Thank you to the following sponsors for their support of the Interbull Annual Meeting

Silver

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COUNCIL ON DAIRY CATTLE BREEDING

SELECT SIRES INC.

Bronze

ICAR

AMERICAN DAIRY SCIENCE ASSOCIATION

INTERBULL Business Meeting

Hilton Netherland Plaza, Cincinnati, Ohio, USA

22 and 23 June 2019

THE GLOBAL STANDARD
FOR LIVESTOCK DATA

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INTERBULL Business Meeting

Reinhard Reents

INTERBULL Chairman

Hilton Netherland Plaza, Cincinnati, Ohio, USA

22 and 23 June 2019

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INTERBULL Business Meeting

Welcome

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- Use the available papers to sign your name
  - Delegates please come forward after the meeting to sign

- Please silence your cellphon

- Interbull Dinner
  - *When?* Tonight @ 7pm
  - *Where?* Hilton Netherland Plaza's Continentale Ballroom

- **Saturday 22 and 23 June 2019**
- **Interbull Business Meetings**
- **Interbull Open Sessions**

- **Monday 24 June**
- **Joint Interbull-ADSA sessions:**

Schedule of Events

Scheduling and locations are subject to change without notice. Please refer to your onsite meeting program for the final schedule and room assignments.

Interbull Schedule of Events

Thursday, June 20

3:00 pm – 5:00 pm	Registration open

Friday, June 21

7:30 am – 5:00 pm	Registration open
8:00 am – 2:00 pm	Technical Committee Meeting 1*
2:30 pm – 7:00 pm	Steering Committee Meeting 1*

Saturday, June 22

7:30 am – 5:00 pm	Registration open
8:30 am – 12:30 pm	Open Meeting
1:30 pm – 3:30 pm	Business Meeting 1
4:00 pm – 6:00 pm	Open Meeting
7:00 pm – 10:00 pm	Interbull Dinner

Sunday, June 23

8:30 am – 12:00 pm	Open Meeting
1:00 pm – 3:00 pm	Business Meeting 2
3:15 pm – 5:00 pm	Technical Committee Meeting 2*
5:00 pm – 6:00 pm	SNPMace WG Meeting*
6:00 pm – 6:45 pm	ADSA Opening Session
6:45 pm - 8:15 pm	ADSA Opening Reception

Monday, June 24

9:30 am – 12:30 pm	Joint Interbull/ADSA Symposium: Ten Years of Genomic Selection
2:00 pm – 5:30 pm	Joint Interbull/ADSA Symposium: Data Pipelines for Implementation of Genomic Evaluation of Novel Traits

Tuesday, June 25

8:30 am – 10:30 am	Steering Committee Meeting 2*

*Closed meeting (committee or working group members only)

Acknowledgements

ICAR
ADSA
Local Organising Committee
Interbull Committees (SC, ITC, SAC)
Interbull Centre Team
Interbeef WG & DNA WG
Interbull Community

Thank you to the following sponsors for their support of the Interbull Annual Meeting

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SELECT SIRES INC.

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ICAR

AMERICAN DAIRY SCIENCE ASSOCIATION

Agenda, Interbull Business Meeting

Saturday 22 June 2019, 13:30-15:30

Sunday 23 June 2019, 13:00-15:00

Interbull Business Meeting

Online information **www.interbull.org/ib/bm_cincinnati_2019 :**

- Agenda
- Minutes of the Business Meetings in Auckland (February 2018)

Interbull Business Meeting

Online information **www.interbull.org/ib/bm_cincinnati_2019 :**

- Agenda
- Minutes of the Business Meetings in Auckland (February 2019)

Agenda

1. Welcome and adoption of agenda
2. ICAR, Interbull and Interbull Centre
3. Interbull Centre Report
4. Interbull Dairy Services (Evaluations and Validation)
5. Dairy R&D
6. Interbull Technical Committee Report
7. Governance
8. Patent for Artificial Selection Method and Reagents ("AVS patent")
9. BeefxDairy
10. Infrastructure Developments
11. Approaching new grounds
12. Future Events
13. Other Matters
14. Close

Business Meeting Agenda

1 Welcome and adoption of agenda

2 ICAR, Interbull and Interbull Centre

3 Interbull Centre Report (Part 1: Personnel, Activities)

5 Dairy R&D

6 Interbull Technical Committee Report

4 Interbull Dairy Services (Evaluations and Validation)

3 Interbull Centre Report (Part 2: Finance)

7 Governance

8 Patent for Artificial Selection Method and Reagents ("AVS patent")

9 BeefxDairy

10 Infrastructure Developments

11 Approaching new grounds

12 Future Events

13 Other Matters

14 Close

Official Delegates Interbull Business Mtg

Australia	Matthew	Shaffer	Datagene Limited
Belgium	Nicolas	Gengler	ULiege - Gembloux Agro-Bio Tech
Canada	Brian	Van Doormaal	Lactanet
Czech Rep	Jiri	Splichal	Plemdat
Denmark	Gert	Aamand	NAV
France	Stephane	Barbier	GENEVAL
Germany	Reinhard	Reents	IT solutions for animal production (vit)
Ireland	Andrew	Cromie	ICBF
Italy	Johannes	Van Kaam	ANAFI
Japan	Junichi	Saburi	National Livestock Breeding Center
Netherlands	Gerben	De Jong	CRV UA
New Zealand	Melissa	Stephen	DairyNZ
Poland	Tomasz	Strabel	PFHBiPM
Slovenia	Jiri	Klopcic	University of Ljubljana
South Korea	Chang-gwon	Dang	National Institute of Animal Science (NIAS)
Switzerland	Urs	Schnyder	Qualitas
United Kingdom	Marco	Winters	AHDB
USA	Gordon	Doak	Natl Assn of Animal Breeders

INTERBULL – an introduction

Reinhard Reents

- Chairman of the INTERBULL Steering Committee
- CEO IT Solutions for Animal Production, vit, Germany

Toine Roozen

- Interbull Centre Director

THE GLOBAL STANDARD FOR LIVESTOCK DATA

1. SLU, ICAR, Interbull: Interbull Centre
2. ICAR
3. Interbull Centre

SLU, ICAR, Interbull:
Interbull Centre

An overview of the organisation

ICAR

Identification

INTERBULL

Recording

Milk Analysis

SLU

Interbull Centre

European Community Reference Body for Zootechnics (Bovine Breeding)

SLU, ICAR, Interbull: Interbull Centre

1951 ICAR founded

1975 EAAP Working Group (+IDF, ICAR, etc.)

1983 Interbull Founded

1988 ICAR Permanent Sub-Committee

1991 Interbull Centre established in Uppsala, Sweden

1994 1st Routine International Evaluation

1996 Official Reference Body for the EU

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ICAR
International Committee for Animal Recording

International non-governmental organisation

28-6-2019

ICAR Mission Statement

To be the leading global provider of Guidelines, Standards and Certification for animal identification, animal recording and animal evaluation.

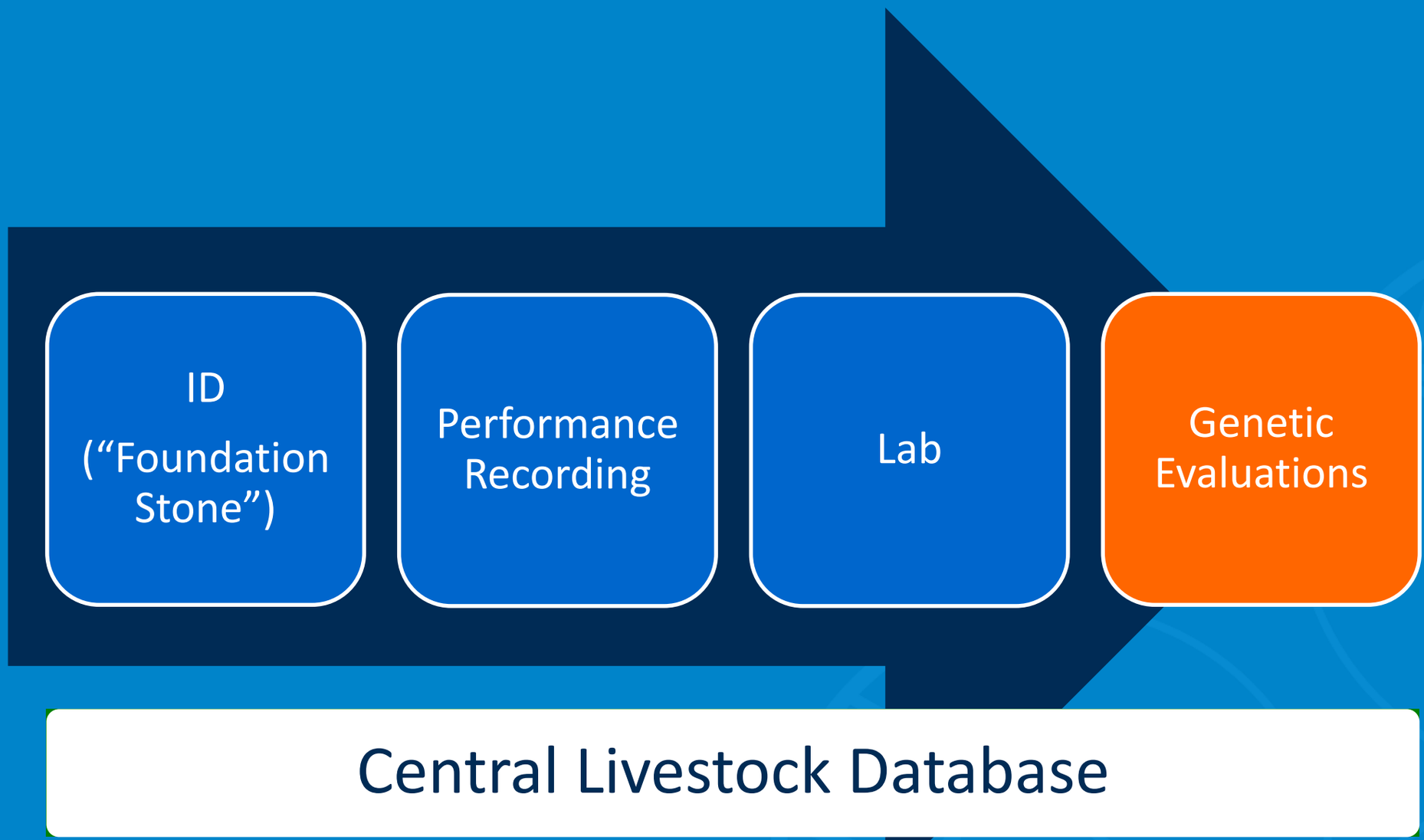
To improve the profitability, and sustainability of farm animal production by:

- Establishing and maintaining guidelines and standards for best practice in all aspects of animal identification and recording.
- Certifying equipment, and processes used in animal identification, recording and genetic evaluations.
- Stimulating and leading: continuous improvement, innovation, research, knowledge development, and knowledge exchange.

ICAR's Global Reach

120 members in 60 countries

ICAR's 4 Permanent Building Blocks



ICAR

Identification

INTERBULL

Recording

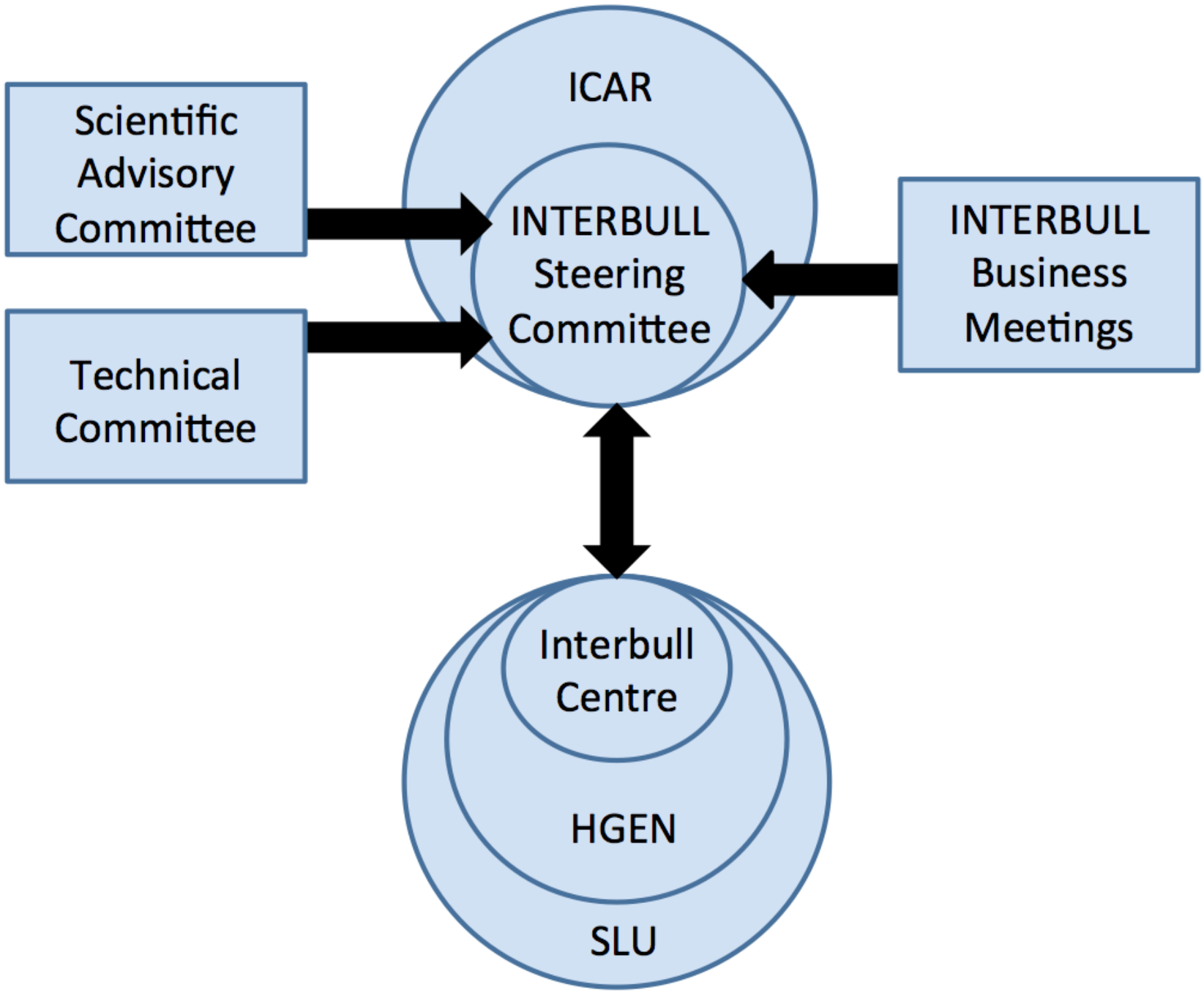
Milk Analysis

SLU

Interbull Centre

European Community Reference Body for Zootechnics (Bovine Breeding)

Interbull Organisational Structure



INTERBULL CENTRE:
INTERBULL'S OPERATIONAL UNIT

Interbull Centre

Interbull Centre:

- Operational unit of Interbull
- Located in Uppsala, Sweden.
- Provides International genetic information services

Department of Animal Breeding and Genetics
Swedish University of Agricultural Sciences
Uppsala, Sweden

Interbull Centre

SLU

Faculty of Veterinary Medicine and Animal Science

Department of Animal Breeding and Genetics (HGEN)

Bioinformatics | Applied Genetics | Quantitative Genetics | Molecular Genetics | SLU Biobank | Interbull Centre

HGEN Lab

Interbull Centre:

- Operational unit of Interbull
- Located in Uppsala, Sweden.
- Provides International genetic information services

Department of Animal Breeding and Genetics
Swedish University of Agricultural Sciences
Uppsala, Sweden

Interbull Centre

Supporting dairy and beef industry:

- Accurate genetic information on bulls
- Since 1995
- Enabling importers and exporters to select, worldwide, the best genetics for different countries, environments or breeding goals.

International Genetic and Genomic Evaluation

Dairy: “MACE”, “GMACE”, “InterGenomics”

Holstein

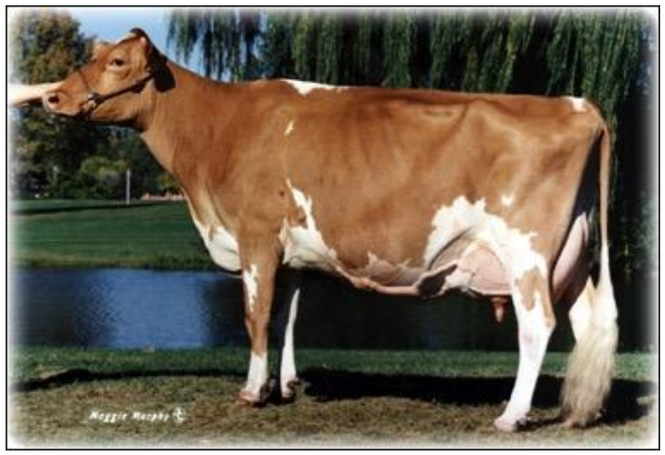
Jersey

Guernsey

Red Dairy Cattle

Brown Swiss

Simmental



International Genetic Evaluation

Beef: Interbeef

Charolais

Limousin

Simmental

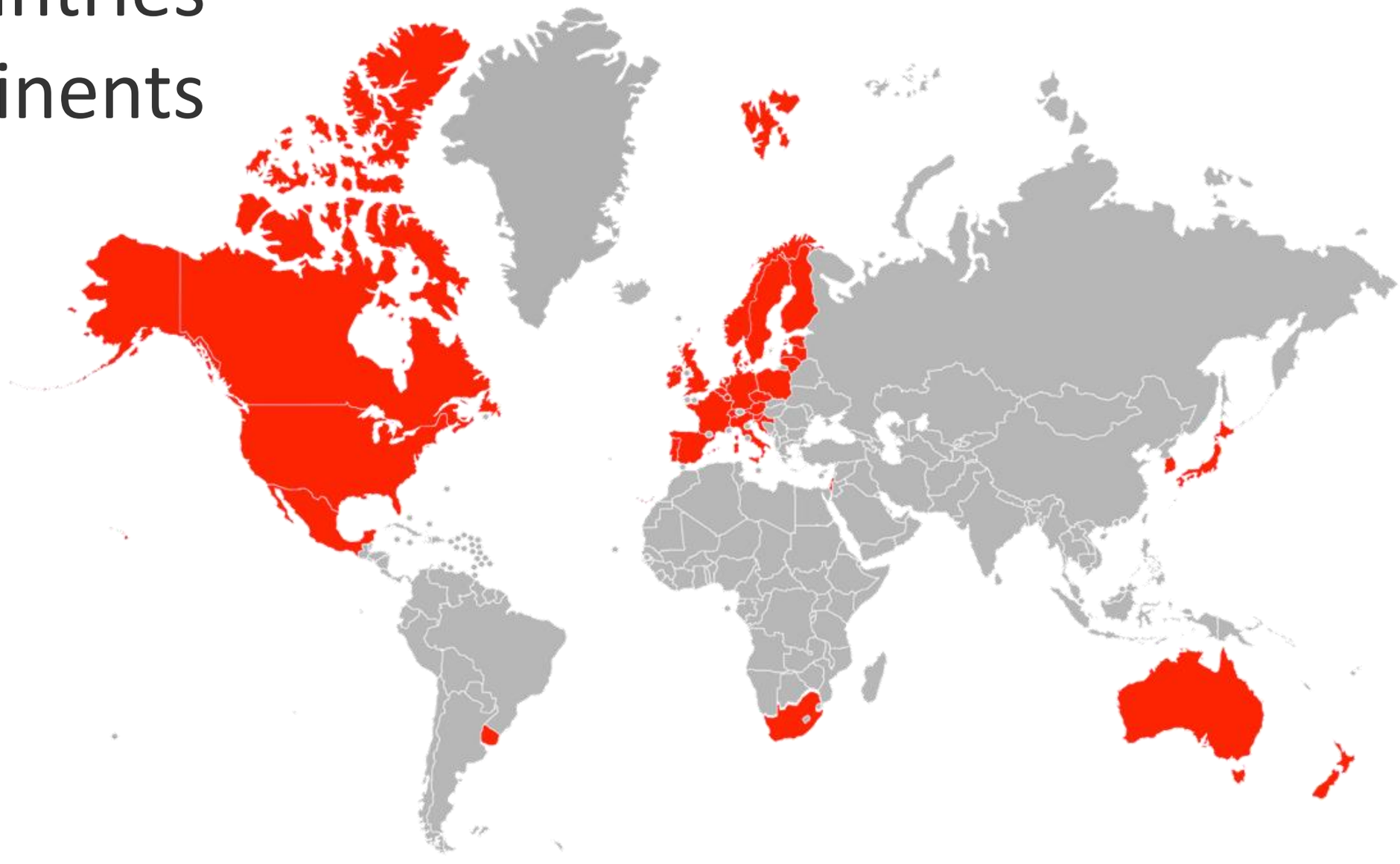
Aberdeen Angus

Hereford

Interbull / Interbull Centre

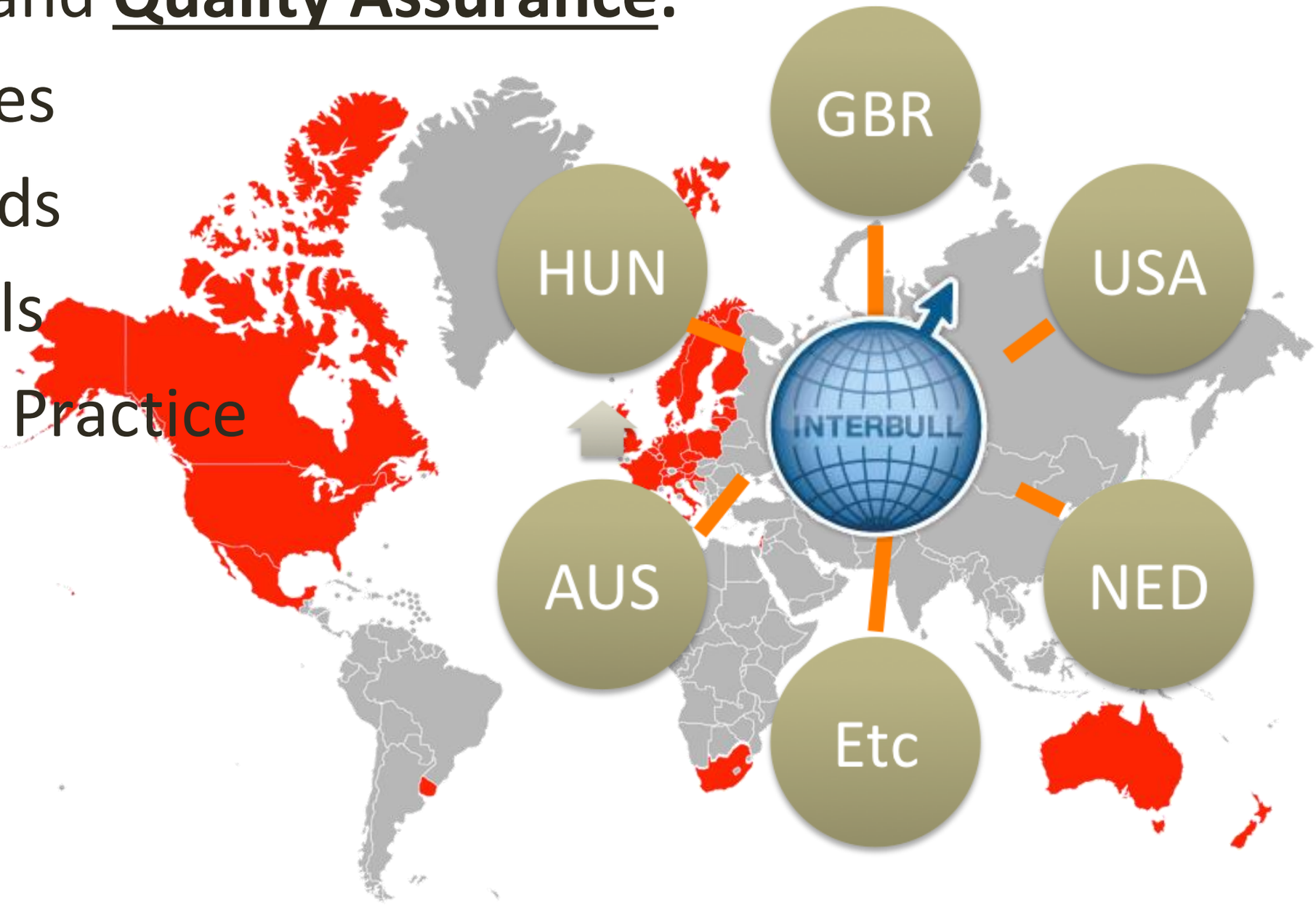
INTERBULL's Global Reach

- 35 countries
- 5 continents



Interbull Centre

- **<u>Infrastructure</u>** and **<u>expertise</u>** for **<u>International Data Exchange</u>** and **<u>Quality Assurance</u>:**
  - Processes
  - Standards
  - Protocols
  - Code of Practice



Interbull Centre

❖ ISO 9001 Certified

ISO 9001
BUREAU VERITAS
Certification
N° SE004561-1

Interbull Centre

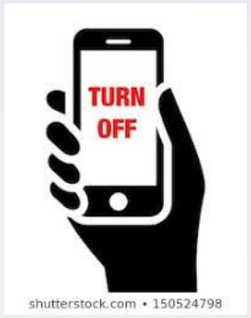
- European Union Reference Laboratory for Zootechnics (Bovine Breeding) since 1996
  - Validation of evaluation
  - Interbull test I,II, III
  - Genomic Validation for widespread use of genomically tested bulls

Interbull Centre

- New EU regulation European Union from 2016 → in effect Nov 1st, 2018
- Interbull Centre is EU Reference Centre from 1 November 2018
- Responsible for collaborating in "*rendering uniform the testing methods and the assessment of the results for pure-bred breeding animals of the bovine species*".
  - Validation continues.
  - Integral part of a breeding programe is performance testing and genetic evaluation

Housekeeping Information

- Use the available papers to sign your name
  - Delegates please come forward after the meeting to sign



- Please silence your cellphone

- Interbull Dinner
  - *When?* Tonight @ 7pm
  - *Where?* Hilton Netherland Plaza's Continentale Ballroom

Interbull Centre

Activity Report

Toine Roozen

Interbull Centre Director

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Interbull Meetings

wcgalp.com
11th World Congress on Genetics Applied to Livestock Production

Auckland

Dubrovnik

Cincinnati

2018

2019

Knoxville

Padova

Interbull Centre Team Changes

Renzo

Monica

Eva

Hossein

2018

2019

Interbull Centre Team Changes

Renzo

Monica

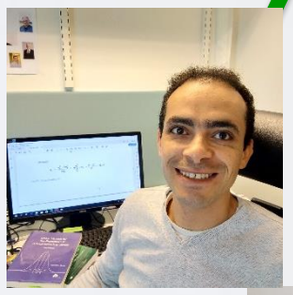
Eva

Hossein

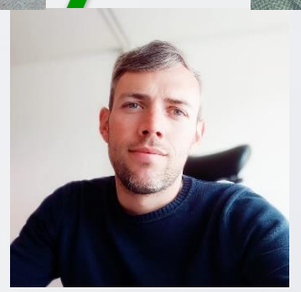
2018

2019

Jan-Erik



Sallam



Simone

Alexis

Interbull Centre

Interbull Centre Team: 4 IT staff; 5 Geneticists, 1 Director

Additional support from Dept of Animal Breeding and Genetics

Improvements

Animal Identification: RED/HOL

SIM/BSM

Calculating & storage cluster

2018

2019

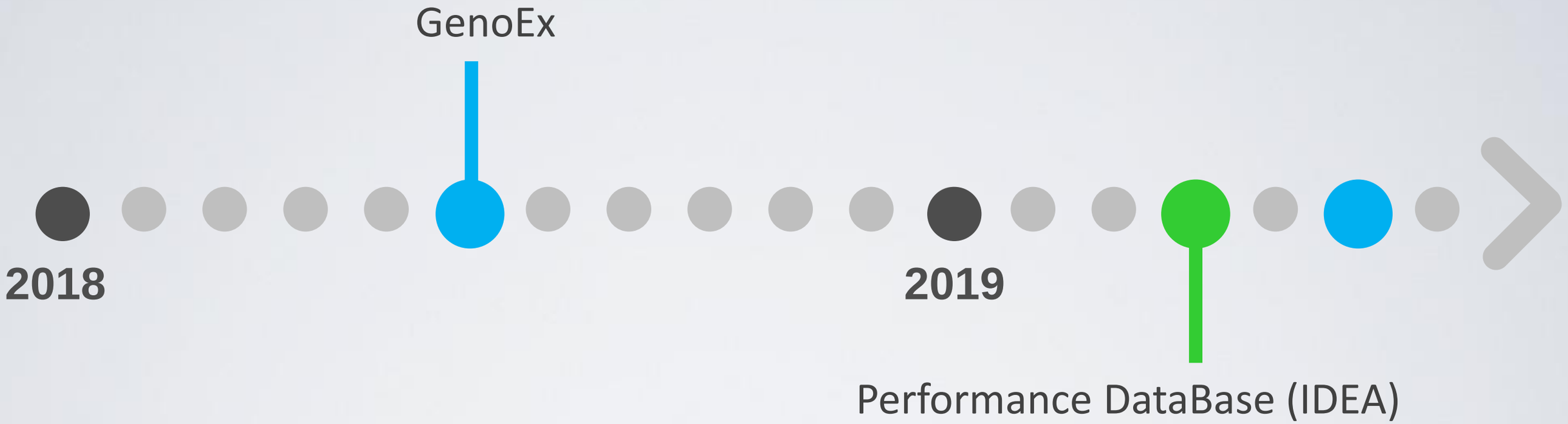
GEBV test

InterGenomics Pipeline

Interbeef Pipeline

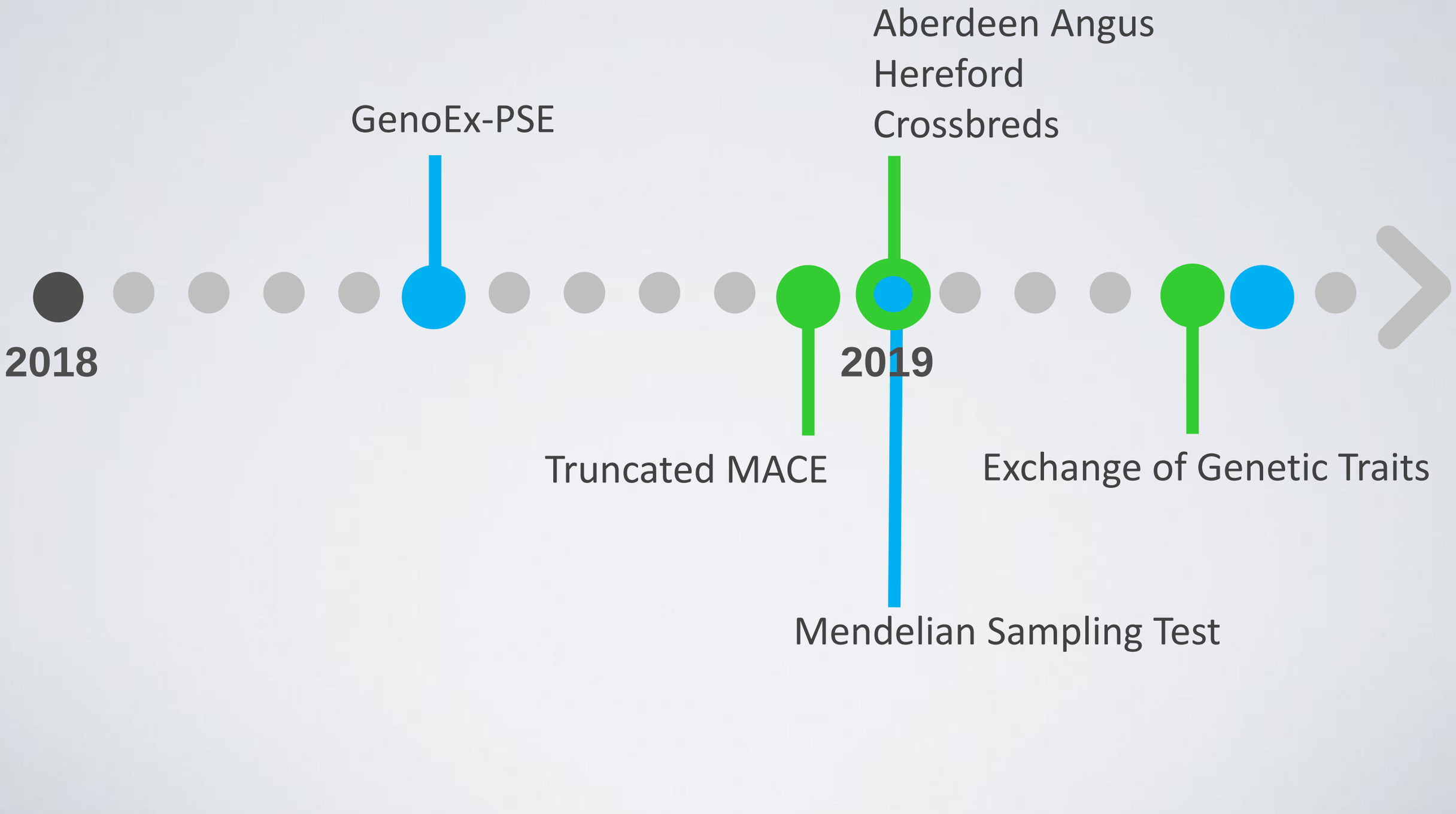
Interbull Bulletin Website

Launched Databases



Interbull Data Exchange Area: IDEA

Launched Services



New Service Users and NGECs

Interbeef	Interbull – Service Users	GenoEx-PSE
ABRI-PLAN (Australia)	State Food and Veterinary Service of the Republic of Lithuania (LTU)	vit (DEU)
		LIA (JPN)
	Interbull – NGECs	AIS (SVN)
	Herdbook CRV (NLD)	ANAFI (ITA)
	GENEVAL (FRA)	ANAPRI (ITA)
		SEGES (DNK)
		ICBF (IRL)
		GENO (NOR)
		NRIAP (POL)

Interbull Centre & EU Activities

From 1 November 2018:
EU Reference Centre

2018

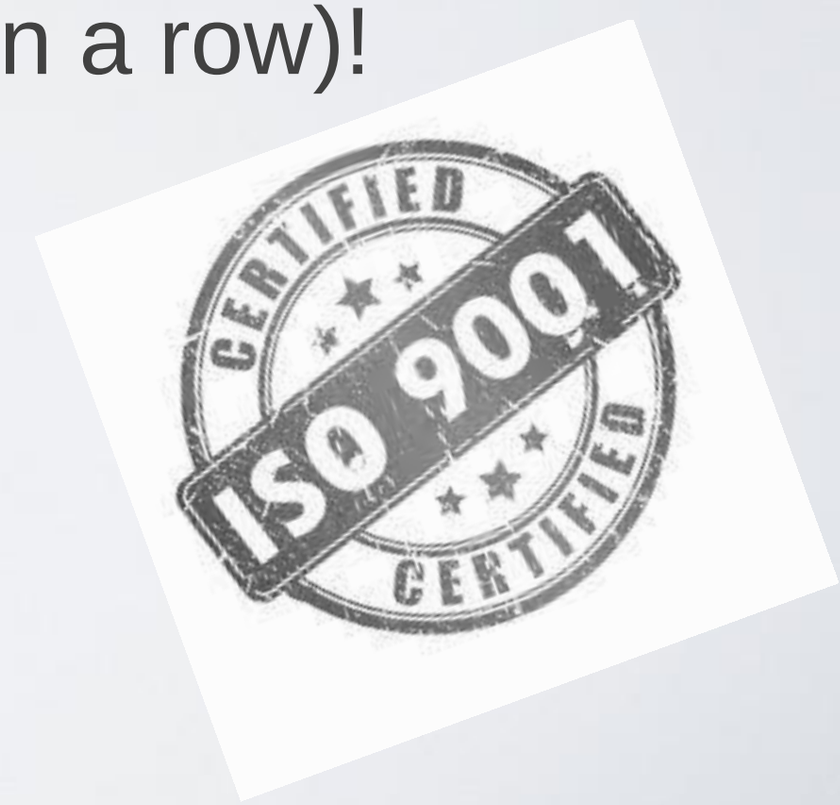
2019

1996 - 31 October 2018:
EU Reference Laboratory

Interbull Centre & ISO

- ISO 9001 certified since January 2016
- Successfully upgraded to the new ISO 9001 in Nov 2017
- Re-certified in November 2018
- Zero non-conformities (3rd year in a row)!

ISO 9001
BUREAU VERITAS
Certification
N° SE004561-1



Research and Development

Haifa Benhajali

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Dairy Research & development

- Close collaboration between ITBC staff and ITC & SAC members
- Working together within dedicated Interbull working groups
- Three main axes:

1. Developing new services
2. SNPMACE, IGHOL
3. Improving our current services
4. Validation Tests, Mace
5. Providing tools and assistance to the countries
6. Standardized methods to be used in national systems

Dairy Research & development

NEW SERVICES

SNP
MACE

SNPMACE WG

Since April 2018

Enrico Santus (chair), Toine Roozen(secretary), Mike Goddard Vincent Ducrocq, Esa Mäntysaari Zengting Liu

INTERGENOMICS
HOLSTEIN

IGHOL

Close collaboration with ITC International genomic evaluation for HOL population

Dairy Research & development

CURRENT SERVICES

Trend Validation Tests WG

Review current methods and develop new tests if needed

Created in August 2018

Esa Mäntysaari (chair), Paul VanRaden
Zengting Liu, Pete Sullivan
Raphael Mrode, Valentina Palucci

GPS &Future Mace WG

Develop and test international methods for genomics era

Created in August 2018

Pete Sullivan, Esa Mäntysaari, Gerben de Jong, Haifa Benhajali

Dairy Research & development

Providing standardized methods

Genomic Reliability WG

Develop a standardized method to calculate Genomic Reliability

Created in 2013

The method was developed in 2017 (Liu et al., 2017), tested by countries in 2018 (Interbull Technical workshop, Dubrovnik).

Now, working on fine tuning the method

Zengting Liu (chair), Mario Calus, Martin Lidauer, Vincent Ducrocq, Paul VanRaden, Haifa Benhajali

Technical Committee Report

Gert Pedersen Aamand

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InterGenomics Holstein: background

- Small Holstein populations have been searching for ways of ensuring cost efficient solutions for genomic selection
- In small Holstein populations chances for commercial-driven implementation of genomic selection are limited.
- After the successful implementation of InterGenomics for BSW the idea of implementing this methodology for small/other HOL populations has arisen.

InterGenomics Holstein

- Status – validation (focus on traits with sufficient info)
  - Reliability increase compared to PA
  - b_1 – biased in some cases
- Next step (focus on traits with sufficient info)
  - Validate that IG-HOL gives extra info compared to national GEBV
  - Do validation with an without foreign animals
  - If bias - it needs to considered like in all national evaluations
  - Estimate realistic reliabilities (apply Grel)

Genomic reliabilities (G-Rel)

(WG: Zengting Liu et al)

- Aim - develop standard procedure for Genomic reliabilities

Status

- Assumption allele frequency not so important (max 2%) – countries can use national calculated
- New correction procedure to handle too high reliabilities for ref animals with limited information (cows and bulls)
- Adjustment factor (f) – need to be national to be given along with national results
- Remaining
  - Look effect of correction of cow reliabilities on candidates

Validation WG

WG: Esa, Pete, Raphael, Paul, Zengting, Valentina

- WG has made nice overview over current methods – strength and weaknesses due to GS
- New ideas for validation look at changes from consecutive evaluations
  - Test bias and over dispersion

SNPMace

- Status given by Mike Goddard

Genomic preselection & Future MACE

(WG:Pete, Esa, Gerben, Haifa)

- Simulation of genomic preselection
  - Framework established
- Future MACE
  - Ideas on the table from WG, how to deal with genomic preselection

2nd ITC meeting focus on

- Establishing a joint overview how serve Interbull members coming 5-10 years with respect to genetic evaluations
- Key elements to discuss are next steps in relation to:
  - Future MACE
  - In cooperating SS evaluations in international evaluations
  - Needs for WG groups etc.

Friendly

Reminder

INTERBULL

Dairy Services

Valentina Palucci

ICAR

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Current Services

- ✓ EU Reference Centre → Quality Assurance / Validation
- ✓ MACE → Progeny tested bulls
- ✓ GMACE → Young genomically tested bulls
- ✓ InterGenomics → International genomic evaluation
- ✓ Interbeef → International beef evaluation

Quality Assurance

- Validation of conventional and genomic national models
  - EBV = 4 methods available (m I-III, MS-Test)
  - GEBV = 1 method available (GEBV-test)

Validation Tests	Mar - Dec 2018	Jan – July 2019	Tot
MACE	99	101	200
GMACE	68	52	120
Tot	**167**	**153**	**320**

MACE 1904r

	Prod (3)	Conf (up to 33)	Udder (2)	Long (1)	Calv (4)	Fert (5)	Work (2)	Tot (50)	1904r vs. 1704r
BSW	11	9	10	10	6	9	7	**62**	*0*
GUE	5	4	5	5	-	5	-	**24**	*0*
HOL	30	23	29	20	17	20	11	**150**	*+3*
JER	12	10	9	9	-	9	6	**55**	*+4*
RDC	15	10	14	12	7	11	7	**76**	*+5*
SIM	13	-	12	6	-	-	-	**31**	*0*
Tot	**86**	**56**	**79**	**62**	**30**	**54**	**31**	***398***	
Incr	*+2*	*+2*	*+3*	*+1*	*+1*	*+1*	*+2*		*+12*

HOL: First time for URY scs, ESP calv,JPN cc2

JER: First time for CHE

RDC: First time for CAM

GMACE 1904r

	Prod (3)	Conf (23)	Udder (2)	Long (1)	Calv (4)	Fert (5)	Work (2)	Tot (40)	1904r vs. 1704r
HOL	11	11	11	9	8	10	7	**67**	*+4*
Incr	*0*	*+1*	*+1*	*0*	*+1*	*+1*	*0*	Hungary joined	

	MACE	GMACE
Animals in pedigree database	35 288 579	35 288 579
Submitted national estimated breeding values	13 182 511	27 574 404
Qualified national estimated breeding values	7 200 799	18 597 409
Calculated international estimated breeding values	300 535 895	178 189 632
Distributed international estimated breeding values	111 610 006	449 437

InterGenomics 1904r

	Prod (3)	Conf (23)	Udder (2)	Long (1)	Calv (4)	Fert (5)	Work (2)	Tot (40)	1904r vs. 1704r
BSW	7	7	7	7	5	6	6	**45**	*0*
Incr	*0*	*0*	*0*	*0*	*0*	*0*	*0*		

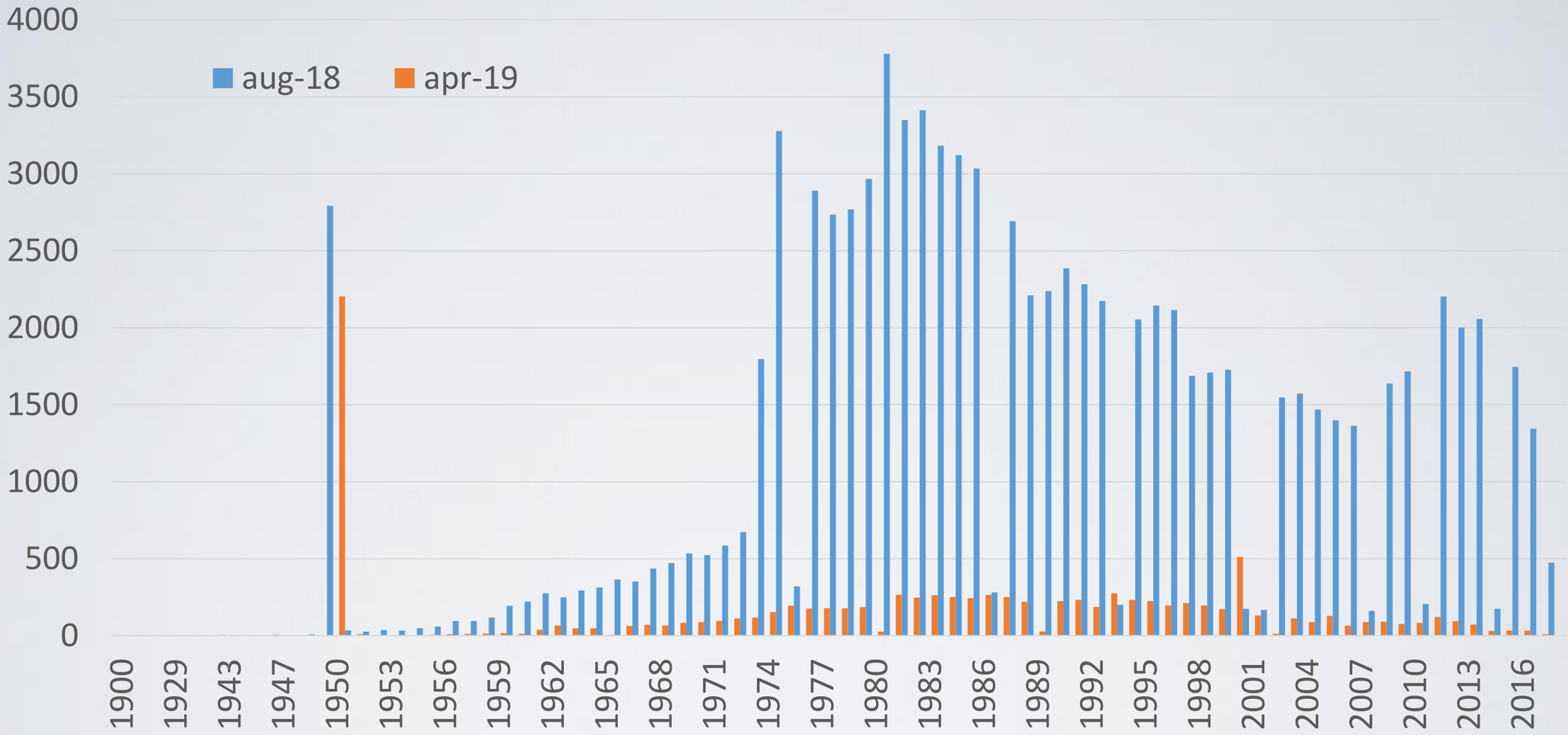
Unique submitted genotypes	40 251
Genotypes entering imputation & genomic evaluation	*33 923*
Distributed international genomic estimated breeding values	9 498 720

Improvements: Status of ID issues

- Starting from 2018, we have been actively working with several National Genetic Centres to resolve issues related to:
  - HOL/RED
  - USA/840
  - SIM/BSM

- By improvi identification of animals, reducing potential duplicates → *Improving international evaluations*

Successful conversion of RED→HOL



- ✓ Remaining cases → majority very old animals
- ✓ RED info available in AnimInfo
- ✓ RED breed code banned from IDEA

SIM/BSM Issue

- Given the dual purpose of SIM, its inclusion in InterBeef caused challenges due to 2 ‘authorative’ organisations for IDEA-Pedigree within one country.
- Introduced breed code for ‘Beef Simmental’: ‘BSM’ to avoid delays in Interbeef evaluations (2017)
- Sub-optimal: The analysis of some animals in Interbull and Interbeef evaluations caused ID problems.
- Now one authorative organisation per country agreed
- Organisations will cross-reference all ***BSM*** into ***SIM***
- ***BSM*** code will be banned from IDEA → preventing uploads from October 2019

USA/840 Issue

- 840 = ISO numerical country code used in RFID
  - ✓ Approved by ICAR as certified animal identification device
  - ✓ A number of USA/840 duplicates were created over time due to unclarity on how to handle it (for importing countries)
- Clear and easy rule to properly handle them!!

  - All IDs with *12-numerical digits < 3 billions → ”USA”*
  - All IDs with *12-numerical digits >= 3 billions → ”840”*

USA/840 Proposal

“840” >= 003.000.000.000
“USA” < 003.000.000.000

The following has been our proposal to the SC:

- ✓ ITBC to provide CDCB with a list of animals with country code wrongly allocated
- ✓ CDCB to provide cross-reference info as part of its pedigree verification duties
- ✓ IDEA will accept USA/840 pedigree records according to the above rule only.

- ✓Aim for completion by Jan 2020

Fake DAM ID's

- CDCB proposal (awaiting slides)

Truncated MACE

- ✓Relevant for countries with own genomic evaluation
  - Current genetic model applied to 4 year old data
  - Providing appropriate validation inputs for countries using foreign bulls in their reference population
  - First evaluation scheduled for **October 2019**
    - Voluntary participation
    - Extra fee applied (500/1000 € for 1 or more breeds)

Mendelian Sampling Variance Test…

- Reliable estimation of genetic merit is fundamental to ensure unbiased international evaluations
- Several studies showed that the biased genetic trends and heterogeneity in genetic variance in national evaluations affect also MACE evaluation
- All countries participating in the international evaluations are required to validate their national evaluations for biased genetic trends, but homogeneity of variance across years had not been tested yet.
  - Development of MS test Software

Mendelian Sampling Variance Test…

- Several trial periods during 2017/2018, ITBC Workshop (Dubrovnik 2018)
- Officially introduced as Interbull validation method IV
- Compulsary from January 2019

Exchange of Genetic Traits

international exchange of information on raits in collaboration with World Holstein ederation (WHFF).

nfrastructure for international data exchange

For more than 20 years, the Interbull Centre has been evaluating and exchanging genetic data from around the world, aiding individual countries, organisations and farmers to identify those animals from around the world that will perform best under their own unique farming conditions. A key part in the exchange has been the quality control of this data. Three times per year data is distributed to its customers.

Holstein Friesian Federation (WHFF) harmonised the d nomenclature for genetic traits to support its ndation that genetic traits be reported to breed Herdbook cuments and be made available for data exchange. The f such data currently happens through bilateral (in most nual) exchange of data.

ional Data Exchange on Genetic Traits

g a request from WHFF to assist with the international exchange of information on enetic traits, the Interbull Centre's database (IDEA) for the collection of animal trait has been expanded to facilitate the collection of the WHFF genetic carried out with Interbull Centre's customers in a case study.

Gene Name	Description	Gene and Express
BLAD	**Bovine Leukocyte Adhesion Deficiency** (deficiency of a normally occurring protein needed for white blood cells or leukocytes, which are body's infection fighters)	**BLC** = tested carrier **BLF** = tested non-carr
Mule foot	**Mule-Foot** (toes of foot are joined, giving animal a single hoof, instead of cloven ones)	
DUMPS	**Deficiency of Uridine Monophosphate Synthase** (one of many enzymes contributing to normal metabolic processes)	**MFC** = tested carrier of M **MFF** = tested non-carrier o
	Complex Vertebral Malformation (causes still-born calves, abortions, and early embryonic losses)	**DPC** = tested carrier of DUM **DPF** = tested non-carrier of DU
	Factor X1 (blood clotting disorder)	**CVC** = tested carrier of CVM **CVF** = tested non-carrier of CVM
	Citrullinemia (accumulation of ammonia and other toxics in blood in baby calves)	**XIC** = tested carrier of Factor X1 **XIF** = tested non-carrier of Factor X1
	rachyspina (causes abortion and llborn, shortened spinal cord, long legs abnormal organs)	**CNC** = tested carrier of Citrullinemia **CNF** = tested non-carrier of Citrullinemia
	ls without horns (reported born s- – Not Tested).	**BYC** = tested carrier of Brachyspina **BYF** – tested non-carrier of Brach
	st	**POR** = code

Exchange of Genetic Traits

- In the past exchange of such information was made manually:
  - based on willingness from bull owners to send a press release and the receptiveness of distributors and herdbook to manually register the information
  - Sub-optimal procedure, registration of genetic traits incomplete, leaving breeders not always fully imormed

Big problem when carriers animals are mated

Exchange of Genetic Traits

→Test: VIT (Germany), SRUC (GBR) and CRV (Netherlands & Flanders

→Input: 230,000 records (~100.000 unique animals: 95.000 ♂; 5.000 ♀)

→Output 265,000 records with Genetic trait information

NGEC	Input	Output	Extra traits
VIT	111,944	127,498	13,3%
SAC	56,323	71,037	26,1%
CRV	62,339	66,987	7,5%

Source: CRV, Mathijs van Pelt

→Automated data exchange of Genetic traits through Interbull Service Users gives significant additional value

New Service

- ✓ WHFF & Interbull agreed on exchanging of Genetic Traits
  - Service officially launched in May 2019
  - Data collected via AnimInfo (→ CoP Appendix X)
  - Regulated by *Letter of Understanding for AnimInfo*
    - (→ CoP Appendix I)
  - Distributed 3 times/year together with official evaluation
  - Currently available for Holstein only
    - Other breeds welcome / Coding needs to be standardised

Interbull Centre
Finance Report

Toine Roozen
Interbull Centre Director

THE GLOBAL STANDARD
FOR LIVESTOCK DATA

Network. Guidelines. Certification.

Financial accounts Interbull Centre

- 4 Sections:
  - Dairy
  - Beef
  - GenoEx
  - Interbull Centre (consolidated)

Financial accounts Interbull Centre

- In previous years
  - Income reported when received (rather than when invoiced)
  - Late payments transferred to next year
  - Fluctuations in finance report year by year
- This report:
  - Income reported when invoiced / performed
  - Less fluctuations in income and balance over years

Finance

Interbull Centre

Consolidated

Interbull Centre, Income

Income	Actual ‘18	Budget ‘19	Projected ‘19	Budget ‘20
Service fees	832 024	825 512	845 583	845 583
SLU grants	48 884	48 884	48 884	48 884
Intergenomics	31 921	32 000	32 000	32 000
EU	142 896	150 000	150 000	150 000
Interbeef	99 977	100 000	122 500	122 500
GenoEx	-	1 000	1 000	15 000
Other	15 902	-	-	-
Total	**1 171 603**	**1 157 395**	**1 199 967**	**1 213 967**

Interbull Centre, Costs

Costs	Actual ‘18	Budget ‘19	Projected ‘19	Budget ‘20
Salaries + social costs	658 460	733 153	679 882	729 209
Office rent	104 386	94 978	104 475	90 832
Support functions	260 408	266 175	275 562	263 655
Travel, conf, training	57 679	42 535	42 535	43 166
ITC: hard + software	36 199	44 089	42 710	43 500
Consultancy	72 324	79 623	81 477	81 477
Other costs	60 757	21 829	21 517	21 727

Interbull Centre, Summary

Item	Actual '18	Budget '19	Projected '19	Budget '20
Total income	1 171 603	1 157 395	1 199 967	1 213 967
Total costs	1 250 214	1 282 381	1 248 159	1 273 565
Balance	**-78 611**	**-124 986**	**-48 192**	**-59 599**
Acc. balance	**509 648**		**461 456**	**401 857**

Finance

Interbull (Dairy)

Interbull (Dairy) finance - Income 2018-2020

- Continued EU and SLU support
- Projected income based on invoices (to be) issued
- Budgeted income same for 2019 and 2020

Income	Actual ‘18	Budget ‘19	Projected ‘19	Budget ‘20
Service fees	817 024	820 512	840 583	840 583
SLU grants	28 884	48 884	48 884	48 884
Intergenomics	31 921	32 000	32 000	32 000
EU	132 896	150 000	135 000	135 000
Other income	15 902	-	-	-
Total	**1 026 626**	**1 051 396**	**1 056 467**	**1 056 467**

Interbull (Dairy) Finance – Costs 2018-2020

- Consultancy 2018-2020 includes research project (SNPMACE or other project, ISO/Audit and CDN/Lactanet)

Costs	Actual ‘18	Budget 19	Projected ‘19	Budget ‘20
Salaries & social cost	542 496	633 658	548 812	612 799
Office rent	86 690	80 273	85 167	76 331
Support & overhead	214 996	226 078	222 878	221 566
Travels, conf, training	55 972	40 835	37 835	39 052
ITC; hard & software	30 348	39 115	39 087	39 108

Interbull (Dairy) Finance, Summary

Item	Actual ‘18	Budget ‘19	Projected ‘19	Budget ‘20
Total income	1 026 626	1 051 396	1 056 467	1 056 467
Total Expense	1 061 265	1 114 537	1 029 152	1 084 732
Balance	**-34 638**	**-63 142**	**27 314**	**-28 265**
Accumulated balance	**627 607**		**654 921**	**626 656**

Finance

Interbeef (beef)

Interbeef Finance – 2018-2020

- Increased budget:
  - Interbull contribution to address dairy in PhD project (5K)
  - Increased Interbeef Service Fee (22.5K)
  - EURC funding allocated to Beef Validation (15K)

Income	Actual '18	Budget '19	Projected '19	Budget '20
Interbull Service fee	-	5 000	5 000	5 000
EURLZ/EURC	10 000	-	15 000	15 000
Interbeef Service Fee	99 977	100 000	122 500	122 500
Total Income	***109 977***	***105 000***	***142 500***	***142 500***

Interbeef Finance – 2018-2020

	Actual '18	Budget '19	Projected '19	Budget '20
Total Income	***109 977***	***105 000***	***142 500***	***142 500***
Salaries incl social costs	72 216	61 556	88 070	81 411
Office rent	11 020	9 098	12 973	10 141
Support functions and overhead	28 280	24 807	35 400	29 435
Other costs	4 529	9 307	13 297	12 558
Total Expenses	***116 045***	***104 768***	***149 741***	***133 544***
Balance	***-6 069***	***232***	***-7 241***	***8 956***
Accumulated				

Finance

GenoEx

GENOEX

International Genotype Exchange Platform

GenoEx Finance - 2018-2020

Income:

- First income in 2019 (€400 to date).

Costs:

- Hardware, software licences, personnel and associated costs.

GenoEx Finance - 2018-2020

Start-up grants by ICAR (€60k) and SLU (€80K)

Income	Actual '18	Budget '19	Projected' 19	Budget '20
Reserves	**15 000**	**-**	**-**	**-**
SLU Grant	**20 000**	**-**	**-**	**-**
Service Fee	**-**	**1 000**	**1 000**	**15 000**
Total	**35 000**	**1 000**	**1 000**	**15 000**
Costs				
Salaries + social costs	44 623	37 939	43 860	35 700
Office rent	6 676	5 607	6 334	4 360
Support functions	17 132	15 289	17 284	12 655
Software and license fees	4 472	4 241	1 787	2 576
Total	72 903	63 076	69 265	55 290
Balance	-37 903	-62 076	-68 265	-40 290
Start-up Investment	-114 606		-182 871	-223 161

INTERBULL

Governance

ICAR

THE GLOBAL STANDARD
FOR LIVESTOCK DATA

SLU

Network. Guidelines. Certification.

Steering Committee Chair & Vice-Chair

- Reinhard Reents
- SC member since 1999
- Chair since 2006

- Current Vice-Chair: Matthew Shaffer
  - New Chair for 4-year term

- New Vice-Chair: Brian Van Doormaal
  - New Vice-Chair for 4-year term

Interbull Steering Committee

Name	Country	(Re)elected	End of Term
Gert Pedersen Aamand	Denmark	2015	2019
Reinhard Reents	Germany	2015	2019
Marco Winters	GBR	2015	2019
Enrico Santus	Italy	2016	2020
Marija Klopčič	Slovenia	2017	2021
Brian Van Doormaal	Canada	2017	2021
Gordon Doak	USA	2017	2021
Matthew Shaffer	Australia	2017	2021
Sophie Mattalia	France	2018	2022

Interbull Steering Committee

Name	Country	(Re)elected	End of Term
Gert Pedersen Aamand	*Denmark*	*2015*	*2019*
Reinhard Reents	*Germany*	*2015*	*2019*
Marco Winters	*GBR*	*2015*	*2019*
Enrico Santus	Italy	2016	2020
Marija Klopčič	Slovenia	2017	2021
Brian Van Doormaal	Canada	2017	2021
Gordon Doak	USA	2017	2021
Matthew Shaffer	Australia	2017	2021
Sophie Mattalia	France	2018	2022

Interbull Steering Committee

Name	Country	(Re)elected	End of Term
Gert Pedersen Aamand	**Denmark**	**2019**	**2023**
Urs Schnyder	**Switzerland**	**2019**	**2023**
Gerben de Jong	**Netherlands**	**2019**	**2023**
Enrico Santus	Italy	2016	2020
Marija Klopčič	Slovenia	2017	2021
Brian Van Doormaal	Canada	2017	2021
Gordon Doak	USA	2017	2021
Matthew Shaffer	Australia	2017	2021
Sophie Mattalia	France	2018	2022

Interbull Technical Committee

Scientific Advisory Committee

Delegate List

Close of BM 1

- **Today**
- Open meeting:
- Dinner:
- **Tomorrow**
- Open Meetings
- Business Meeting
- Beef from Dairy Meeting

Thank you to the following sponsors for their support of the Interbull Annual Meeting

Silver

CDCB

COUNCIL ON DAIRY CATTLE BREEDING

SELECT SIRES INC.

Bronze

ICAR

AMERICAN DAIRY SCIENCE ASSOCIATION