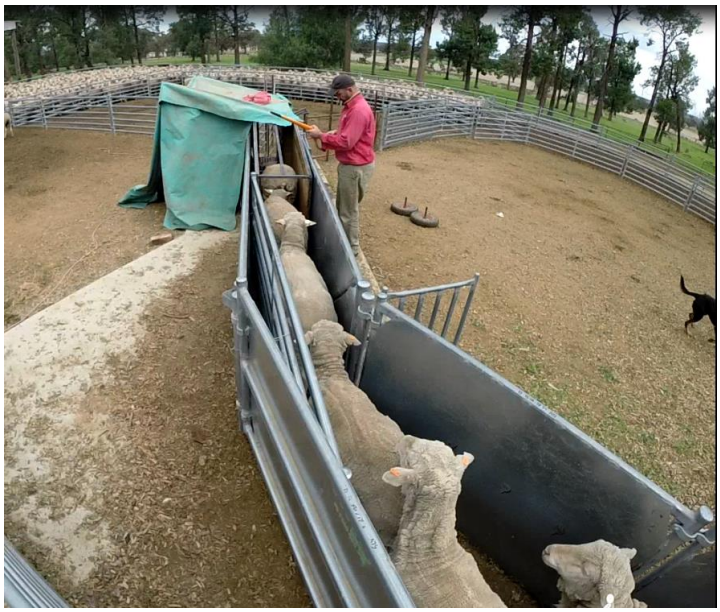
The Process of using Electronic Identification to Identify Commercially Productive Sheep

The Objective

To commercially index the merino lamb maiden ewes on clean fleece value and fertility status.

The Process – Fertility Status (FS)

At pregnancy scanning, the fertility status of the ewe is recorded at the time when the ewe is being scanned. Instead of the scanner having to spray each sheep with a different colour mark, all he has to do is call the fertility status of the sheep, and it is recorded on the stick reader by scanning the ewes' eID tag. Some pregnancy scanners also have the option to enable the fertility status to go directly into their system by using a panel reader on their crate.



By simply scanning the eID tag, the pregnancy status of the ewe is recorded, and importantly is not affecting the flow of the job! Note: an eID stick reader is not an electric prodder!

Data Sheet from Pregnancy Scanning

With the information collected from pregnancy scanning via the stick reader or through a panel reader, the results are down loaded onto a spreadsheet or into specific software.

eID	Manual	Fert
951 000001746750	111290	2
951 000011743693	110868	2
951 000008742813	110604	1
951 000013742192	111305	1
951 000009740225	111277	2

A simple spreadsheet shows the pregnancy status of the individual sheep recorded against the eID tag, which is also linked to the manual tag number.

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The Process – Clean Fleece Value (CFV)

Collect a wool sample

At sheep classing (while sheep are in yards) eID tags are put into the **classed in** maiden merinos and a wool sample is collected at the same time. The sample of wool is sent to a wool testing house with a bar code print out of the eID tag number. The wool test file shall be sent back on an electronic spreadsheet.

Taking a rump wool sample of classed in merino maiden ewes. Note the use of a cordless hand piece and sheep handler.

Micron Test Results from Wool Testing House

eID	Micron	FD	Yield	CV	Above30	Comfort	Spin F	Curv
951 000001746750	18.04	-1.65	70.14	19.64	0.8	99.2	16.2	110.25
951 000011743693	18.07	-0.6	71.18	17.32	0.7	99.3	16.85	97.15
951 000008742813	19.89	-0.8	68.55	16.48	0.4	99.6	16.54	87.36
951 000013742192	19.11	1.73	70.15	17.82	1.3	98.7	19.17	104.48
951 000009740225	20.26	2.81	69.69	15.49	1.1	98.9	19.81	81.46

A micron spread sheet from the wool testing house from the rump samples. Note the tag number is the 16 digit eID tag number

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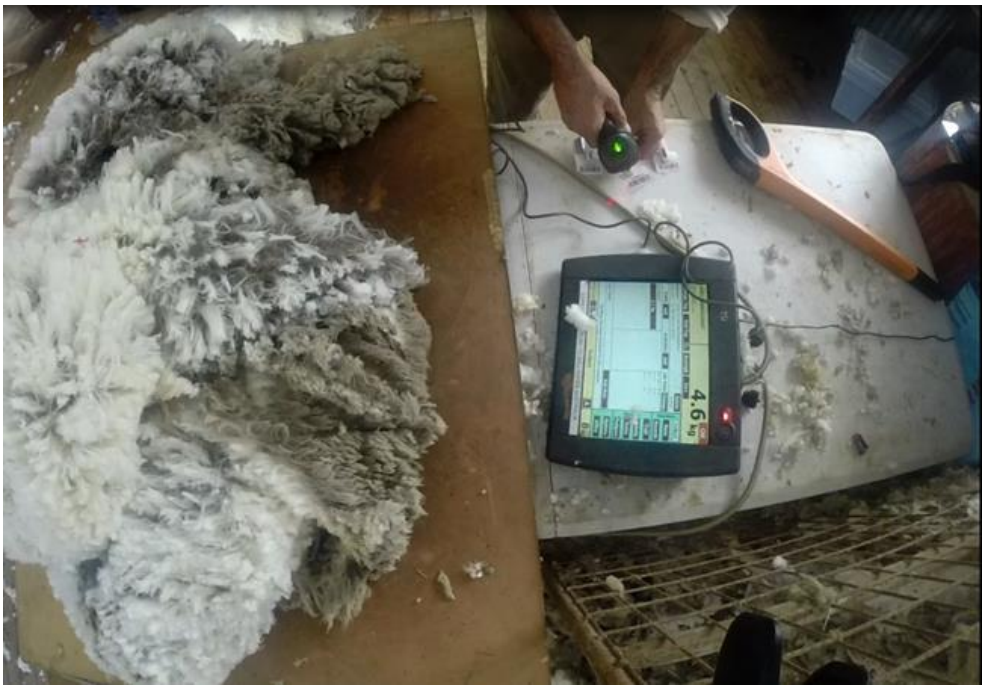
Weighing the Fleeces

The greasy fleece weight is recorded at shearing. The eID tag on the sheep is scanned which enables a printer to print out a barcode, representing the eID number. Once the sheep is shorn, the fleece is weighed on a platform with cell bars connected to an indicator and the barcode printout is scanned. Then the greasy fleece weight is recorded against the scanned barcode number, which represents the sheep's unique eID number.



Collecting fleece weights at shearing. Note:- the bar code printout being scanned, which represents the sheep's eID tag, and that the weight is recorded against the sheep's eID tag number.

The Office

With both the micron (and yield) and fleece weights collected against the individual sheep, the information is "mapped" to the sheep's unique 16-digit eID number. Using software (in the authors case he uses Koolcollect, by Sapien Technology) a clean wool value is obtained by looking at the value of the micron against a 3-year rolling average clean price from the Australian Wool Exchange (AWEX). An individual yield can be collected with the wool sample or you can assume a yield for all the wool samples. With a Clean Fleece Value (CFV) calculated against the sheep, a Clean Fleece Value Index (CFVI) is also put against the sheep. The CFVI represents where the sheep ranks in the mob. A CFVI of 100 is the average value for the mob.

Once the wool data is collected, its spreadsheet is "mapped" to the separate fertility status spread sheet. The constant on both spreadsheets is that **unique eID number**. So we can "map" the two different types of information to that one constant eID number, creating a growing résumé against that individual sheep.

Which sheep are meeting your short, medium and long-term objectives?

Important commercial traits recorded against individual sheep all "mapped" to the sheep's unique eID tag number

eID	Tag	Fert 2012	Clean FLC Value	Index	Greasy Flc Wght	Flc Yield	Micron
951 000001746750	111290	2	7432	113	7.6	70.14	18.04
951 000011743693	110868	2	8117	123	8.3	71.18	18.07
951 000008742813	110604	1	6014	91	7.3	68.55	19.89
951 000013742192	111305	1	6505	98	7.5	70.15	19.11
951 000009740225	111277	2	5290	80	6.6	69.69	20.26

A spreadsheet showing the fertility and clean fleece value of individual sheep.

Decision Time

Example 1

The Clean Fleece Value and Fertility spreadsheet can be imported back into any stick reader and taken back out into the yard to be used to make decisions. As an example, you are in the middle of a long dry period and while the market is still good and the ewes are in good condition, you decide you want to off load some.

You bring in the mob of ewes, which have all been indexed on Clean Fleece Value and have a Fertility Status. You wish send in 100 ewes to the sale yards or 20% of the mob.

With just your stick reader you can put in a *draft to ID* the bottom 20% on Clean Fleece Value. It takes you an hour to scan and ID the lowest valued wool sheep, and then draft them into their own mob.

You have just identified the lowest wool productive sheep and sold them for good money. You have kept the top 80% performing sheep on wool value, and another plus is that you are looking after your farms ground cover. When you come out of this long dry period you will be starting with the most productive sheep on the farm.

You made an objective decision based on production, not age. All based around the eID tag.

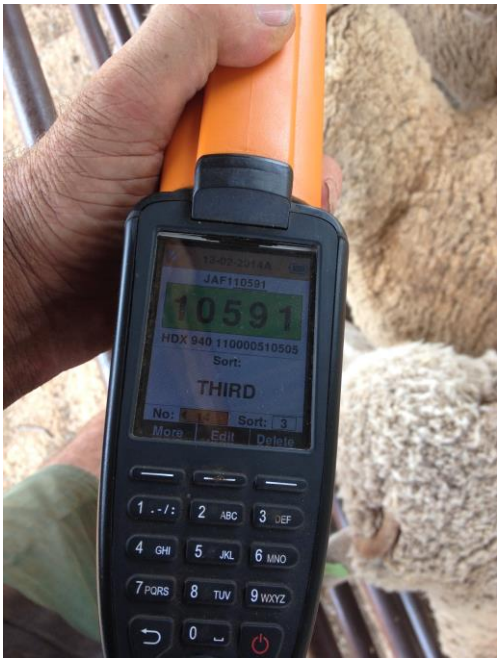
Example 2

You are coming up to shearing and there has been a significant rise in the premiums received for 18 micron wool and finer. Using just a stick reader you can set up a draft to identify those sheep in the mob that are 18 micron and finer. They are identified and then manually drafted into their own mob, which has taken you an hour to do. Those sheep can then come in the shed and be shorn as their own mob and the wool baled as that finer micron line.

Example 3

Joining is coming up soon and you want **to join 80% to Merino genetics and 20% to Poll Dorset genetics**. You like the idea of those 20% joined to Poll Dorset, which will give you some cash flow earlier.

With the same stick reader you have set up a "draft" on the reader to identify sheep that are low on Clean Fleece Value and also a Fertility Status of a single or twin. They are ID and drafted out in readiness for joining to the Poll Dorset.



Stick readers such as this Gallagher HR5 is used to both collect information and then use that information to make decisions.

Important commercial traits recorded against individual sheep all "mapped" to the sheep's unique eID tag number

eID	Tag	Join 2013	Fert 2012	Clean FLC Value	CFV Index	Greasy Flc Wght	Flc Yield	Micron
951 000001746750	111290	M	2	7432	113	7.6	70.14	18.04
951 000011743693	110868	M	2	8117	123	8.3	71.18	18.07
951 000008742813	**110604**	**PD**	**1**	**6014**	**91**	**7.3**	**68.55**	**19.89**
951 000013742192	111305	M	1	6505	98	7.5	70.15	19.11
951 000009740225	**111277**	**PD**	**2**	**5290**	**80**	**6.6**	**69.69**	**20.26**

*The traits circled in the above spreadsheet against the sheep, show that both these sheep are both **fertile** and have a **low clean fleece value**. These two ewes would be ideal to be joined to the Poll Dorset. Just from this spreadsheet, we can see that the average fleece value from the 2 lowest ranked fleece value sheep is $56.52, while the remaining three average fleece value is $73.51.*

In the above **3 examples** we have looked at just some of the real possibilities available to you to help with your decision-making. You have also started the journey of gaining and using the knowledge of some of the most fundamental aspects in your sheep operation.

i. You are selecting the correct genetics to the correct genetics (like to like)

ii. You are making your decisions on productive traits, not age.

iii. You are reducing your Cost of Production (COP) by having sheep in your operation that are driving profit and your charity sheep out of the system.

iv. By knowing what Dry Sheep Equivalent (DSE) you run your sheep at per hectare, you know what they are earning you per HA. Therefore you can compare on a performance basis to other enterprises on your farm.

Summary

"If we were to try and collect all the information we are through using eID, by manual means, we wouldn't. Just time alone in the manual system, would make it unaffordable to do so"
– client of Sheepmatters

So the important key points on eID**.**

- ✓ **Know your goals**. Where do you want your sheep operation to be at in 3, 5 or 10 years' time?
- ✓ **Learn to swim.** Start with eID on a small scale and have your expectations met.
- ✓ **Don't invest in expensive equipment.** Until you know what you really need, employ the services of a service provider and use their knowledge and strengths.
- ✓ **Back up Service.** When you do get to a stage where you want to invest in eID hardware/software, the number 1 area that is critical is the support/service that comes with the investment.
- ✓ **Only collect traits that matter.** Don't waste your time by collecting information that is not commercially viable to your sheep operation.
- ✓ **Production, not age.** By collecting objective information on your sheep, you are in fact putting them potentially all on the same playing field. Just because the ewe is a 6 year old, doesn't mean she still isn't productive.

For Sheepmatters, the ability to capture important commercial information for their clients and then make informed decisions has helped their clients to able to take away the guesswork.

Producers are making time smart decisions with certainty by combining subjective with objective information on sheep that are measured on production, not age.