



IRISH CATTLE BREEDING FEDERATION

# Interbeef: past, present, and yet to come



Thierry Pabiou (ICBF)

ICBF & Sheep Ireland  
Genetics Conference 2018

Wednesday & Thursday  
5th & 6th December  
Hodson Bay Hotel,  
Athlone



'Sustainable Farming –  
Progress through Genetics'



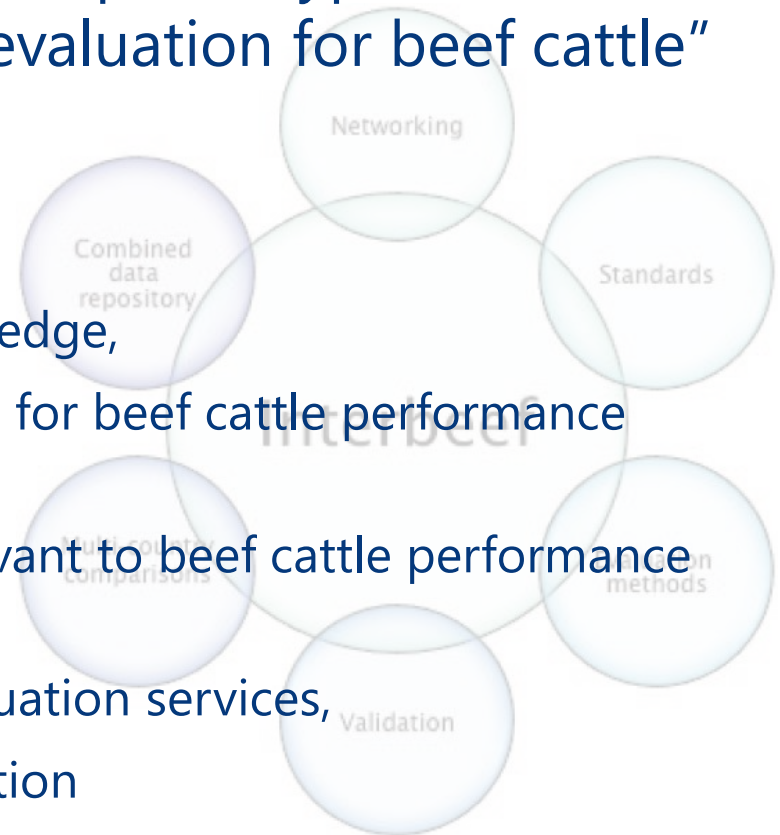
Department of  
**Agriculture,  
Food and the Marine**  
An Roinn  
**Talmhaíochta,  
Bia agus Mara**

# ?? Interbeef ??

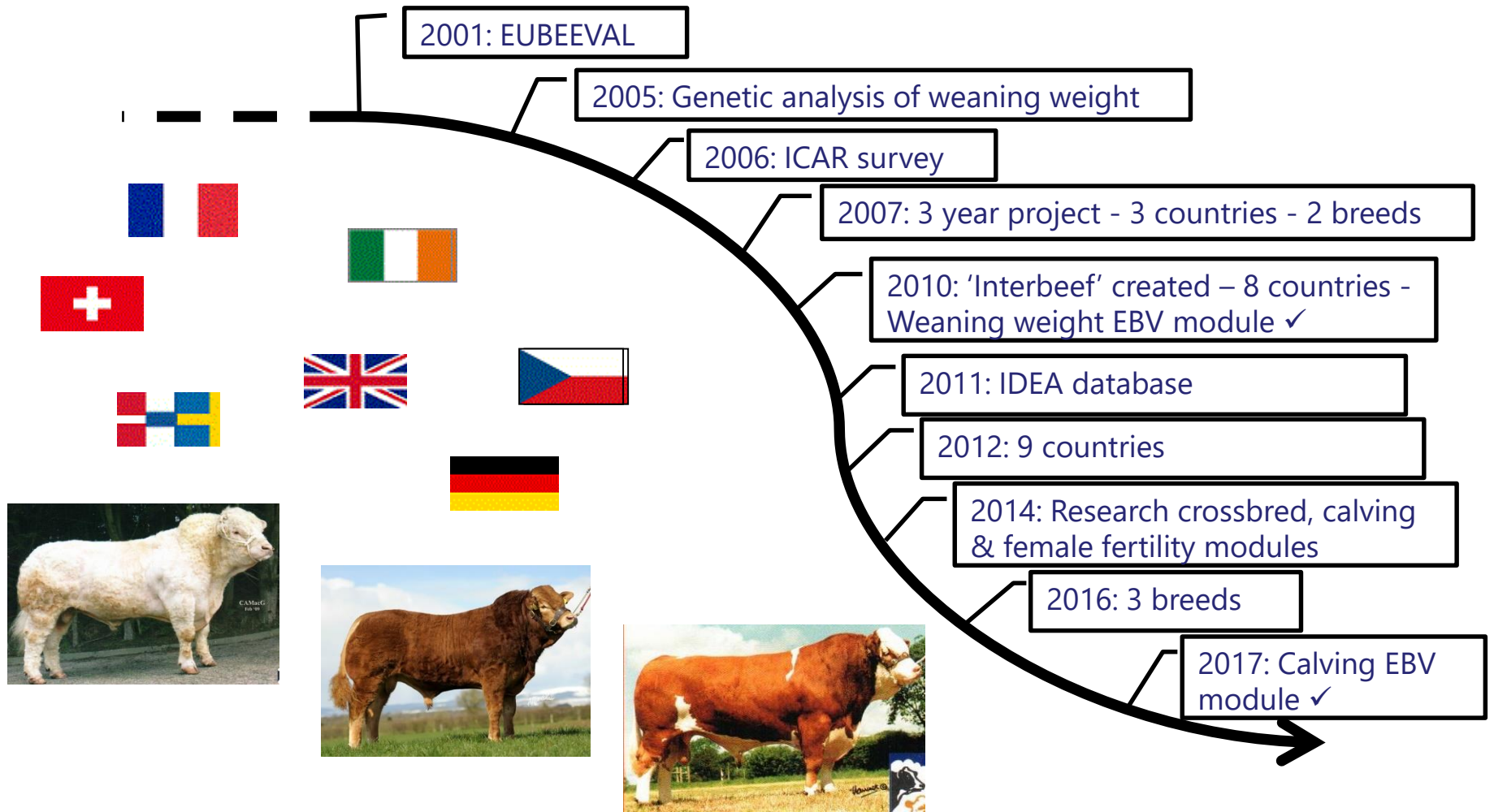
“Some countries bringing together phenotypes and pedigree into a unique genetic evaluation for beef cattle”

## 5 objectives

- To provide a forum for sharing knowledge,
- To maintain guidelines and standards for beef cattle performance recording,
- To conduct international surveys relevant to beef cattle performance recording,
- To develop international genetic evaluation services,
- To facilitate the use of genomic selection



# Interbeef Past



# Interbeef Present

- 2018 March test-run for weaning weight



- Charolais from South-Africa
- Using phenotypes from crossbred animals



- 2018 September test-runs for weaning weight



- Charolais & Limousin from Australia
- Angus from Ireland, Germany, Czech Rep., and Denmark-Finland-Sweden
- Hereford from Ireland, Germany, Czech Republic, and Denmark-Finland-Sweden



# Interbeef Evaluations

- 2 official routine runs (Jan. Sep.)
  - 3 breeds (Charolais, Limousin, Simmental)
  - 2 modules (weaning weight, calving)
- 2 test-runs (Mar. Oct.)

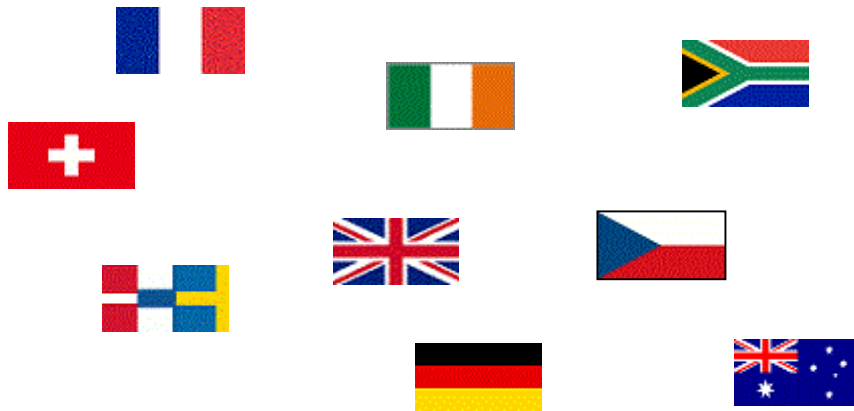
Records used in the 2018 January Interbeef run

		Limousine			Charolais			Simmental
		Weaning weight	Calving score	Birth weight	Weaning weight	Calving score	Birth weight	Weaning weight
Phenotypes	France	2,730,993	4,962,960	4,992,395	4,572,219	8,738,175	8,750,706	
	Ireland	21,676	214,350	19,532	22,843	222,072	38,320	5,832
	Great Britain	137,274	154,984	204,011				
	Germany	89,828			92,640			112,751
	Switzerland	36,440			12,007			10,610
	Czech Republic	12,679	17,756	17,756	39,320	59,149	59,149	
	DFS*	91,628	281,185	211,645	173,423	298,493	271,760	72,675
<b>Pedigree</b>		3,492,314	6,165,629		5,703,603	10,342,119		300,098

DFS\* = Denmark, Finland, Sweden

# Interbeef output

- 9 member countries = 9 EBV scales
- Following Interbeef publication rules



	Irish scale		French scale	
	EBV	Rank	EBV	Rank
bull A	40.2	1	32.4	2
bull B	35.4	2	38.5	1
bull C	20.3	3	23.4	3
bull D	-10.2	4	-6.2	5
bull E	-16.3	5	-2.4	4

G x E

# Interbeef Top A.I. bulls<sup>^</sup> (1/2)

Direct weaning weight

	B.year	ITT	Name	N prog.	EBV*	Rel.	Used in Ireland?	
Angus	1	2002	AANDEUM000983874031	<b>MERKUR</b>	258	40.9	51%	<b>N</b>
	2	2009	AANGBRM302307400489	NIGHTINGALE EL PASO J489	29	36.8	62%	<b>Y</b>
	3	2010	AANIRLM191198990436	GOULDING JUMBO KING K436 ET	485	30.2	96%	<b>Y</b>
	4	1996	AANUSAM000012758219	<b>ANKONIAN ELIXIR 100</b>	211	28.3	53%	<b>N</b>
	5	2012	AANGBRM545022300195	RETTIES JFK	4	26.7	24%	<b>Y</b>
Charolais	1	2006	CHAFRAM001001837008	BASTION	4409	72.7	71%	<b>Y</b>
	2	2000	CHAFRAM004527660269	RHODANIEN	233	48.8	67%	<b>Y</b>
	3	2002	CHAFRAM007957090255	TAMILLY	5677	48.4	75%	<b>Y</b>
	4	1993	CHAFRAM000393100604	IGLOO.MIC	457	45.8	83%	<b>Y</b>
	5	2010	CHAFRAM005501038565	<b>FLABAS</b>	939	45.2	65%	<b>N</b>
Hereford	1	2011	HERIRLM151225380268	ALLOWDALE RAMBO ET {HYF}	30	34.5	70%	<b>Y</b>
	2	2006	HERGBRM009331322887	SOLPOLL 1 DYNAMITE	58	30.5	43%	<b>Y</b>
	3	2013	HERIRLM006995701417	MOESKAER PACMAN 1417	2	25.9	16%	<b>Y</b>
	4	2008	HERCANM000C02923622	HARVIE DAN HIDALGO ET 193U	18	24.9	27%	<b>Y</b>
	5	2013	HERGBRM562010701002	ROMANY 1 LAWBREAKER RE L 23	25	24.3	45%	<b>Y</b>
Limousine	1	2000	LIMFRAM001627496661	RECIF	1476	56.8	79%	<b>Y</b>
	2	2004	LIMFRAM001602801047	<b>VAZY ED</b>	288	51.0	68%	<b>N</b>
	3	2006	LIMFRAM005454765999	<b>BRESIL</b>	438	49.5	64%	<b>N</b>
	4	2007	LIMFRAM001208099630	CHATELAIN	1823	47.2	76%	<b>Y</b>
	5	2009	LIMFRAM008609549654	<b>ENZO</b>	226	45.9	62%	<b>N</b>
Simmental	1	2011	SIMDNKM002517101555	LINDE GENERAL P	148	54.4	59%	<b>Y</b>
	2	2008	SIMIRLM221283310660	CLONAGH WILLIE-WONKA	0	49.8	42%	<b>Y</b>
	3	2006	SIMDEUM001260105246	HOENESS	852	45.3	69%	<b>Y</b>
	4	2001	SIMDNKM004134400241	LYKKE SIRIUS P	447	39.4	70%	<b>Y</b>
	5	2003	SIMDNKM008018500096	HEDETOFT UNITED P	811	39.3	69%	<b>Y</b>

# Interbeef Top A.I. bulls<sup>^</sup> (2/2)

Maternal weaning weight

		B.year	ITT	Name	N prog.	EBV*	Rel.	Used in Ireland?
Angus	1	2010	AAN <b>DEUM</b> 0000665196323	<b>NEW YEAR</b>	204	17.0	30%	<b>N</b>
	2	1996	AAN <b>USAM</b> 000012758219	<b>ANKONIAN ELIXIR 100</b>	211	13.5	52%	<b>N</b>
	3	2003	AAN <b>CZEM</b> 000010484031	<b>LIPNO ZDB 126N</b>	238	12.6	45%	<b>N</b>
	4	2012	AANIRLM151739581206	MOGEELY JOSH	7	12.2	20%	<b>Y</b>
	5	2007	AANGBRM302307400405	PROUD JAK	33	10.4	34%	<b>Y</b>
Charolais	1	2006	CHA <b>FRAM</b> 001001837008	BASTION	4409	30.5	53%	<b>Y</b>
	2	1998	CHA <b>FRAM</b> 008598107586	<b>ORLANDO</b>	354	29.6	39%	<b>N</b>
	3	2002	CHA <b>FRAM</b> 007957090255	TAMILLY	5677	28.8	63%	<b>Y</b>
	4	2006	CHA <b>FRAM</b> 004241203929	<b>BALTRAP</b>	1862	24.8	48%	<b>N</b>
	5	2003	CHA <b>FRAM</b> 008907593424	<b>ULTRA</b>	211	24.0	37%	<b>N</b>
Hereford	1	2001	HERIRLM251104720370	TRILICK BEST	147	9.0	59%	<b>Y</b>
	2	2013	HERIRLM301104011614	BALLYVILLE HAMLET	23	8.9	28%	<b>Y</b>
	3	2012	HERGBRM185962500018	MOORSIDE 1 JOSEPH {HYF}	4	8.3	11%	<b>Y</b>
	4	2006	HERGBRM009331322887	SOLPOLL 1 DYNAMITE	58	6.9	29%	<b>Y</b>
	5	1996	HERIRLM000LWWP02128	CLOONBRACKEN PERFORMER	29	6.0	25%	<b>Y</b>
Limousine	1	1998	LIM <b>FRAM</b> 004899032237	OBIWAN	2890	21.3	63%	<b>Y</b>
	2	2001	LIM <b>FRAM</b> 005703153135	<b>SARAZIN</b>	237	20.1	46%	<b>N</b>
	3	2006	LIM <b>FRAM</b> 001526937101	<b>BAOBAB</b>	291	17.4	46%	<b>N</b>
	4	1998	LIM <b>GBRM</b> 0000PB98-008	<b>COCKLESHELL OLYMPUS</b>	209	17.0	40%	<b>N</b>
	5	2006	LIM <b>FRAM</b> 003615027044	BOLERO KB	24	15.9	30%	<b>Y</b>
Simmental	1	2004	SIM <b>DEUM</b> 000937631910	STEINADLE	1298	19.7	76%	<b>Y</b>
	2	2008	BSM <b>DEUM</b> 001267263655	<b>STEN</b>	252	17.9	48%	<b>N</b>
	3	2000	BSM <b>SWEM</b> 052758742600	<b>ELIT AV HALLINGE</b>	413	12.9	50%	<b>N</b>
	4	1987	SIMGBRM00000M015902	CARNKERN TITAN	113	10.9	57%	<b>Y</b>
	5	1995	SIMAUTM000623710746	RUMBA	33	10.8	30%	<b>Y</b>



# Using Interbeef EBVs

- Integrate Interbeef EBVs as part of the genetic evaluation
  - Avoiding x2 counting of phenotypes (Interbeef and national evaluation)
  - Successful pilot ran in Feb.2018
  - Currently under development at ICBF



**Conclusion**

- Good performance of the blending process using official Interbeef run
  - More development for better inclusion of maternal traits
- Extension to
  - Full multi-trait domestic model
  - Other beef traits
  - Dairy model

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# Interbeef 2019 Routine

- 8 routines evaluations

	Weaning weight	Calving (2 traits)
Charolais	8 countries + Irish crossbred	6 countries
Limousin	9 countries + Irish crossbred	8 countries
Simmental	5 countries + Irish crossbred	5 countries
Angus	4 countries + Irish crossbred	
Hereford	4 countries + Irish crossbred	

# Interbeef 2019 Test

- March 2019 test-run : **female fertility**
  - Research done (Germany)
  - Data call for test-run started
  - Traits = calving interval, Age at first calving, number of calving at 78 months of age
  - 9 countries across 2 breeds



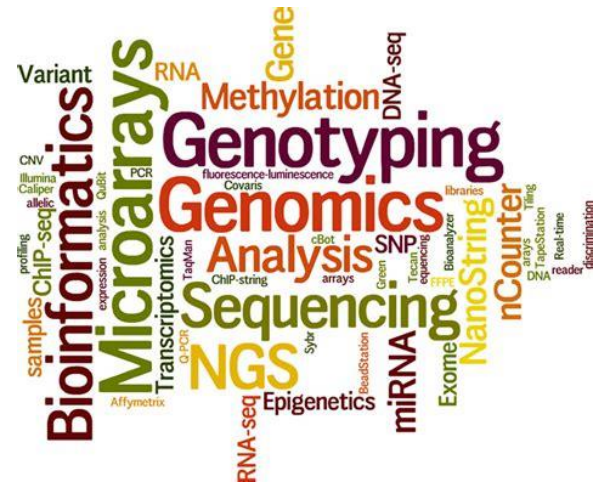
# Interbeef Yet to Come

- Across-country evaluation for **carcass traits**
  - First data call (Ireland, Great-Britain, Denmark-Finland-Sweden, Switzerland) Oct.2018
  - Research started in ICBF
  - Carcass weight, conformation, fat



# Interbeef Yet to Come

- Creating central repository for phenotypes at Interbeef
- Using **genomic information**
  - Renzo Bonifazi started his PhD in September 2018 (WUR - NLD)



# Conclusion

- After long gestation, Interbeef machinery is in place
- Business model allows research to progress
- Ireland is paving the way for
  - Using Interbeef EBVs in national models
  - Using records from crossbred animals
- Genomic is round the corner





## Our Farmer & Government Representation



## Our AI & Milk Recording Organisations



## Our Herdbooks



# Acknowledging Our Members