The evolving landscape of beef from the dairy herd: A perspective from Ireland

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Dairy herd birth trends

- 2023 Beef sired births now more than dairy sired
- 60% of beef carcasses now of dairy origin
- Herd size 69 to 101 cows
Sire recording levels

- Farmers did not see huge benefit to recording beef sires up to now
- AI replacing some of the natural service sire market
- National genotyping program will increase sire recording levels
Insemination trends

- Beef inseminations now close to dairy
- Sexed dairy semen on an upward curve
The challenge!

- Farmers prioritised calving traits, Milk and fertility over beef merit of calves
- Net stagnant carcass merit from dairy cow progeny
Even though!

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The proposed solution

A Trilogy of breeding tools

Farm best practice

Objectives

- €500/ha per hectare
- Beef and Dairy integration
- Improve beef merit of dairy-beef calves
- Promote best practices
  - Grass management, calf rearing, health
- Reduce environmental impact
Dairy Beef Index (DBI)

- Identifies beef bulls suitable for the dairy herd
  - Calving traits
  - Carcass traits
  - Carbon traits

- Launched in 2019
- Updated in 2023 to include age at slaughter, TB, Carbon
Mating advice

1. Farmer chooses sires and usage rates
   • Farmer chooses females for dairy, beef, culling, crossbreeding....

2. Linear programming algorithm factors:
   • Female predisposition to difficult calving + sire’s calving difficulty genetic merit
   • Hitting the carcass spec

3. Farmer can save on database and send to technician handheld

4. 42% of cows were put through Sire Advice in 2024
Commercial Beef Value and NGP

Thursday 08:18 Session 1a: Decision Support Tools of the Future – Promoting Sustainability Farm Management
Margaret Kelleher: The Commercial Beef Value (CBV) encourages the adoption of sustainable and profitable practices in beef production.

Thursday 16:45 Session 9: Genomic’s impact on Livestock Sustainability
Mark Waters: Unlocking Genetic Potential: The National Genotyping Programme for Ireland’s Cattle Herd
Progeny testing programme

**Common herds**
- 490 herds in dairy
- 614 herds in beef
- 290 herds in both
- 25 straws: 5x5
- ~22k straws

**Common sires**
- 44 sires in 2024 from 6 breeds
- 377 sires tested in both programs
Initiatives with Meat Processors

Genotyping

- Breed surety
- Genetic merit

Sensory attributes of meat

- Tenderness
- Juiciness
- Flavour

Climate

Leverage the database
Genetics, diet, systems

- Estimate Animal Growth Profile
- Predict Energy Demand (for Maintenance and Gain)
- Infer DMI using assumed diet energy density (MJ ME/kg DM)
- Predicted daily enteric CH₄ from DMI (different EF for different feeds)
- Predict other GHG (methane, ammonia, N₂O, NOₓ, CO₂)
Other initiatives.....

Methane PTAs

Improving male fertility

2024 Heterospermic semen field trial

- 2k greenfeed animals on TMR diet
- Expansion to grass diet phenotypes
- Cow phenotypes
Summary

- Dairy herd has expanded by ~24% since 2015
- Beef from dairy now 60% of all beef processed
- Strategy focusing on both beef sire and dairy cow beef merit
- Breeding goals for beef herd and dairy herd now more aligned
- Meat processors now engaged and see benefit of genetic solutions
- Utilizing the cattle breeding database for more than just genetic gain
Thank You