

What can we glean from commercial flock data recording?

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Sheep Ireland & OviData



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Setting the scene

- Sources of sheep data are limited
- 700 in LambPlus (Providing 33% of rams needed annually)
- Data from the 700 LP flocks is good, but more is better!!
- Possible sources
 - More pedigree breeders.....
 - More research data.....
 - More commercial flock data.....



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Commercial data

What have we learned since SI began?

- Difficult to collect
- Assigning parentage is difficult
- Rewards are not immediately visible



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Infrastructure Development

How data can be captured has come along way!!



The image shows the 'Sign In to Sheep Ireland' web page. It includes the Sheep Ireland logo and website address at the top. The main heading is 'Sign In to Sheep Ireland'. Below this are input fields for 'User Name' (containing 'ewall@icbf.com') and 'Password' (masked with dots). There is a 'Sign In' button and a 'Stay Signed In' checkbox. A link for 'Forgot password?' is also present. At the bottom, it says '© Sheep Ireland' and provides support contact information: 'For Support: Email query@sheep.ie or telephone 023 882 0451 during business hours'.



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Commercial sources so far

MALP – Maternal Lamb Producers Group

- Using old DNA technology (micro sats)
- Tagged lambs at 40 days of age (first weighing/dose)
- Technology used not accurate enough to predict parentage
- Not value for money



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Commercial sources so far

CPT – Central Progeny Test

- Using AI (now also genotyping all lambs)
- Very accurate parentage
- High value data
- Critical to LambPlus
- Expensive to roll out on larger scale



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Other Options



SSM – Single sire mating

- Cheap way to assign parentage (good mating records critical)
- Ram raddling/harnesses to identify infertility/sub fertility
- Great control of breeding within a flock

Disadvantages

- Infertility risk – prolonging lambing
- More grazing groups at mating
- Tagging at birth is still needed to assign dams





Other Options - OviData

Back to DNA again!

- Now using 50,000 SNP chip
- Micro satellites used 14 SNPs for MALP parentage
- Currently we are using 800 SNPs to assign extremely accurate parentage



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OviData - General

- Project funded by the European Innovation Partnership (EIP) initiative
- EIPs are 5 year projects, administered by Irelands DAFM

EIP objectives

- Foster collaboration between farmers, scientists, advisors, NGOs etc
- Address specific issues or take advantage of new opportunities
- Road test new ideas to improve productivity, sustainability & efficiency



Irish EIP-AGRI Operational Groups



* The location points for each EIP-AGRI Operational Group relates to the group's Lead Partner, however the Operational Groups, in most cases are far reaching regionally and nationally. A specific indication of 'Geographical Location' for each group can be found in the EIP-AGRI Project Storyboard Database on the National Rural Network website, and also on the EIP-AGRI Service Point website.

OviData learnings so far

- Genomics works to predict parentage
 - Rapid turnaround of results (<1 month)
 - Highly accurate parentage predictions
 - Minimal errors
 - Working in large flocks
- Multi-sire litters
 - 28% of multiple litters had more than one sire!!!



Farmer benefit

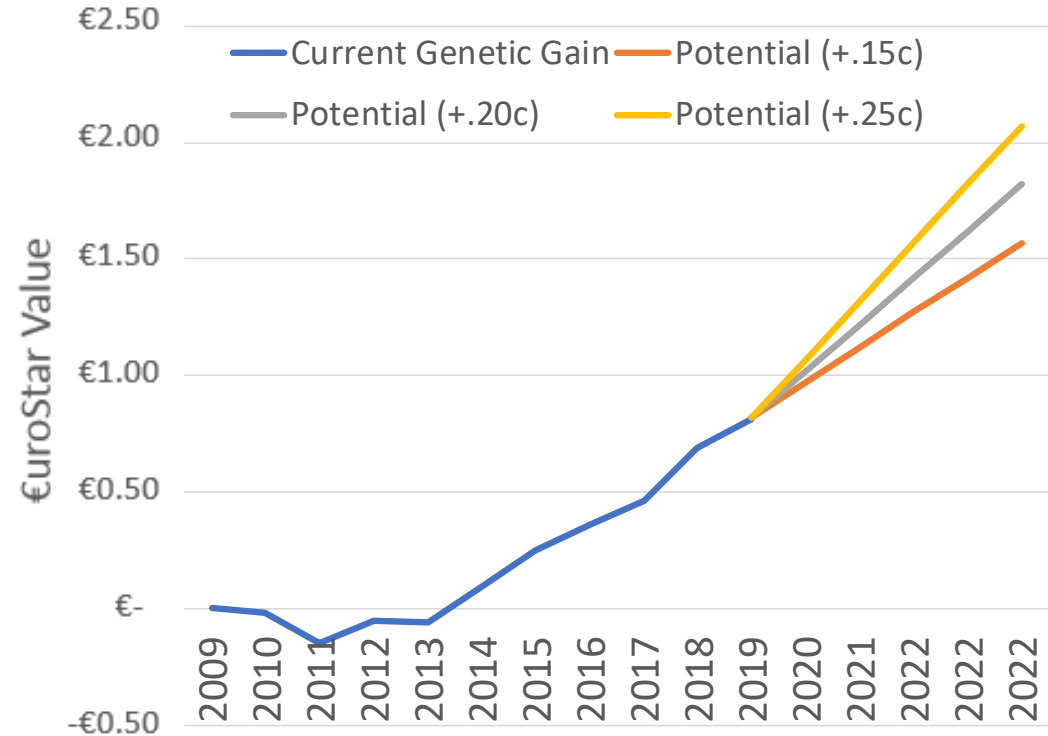
- Known parentage allows more informed breeding decisions
- Allows for genetic evaluations to be provided for each animal in the flock
 - Combines data from an entire bloodline
 - Allows rapid progress to be made
 - Data from numerous flocks combined
- Ram and ewe reports to aid in selection decisions



Index benefit

- Without our commercial data
 - No across breed indexes
 - Number of genotypes (currently 34K and building) would be extremely low
 - No health index
- Helping pedigree breeders to drive genetic gain for the benefit of all Irish sheep farmers!

Replacement Index genetic gain



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The Future???

- Progress now affords us options
 - To evaluate all data recording events
- Links now building with processors
 - Automated data transfer
- Removing the need to tag at birth?
 - DNA tag later in life
 - Capture DOB by reading ewe EIDs daily during lambing?
 - Cost of course being an issue here...
- Overall aim to remove barriers to commercial data recording – many already removed, more to come!



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