

# International beef evaluation for Carcass traits

Fernando Macedo Interbull Open Meeting 2023, Lyon, France







# Outline

- Interbeef at a glance
- Carcass traits
- From R&D to a Service
- Impact on other traits' evaluations:
  Genetic Groups
- Next steps







# Interbeef at a glance

### Interbeef evaluations

- Adapted to the beef industry
  - Low use of A.I. within herds (10-15%)
  - Low connection across country
- AMACI\* model (Phocas et al., 2005)
  - Use of phenotypes
  - Different models for each country
  - Across country co-variances

\*Animal Model accounting for Across Country Interactions



# Interbeef at a glance

### Research and development

- Done by participating countries and Interbull Centre
  - Calving Czech Republic
  - Animal weaning weight Ireland
  - Carcass Great Britain & Ireland
  - Female fertility Germany
- Development of models and pipelines
- Process: Research > Pilot > Test > Routine



# Carcass trait

### A goal since the beginning of the Interbeef WG

Survey NGEC GBR (SRUC) (May 2014)







# Carcass traits particularities



- Carcass weight & carcass quality
- Males, females and steers (EUROP: A, B, C, D, E)
- Trait definition can differ between EU and non-EU countries (different grades)
- Crossbreed animals
- No maternal effect
- Multi-trait models considering also weaning weight



# Recorded Traits - survey 2014



	CHE	CZE	DNK	FIN	SWE	FRA	GBR	IRL
C. Weight	<b>√</b>	<b>√</b>	✓	<b>√</b>	<b>√</b>	<b>√</b>	✓	<b>√</b>
C. Conformation	<b>√</b>	✓	✓	<b>√</b>	<b>√</b>	<b>√</b>	✓	<b>√</b>
C. Fat	<b>√</b>	✓	✓	<b>√</b>	<b>√</b>	<b>√</b>	✓	<b>√</b>
Individual Primal Cuts							$\checkmark$	<b>√</b>
Total meat yield								<b>√</b>
Tenderness								<b>√</b>
Age at slaughter						<b>√</b>		



### Recommendations



### Recommended starting with:

- Carcass weight
- Carcass conformation
- Carcass fat



- Research runs started by Ireland
  - Traits: carcass weight, conformation and fat
  - First data call September 2018
  - Countries: Denmark, Finland, Sweden, Switzerland, Great Britain (GBR) and Ireland (IRL)
  - Breeds: Limousin, Charolais and Simmental

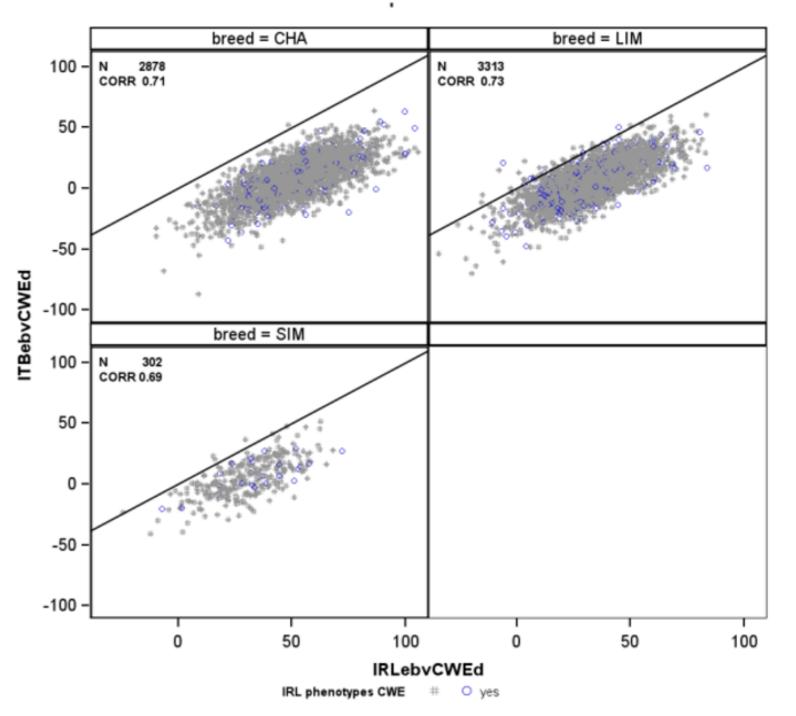


#### Last research run December 2022

Results were considered satisfactory

#### Comparison of ITB (ITBebvCWEd) & IRL (IRLebvCWEd) EBVs

Reliability of trait ITB > 0.70 and IRL > 0.70





### Test run April 2023

Participants GBR and IRL

#### **Performances**

	CHA Total: 1,620,279			IM ,619,571	SIM Total: 450,708	
	GBR	IRL	GBR	IRL	GBR	IRL
CWE, CFA, CCO	151,593*	388,500*	153,600*	386,257*	102,006*	48,230*

<sup>\*</sup> per each trait

### Pedigree/EBVs

	СНА	LIM	SIM
Animals	1,232,423	1,276,613	361,419



#### 1<sup>st</sup> Routine run October 2023

Carcass traits are prime goals trait in Ireland. The Interbeef evaluation for carcass traits will expand the capacity for farmers and the industry to select the best bulls to optimise profit (ICBF)

Inclusion of carcass traits in Interbeef will enhance our national evaluations for these traits and make the Interbeef service more relevant to our breeders (AHDB)



## Impact on other traits' evaluation

Inclusion of Genetic Groups

Discussion started in the Carcass WG

Implementation extended also to other evaluated trait groups



# Next steps

- Genomic Evaluation
- New countries
- Expand to more breeds
- Age at Slaughter (GenTORE)
- Beef on dairy



### Acknowledgements

Kim Matthews and Harriet Bunning (AHDB)

Ross Evans and Thierry Pabiou (ICBF)

Thank you!