



# **Interbull Centre Activity Report 2013-2014**

**Orlando, Florida, USA – July 09-11, 2015**



# 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).



Swedish University of  
Agricultural Sciences





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# PERSONNEL



# Interbull Centre

- ❖ Haifa Benhajali (from 2015 – 03 – 09)
- ❖ Eva Hjerpe
- ❖ Hossein Jorjani
- ❖ Mohammad Nilforooshan (up to 2015 – 09 – 30)
- ❖ Valentina Palucci
- ❖ Petri Pennanen
- ❖ Johanna Sendecká (from 2015 – 01 – 15)
- ❖ Erling Strandberg – Interbull Secretary
- ❖ Carl Wasserman



# Interbull Centre

- ❖ João Dürr (up to 2014 – 09 – 15)
- ❖ Dan Englund (up to 2014 – 05 – 31)
- ❖ Gerald Jansen (up to 2014 – 12 – 31, 25%)



# **SERVICE AND OPERATIONS**



# Evaluation runs in the period

## ❖ Test runs

- September 2014
- January 2015

## ❖ Routine runs

- August 2014
- December 2014
- April 2015





# 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



# Size of operations - MACE

Multiple Across Country Evaluation (MACE)	December 2013	December 2014
Countries	34	34
Evaluation breeds	6	6
Country-breed-trait combinations	1,789	1,833
Breed-trait evaluations	171	171
Animals in the pedigree database	21,067,789	23,084,236
Submitted national estimated breeding values	8,276,343	11,030,135
Qualified national estimated breeding values	5,932,416	6,086,142
Calculated international estimated breeding values	251,709,552	265,634,220
Distributed international estimated breeding values	98,769,083	102,965,388
Multiple Across Country Evaluation (MACE)	September 2013	September 2014
Estimated across country genetic correlations	12,999	13,168
Validation tests	146	183



# Size of operations - GMACE

<b>Genomic Multiple Across Country Evaluation (GMACE)</b>	<b>December 2014</b>
<b>Countries</b>	<b>11</b>
<b>Evaluation breeds</b>	<b>1</b>
<b>Country-breed-trait combinations</b>	<b>331</b>
<b>Breed-trait evaluations</b>	<b>38</b>
<b>Animals in the pedigree database</b>	<b>23,084,236</b>
<b>Submitted national estimated breeding values</b>	<b>14,975,470</b>
<b>Qualified national estimated breeding values</b>	<b>12,171,547</b>
<b>Calculated international estimated breeding values</b>	<b>135,578,888</b>
<b>Distributed international estimated breeding values</b>	<b>6,378,848</b>



# Size of operations - InterGenomics

<b>InterGenomics (Genomic evaluation of BSW populations)</b>	<b>December 2013</b>	<b>December 2014</b>
<b>Countries</b>	<b>7</b>	<b>8</b>
<b>Country-trait combinations</b>	<b>177</b>	<b>212</b>
<b>Unique submitted genotypes</b>	<b>13,905</b>	<b>16,599</b>
<b>Genotypes entering imputation &amp; genomic evaluation</b>	<b>13,186</b>	<b>15,808</b>



# Size of operations - Interbeef

<b>Interbeef</b>	<b>January 2015</b>
<b>Countries</b>	<b>10</b>
<b>Evaluation breeds</b>	<b>2</b>
<b>Country-breed-trait combinations</b>	<b>18</b>
<b>Animals in the pedigree database</b>	<b>23,927,437</b>
<b>Submitted national estimated breeding values</b>	<b>7,210,100</b>
<b>Distributed international estimated breeding values</b>	<b>69,569,165</b>



# Populations in MACE (April 2014)

Breed Group	PROD (3)	CONF (23)	UDER (2)	LONG (1)	CALV (4)	FERT (5)	WORK (2)	ALL (40)	Δ	Publishable bulls (PROD)
BSW	11	9	10	10	5	9	6	60	0	10 242
GUE	6	4	6	6	0	6	0	28	0	1 079
HOL	31	24	29	20	15	19	10	148	-3*	139 799
JER	11	9	8	9	0	9	5	51	1	11 479
RDC	14	9	13	10	7	11	6	70	1	14 800
SIM	12	0	11	5	0	0	0	28	2	29 823
ALL	85	55	77	60	27	54	27	385	2	207 222
Δ	1	-1	1	0	-1	-1	3	2		6 937



# Meetings

- ❖ 2015 Interbull Technical workshop and Industry Meeting
  - Verden, Germany
  - February 23-26, 2015
  - 75 / 90 participants



# RESEARCH & DEVELOPMENT

- ❖ World Guernsey Cattle Federation
- ❖ ITC coordinated activities:
  - GEBV-test
  - Post-processing of rG
  - MS trend validation
  - Genomic Reliability
  - Etc.
- ❖ ITBC's own activities:
  - Continuous improvement of workflows





# WORK PLANS



# Services

## Routine Runs

Year	Release date	
2015	AUG	11
	DEC	01
2016	APR	05
	AUG	09
	DEC	06

## Test Runs

2015	SEP (06 OCT)
2016	JAN (16 FEB)
	SEP (11 OCT)



# Future Meetings

- ❖ The 2016 ICAR/Interbull meeting
  - EAAP 2015, 2016
  - Puerto Varas, Chile, October 24 to 28, 2016



**Thanks to all our collaborators!**

The Interbull Centre Team