



INTERBULL Business Meeting

Tallinn, Estonia, 26-27 August 2017

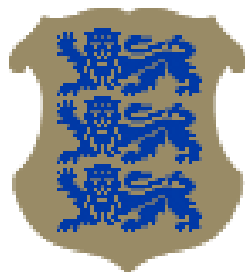
Reinhard Reents

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



THE GLOBAL STANDARD
FOR LIVESTOCK DATA

Acknowledgements



REPUBLIC OF ESTONIA
MINISTRY OF RURAL AFFAIRS



EAAP

**68th ANNUAL
MEETING**
Tallinn, Estonia 2017



Interbull Business Meeting Programme

Today: Saturday 26 August 2017, 13:30 – 15:30
Tomorrow: Sunday 27 August 2017, 13:00 – 15:00

This Room

[http://www.interbull.org/ib/bm_estonia_2017:](http://www.interbull.org/ib/bm_estonia_2017)

- ❖ Agenda
- ❖ Reports



Agenda

1. Opening
2. Adoption of agenda
3. Interbull Centre Report
4. Interbull Technical Committee Report
5. Interbeef working group Report
6. Updates on services (incl Requests and Suggestions from Interbull Users)
7. Governance
8. Strategic Developments.
9. Calendar for future events
10. Other matters



Reinhard Reents

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

Toine Roozen

- Interbull Centre Director

Hossein Jorjani

- Interbull Centre Service Manager



THE GLOBAL STANDARD
FOR LIVESTOCK DATA



Interbull Centre

- ❖ Section of the Department of Animal Breeding and Genetics of the Swedish University of Agricultural Sciences (SLU)
- ❖ Operational unit of the ICAR permanent sub-committee Interbull
- ❖ European Union Reference Laboratory (EURL) for Zootechnics (Bovine Breeding)
- ❖ ISO 9001:2008 certified.

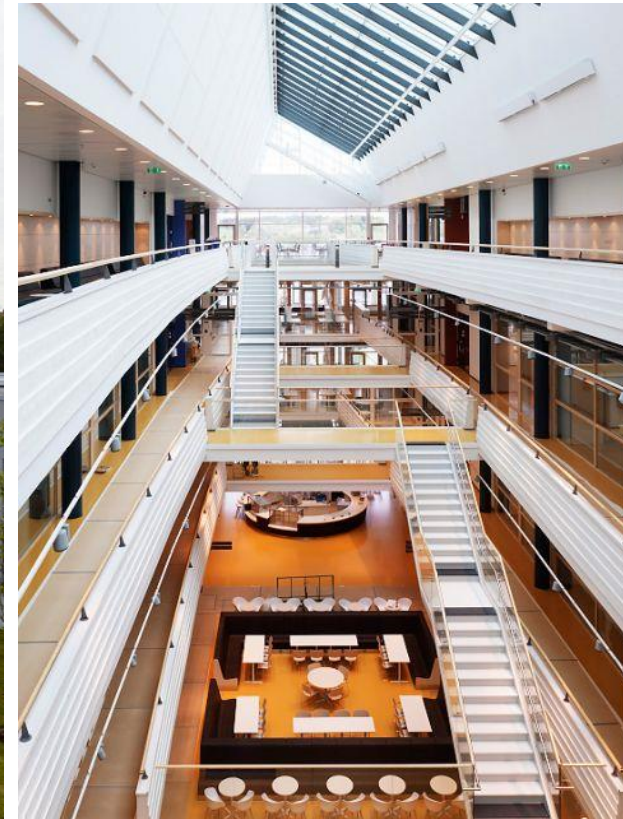


Swedish University of
Agricultural Sciences





Interbull Centre



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



Interbull Centre Activity Report 2016-2017

Tallinn, Estonia – 26-27 August 2017



Contents

- 1 EU Reference Centre / Personnel
- 2 Service & Operations
- 3 Research & Development
- 4 Work plans & Events
- 5 Finances & Budgets



Interbull Centre - EU Reference Laboratory

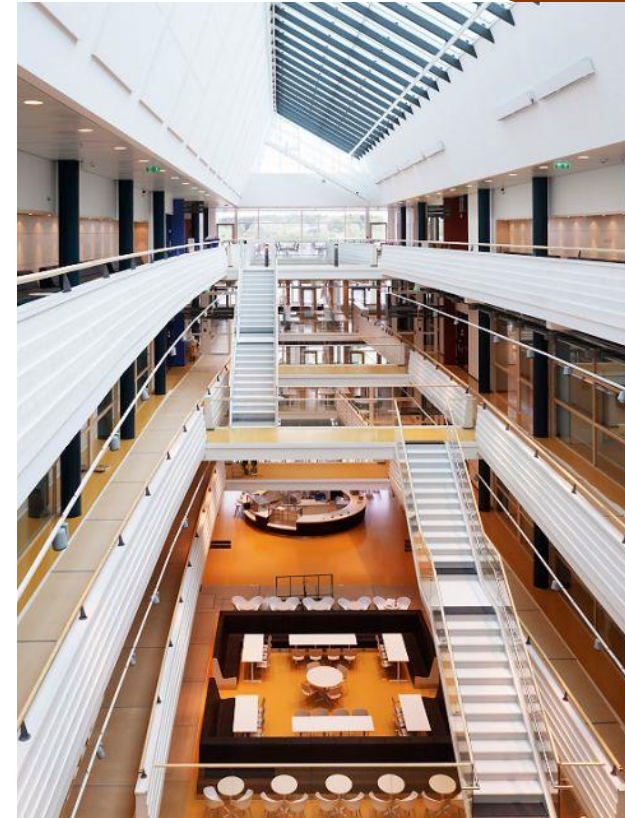
- ❖ European Union Reference Laboratory (EURL) for Zootechnics (Bovine Breeding)
- ❖ Since 1996
- ❖ Usually annual grant
- ❖ Current grant for 2016 and 2017
- ❖ Planned for 2018: 1 Jan – 31 October





Interbull Centre – EU Reference Centre

- Nov 2018 → current duty ends
- January 2017: call for new EU reference lab
- March 2017: Swedish state (through the Board of Agriculture) submitted proposal of Interbull Centre for duties in the call
- In parallel information of European ICAR members jointly by ICAR president and Interbull chairman
- June 2017: Evaluation committee recommended to EU commission to accept proposal of Interbull Centre / seeks for confirmation by Swedish state
- August 2017: Published in Official Journal of the European Union.



COMMISSION IMPLEMENTING REGULATION (EU) 2017/1422

of 4 August 2017

designating the European Union reference centre responsible for the scientific and technical contribution to the harmonisation and improvement of the methods of performance testing and genetic evaluation of purebred breeding animals of the bovine species

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

HAS ADOPTED THIS REGULATION:

Article 1

The following centre shall be designated as the European Union reference centre responsible for the scientific and technical contribution to the harmonisation and improvement of the methods of performance testing and genetic evaluation of purebred breeding animals of the bovine species:

Interbull Centre
Department of Animal Breeding and Genetics
Swedish University of Agricultural Science — SLU
Ulls väg 26
Box 7023
SE-750 07 Uppsala
Sweden

(¹) OJ L 171, 29.

Article 2

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

It shall apply from 1 November 2018.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 4 August 2017.

For the Commission
The President
Jean-Claude JUNCKER



PERSONNEL



Interbull Centre

- ❖ Haifa Benhajali (PhD) Geneticist (09 March '15)
- ❖ Eva Hjerpe (MSc) Geneticist (01 March '04)
- ❖ Hossein Jorjani (PhD) Service Manager (01 November '98)
- ❖ Valentina Palucci (MSc) Geneticist (07 March '07)
- ❖ Marcus Pedersén Systems Administrator (23 May '16)
- ❖ Toine Roozen (MSc, MBA) Director (08 September '15)
- ❖ Joanna Sendecká (PhD) Geneticist (15 January '15)
- ❖ Carl Wasserman Systems Developer, IT Coordinator (01 August '11)
- ❖ Petri Pennanen Programmer, System Admin. (May '14–7 Aug' 17)
 - Vacancy Programmer, Systems Administrator

- ❖ Renzo Bonifaci (BSc) Student



ISO 9001 Certification

- January 2016
 - Interbull Centre has been ISO certified according to the ISO 9001:2008 standard
- December 2016
 - First surveillance visit
 - No non-conformities
- June 2017
 - Internal audit according to the ISO 9001:2015 standard
- *(November 2017)*
 - *(External audit according to the ISO 9001:2015 standard)*





SERVICE AND OPERATIONS



Evaluation runs in the period

❖ Test runs

- January 2017

❖ Routine runs

- December 2016
- April 2017
- August 2017



Validation of National EBVs and GEBVs

- ❖ Methods I, II and III
 - Follow the official test evaluations calendar
- ❖ The GEBV test
- ❖ Validation software
 - GEBV test
 - Methods I, II, III
- ❖ Mendelian sampling trend validation
 - Introduced for Production traits starting September 2017 test run



Populations in MACE (April 2017)

Breed Group	PROD (3)	CONF (23; BSW 33)	UDER (2)	LONG (1)	CALV (4)	FERT (5)	WORK (2)	ALL (40)	Δ	Publishable bulls (PROD)
BSW	11	9	10	10	6	9	7	62	0	10 615
GUE	5	4	5	5	0	5	0	24	-4	1 092
HOL	30	23	28	20	16	19	11	147	-1	146 925
JER	11	9	8	9	0	9	5	51	0	12 404
RDC	14	9	13	11	7	11	6	71	+1	15 631
SIM	13	0	12	6	0	0	0	31	0	31 388
ALL	84	54	76	61	29	53	29	386	-4	218 055
Δ	-1	-1	-2	+1	0	-2	+1	-4		5 609

The number of traits by trait group is given in parenthesis.

Number of bulls with published MACE EBVs for production traits is shown in the last column.



Size of operations - MACE

Multiple Across Country Evaluation (MACE)	December 2015	December 2016
Countries	33	34
Evaluation breeds	6	6
Country-breed-trait combinations	1,825	1,899
Breed-trait evaluations	171	181
Animals in the pedigree database	24,981,462	27,896,152
Submitted national estimated breeding values	11,573,393	12,182,435
Qualified national estimated breeding values	6,348,587	6,654,381
Calculated international estimated breeding values	270,221,873	282,411,323
Distributed international estimated breeding values	103,108,350	106,979,713
Multiple Across Country Evaluation (MACE)	September 2015	September 2016
Estimated across country genetic correlations ¹	12,548	12,303
Validation tests ²	132	167

¹ Merging of 2 populations in one country during 2015

² Subject to natural fluctuations



Size of operations - GMACE

Genomic (GMACE)	Multiple	Across	Country	Evaluation	December 2015	December 2016
Countries					31	31
Evaluation breeds					1	1
Country-breed-trait combinations					339	340
Breed-trait evaluations					38	38
Animals in the pedigree database					24,981,462	27,896,152
Submitted national estimated breeding values					17,324,351	19,428,147
Qualified national estimated breeding values					14,135,403	14,851,282
Calculated international estimated breeding values					153,062,674	155,263,850
Distributed international estimated breeding values¹					322,431	536,340

¹ Change of publication rules during 2015 and 2016



Size of operations - InterGenomics

InterGenomics (Genomic evaluation of BSW populations)	December 2014	December 2015	December 2016
Countries	8	8	8
Country-trait combinations	212	219	279
Unique submitted genotypes	16,599	20,561	26,013
Genotypes entering imputation & genomic evaluation	15,808	19,500	23,571
Distributed international GEBVs	Not reported	Not reported	6,385,844



Size of operations - Interbeef

Interbeef	January 2015	January 2016
Countries	10	10
Evaluation breeds	2	2
Country-breed-trait combinations	18	18
Animals in the pedigree database	23,927,437	25,389,096
Submitted national estimated breeding values	7,210,100	7,472,166
Distributed international estimated breeding values	69,569,165	57,996,544
Number of distributed international estimated breeding values	938,179	1,108,658



RESEARCH AND DEVELOPMENT



RESEARCH & DEVELOPMENT

❖ ITC coordinated activities:

- Expanding InterGenomics
 - InterGenomics 2.0
- MS trend validation
- Robust MACE
- GMACE reliabilities for MAS

❖ ITBC's own activities:

- Continuous improvement of IDEA & workflows

Expanding InterGenomics



❖ InterGenomics 2.0

- Process started back in April 2014
- Final steps set in motion
 - Implementation and validation of a quality protocol

❖ InterGenomics Holstein

- Later today...



Mendelian Sampling Trend Validation

- ❖ Investigating further reasons for countries failing
 - Confirmed correctness of software

- ❖ SC decision in Chile:
 - Introduce the test for PROD in SEPTEMBER 2017
 - Results used with conventional validation to further understand validity of national models
 - Introduce the test for other traits by January 2018



Robust MACE

- ❖ Collaborative Project started in 2013 between
 - **INRA Inst. de l'Elavage ITBC**
- ❖ December 2015 ITBC took over analysis and summary of results
 - WG group created overseeing studies and results:
 - *Results showed that Robust Mace was over correcting the bias for some traits and not for others*
 - *Decided to also change the de-regressed model*
 - *Problem of overcorrection solved!*
- ❖ How can we assess which model is better?
 - *On going discussion within WG*



GMACE reliabilities for MAS

- ❖ December 2015 GMACE Evaluation:
 - Noticed high reliabilities values for MAS compared to other traits
 - After investigation, a new approach was proposed “**The parameter-space**” where new residuals are taken into account for different heritabilities among country-traits.
 - The Parameter-space approach has been implemented since January 2017 GMACE test run



IDEA AnimInfo

- ❖ Introduced in January 2016
 - Allows member organizations to report additional information on existing animals in pedigree module
 - Makes IDEA an exchange area of information.
- ❖ Several applicability:
 - % Red Holstein genes in Simmental
 - WHFF Genetic Traits
 - Additional GMACE information (files 733, 734)



IDEA Duplicate

- ❖ Looking for ways to improve IDEA Duplicate page
 - ❖ Develop possibility to print extract list of duplicates
 - ❖ Develop possibility to deal with such conflicts via uploading of link file202 rather than on page only

Currently under testing

- ❖ Looking for ways to increase member awareness!!



WORK PLANS



Services

Routine Runs

Year	Release date	
2017	DEC	05
2018	APR	03
	AUG	07
	DEC	04

Test Runs

2017	JAN (13 FEB) MACE & IG
	JAN (21 FEB) GMACE
	SEP (03 OCT) MACE & IG
	SEP (10 OCT) GMACE





Services

Routine Runs

Year	Release date
2017	NOV 06
2018	MAR 21
	OCT 29

Test Runs

2017	JUNE
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