations of all products available allowed the group to select preferred hardware and to lease this so it could be trialled and used by the group over the period of the project.

[1] This information will be given to MLA's NLIS program.

Table 1. Group activities by date

Date	Activity	Participants
April 08	Beef Group meeting planning NLIS project	18
May 08	Demonstration day Possum Gully software – Wattle camp	15
Aug 08	ProKollect day - Sapling Springs	8
Feb 09	Demonstration day Trutest and Allflex products on property	13
	Training in the use of the NLIS data base - Kingaroy	
May 09	Gallagher TSI demonstration day on property – Wattle Camp	8
June 09	Beef Group meeting	12
July 09	Supply chain and NLIS with Kingaroy Bollon & Chinchilla groups	31
June 09	Training session Gallagher TSI Kingaroy	6
July 09	Practical systems field day Kooralgin	22
Aug 09	Beef Group meeting	10
Sept 09	Beef Group meeting Jim Cross Sapling Springs	12
Oct 09	Gallagher TSI data collection on Oakway property Kingaroy	6
Nov 09	Beef Group meeting Kingaroy	15
Nov 09	Beef Group field day – Undery Property	22
Dec 09	Beef Group meeting - Kingaroy	11
Feb 10	Training session Gallagher - Kingaroy	9
Apr 10	Data collection Jim Cross Sapling Springs	8

4 Results and Discussion

4.1 Demonstrated management and financial benefits

In the initial stages of the project it was decided to employ a local consultant to assist and train individual producers to collect and collate data from their own herds during normal management practices. However this did not prove practical so a change was made to the way the PDS would be conducted. In essence the collaborators for the project and other participants took part in training programs with hardware from Gallagher, Tru-test, Pro- Kollect and software from Possum Gully and Stockbook. From this participants decided that they would prefer to individually use a particular system they had chosen and then via field days and personal experience report back to the group.

The Gallagher TSI was chosen by most members in the group as being the system that best suited their needs. So all participants could use this hardware a Gallagher TSI was leased for the PDS and a group of 4 members used this system extensively. One member chose to use the Tru-test system.

4.1.1 Management Benefits

The group identified key performance indicators that a beef business could use to monitor their management and benefit the operating of their business. Accurate animal identification is a key to this and NLIS technology has the benefits that allow this to happen. The key indicators indentified are listed below:

Pregnancy % monitoring,
No. Live calves weaned,
Temperament Flight test or visual assessment,
Weight monitoring,
Weaner weights/growth weights,
Cow weights & Condition score,
Mothering ability,
Management history Treatments LPA,
Bull assessment,
Paddock Herd assessment,
Heifer pelvic assessment,
Health blight, fly susceptibility,
Meeting market specifications,
Cost of production.

Each participating producer in the trial then identified the most important factors that affect their business.

4.1.2 Financial benefits

In the short term of the trial it was difficult to demonstrate any financial benefits. Through the activities associated with this project it was discovered that as scale of operation increases, the potential benefits of using NLIS tags for management increases for a number of reasons (and *vice versa*). In larger herds the set up costs are spread across more cattle. The impact of financial benefits would be less for smaller operations unless it was a stud and the value of animals is higher.

4.2 Business overview and NLIS benefits

Appendix I provides a summary of the businesses involved in the practical side of the PDS. It details their enterprise, profit drivers, equipment used, data collected and benefits gained from using NLIS technology.

4.3 Problems

Throughout the duration of the project, a series of problems were identified by a range of players along the beef supply chain. These problems are listed under several topic areas in Table 2.

Table 2. Problems identified throughout the project

NLIS tags

- Tag losses

- Faulty devices (problem with the manufacturing)
- Reasons for tag loss include cows licking calves ears, mesh fences and hay feeders
- Cost incurred by the producer if they don't have a tag at the saleyards
- Time spent applying new tag and updating information in the indicator
- A particular brand was identified to have more lost tags

- Non-readers

- Companies are not reimbursing the producer
- Time and labour to identify faulty tags and cost at saleyards

- Incorrect positioning of the tag in bought cattle – sometimes in the wrong ear; manually have to adjust the beast's head position to read the tag

RFID readers

- Unreliability of panel readers when loading/unloading cattle at speed
- Remembering to delete entries off their wand – become full and sometimes accidentally retransfer cattle (if a new session is not set up)

Indicators

- Numbers on the indicator can be too small to read (it's possible to only have the relevant figures on the screen which counteracts the problem)
- Worn keys
- Direct sunlight on the screen makes reading the numbers difficult
- With particular models, it's not possible in the yards to get the average weight of the first mob weighed once a second mob has finished weighing

Cost and time

- High cost to set up for small operator
- When the saleyards used to use panel readers and a beast was missed, substantial manpower and time was required to identify the animal and retrieve it
- Help desks sometimes can't offer solutions on the spot which means having to wait 30 minutes to an hour for a return phone call

Software

- Just getting it to work was sometimes very time consuming.

Processing

- Two animals entering the crush at once – incorrect weights; disrupts the functioning of the indicator
- For those that have their scales under a weigh box, it's difficult to later enter in information, for example, if a treatment is given in the crush
- Set up of equipment i.e. crush not secure, load bars not even (data is not accurate).

User experience and training

- Need to be on top of things all the time or otherwise can forget how to use the equipment.
- Computer glitches can sometimes frustrate producers to the point where they avoid the technology for good
- Producers trying to collect too much information (can get frustrated and it creates extra work)
- Producers not reading the provided manual (sometimes the problem is very simple to fix)

Other

- Difficulty in using the database
- Compatibility issues with equipment
- The 9 pin serial cables are not heavy duty and can be damaged by wildlife/weather
- Electrical noise from the 240 volt mains circuit i.e. switching florescent lights, motors and pumps (Must install Line filter in series with instrumentation)
- Electro-magnetic interference i.e. induction through cables with high current running in parallel, radio frequency noise from UHF or CB transmitters or from the RFID panel or wand (Run signal cabling separate to power cabling and cross at 90 degrees)

4.4 Producer experience with software

Steve & Paula Thompson
The introduction of the NLIS is proving a useful tool in our everyday management of our cattle. We've embraced this new technology since its inception as we could see potential benefits towards our management practices. We later purchased an Alflex yellow stick reader (Bluetooth enabled) and downloaded a trial version of Stockbook from Practical Systems. With the help of MLA, we hosted a field day facilitated by Practical Systems on 19/07/09 on our property at Kooralgin.
On the day we did the following activities (treatment report attached):

- Attached an NLIS tag to each animal
- 7in1
- Preg testing

We demonstrated attaching an NLIS ear tag, then reading it with the Alflex stick reader which then uploaded the device direct to our laptop via Bluetooth with all participants at the day using the system. We then matched the new NLIS tag with an existing cattle record in Stockbook. With the animal record still open on the laptop, we then entered their weight, treatment and preg-testing results. Everyone was amazed how easy and efficient this was, even the less technologically minded field day participants found it amazing.

Not only do the NLIS tags make it easier in the yards, they also give us the ability to download carcass data from the abattoir if available, however it would also be useful if this data included whole

of life history. This carcass data can then be uploaded to Stockbook where it matches to the applicable cattle records for analysis

This is an invaluable tool for us as a breeder operation as it allows us the ability to analyse this feedback to make better management decisions on which animals to cull that are not performing, and which genetics to pursue for best weight, feed conversion for age etc.

4.5 Tag retention and read rates

Loss of NLIS tags across the group was very low with a rate of less than 1%. Similarly non-reading tags were less than 1%. It is obvious that tags correctly positioned in the ear are far less susceptible to loss than most producers would have expected. Most loss of tags occurred at hay feeders or where there were netting fences.

5 Success in Achieving Objectives

Over the time period of the PDS all objectives were accomplished.

1. **Trained selected producers in the use of NLIS for recording management data.**

Of the group that regularly participated in the project, 6 properties are now confidently using NLIS as a management tool to achieve their key business performance indicators. The remainder of the group has been introduced to the technology and now have the ability to see what applications of the technology will be applicable for their own business.

2. **Demonstrated the management and financial benefits of using NLIS to record and retrieving individual animal and/or herd production data quickly and accurately at appropriate intervals.**

The key co-operators in the PDS have all started to keep better records and performance criteria on their beef herds. It is readily apparent that these businesses now have the skills and ability to use data collected as an important tool for business management. Already one of the participants has clearly identified low performers through the record keeping and cows that have not calved on a regular basis. Whilst it is difficult in the short term to put a financial benefit on the outcomes of the project it is clearly apparent that the culling of underperformers is the first step to long lasting financial benefits for the business.

3. **Recorded all relevant data that can then be analysed to assist/improve business management decisions by:**

    - *Defining key production parameters*

    Two meetings early in the PDS were held to discuss the key production parameters for each business. Obviously this depended on the business and the management of the business. Variations in the business types ranged from finishing steers, breeding, breeding and finishing and stud operations. All these businesses agreed that better records were possible and would of great value to efficiency and profitability.

    - *Identifying the appropriate methods/software for electronically recording production information on demonstration properties*

This project was very valuable in allowing all interested members to assess for themselves the value and use of the various hardware and software that is available. The demonstrations of the products in practical sessions on co-operators properties gave a clear indication to participants of the limitations and possibilities of the system. It was clear that initial impressions of one software brand changed considerably when competing software was demonstrated. One of the producers was happy to purchase software after they saw it demonstrated with their own stock being recorded. This gives the user confidence in the system and allows useful relevant data to be collected and used by the business.

- *Monitoring NLIS tag retention and read rates on demonstration properties*[2].

While the Kingaroy group was not dealing with large numbers of stock (an average of 80hd/participant) the tag retention rates and read rates where very good - greater than 99% retained and less than 1% of tags being non-readers.

- *Providing evidence that compliance obligations under Livestock Production Assurance (LPA) are being met by participating businesses.*

Participants had clearly demonstrated to them the benefits of recording their compliance obligations using the various systems that were trialled and used in the project. A good example is the record of information detailed in the Appendix for the Thompsons. The Stockbook software made it very easy to record the treatment of cows with 7 in 1 which also recorded the vaccines batch number, paddock history, expiry date etc. This was a very good demonstration of the value of NLIS in recording management history.

6 Impact on Meat and Livestock Industry

NLIS has the ability to allow accurate and easy identification of stock for management purposes in addition to providing the positive trace-back systems needed to maintain the beef industries overseas export industry. In all sections of the supply chain the NLIS system has benefits to offer. Whilst those at the grass roots level may find the tags onerous and an expensive impost there is a great deal that the system can offer the property manager. Identification of superior animals through a number of key performance indicators is able to occur with a minimum of error. Any gains made at the breeding/finishing sector have downstream benefits for the whole industry in reducing costs and/or maintaining and improving productivity in an industry with ever shrinking margins.

The field days and information sessions carried out by the Kingaroy beef group introduced many beef producers to the concepts and possibilities that the NLIS management systems can offer. The service providers also saw it as an opportunity to speak to a group of producers rather than individuals and after using the equipment receive feedback from users. The value of this was reflected in the changes that were made to the Gallagher TSI system software over the course of the trial.

Actually following a beef supply chain over 3 days was a very valuable exercise. One very experienced and noted seedstock producer said it was the best learning experience she had received in many years.

[2] This information will be given to MLA's NLIS program.

This demonstrates the increasing acceptance of the NLIS technology as a management tool and this can only have a positive impact on the Meat and Livestock industry.

7 Conclusions and Recommendations

7.1 Conclusions

Participants in the PDS all agreed that using NLIS tags for data collection can improve accuracy of data collection, save time and labour in their enterprise. It can be a valuable tool for stock management. However the plethora of equipment and options available make it difficult for a first time user to cut through the jargon and whole concept of the recording system. Murphy's law seemed to prevail in many situations where the group trialed the technology and it is obvious that there is a certain amount of determination and patience needed to get the system/s operating. For group members regularly using computers this did not present a great obstacle but it was very daunting for non-computer users in the group to see the initial difficulties in getting the system to operate. We found it imperative to have the support of the company representatives to troubleshoot problems. An un-recognised benefit of NLIS has to be identification of straying stock and recording of the "accidental" sale of neighbour's livestock.

7.2 Recommendations

While NLIS technology has limitless possibilities for property management on larger scale operations it is very difficult to justify the cost for smaller operations. In the case of the Kingaroy group a selected system will be used and ultimately purchased on a group basis for members to use. Like all shared equipment this has its problems but gives every member the opportunity to learn and become conversant with the system in their own situation. Dialogue and sharing of experiences between group members is also important in developing and using the systems to their fullest potential. There is still a long way to go with making the systems user friendly. With all the equipment used by the group it remained clearly evident that there is a need to have a company representative to help set up and trouble shoot the systems. Even simple tasks like downloading data caused trouble for the group who had a school IT manager on the job. In another case a system was not being used at all due to the owner's unfamiliarity and frustration with the system and its inner workings. In short NLIS has much to offer property managers as a valuable tool but ease of use and high cost per animal are major stumbling blocks for smaller properties. In many cases a management tag pencil, paper and scales can get the job done quicker. In contrast one local producer could weigh 200 bullocks using a crush reader in less than an hour which makes the technology extremely cost effective. It is a case of each producer determining their needs and the economics for their operation of adopting NLIS as a management tool. For the Kingaroy Beef Plan group the PDS has achieved this.

8 Further Reading

Better beef with NLIS. Western Australian NLIS Implementation Working Group.

Research Report: NLIS Equipment. Kondinin Group, from Farming Ahead Dec 2007 No.191 P.45

NLIS equipment and software compatibility. Kondinin Group publication.

Livestock Production Assurance: audit checklist. MLA www.mla.com.au

9 Acknowledgments

The group members wish to acknowledge the hard work and enthusiasm of group members involved in this project. Producers, sales representatives and agri-service providers who either hosted or attended activities shared their valuable industry knowledge and experiences with NLIS technology. The Chinchilla and Bollon group for their report on the supply chain trip and the generalised benefits of NLIS table in the appendix. The project was made with the financial support from MLA, and Department of Employment, Economic Development and Innovation.

Appendices

9.1 Appendix 1: Participant list for the two PDS groups

Peter Peacey
Mike Carroll
Mal & Val Goodger
Steve & Polly Thompson
Bob Childs
Brix & Nadine De Caluwe
Peter Undery
Jim & Jenny Cross
Ray Patroni
Bob & Paula Wynne
John Allery
Barry & Deanna Littleton
Graeme & Cheryl Goldsworthy
Greg Birch

Business	Enterprise	Use of NLIS previously	Experience of using Gallagher TSI system	Data recorded	Changes to management after participating in project	Any other comments
J Cross	1660 ha with 275 breeders & progeny to 18 months	Using NLIS since 1998 with Aginfo link software, then Livestock Recording Australian and ProKollect	Gallagher TSI. I find confusing and cumbersome in the field. To many screens need to be accessed if doing anything other than basic NLIS, weight, and presets ie. 5in1 etc. TSI to APS Office is OK but the transfer terminology is a bit confusing. Maybe NZ speak.	We like to record weaner weights • Pregnancy status • Sire • Dam • Date of birth • Treatments 5in1 cydectin p etc • Paddock movements/ transfers • Condition score	Change in technology used and more fine tuning of the current and long term use of NLIS	I certainly believe in NLIS as a management tool, it has also been good for us as a stock theft prevention tool. You need to look for a software system that you can handle. One that will satisfy your needs now but one that you can add too or has systems you don't need now but can activate in the future. Remember as with most things, we dismiss them as being for someone else, but later on as we understand them we come to use them ourselves. Always leave room to grow then you won't have to turn around and reinvest in a new and bigger system in the short term.
P Undery	Breeding 224ha & 80 breeders	NLIS wand used to record stock and then put on spread sheet	The input is slow especially when entering new animals. The speed is slow due to the time taken to change screens continually for adding breed, gender, adding a Paddock Tag etc. The data was easier to collect the second time as the wand quickly brought up the animal from the data base. The system was easy to setup and connect the gear. The blue tooth wand was a bit erratic at times. The scales worked well and weights were quickly entered automatically.	Weight gain, Traits, LPA History, calves to weaning age. Collecting data for cost of production per beast and or Kg.	• Better recording of breeders calving rates. Monitor weight gain (mob based averages compared on a spread sheet ; helps matching cattle to market specifications)	

Business	Enterprise	Use of NLIS previously	Experience of using Gallagher TSI system	Data recorded	Changes to management after participating in project	Any other comments
S & P Thompson	Trading/Breeding	None	Data entered directly into Stockbook	• Breeders with exceptional progeny (good weight for age etc)/Non-calving breeders/calving rate • Mating list of breeders with bull (also detailing date bull in/out, earliest & latest birth date) • Preparation for dispatch of livestock (including print of treatment history for animals) • Carcass data	Better management of breeders and stock selection for best performers.	Software purchased by Steve & Paula Thompson • $1177.00 (inc. GST) from Practical Systems • No funding provided from MLA Project • Software version - Stockbook Standard Edition up to 500 cattle & 2000 other Species
R Patroni	Breeders 886ha	None apart from Weighing	Data entry time consuming new software improved use of system. Allflex wand	• Read cattle on/off the property	• Make more use of cattle records for management	• Upload tags onto the database
M Carroll	120 Breeders + progeny 987ha	Used herd Management program	Have not used it yet but will in future as it appears fool proof	• weights	• More emphasis on weights	• Need a system that is very forgiving for non-computer users.

Appendix 3: Kooralgin and Kingaroy Field days

9.2 Appendix 4: South Burnett Times

Paul Quinlan from QDPI&F shows how easy it is to collect NLIS data using a reader.

Make livestock management and ID easy

In late February the Kingaroy Beefplan Group, MLA and DPI conducted the first of several field days to demonstrate how National Livestock Identification Scheme (NLIS) can be used to assist in the identification and management of cattle.

This MLA funded project looked at three different sets of hardware and software to evaluate them for on property management.

The NLIS recording systems and software that are available can be used to help monitor weight gains, keep records of pregnancy status and identify the best performing animals in your herd.

This is just a small sample of how NLIS technology can be used in your day to day cattle management.

For more information contact Damien O'Sullivan at the Queensland Department of Primary Industries and Fisheries on 4160 0717.

9.3 Appendix 5: Thompsons Stock book recorded information

Cattle only

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Animal Treatment History: 19/07/2009 and 19/07/2009

Identification	Sex	Age	Sire	Dam	Mob	Paddock	Safe On
Treatment	*Live Wt.*	*Date*	*Product*	*Batch*	*Qty.*	*Comment*	*WHP/ESI*
000802	F	10.35 yr	UNKNOWN	F33	BREEDERS	Scrubby & The Bluff	
Buffalo Fly/Ticks	0	19/07/2009	7 in 1	06504	2.50 mls		0/0
080901F	F	8.80 yr	SHAH	193	BREEDERS	Scrubby & The Bluff	
Buffalo Fly/Ticks	0	19/07/2009	7 in 1	06504	2.50 mls		0/0
110601	F	9.01 yr	SHAH	F13	BREEDERS	Todd's Flat	
Buffalo Fly/Ticks	0	19/07/2009	7 in 1	06504	2.50 mls		0/0
130902F	F	7.76 yr	SHAH	STAR 94	BREEDERS	Todd's Flat	
Buffalo Fly/Ticks	0	19/07/2009	7 in 1	06504	2.50 mls		0/0
131202	F	7.51 yr	ROLLY	F25	BREEDERS	Scrubby & The Bluff	
Buffalo Fly/Ticks	0	19/07/2009	7 in 1	06504	2.50 mls		0/0
151001	F	8.67 yr	ROLLY	990610	BREEDERS	Todd's Flat	
Buffalo Fly/Ticks	0	19/07/2009	7 in 1	06504	2.50 mls		0/0
160900	F	9.75 yr	SHAH	F19	BREEDERS	Todd's Flat	
Buffalo Fly/Ticks	0	19/07/2009	7 in 1	06504	2.50 mls		0/0
220902P	F	7.73 yr	SHAH	F31	BREEDERS	Scrubby & The Bluff	

9.4 Appendix 6 Thompsons Feedback data and Field day flyer

Cattle only

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Carcase Report for period 01/01/1900 to 14/06/2010, in Identification order

Identification	Body No.	Sex	Dent	Musc	P8 Fat	LEFT Weight	LEFT Brs	LEFT Grd	RIGHT Weight	RIGHT Brs	RIGHT Grd	BODY Weight	BODY Price/Kg	BODY Value	Meat Mbl	Meat Clr	Fat Clr	Rib Txt	Rib Fat	Rib EMA	VIA Fat%	VIA EMY%	Meat pH	MSA SMY	MSA Oss'n	MSA Grd	Sale Wt.	Yld%
420	8203	M				116.6			116.6			233.2	0.00	0.00													358.0	65.1
F20	34	F	8			0.0			0.0			0.0	0.00	0.00													496.0	
F46	427	F				136.1			136.1			272.2	0.00	0.00													370.0	73.6
F48	8207	F				153.3			153.3			306.5	0.00	0.00													400.0	76.6
F49	6853	F	8		9.0	115.0			115.0			230.0	0.00	0.00													444.0	51.8
5 animals (total)		Averages:			9.0	130.2			130.2			260.5	0.000	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	413.6	66.8
		Totals				521.0			521.0			1041.9		0.00														

9.5 Appendix 7: Generalised benefits of NLIS technology and associated costs

Benefits	Costs
1. Common direct benefits in the yards (which increase with increasing cattle numbers) include: Fast accurate data collection • know it is the right animal • large time savings for large numbers • reduced labour • Less stress/risk for people and stock Crush side data, analysis and decisions • saves time if no need to go and analyse data and reprocess cattle • automatic drafting – easier, faster • efficient data entry e.g. treatments, QA 2. Potential benefits with remote management: • paddock weights, drafting, weaning, targeted supplements, mothering up… 3. Flow on benefits from better records: Performance data for management and marketing decisions • cull non performers, more feed for better performers • better market compliance & income • data as marketing tool to customers • measure paddock performance Better records • know what stock are where and value • run budgets and income projections • QA data eg for LPA • historical benchmarking data 4. Identification of straying stock and stock sold "accidently" by neighbours, The flow on benefits can be gained irrespective of NLIS tags, however the main benefits from the tags is fast accurate data and the management benefits from time savings, accuracy, instant crush side data analysis, cattle handling and labour savings.	Lost / non reading tags and loss of associated records Cost to set up and maintain • equipment – readers, scales, draft gates, computer, software and repairs • getting it right, learning curve, time and costs overcoming problems and malfunctions, consultancy • time lost in yards with lost tags, systems failures • opportunity costs of investment For small cattle numbers the costs become proportionally very high (and vice versa) Associated costs include lost data if not backed up however this is a risk irrespective of if NLIS tags are used for collecting data.

9.6 Appendix 8: Media article that appeared in Northern Downs News 10/09/2009

Producers see benefits of NLIS first hand

Southern Queensland producers who participated in a recent tour of the Dalby region are convinced of the importance of the National Livestock Identification System (NLIS), according to a local Queensland Primary Industries and Fisheries (QPIF) extension officer.

Senior extension officer Damien O'Sullivan said the three-day tour showed 32 producers how NLIS was being used in all facets of the beef supply chain.

"The trip gave producers an insight into how NLIS is a valuable tool for traceability and how it is ensuring safety of our beef markets," he said.

"The group visited suppliers along the chain, including producers, sale yards, NLIS service providers, a feedlot and an abattoir.

"This included a trip to Dalby Agricultural College which detailed how NLIS aided in the tracking of beef for Meat Standards Australia (MSA) meat-grading systems and how MSA operates for the meat seller."

Upon visiting the Japanese-owned Oakey Abattoir, the group saw how a cryovaced and bar-coded cut of meat from one of the 1000-plus head processed daily could be traced back to the individual animal and its property of origin.

Mr O'Sullivan said from visiting the abattoir, the producers became aware of the effectiveness of NLIS as a marketing tool for the Japanese market.

"We export 65 per cent of our beef and Japan is the biggest importer of Australian beef, so this market is very valuable to us," he said.

"Japanese are fastidious about food safety and this aspect is vitally important to consumer purchase choices.

"We viewed a Japanese television advertisement that focused entirely on the importance of NLIS in the use of 100 per cent Australian beef in their beef patties.

"This advertisement, which focuses on NLIS in Australia, shows how important it is to them and us."

Mr O'Sullivan said the trip offered a fantastic platform for producers to come together, learn and share their experiences in using the tag system.

"Having a group of producers and staff together to learn from each other and find out how other people are gaining management benefits from NLIS was great," he said.

"It was enjoyable to hear other people are having such success with recording systems and finding they want to collect more objective data for managing their herd.

"The producers have a better appreciation of the value of NLIS to individuals within the beef supply chain.

Similarly, he said, the benefits of NLIS were large.

"NLIS can save a lot of time and remove lots of human errors," he said.

"On large-scale properties and feedlots, time savings can add up to many days saved over a year.

"Several producers mentioned another benefit of NLIS was just getting more of their own cattle home after they had strayed."

The trip was part of three NLIS projects funded by Meat and Livestock Australia and lead by QPIF.

It will now be up to the producers involved with these projects, with assistance from QPIF extension staff, to see how they can further integrate the technology as part of normal on-property management.

For more information on NLIS, visit www.dpi.qld.gov.au

Mort and Co Grassdale feedlot livestock supervisor Rick Young shows participants the importance of NLIS tags in the management and handling of large numbers of cattle.

9.7 Appendix 9: NLIS/Beef Supply Chain Trip Overview 2009

Bollon, Chinchilla & Kingaroy project groups

Tuesday evening 28 July – AACC Dalby

- **MSA**- Kelly Payne, MLA
- **Auditing insights** - Terry Elliot, Quality Ag Systems
- **NLIS at the saleyards** - Joe Walsh, Livestock Link

Wednesday 29 July

- **"Rosevale" Jandowae** - David & Sonya Greenup
- **ALEIS** - John Finlayson
- **Grassdale Feedlot** - Rick Young, Mort & Co

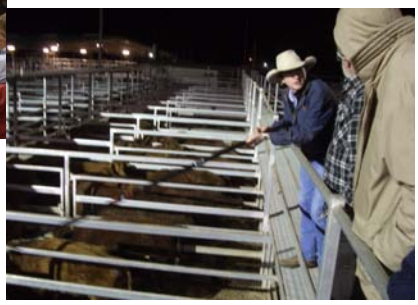
Thursday morning 30 July

- **Oakey Abattoir**

Tuesday evening 28 July – AACC Dalby

1. Explanation of MSA
- producing high eating quality Australian beef

2. Auditing insights



3. Dalby saleyards
- NLIS scanning & data management

Wednesday 29 July – "Rosevale"

"Rosevale"
Weight & flight speed records. Trutest indicator, ALEIS wand.

Accurate objective data for identifying and selecting superior genetics

Wednesday 29 July – "Grassdale"

"Grassdale Feedlot" 35,000 head - fast, accurate objective data, massive time savings

Thursday 30th July – Oakey Abattoir

NLIS traceability vitally important to Japanese customers

Some conclusions from participants

- NLIS is a tool the majority of us do not use, not only to its capacity but at all, tag to sell is the main use. We need more trips like this to see it as a very useful tool.
- There is a lot of scope in the industry to adopt the use of NLIS tags for many different management & operational tasks.
- NLIS can be used for management & probably can be done easily.
- We need to make better use of RFID tags in a management role on farm and a reader, program & scales will be purchased in the next three months.
- Reinforced the thinking that there needs to be a succinct reason/goal to collect and maintain livestock performance data.
- Excellent opportunity to see NLIS from paddock to plate