



# Electronic Identification – practical applications of data capture for the stud and commercial producer.



# Radio Frequency Identification (RFID)



- Improved data accuracy.
- Eliminate tag reading errors.
- Improved stock handling – less stress.
- Reduction in time taken to collect data.
- Improved data collation and recall.
- NLIS

# PRECISION SHEEP MANAGEMENT

- Precision Sheep Management is the selection, management and marketing of animals based on measured or individual production rather than that based on flock management principals.
- It allows returns to be maximised from high value animals and minimises costs among low value animals.
- It allows for the exploitation of the variation that exists within flocks of key profit drivers, e.g. Wool traits, meat traits.
- New technologies exist to improve productivity and profitability of livestock enterprises, look how you can incorporate these into your management practices.



*Providing: OFDA2000 On Farm Wool Testing: Pregnancy Testing: Fat & Eye Muscle Scanning: Sheep Classing: Ram Selections: EID Requirements, including software & hardware needs.*

# Variation within a flock.



	<i>Flock average</i>	<i>Top 25%</i>	<i>Bottom 25%</i>
<b><i>Wool traits:</i></b>			
- Fleece weight (kg)	4.6	5.3	3.9
- Fibre diameter ( $\mu\text{m}$ )	20.4	18.9	21.9
- Staple strength (N)	35	42	28
<b><i>Reproduction (%)</i></b>			
- Merinos	86%	143%	28%
<b><i>Meat traits:</i></b>			
- Growth rate (g/day)	284	357	200
- Fat depth (mm)	10.6	8.9	12.5
<b><i>Value (\$ per ewe)</i></b>			
- Fleece value	\$54	\$82	\$37
- Carcase value	\$33	\$56	\$12

## Uses for RFID for Producers

Usage will depend on producers individual management needs and profit drivers, they could include:

- Pedigree information
- Weights and weight gain
- Vaccine and parasite history and management
- Supplement history
- Fertility – incl. Pregnancy scanning data
- Fleece measurements – micron, fleece weights.

**It gives the producer the ability to make decisions based on an individual animals performance and tailor management/production systems accordingly.**



## How it works



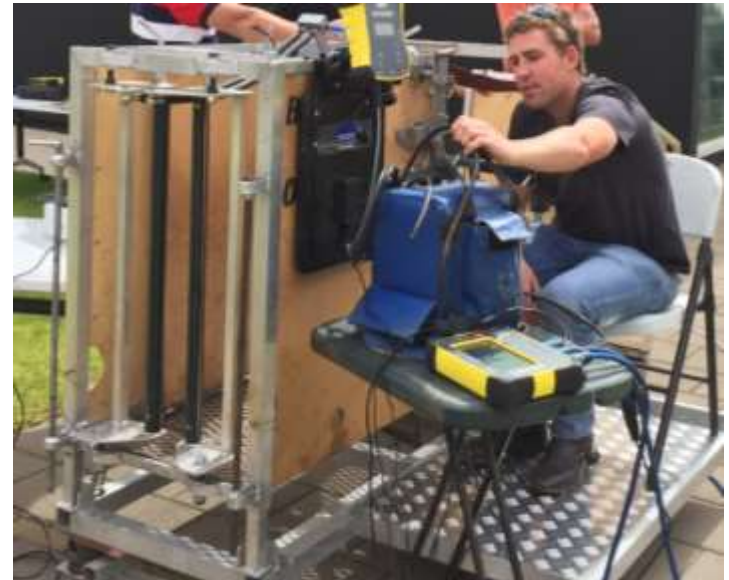
- They are a passive devices and operate by means of induced voltage.
- The antenna (coil of copper wire) sits under the plastic casing and connects to the electronic chip which contains the unique electronic number.
- A hand held reader or panel generates an alternating electro – magnetic field. When the tag comes into close proximity with the field the interaction causes a small voltage to be induced in the antenna coil of the tag.
- Once the voltage reached a specific level the electronic chip in the tag turns on and simply transmits the unique number to the reader.





## What equipment is out there?

- Hand held readers & Panel Readers
  - Allflex, Leader, Shearwell, Aleis, Gallager



# What equipment is out there?

- Scales and automatic drafting systems.



Ability to weigh and/or draft sheep automatically on predetermined parameters.



# Auto Drafting



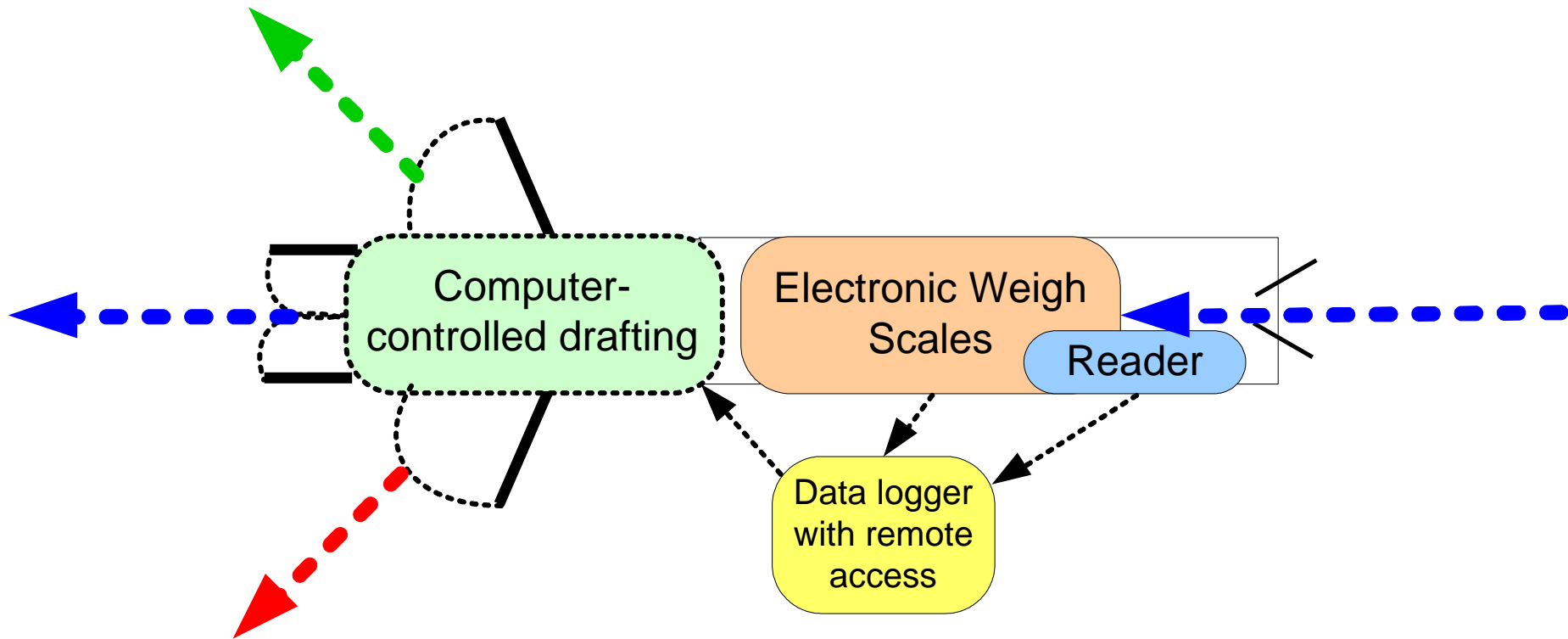
autodrafting.MOV



Ability to draft sheep automatically on predetermined parameters.



# Automatic drafting (sorting) of sheep based on RFID



# Pedigree Matchmaker



Uses the physical association between electronically tagged ewes and their lambs to record lamb survival and assign maternal pedigree information.

# Data Management



# Data Support Systems and Software

- Variety of software programs to manage data available. Eg - Kool Collect (Sapien) Stockbook, BreedElite
- Sheep CRC had developed software tools to assist producers, including: ■ Selection Assist ■ OFFM Calculator ■ Wether Calculator ■ Merino vs Terminal Sire Calculator ■ Simultaneous Assortment ■ Lamb Growth Predictor.



5

Common  
eID mistakes

**5 common eID mistakes you  
can avoid.**

Robert Wyld, Sapien Technology

# 5 common eID mistakes you can avoid.

## 1. No Clear Goal.

- Know what you want to achieve/improve.
- How are you going to know if you have achieved it?

## 2. Not Seeking Good Advice.

- Do your homework – ask specialists, early adopters, product manufacturers.

## 3. Buying The Wrong Equipment.

- Understand what you are trying to achieve and what is needed to achieve it.

# 5 common eID mistakes you can avoid.

## 4. Not Using The Data.

- Data collected is an investment that is not realised until a meaningful decision is made based upon the data.

## 5. Missed Opportunities.

- Forget (or don't know how) to use the data collected.

“ Many successful clients have saved or made **10 times** *their investment* on eID just by being better equipped to make intelligent and confident decisions.”



Pregnancy Scanning

Fat & Eye Muscle Scanning



Pedigree Matchmaker

# Uses for RFID in Cousins Merino Services

Autodrafting



Fleece Tracking

On farm wool testing



# Conclusion

- Electronic identification assists with individual animal management.
- Rapid advancements within the industry.
- Adoption of new technologies and better usage of existing ones is creating opportunities.
- Potential for new technologies to develop further.
- It is not the collection of data which results in financial benefits. It is the applied usage of this data.