THE GLOBAL STANDARD FOR LIVESTOCK DATA

Euroopa Maaelu Arengu Põllumajandusfond: Euroopa investeeringud maapiirkondadesse

Integration of Interbeef EBVs in the Irish evaluation

ECAC conference – 13/05/2021

Thierry Pabiou – ICBF Ireland

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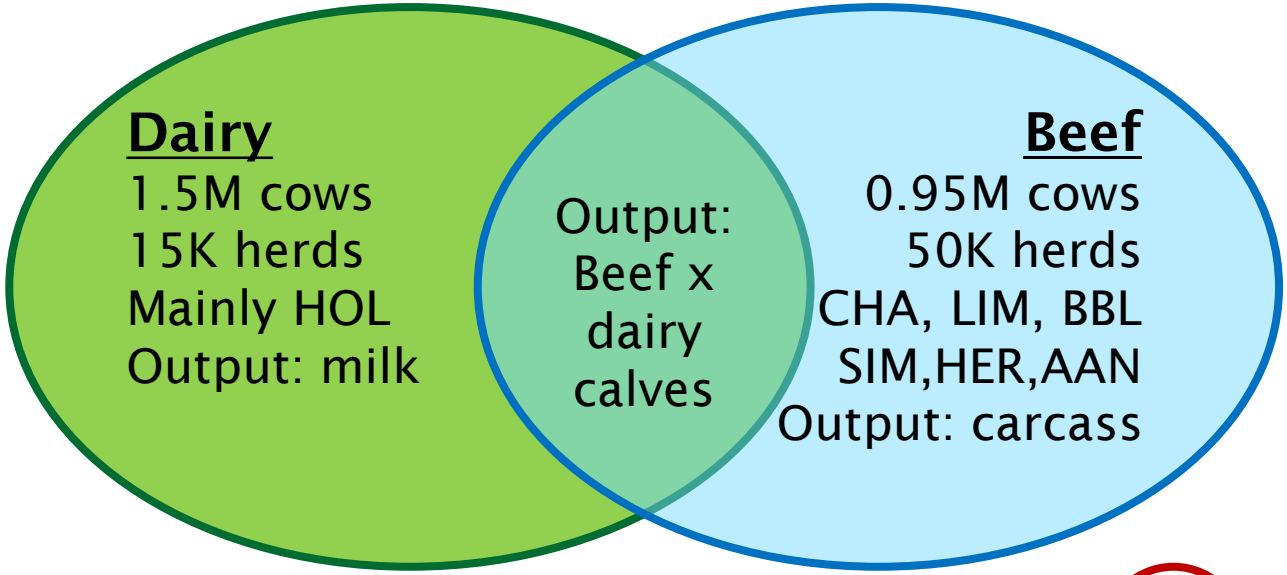
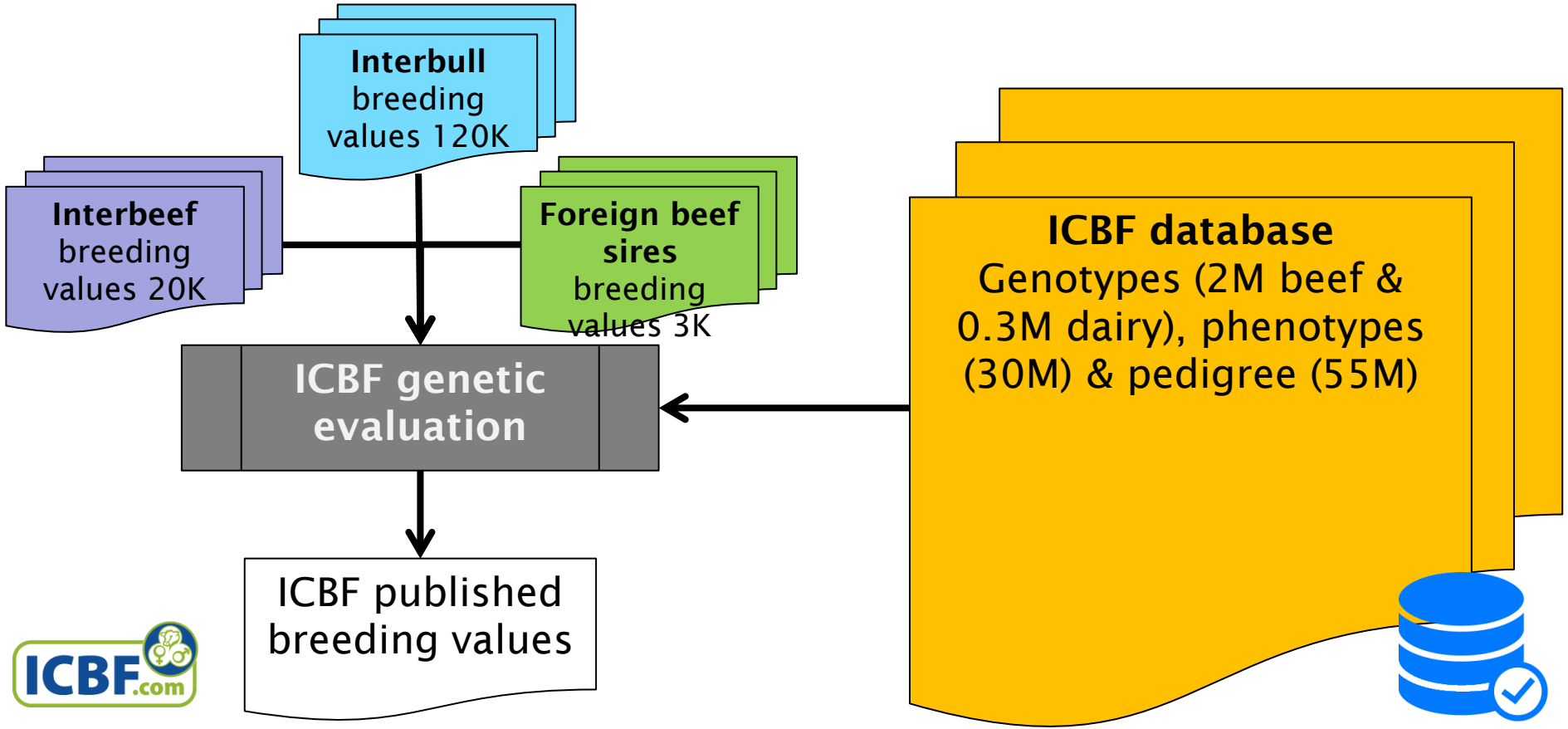
Irish farming overview

Euroopa Maaelu Arengu Põllumajandusfond: Euroopa investeeringud maapiirkondadesse



Evaluation overview



Objective

Euroopa Maaelu Arengu Põllumajandusfond: Euroopa investeeringud maapiirkondadesse

- Give Irish farmers access to the best genetics
  - Integrating Interbeef breeding values (and all foreign data) into the national evaluation

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Published method

Euroopa Maaelu Arengu Põllumajandusfond: Euroopa investeeringud maapiirkondadesse

Journal of Animal Breeding and Genetics

J. Anim. Breed. Genet. ISSN 0931-2668

ORIGINAL ARTICLE

An integration of external information for foreign stallions into the Belgian genetic evaluation for jumping h

J. Vandenplas[1,2], S. Janssens[3], N. Buys[3] & N. Gengler[1]

1 Animal Science Unit, Gembloux Agro Bio-Tech, University of Liège, Gembloux, Belgium
2 National Fund for Scientific Research, Brussels, Belgium
3 Livestock Genetics, Department Biosystems, Katholieke Universiteit Leuven, Heverlee, Belgium

Vandenplas *et al. Genetics Selection Evolution* 2014, **46**:59
http://www.gsejournal.org/content/46/1/59

GSE Genetics Selection Evolution

RESEARCH Open Access

Unified method to integrate and blend several, potentially related, sources of information for genetic evaluation

Jérémie Vandenplas[1,2*], Frederic G Colinet[1] and Nicolas Gengler[1]

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Review article

Strategies for comparing and combining different genetic and genomic evaluations: A review

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[b] *National Fund for Scientific Research, 1000 Brussels, Belgium*

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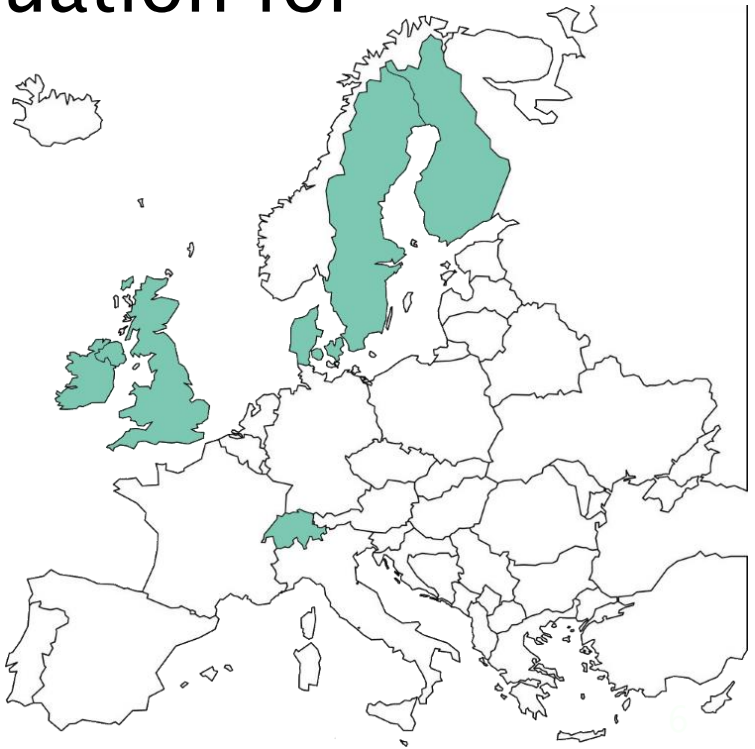
Carcass data

Euroopa Maaelu Arengu Põllumajandusfond: Euroopa investeeringud maapiirkondadesse

- Interbeef carcass pilot evaluation for Limousine
- October 2020
  - CHE 94K beef & dairy-cross
  - DFS 215K beef
  - GBR 89K beef & dairy-cross
  - IRL 900K beef & [illegible]oss



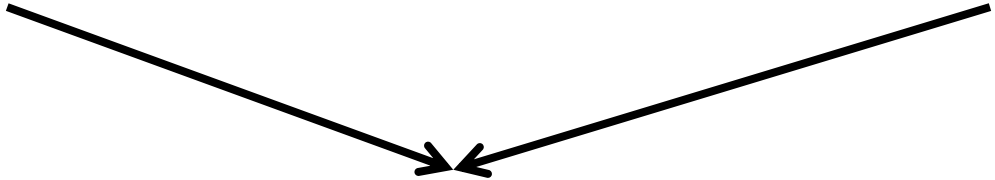
Process

Euroopa Maaelu Arengu Põllumajandusfond: Euroopa investeeringud maapiirkondadesse

- Creating pseudo-phenotypes from EBVs
  - **DRP** (DeRegressed Proof) = Parent Average +(EBV-PA)/rel(EBV|PA)
- Creating weighing factor from reliability
  - **ERC** (Equivalent Record Contribution) build from pedigree and h^2 – can be computes as λ*(rel/(1-rel.))

Process

- **Interbeef evaluation**
  - Computed DRP and ERC
- **Reduced national evaluation**
  - Compute DRP0 and ERC0

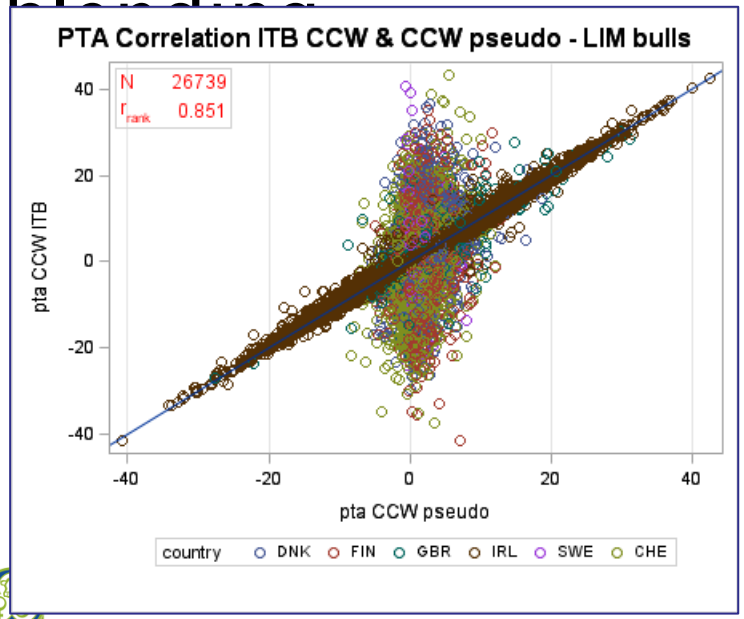


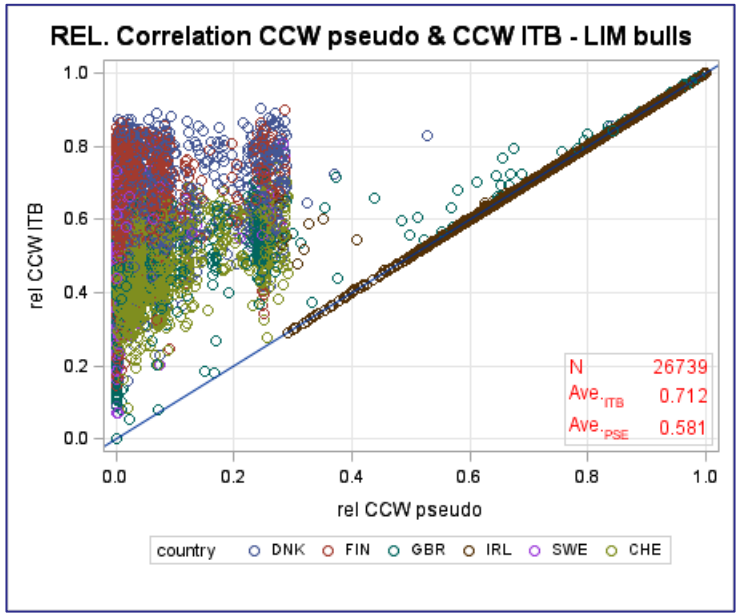
Compute DRP* (and ERC*)
(free of x2 counting)
for ~9K foreign sires with phenotypes and ERC* >0.5

Blend DRP* (weighed by ERC*)
into reduced national evaluation

Interbeef & national EBVs

- Carcass weight on IRL scale* before blending

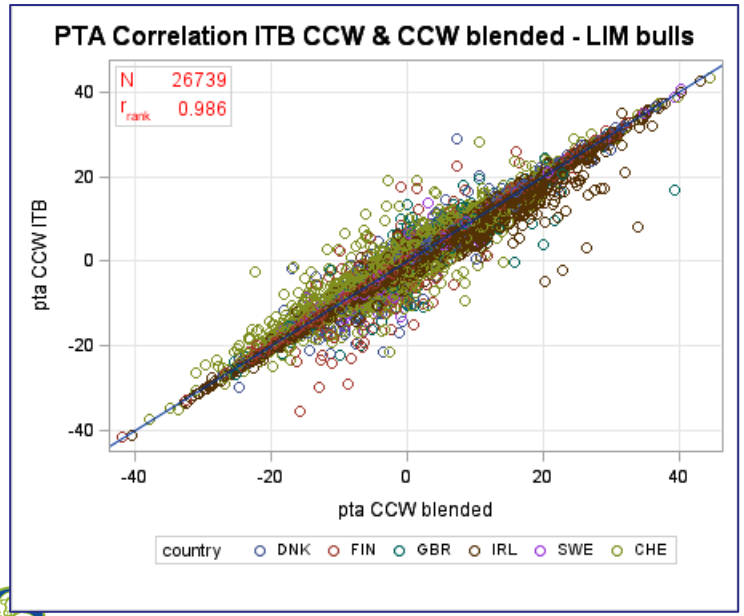


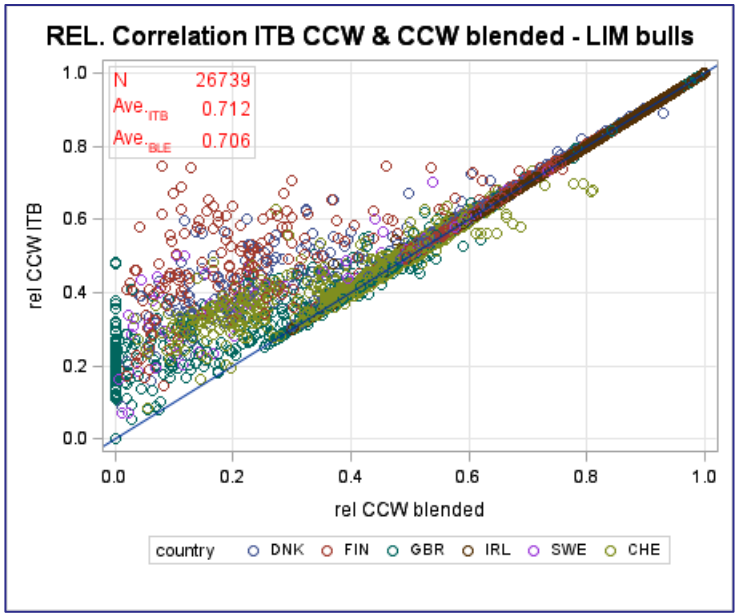


*Limousin bulls with 10+ desc. in Interbeef

Interbeef & blended EBVs

- Carcass weight on IRL scale* after blending





*Limousin bulls with 10+ desc. in Interbeef

Conclusion

Euroopa Maaelu Arengu Põllumajandusfond: Euroopa investeeringud maapiirkondadesse

- 9K sires with international information added to the national evaluation for carcass
  - Increased reliability
- Integrating foreign data as DRP is efficient
  - Foreign data impact filters down to progenies via evaluation