

# ***The Practical Use of Electronic Identification: a summary of Leading Sheep EID workshops held in 2018.***



Photo supplied by Jane Tincknell



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The information published in this booklet are the views of the individual and is not the position of Leading Sheep, Australian Wool Innovation or Queensland Department of Agriculture and Fisheries.

This booklet was compiled by Jed Sommerfield from the Department of Agriculture and Fisheries in August 2018.



## **Overview**

Leading Sheep hosted a series of Electronic Identification (EID) workshops at a number of locations throughout Queensland in 2018. Workshops were held in Cunnamulla, Goondiwindi and Longreach, with one cancelled in St George. While presenting important general information, these four locations each had a different focus which reflected the relevant production model of the region. This publication describes different producer experiences using EIDs capture frequently asked questions from the workshops and provide a guide to the costs of EIDs and associated products.

### **Special thanks goes to the following people.**

Jane Tinckell – DAF Longreach.

Amy Macintosh – Longreach.

Anthony Shepherd – Sheepmatters.

Cindy Taylor – Longreach.

Jane Rindfleish – Animal Genetic Services.

Peter Thomas – Longreach.

Jim and Trish McKenzie – Cunnamulla.

David Counsell – Longreach.

John and Debbie Cowley – Goondiwindi.

Tony Jesberg – Longreach.

Rod and Cathy Avery – St George.

Longreach Pastoral Collage.

Dave Owens – Longreach.

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Joy Hardie - West and Central/West region.

Amy Palmer – South West region.

Noel O'Dempsey – South region.

## Overview of using EIDs:

### **1. John and Debbie Cowley, Munda, Goondiwindi, Qld.**

We started using EIDs just over a year ago with only our ewes. Our focus to date has been on tracking fertility with recording pregnancy scanning results (dry, singles and twins) on each individual ewe. We use this lifetime data to make decisions, with the goal to improve our ewe fertility. With just two years of pregnancy data, we can now identify those ewes that twin every year, those who have had singles and multiples over different years, those that have singles every year and those that are dry.

Looking back, some initial one-on-one training from both the hardware and software suppliers would have been very beneficial on how to setup, record and use the data.



Photo supplied by Jed Sommerfield

John Cowley explaining how he uses EIDs and an autodrafter to the workshop attendees.

### **2. Peter Thomas, Beaconsfield, Ilfracombe, Qld.**

The use of EIDs makes the process of recording and recalling information a lot easier, it is also a lot more accurate than manually reading and recording sheep tag numbers.

We had been interested in collecting objective data on our sheep to assist with classing and breeding decisions. After being completely destocked of breeding ewes due to drought, we purchased young ewes from a number of sources in 2017 and commenced using EIDs. We made the decision to trial the collection of fleece and body data on these sheep before their first joining. The initial data collection was quite labour intensive as we had to tag, weigh and side sample the ewes up the race in the days prior to shearing, with the fleece weight being collected on the shearing board. All our lambs now receive an EID tag and going forward data collection will be incorporated into the routine handling of our sheep at crutching etc.

Against each sheep tag number we now have recorded the following information: wool quality, fleece weight, body weight, pregnancy status (i.e. twin, single or dry) and if the ewe was wet or dry at lamb marking. This information assists in assigning a real commercial value to each individual animal.



### **3. Anthony Uren, *Congi, Walcha, NSW.***

Before embarking on the use of EIDs I believe that the grower must have an end goal in sight. That end goal can be wide and varied, from driving production in a single trait, adoption of a selection index to drive a flock in a certain direction, pedigree management or electronic drafting, the list goes on. I don't think that the use of EIDs can be justified if for animal identification alone. EIDs come at a cost, and if you cannot recoup that cost through its adoption then it is not worth doing. It is my opinion that the adoption of EIDs should be aligned with driving profit.

When we first went down the path of sheep selection with the assistance of objective measurement, our decision making became more informed. The downfall in the initial data collection was accuracy, with many errors being made when manually reading tags (errors of up to 5% of tags read incorrectly). I have had discussions with testing houses and tag suppliers and they say manual tag reading errors can be as large as 15%. If you are collecting a number of traits to use in a selection index, or other purposes, these errors are multiplied at each collection stage and errors undermine confidence in the result. The need to have confidence in the result provided the impetus for me to move down the path of using EIDs.

Once the adoption of EIDs was in place and we started reading tags electronically the errors became negligible. Additional benefits became obvious, for example:-

- The ability to collect large amounts of data across large cohorts of animals accurately.
- Information could be easily managed by data management software.
- An ability to re-sort selection criteria for further and future classings.
- The ability to draft using the EIDs with an autodrafter.

My suggestion would be to take small steps, identifying a small group of animals to start with and once the bugs are ironed out and confidence grows expand the use of EIDs where desired. The move to EIDs can be a bit daunting for some, as you are putting a lot of faith in systems working properly. More often than not, you are under pressure and help is a long way away. eg, on the board at shearing, or out in the paddock away from mobile reception.

### **4. Jane Rindfleish, *Apiam Genetic Services, Dubbo, NSW.***

Within Queensland sheep producers' flocks, there is considerable variation in individual animal performance. Much of this variation needs to be measured and combined to get the full picture on each animal.

Using EIDs and multiple records on each animal, producers are able to make informed decisions based on facts. Identifying the non-performing animals in the system provides you with an opportunity to remove these animals, similarly the opportunity to capitalise on the very best performers within your flock.

Sheep can then be monitored and managed individually throughout their lifetime. The records are accurate, available and fast to access. This knowledge gives your enterprise resilience and flexibility.





## **Key points from producers that attended the EID workshops.**

A series of four events, each with a focus on using EIDs in the specific region, were planned throughout Queensland, at Cunnamulla, Goondiwindi, St George and Longreach. The information in the bullet points below comes from both verbal quotes and written feedback from each event.

### **1. Cunnamulla – Using information linked to EIDs for auto drafting.**

- Plan and work out what you want to do before you start buying “stuff” or collecting data.
- Don’t overcapitalise. The minimum requirement to start using EIDs and collecting data is an EID tag and a handheld reader. There is a lot of equipment you can buy, but do you need it to collect the data?
- Only collect data that can be used to help you make a management decision. Think about what management decisions you want to make and collect the data accordingly.
- Good to see a practical demonstration of equipment (EID tags) and how the auto-drafter works. Also good to see the different types of tags.
- Being able to identify the non-performing animals. Through analysis of the information it would be good to identify which animals are not making money and culling them. This is only possible when you can identify individual animals.



Photo supplied by Jed Sommerfield

Anthony Shepherd from Sheepmatters explaining the benefits of using EIDs.



## **2. Goondiwindi – Using linked reproductive information on EIDs to draft and help make management decisions.**

- Being able to collect data when we scan empty, single and twins, and when we wet and dry our ewes at weaning. When scanning ewes, being able to store the data with individual ewes, then being able to automatically draft into different mobs. Also when this data is recorded over time it allows for individual animals to be identified, especially culling ewes that are not having lambs or are having lambs and not raising them.
- Being able to identify and focus on high performing stock. Knowing which animals are most profitable, being able to individually identify these animals and manage them separately from the rest of the flock.
- Practical demonstration of sheep handling equipment. It was good to see how the auto drafter is set up and in use and how their yards worked. It was also good to see how the sheep flow through them and how quickly you can draft different mobs.

## **3. St George – Collecting fleece and fibre data and using this information at shearing time to manage the wool clip. (Event cancelled)**

This particular workshop was cancelled due to lack of numbers. The take home messages have come from producers who are currently using EIDs to collect data on their wool clip and use the information to make management decisions.

- The extra time and money that it takes to collect the information on the fleece of the animals is well worth the investment. Knowing before the sheep is shorn what the micron of the fleece is, allows for classing to be carried out in a way to maximise the returns from the wool clip.
- The extra time it takes to weigh the fleece and record that weight against a specific animal allows for calculations to be made to determine how much money that individual animal is making you. This information can be used for benchmarking.
- There are a number of commercial wool growing properties who are currently using EIDs in Queensland to collect data, analyse it and turn it into information which is used in management decisions in the shed and on their property.



Click the image above to view a short (1:21min) video of fleece weighing, or type the following link into the address bar of your internet browser <https://www.youtube.com/watch?v=SFI2F5wexSA>

#### 4. Longreach – Information on how to set up an EID program on your property and how to use the information.

- Able to collect relevant data. Collecting data is often a tedious process and the benefits are not often realised immediately. Therefore it is important to decide on what decision you would like some help making and what data needs to be collected to help make these decisions. Think about your specific enterprise and what decisions you make that could be improved by having additional information and collect the data that is relevant to you.
- It was good to actually touch and hold the range of EID tags that are currently available.
- EID has to make things easier, not harder. As useful as technology is, it is not designed to make your job harder. Planning, training in the use of technology and learning from the mistakes of others all help when making a change, however if this change makes ‘things’ harder it may not be for you.



Photo supplied by Jane Tincknell





## **Frequently asked questions.**

The hosts and the presenters were asked a variety of questions during the workshops. The answers to the four frequently asked questions (shown below) come from both producers and presenters. These are intended to give a variety of answers, some of which may be more relevant to your particular enterprise.

### **1. It's not compulsory to use EIDs in Queensland, why bother?**

The technology is available to enable graziers to make better informed decisions on individual animals in their flock. You can record the data manually, but to then analyse it, sort it and try to identify the sheep that the data relates to would be near impossible. Using EIDs makes this task very simple. If you have the hardware to keep up with the software, it is an automated draft with very little labour required. – John and Debbie Cowley

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When EIDs are used effectively as part of a plan, it pays its way and producers' returns are greater than those without EIDs – Jane Rindfleish.

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How else can you identify the best performers in your mob if you can't collect their information? By recording each sheep's data, you can make decisions on their performance with actual data. If you could remove the bottom 20% of the mob and produce the same income, wouldn't you do it? – Rod Avery.

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- You are able to accurately record data.
  - Ability to record across large flocks.
  - The technology is becoming cheaper.
  - Most growers have EID collection equipment associated with NLIS in their cattle enterprise.
  - Making evidence based decision that are aligned with profit motives.
- Anthony Uren
- 

EIDs are a cost effective tool that can help producers to build up an understanding of which of their sheep are driving production and which are not.

EIDs are able to give the grower a benchmark to better understand if their breeding programme is moving to where their breeding objective / goal is set. – Anthony Shepherd.

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We are using EIDs to assist in the accuracy and speed of recording and recalling information for each individual animal. – Peter Thomas.



## 2. Will I save time and money by using EIDs?

It is an investment of time and money. In the long-run, it should make you money or at least, identify where you didn't. – John and Debbie Cowley

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Start recording manually first. Within 12 months, you will discover how much this investment has either made and or saved you money. Just like with any investment, you will then work out how many years it takes to get value for the investment you made. Each producer is able to pay for their initial investment within 18 months (2 shearings). – Jane Rindfleish.

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I would class out the visual faults of animals before applying the EID tags to sheep and before micron testing, rather than tag them all at marking. This can save a few dollars plus you can order the correct amount of coloured tags.

You only have to micron and yield test at the first shearing which in my case is the maiden ewes. – Rod Avery.

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In every group of animals we know that some perform better than others, whether that's financial contribution to the bottom line, heavier wool cut, better muscled, more fertile etc. It is a growers imperative to identify those better performing animals and sell the under performers. For example: across a cohort of 700 ewes we tested, fleece value within the group ranged from \$24-\$107. So if we can accurately identify the top performers and sell the passengers, our bottom line will be far healthier. I will argue that this can only be done accurately through objective measurement. Genetic benefits are cumulative as they permeate through a flock for years, conversely so do bad genetics, hence the need for accuracy in decision making. Using EIDs gives me the accuracy and confidence to do this. - Anthony Uren.

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You first must know what your breeding objectives are and where you want your sheep operation to be in 5, 7 or 10 years' time. You are wasting time, money and effort if you don't know the answer to this crucial question. Collection of important data is done at an opportunity when the sheep are in the yards / shed which makes you time smart. Using EIDs is expensive if you don't use the data you have collected to help you make decisions. Only collect data on traits that matter. Don't waste your time or effort collecting information that is not commercially viable to your sheep operation.

You should start small and learn about the positives and negatives of using EIDs. Until you know what you really need, it would be a good idea to employ a service provider and use their hardware, knowledge and strengths to understand what is important to you. Don't invest lots of money in EIDs to find out that it doesn't meet your expectations. If you were to purchase some initial hardware (EID tags, reader and indicator) and software, your initial outlay can realistically be under \$2500 for a mob of 500 sheep (\$5/hd in year 1) – Anthony Shepherd.

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There is extra cost associated with EIDs, however there is benefit in the speed and accuracy of the data that is recorded. – Peter Thomas.



### 3. What do other people use EIDs for in Queensland?

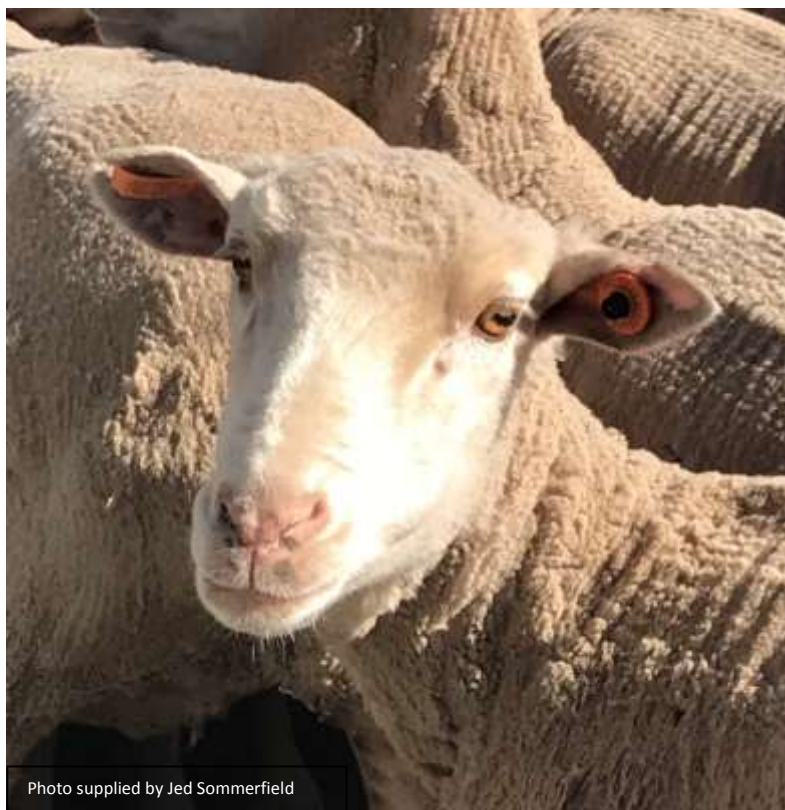
Recording data on fleece (weight, micron, yield etc.). Recording individual weight gain. – John and Debbie Cowley.

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The reason one starts to use EIDs is to primarily identify your non-performing animals. These are the animals that give you flexibility through the seasons. The main information producers focus on include, weights, wool traits, pregnancy status and moving towards condition scoring. - Jane Rindfleisch.

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EIDs can assist you in making more accurate decisions on your flock management. It will make selecting animals to keep much easier when using objective measurements. If you collect this information you can identify and cull those ewes who get in lamb, but don't rear a lamb a second time around. It will allow you to choose which ones to keep if you are needing to destock. You should start collecting data on micron, yield, fleece weight, bodyweight, twins, singles or dry and if they are wet or dry at lamb marking. – Rod Avery.





#### 4. What data should I start recording?

You should record data on the most important aspect that you need quantified, in order to make informed decisions. Otherwise, it is a pure guess. For example, if your focus is purely wool, then you should start there. If fertility is important to you, then start recording lifetime pregnancy data on your ewes and so on. – John and Debbie Cowley

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Wool weight and micron, body condition score, body weight, pregnancy status (dry, single, twin), rearing status (wet/dry). – Jane Rindfleish.

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Greasy fleece weight, micron, body weight, pregnancy status, muscle depth, date of birth and pedigree. – Anthony Uren.

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Growers in Queensland are using EIDs to collect a range of key traits that are important to their breeding objectives. The main information collected is greasy fleece weight, micron and yield.

Other important traits are pregnancy status and over time the repeatability of fertility. Also body weights of young sheep which identifies weight gain.

Data is also being collected on sheep health treatments and roll calling (e.g. sheep lost to dogs from the previous count).

Data that is easy to collect when the sheep are in the yards or shed for another reason, this then becomes an opportunity to collect this data. For a wool sheep breeding programme it is easy to collect greasy fleece weight and take a wool sample which will give you individual micron and yield. When ewes are in to be pregnancy scanned it is easy to collect the fertility status of the ewe. At weaning it can be easy to get a body weight of the weaner, all are important traits. – Anthony Shepherd.

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Have a good think about what you are wanting to achieve and what information you will need to collect. There is useful information that can be collected without the use of EIDs (i.e. through the use of different coloured ear tags, buttons and ear marks. – Peter Thomas.





## **Cost of setting up.**

Leading Sheep does not promote one product over another. The information below is listed to give producers an indication of the cost of items associated with using EIDs and other products that may be available.

These prices were current at 01 September 2018 and are to be used as a guide only. Please contact your preferred local rural supplier for more information and up to date prices.

### **1. EID ear tags.**

Shearwell EID NLIS Tags - \$1.30 each ex GST.

Allflex – EID NLIS Tags – 1.96 ex GST.

Datamars – Single shot FET tags \$1.68 ex GST.

Datamars – Tagfaster HDX tags \$1.77 ex GST

### **2. Portable handheld readers.**

Tru-Test Stick Reader \$1,772 -\$2,136 ex GST.

Shearwell SDL 440 Blue Handled Stick \$1,222 ex GST.

Shearwell SDL 410 Red Handled Stick \$1,050 ex GST.

Allflex – RS420 Stick Reader - \$2,255 ex GST.

Gallagher – HR4 Reader - \$1,452 ex GST.

### **3. Indicators.**

Tru-Test XR5000 Indicator \$3,954 ex GST.

Tru-Test ID5000 Indicator \$2,454 ex GST.

Gallagher – TWI Indicator \$2,086 ex GST.

### **4. Drafting and scales.**

Tru-Test MP600 Load bars \$1,450 ex GST.

Tru-Test Prattley Sheep drafters and handlers \$2,181 - \$17,272 ex GST.

Shearwell Race Readers, Weigh Crates, Drafting Crates @ \$3,500 to \$18,000 ex GST.

Gallagher – Autodrafter - \$14,759 ex GST.

Clipex Fixed Sheep Handler range \$18,181 to \$22,727 ex GST.

Clipex Contractor Model \$22,727 to \$27,272 EX GST.