



The European Agricultural Fund
for Rural Development:
Europe investing in rural areas



North York Moors Swaledale Breeders - Operational Group

Thursday 15th June
Swaledale Sheep Society AGM
Steve Dunkley – Senior Knowledge Exchange Manager

NYM Swaledale Breeders EIP Operational Group

- Defra/EU funded project
 - European Innovation Partnership (EIP – Agri)
- Application made in March 2016
- Approved in Jan 2017
- Secured support towards
 - Hire of EID equipment
 - Consultant support / lab fees
 - Performance recording / scanning
 - Open days
 - Farmers match funding it with own cash



NYM Swaledale Breeders EIP Operational Group

- 4 hill farmers from the North York Moors
- Ewes in project
 - Yr 1 - 790
 - Yr 2 -1,220
 - Yr 3 – 1,530
- Tim Dunn – Group Chairman and applicant
- AHDB and Kate Philips



The European Agricultural Fund
for Rural Development:
Europe investing in rural areas

AHDB
BEEF & LAMB

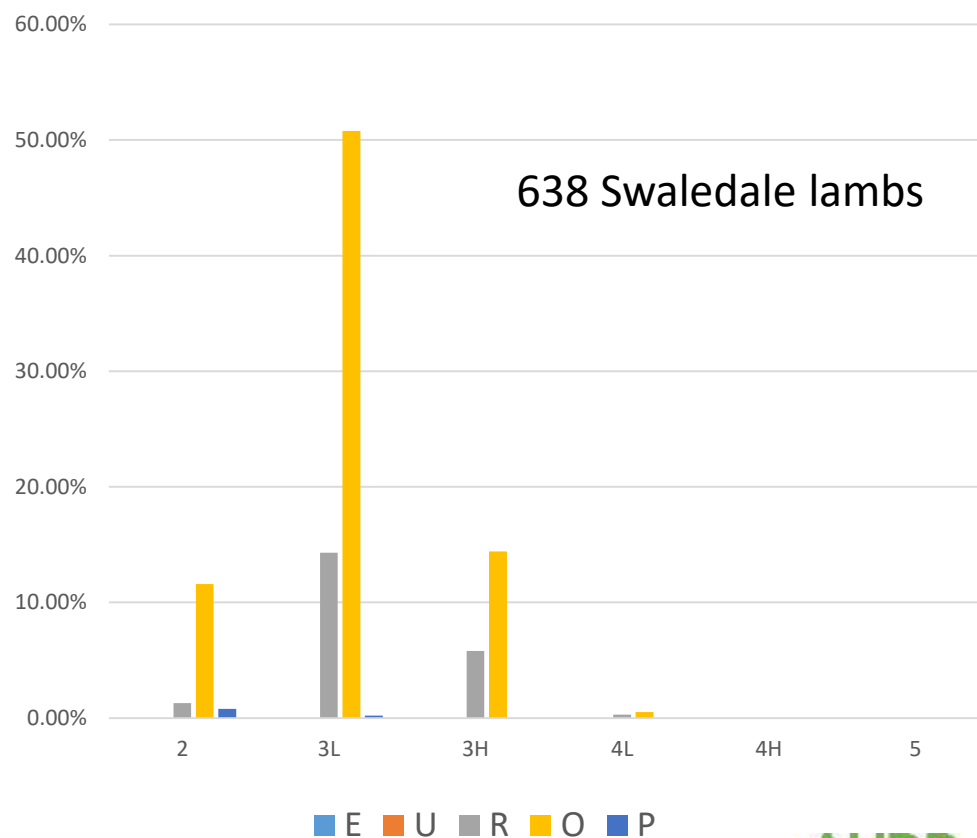
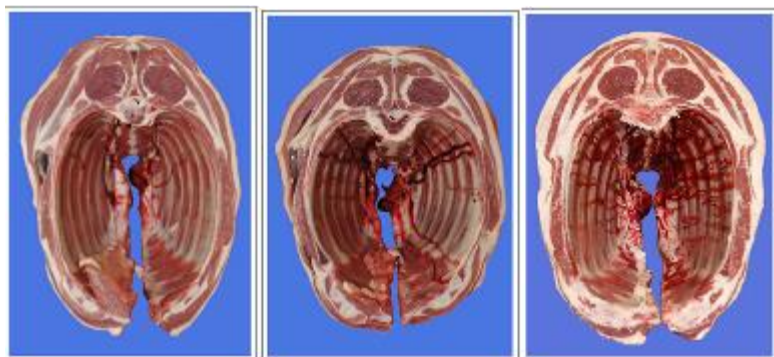
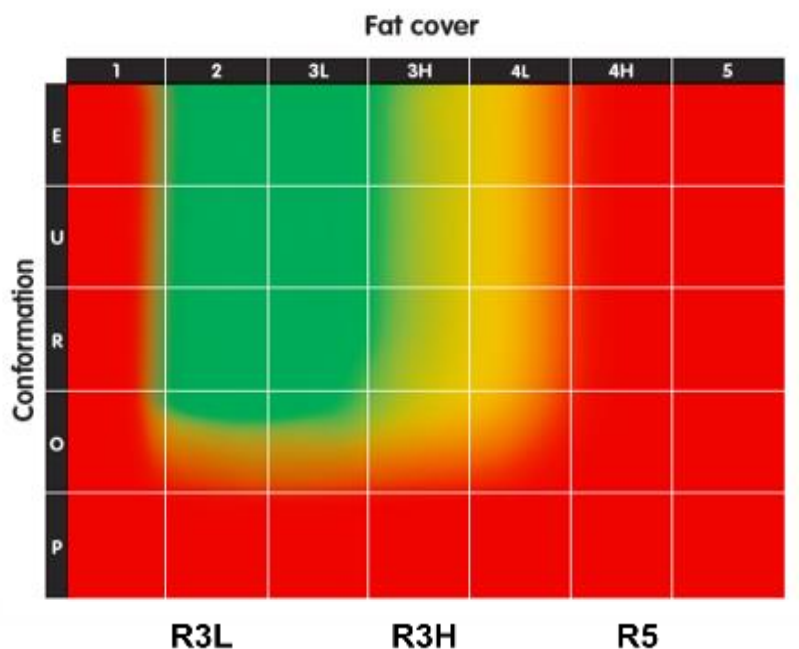
Objectives

- Identify Swaledale sheep with better carcase traits (loin, hind leg and shoulder) and use them within a breeding programme to improve carcase quality and consistency
- Develop new ways of data collection and new and novel data sets that can be used in genetic evaluations for hill sheep carcase traits
- Develop existing ultrasound scanning technologies to provide a measure of total muscle area
- Take lambs from the breeding programme and trial different finishing systems



Carcase traits – Hunt House Farm 2013/14

EUROP Grid - Lamb



Performance recording - Challenges of data collection

- Lambing data
 - Sire, dam, date of birth, sex, fostering
 - Optional: Birth weight / lambing ease
- 8 week weights
- 21 week weights
 - Scan lambs using ultrasound



Performance recording - Challenges of data collection

- Single sire mating
- Lack of AI / ET
- Data collection at lambing time
- Ability to weigh/gather
- Identification of sheep

Create a nucleus group

Collaboration /
sharing genetics

Lamb close to farm /
lamb a slightly earlier batch
S/M/L

Tie in with clipping /
Digital weighing systems

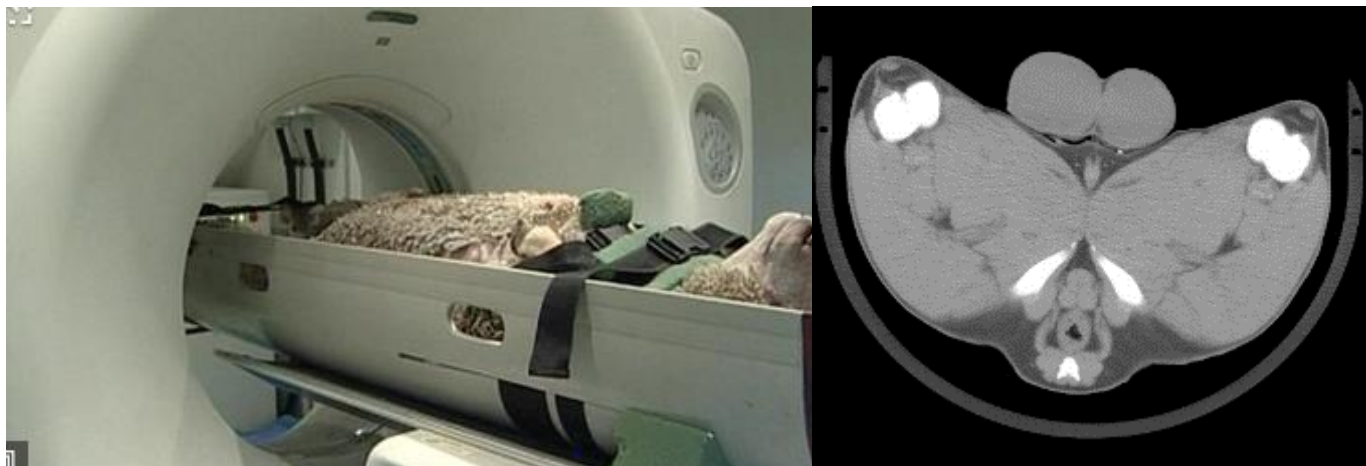
Farm software/EID



The European Agricultural Fund
for Rural Development:
Europe investing in rural areas



Scanning Technologies



CT – Too expensive for hill sheep?

Ultrasound
Meat Yield?

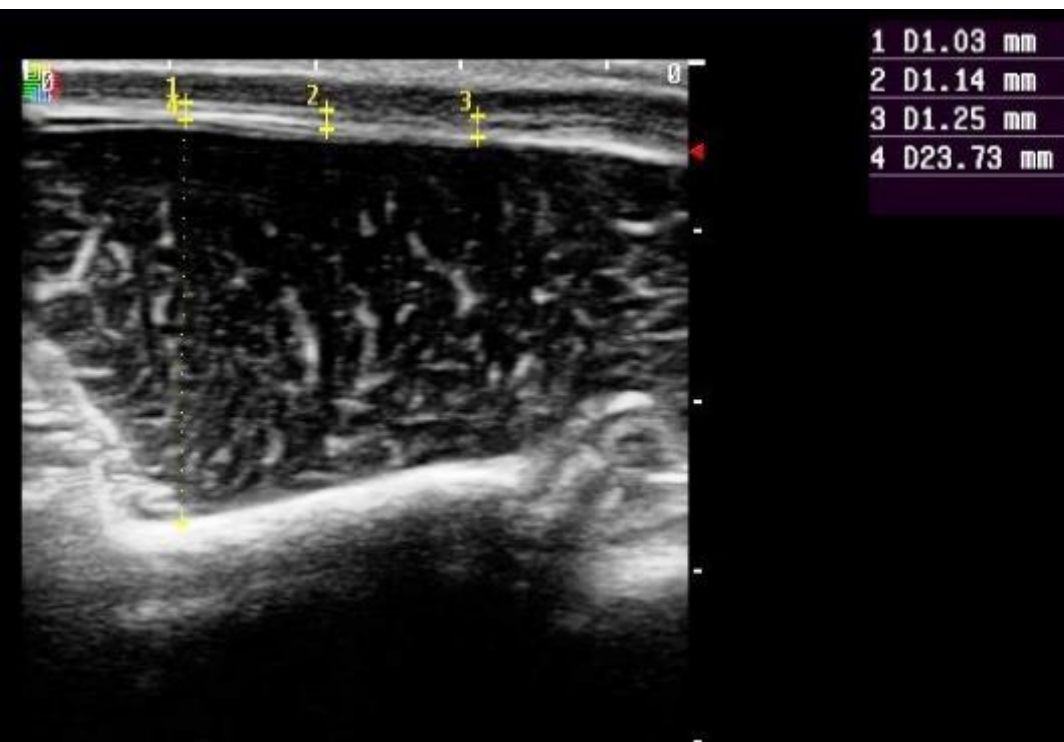


Scanning involves parting wool over the third lumbar vertebra, applying liquid paraffin to ensure acoustic contact and placing a transducer on the prepared site. This is adjusted until a clear image of the vertebra, eye muscle and fat layers can be seen. Linear measurements of fat and muscle depths are taken and downloaded to a computer.



The European Agricultural Fund
for Rural Development:
Europe investing in rural areas

Scanning Technologies



The European Agricultural Fund
for Rural Development:
Europe investing in rural areas

Dissemination Plan

- Events: Delivery of farm open days
 - 22nd August 2017 - Barry Wheldons
- Web: Progress, presentations, case studies and interim/final reports and results
- Press: Case studies and editorials for press, NFU / NSA / Sheep Breed Societies
- EIP Agri: The group will publish a final report that will be provided to the EIP Agri website.



The European Agricultural Fund
for Rural Development:
Europe investing in rural areas

Performance Recording

Thursday 15th June

Emma Steele

A large, stylized green wavy graphic that spans the bottom half of the slide. It consists of several overlapping, curved bands of different shades of green, creating a sense of movement and depth, reminiscent of rolling hills or a field.

What is Performance Recording?

- We combine pedigree and performance data to create estimated breeding values (EBVs) for individual animals
- This can:
 - Improve growth and carcase traits
 - Increase maternal efficiency
 - Enhance animal health and welfare
 - Reduce the carbon footprint of ruminant production

...For both pedigree and commercial breeders!



The European Agricultural Fund
for Rural Development:
Europe investing in rural areas



Genetics and the Environment

Health →

Age →

Age of Dam →



← Year / Season

← Nutrition

← Genetic Potential

- Permanent
- Cumulative
- Cost Effective



The European Agricultural Fund
for Rural Development:
Europe investing in rural areas

How do we assess performance?



The European Agricultural Fund
for Rural Development:
Europe investing in rural areas

EBVs and Breeding Indexes

EBV	Characteristic
Litter size Maternal ability	Maternal performance
Eight week weight Scan weight	Efficient growth
Muscle depth Fat depth	Saleable meat Lean meat yield
Ewe mature size	Efficiency



Hill Index what is involved?

- Growth (8 week weight and scan weight)
- Muscle depth
- Fat depth
- Litter size reared
- Milk (maternal ability)

← Priority



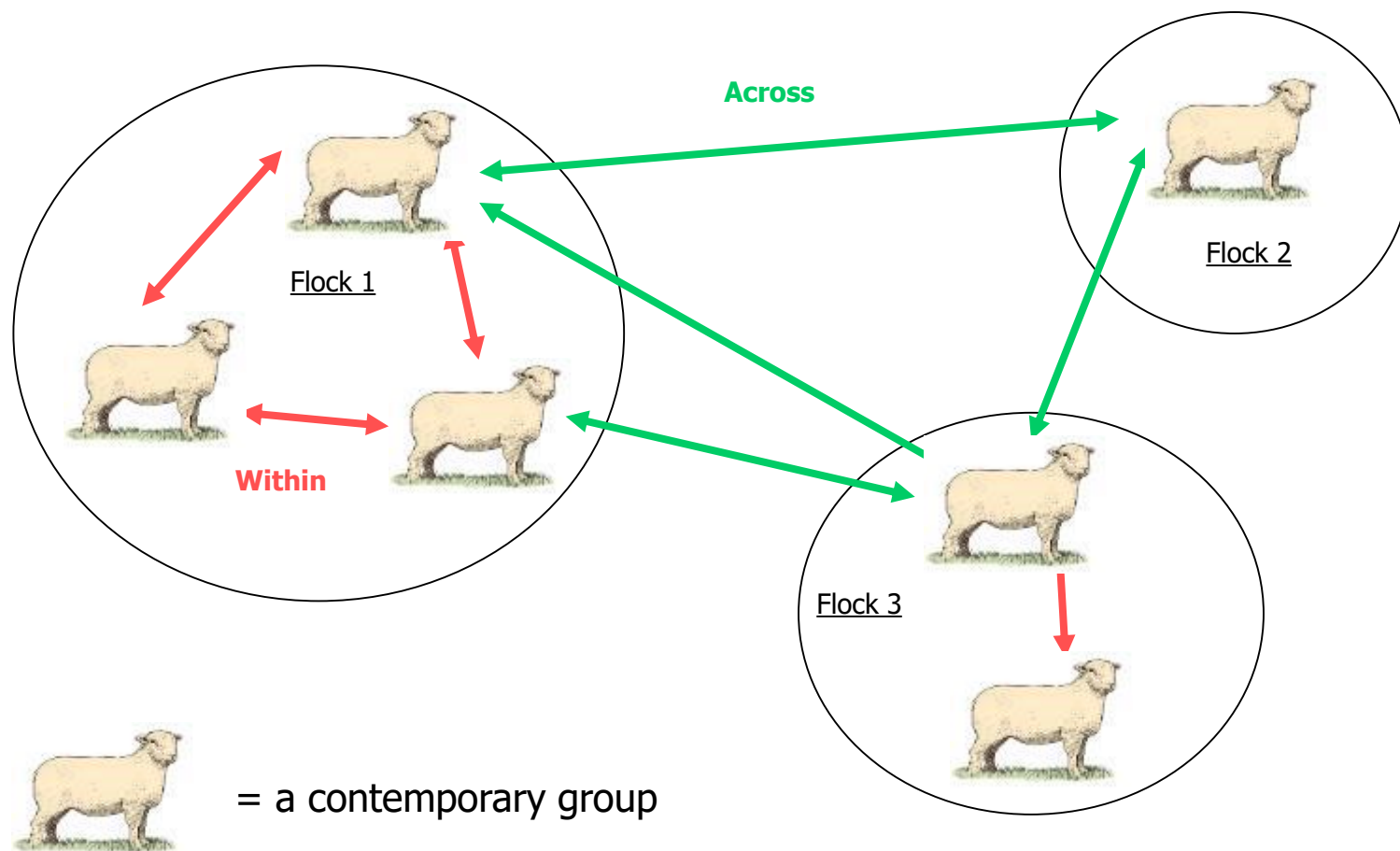
The European Agricultural Fund
for Rural Development:
Europe investing in rural areas

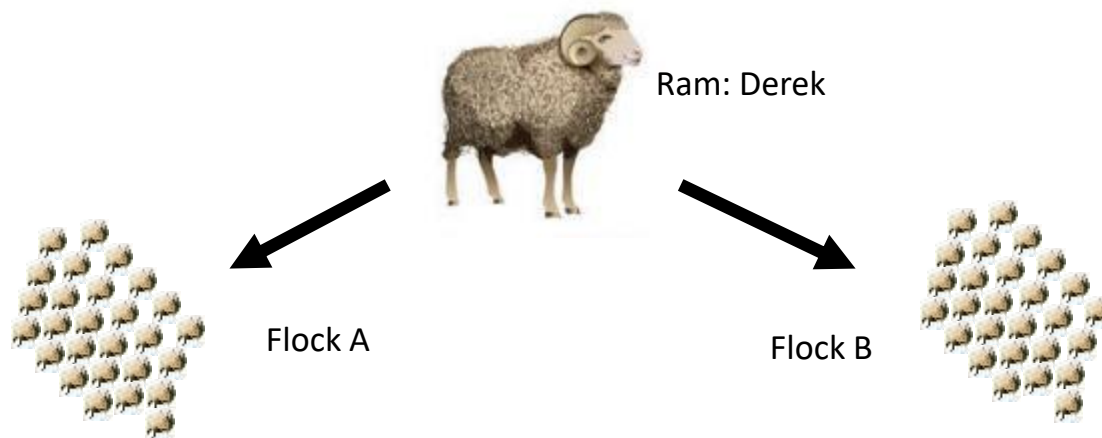
What do recording breeders do?

- Lambing data
 - Sire, dam, date of birth, sex, fostering
 - Optional: Birth weight / lambing ease
- 8 week weights
- Scan lambs using ultrasound
 - Remember management groups
- Ewe mature size



Comparing performance





The European Agricultural Fund
for Rural Development:
Europe investing in rural areas



Ram: Derek



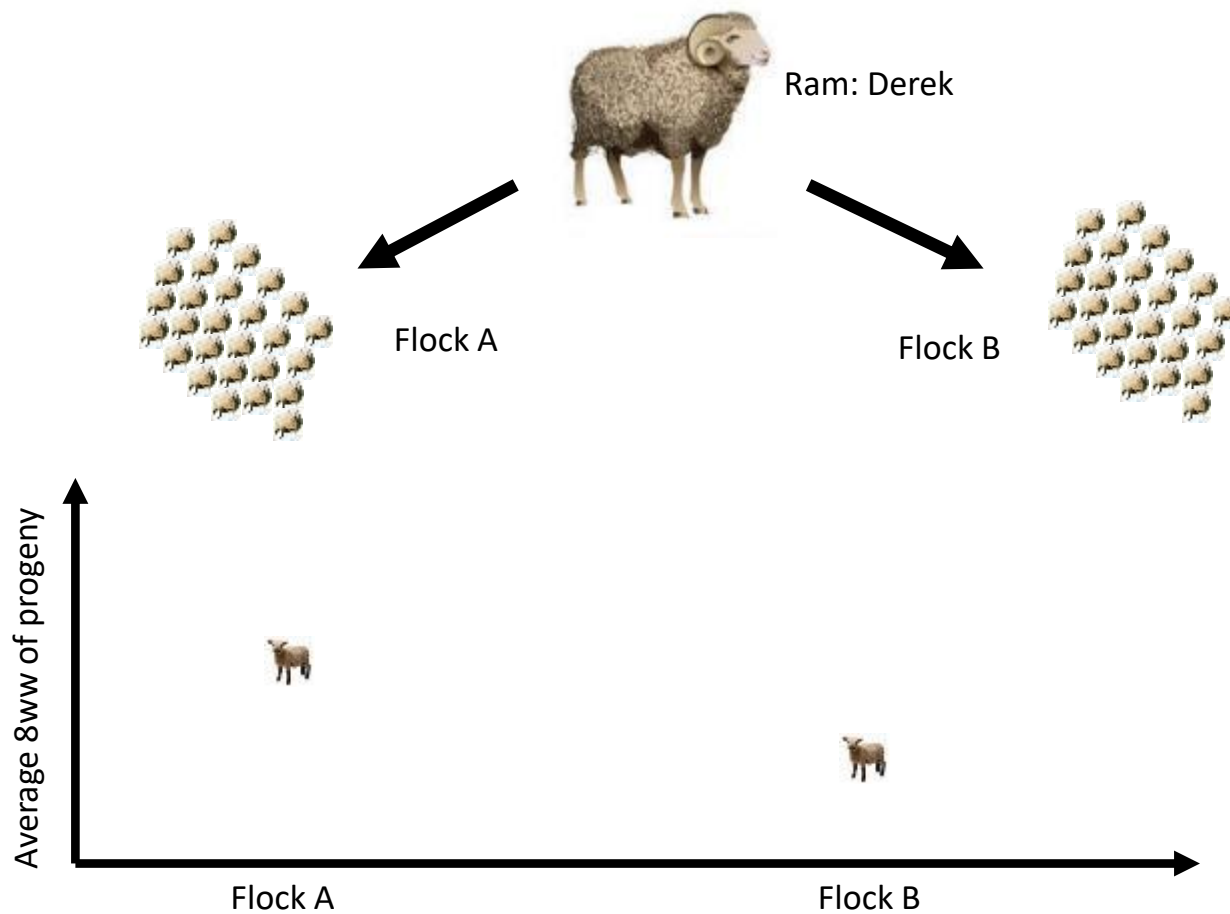
Flock A



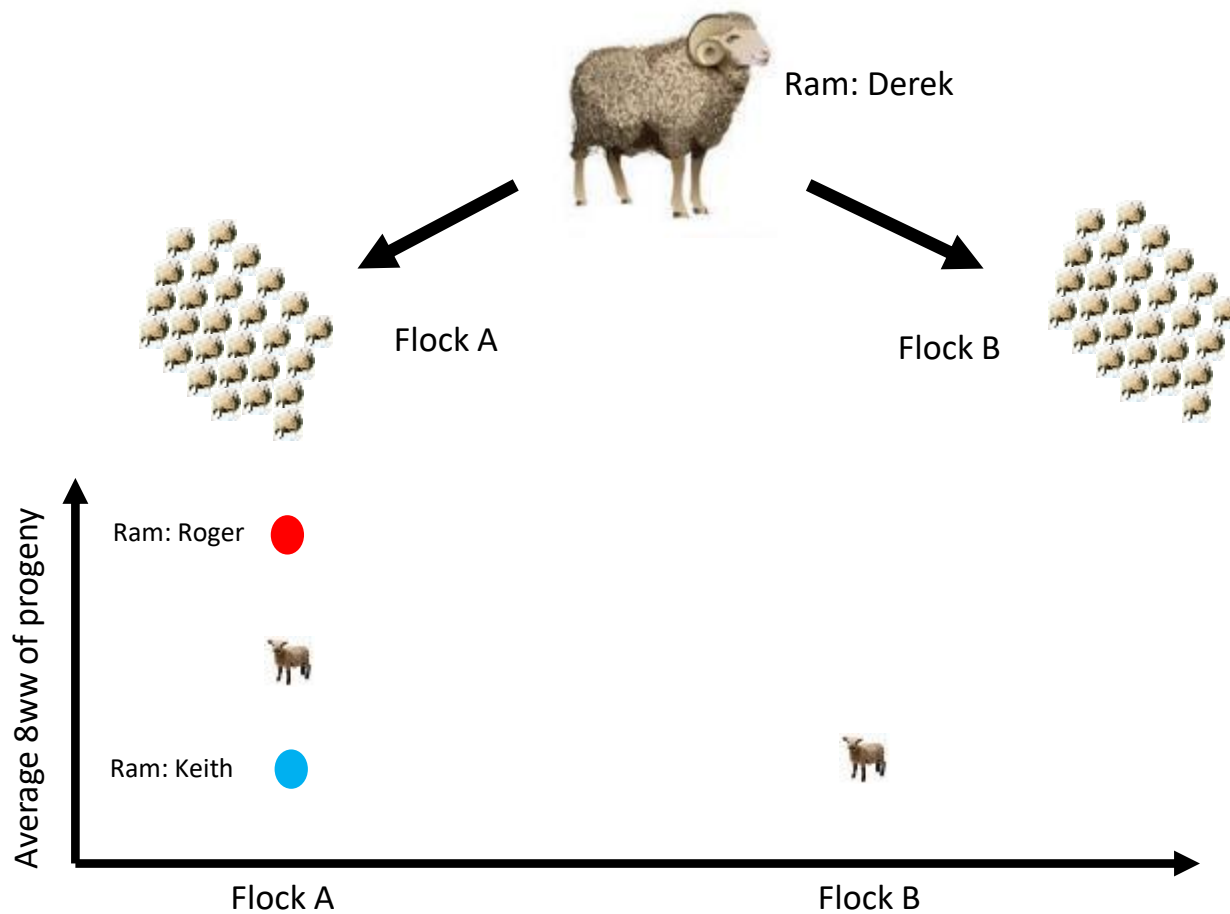
Flock B



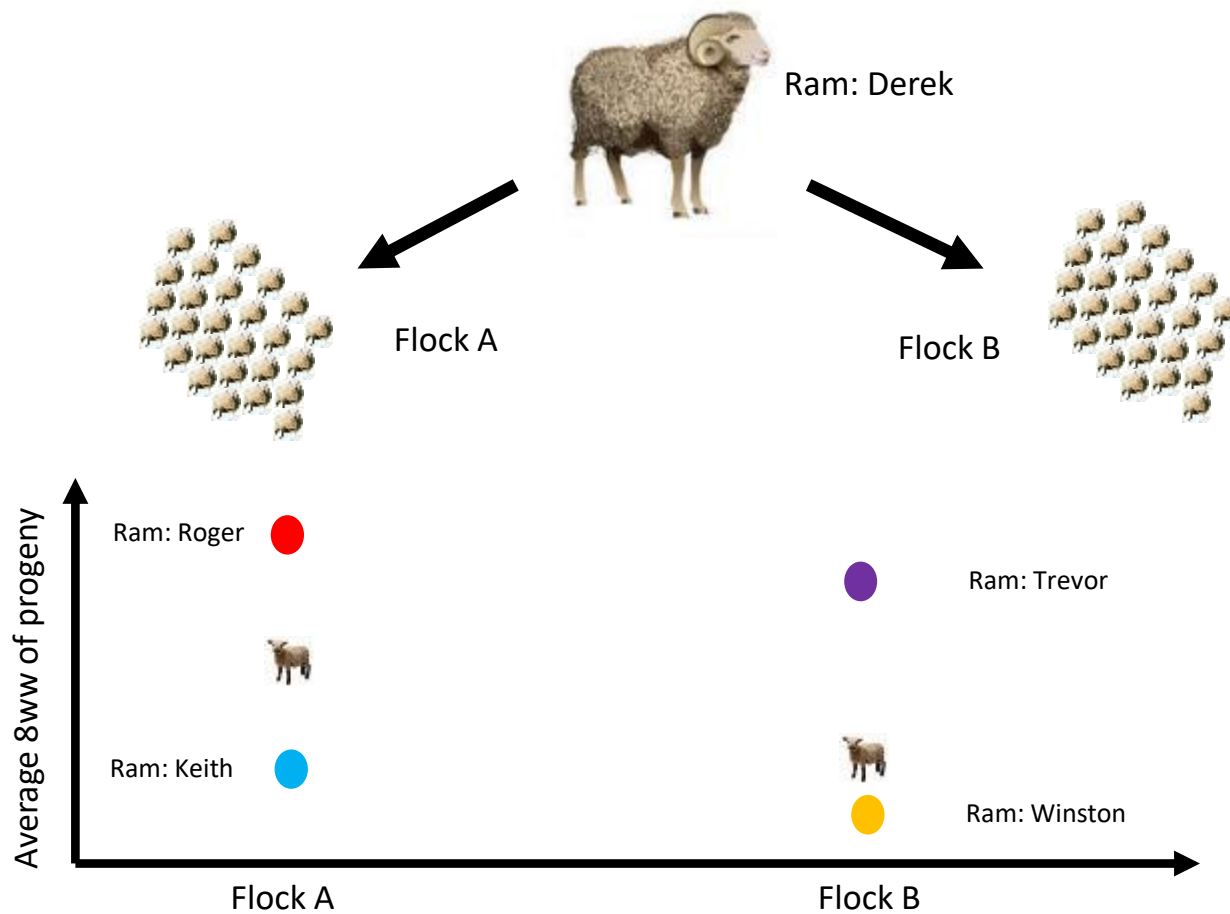
The European Agricultural Fund
for Rural Development:
Europe investing in rural areas



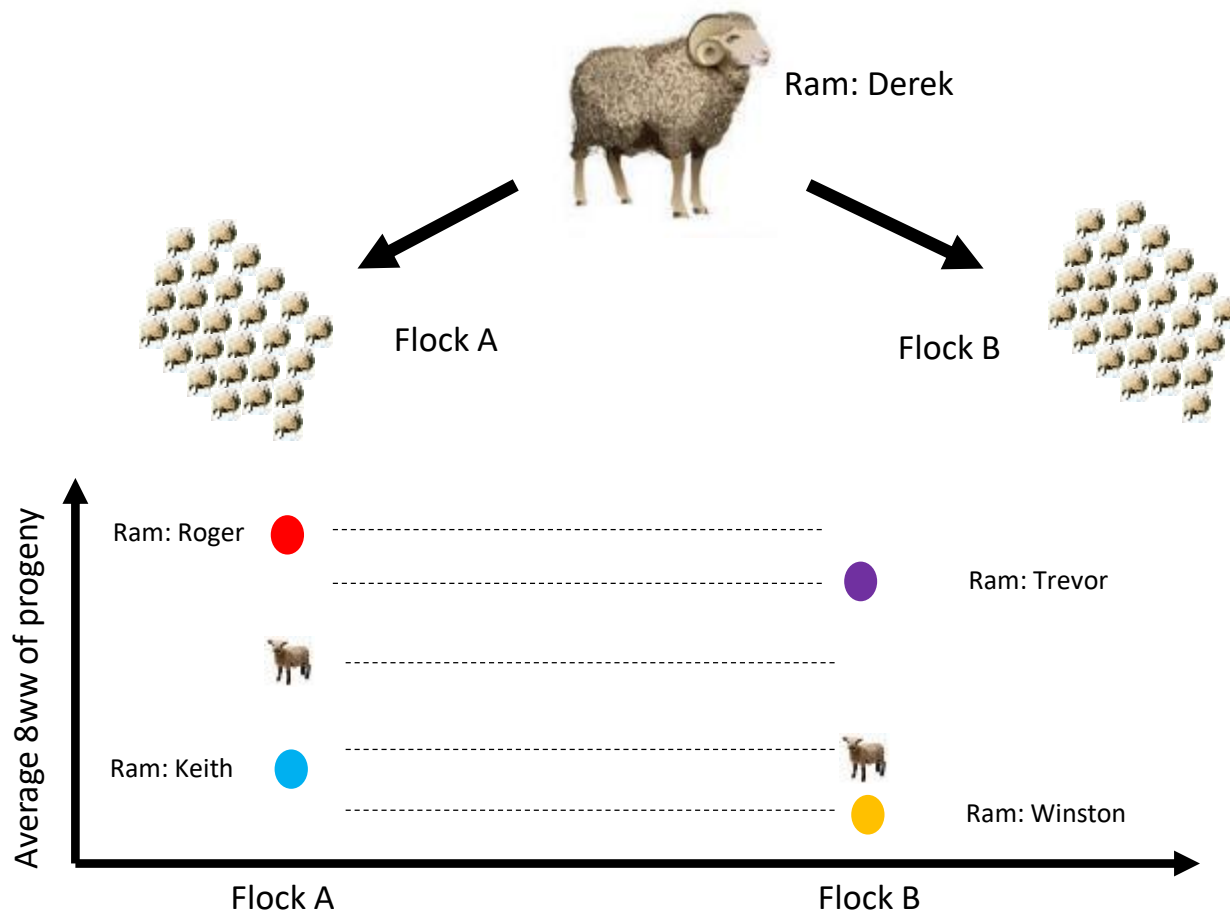
The European Agricultural Fund
for Rural Development:
Europe investing in rural areas



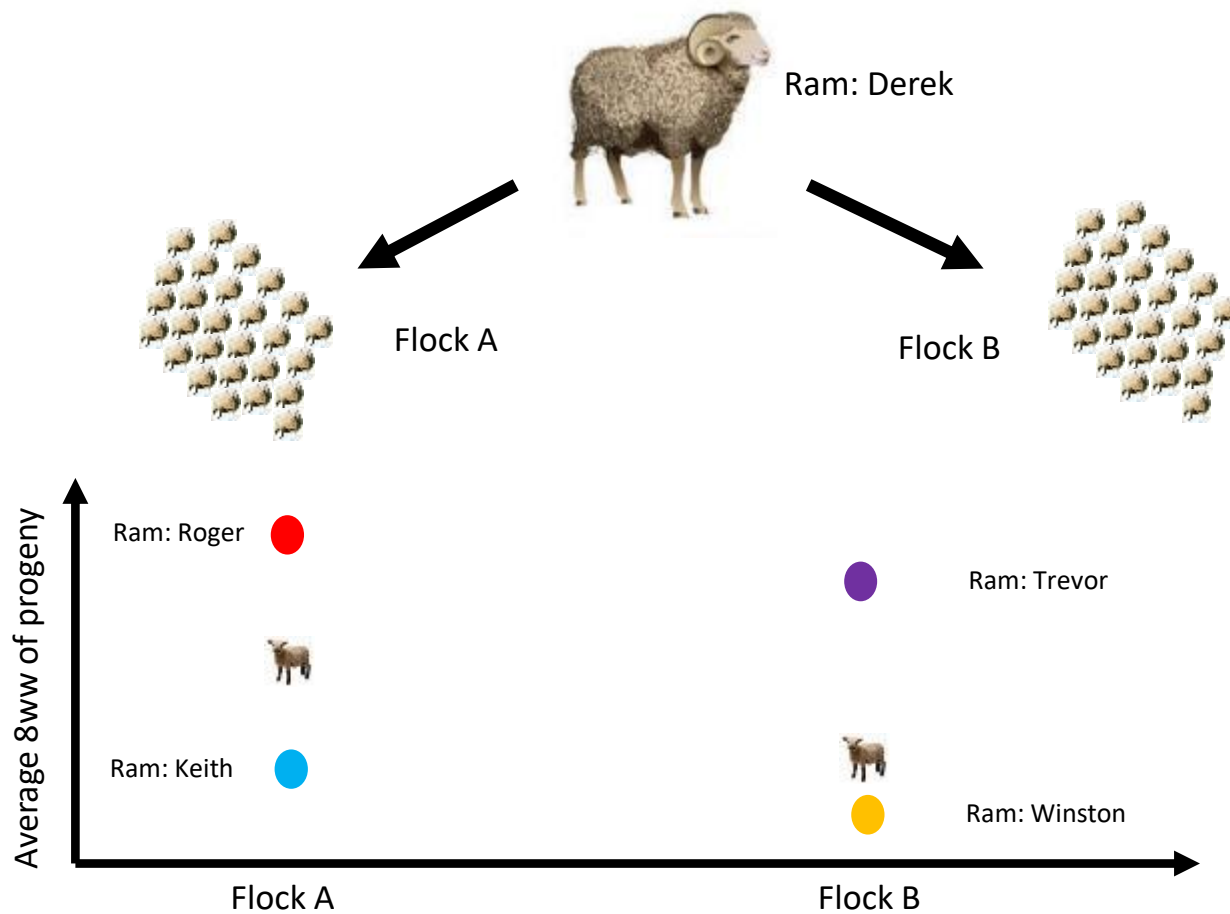
The European Agricultural Fund
for Rural Development:
Europe investing in rural areas



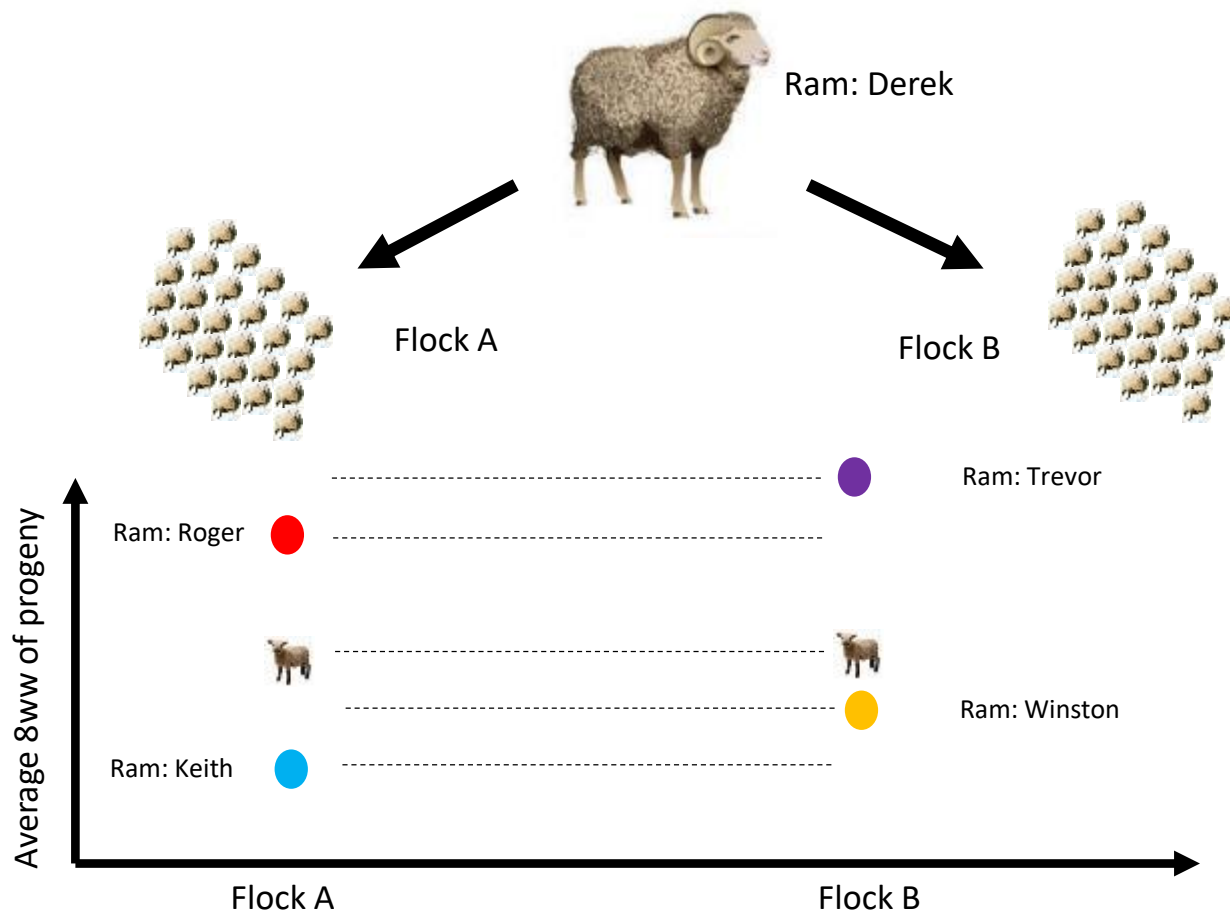
The European Agricultural Fund
for Rural Development:
Europe investing in rural areas



The European Agricultural Fund
for Rural Development:
Europe investing in rural areas



The European Agricultural Fund
for Rural Development:
Europe investing in rural areas



But remember!

- We must maintain our genetic diversity
- Select the best progeny from more than one ram
- Ensure replacements are still 'fit for purpose'
- This only is a single year of data – more data increases accuracy



Thankyou



The European Agricultural Fund
for Rural Development:
Europe investing in rural areas