

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 tupped) 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%

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

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

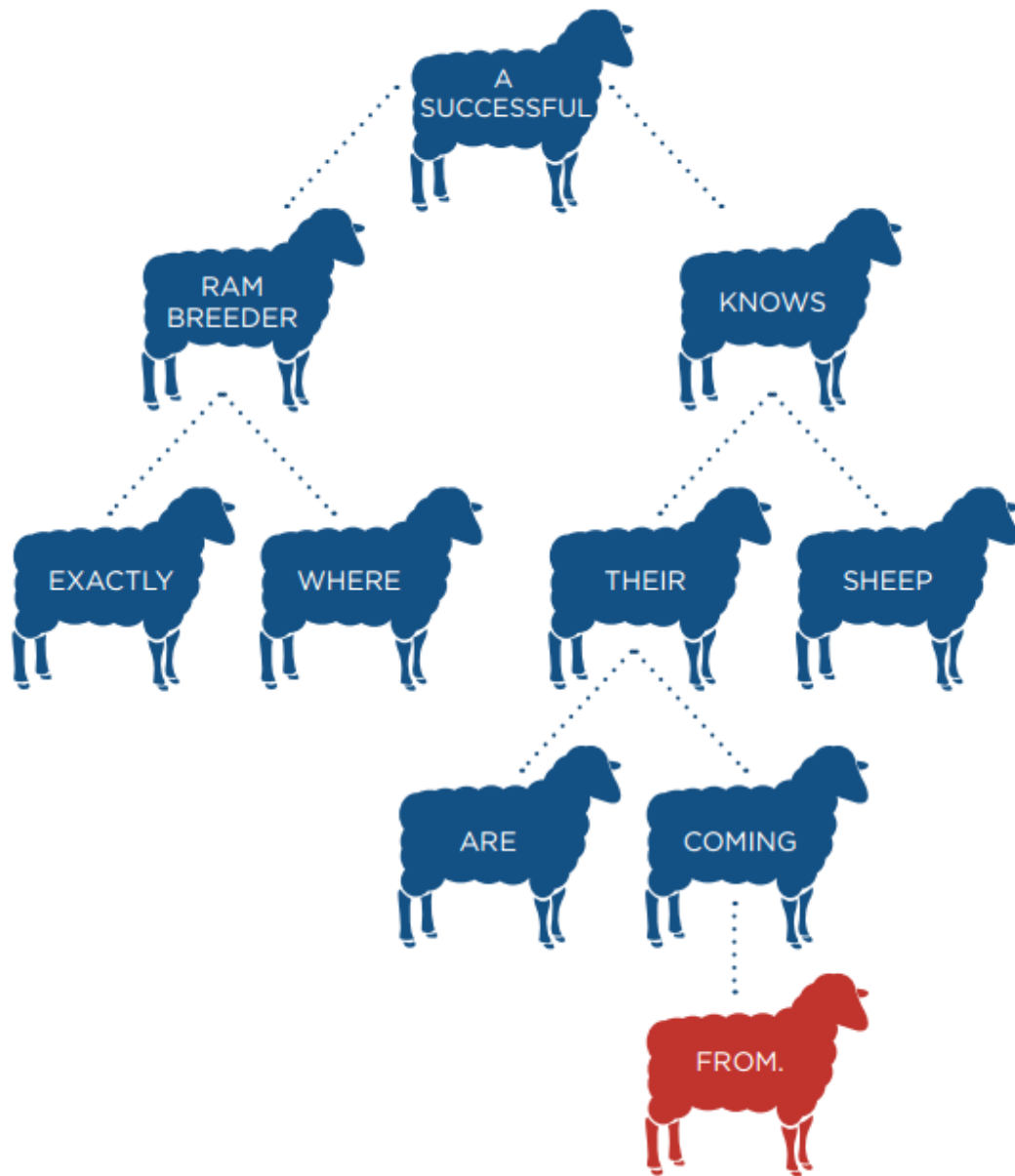
My thoughts

- 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 tupping weight



Thankyou for
listening