Complementarity of EBI and COW

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Performance
Performance

Breed from these??

Cull these
Gen 0

Gen 1

Gen 2

Top 90% - €18 higher EBI
Top 50% - €72 higher EBI
Top 25% - €114 higher EBI
9% voluntary culling rate $\rightarrow$ €86 more profit
Impact on genetic gain?

Bull sires: 34%  
AI sires: 23%

Bull dams: 40%  
Commercial cows: 3%

Correlation of 0.65

The Irish Agriculture and Food Development Authority
Achieving 5.5 lactations

- 18% replacement rate → 5.5 lactations
  - 9% involuntary
  - 9% voluntary
Future modifications?

- Heifers
- Non-seasonal herds
- Better use of health data
- DNA data to estimate heterosis
- Customised/herd-specific parameters or decision rules
Conclusions

• Complementary not replacement of EBI
  • Considers factors not directly transmitted to the next generation
• Useful tool to identify culling candidates
  • Component of new sire advice
• Under constant development
  • EBI revised 9 times since 2001