

# Effective methods of recording parentage in extensive systems



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# Introduction of myself

- Sheep farmer in the hills of South West Wales
- 520 ewes, 210 ewe lambs (80 being tuppied) and 20 Suckler cows
- Also help on Fathers farm running a further 820 ewes and 160 ewe lambs.
- Graduate of Aberystwyth University
- Worked in Red Meat Industry and with other commercial and pedigree breeding farms.

# Interest in Pedigrees and Performance

- Good to know history and connections
- Predict future performance
- Make more informed decisions = better decisions?



# HCC Scholarship

- Enabled me to look at ways of recording parentage on large extensive systems
- Relative to Welsh hill farms and outdoor lambing
- Collecting information without drastically increasing labour

# What to consider?

- How it works
- Reliability
- Suitability
- Cost



# Where to Visit?

- New Zealand and Australia
  - Large Hill Country farms in NZ
  - Extensive systems
  - Low Labour, farmer friendly systems



# The systems

- DNA Shepherd
  - DNA matched from both Sire and Dam
- EID Tracking
  - Match to Dam through association of tags through EID readers
- Tagging at Birth
  - Typical British Methods
- Mothering up
  - Identifying lambs being reared by the ewes

# DNA Shepherd

- DNA taken from ewes and rams prior to tupping
- Multi-sire mating
- Lambs tagged at 4 weeks and DNA sample taken and linked to this tag
- Results given within 4-6 weeks
- 99% accuracy
- Less intervention at lambing
- Better utilisation of grass at tupping





# DNA Shepherd

- Most farmer friendly method
- Samples easily taken when convenient
- Costly method
- Guaranteed parentage important for stock sires
- Produce rams in a commercial environment





# DNA Shepherd – case study

- Awapai, Hawkes Bay
  - Breeding Partner for Focus Genetics
  - Commercialised system producing rams
  - Could not go back to tagging at Birth
  - Ram breeding at no extra cost or work



# EID Tracking

- Ewes previously tagged and lambs tagged at 4 weeks of age
- Ewes and lambs walk through EID readers to a point of interest over 4-6 week period
- Data analysed to determine matches
- 85-93 % allocation (96% accuracy of allocation)
- Mating groups must be known to determine sire.

# EID Tracking

- Sapien PedigreeScan technology
- Very useful kit
- Initial outlay of money but cheap after that
- Huge potential in commercial enterprises
- Help identify better performing ewes to keep in the flock

# EID Tracking – case study

- Rosebank, Gore
  - Use EID Tracking for their commercial enterprise
  - Easy to use between paddocks
  - 90% of lambs being given dam parentage
  - Very useful to make breeding decisions



# Tagging at birth

- Tag lambs at birth and take note of Dam
- Requires a lambing beat
- Labour intensive
- Better suited for accessible land/shed
- Single sire mating

# Tagging at birth – case study

- Wairere, Masterton
  - Value the ability to score for mothering ability
  - Improved ability to mother up after handling etc
  - Error of 5-10% in recordings





# Mothering up

- Allow ewes to lamb down naturally without interference
- At about 3 weeks of age sort the ewes and lambs to allocate parentage
- Better for single reared lambs
- Some lambs not given parentage

# Suitability to the UK

- Tagging at birth currently the most used, majority being done indoors
- Potential for DNA shepherding and EID tracking in varying circumstances
- Important to gain more and better information with challenges ahead

# Costings

Costings based on a 800 ewe flock rearing 150%

<b>System</b>	<b>DNA Shepherd</b>	<b>EID Tracking</b>	<b>Tagging at birth</b>	<b>Mothering up</b>
<b>Cost per lamb</b>	<b>£10</b>	<b>£2.92</b>	<b>£2.33</b>	<b>£0.50</b>

# My thoughts

- DNA is most accurate and essential for pedigree breeding with performance recorded
- Huge potential for EID Tracking within commercial flocks
- Greater need to be accountable for making decisions
- Determining birthdate is sometimes difficult

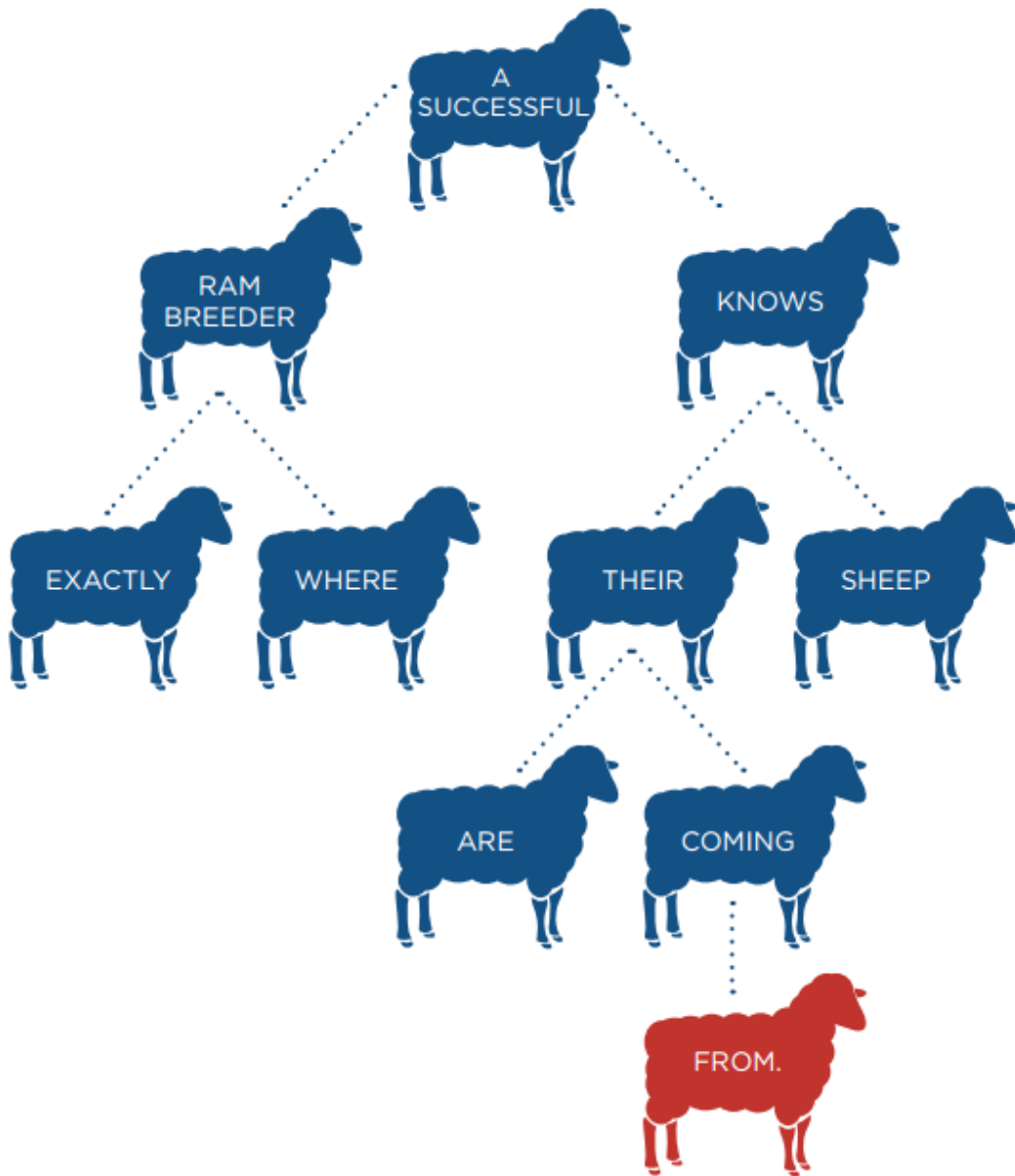
# My thoughts

- Quickest way to improve a flock is to remove the bottom third
- Keep better performing ewes longer, lesser ewes are able to be culled out sooner



# What next for me?

- Improve infrastructure
- Record more and analyse data
- Look into purchasing an EID Tracking system to record commercial ewes
- Target a 65Kg ewe weaning lambs equal to her tuppings weight



Thankyou for  
listening