



Interbull Business Meeting 2

1 June 2026



THE GLOBAL STANDARD
FOR LIVESTOCK DATA

Network. Guidelines. Certification.



Interbull Business Meeting 2

Urs Schnyder

Interbull Steering Committee Chair



THE GLOBAL STANDARD
FOR LIVESTOCK DATA

Welcome



2026 Interbull Business Meeting

2026





House Keeping

- Please silence your mobile phones
- Please use the microphone and state your name
- Official Delegates, please sign your name on the paper



Business Meeting Delegates 2026

Australia	Thuy Nguyen
Austria	Judith Himmelbauer
Belgium	Alain Gillon
Canada	Cindy Jaton
Croatia	Sebastian Mucha (SC Rep)
Czech Rep.	Jiri Splichal
Denmark	Haifa Splittorff
Estonia	Kaivo Ilves
Finland	Haifa Splittorff
France	Sophie Mattalia
Germany	Rainer Emmerling
Hungary	Sebastian Mucha (SC Rep)
Ireland	Sean Coughlan
Israel	Yaniv Lavon
Italy	Jan-Thijs van Kaam
Japan	Takefumi Osawa
Latvia	No representative 2026

Lithuania	Vytenis Cukauskas
Netherlands	Gerben de jong
New Zealand	Katarzyna Stachowicz
Norway	Janez Jenko
Poland	Sebastian Mucha
Portugal	
Slovakia	
Slovenia	Marija Klopčič
South Africa	Bobbie van der Westhuizen
South Korea	Jaebeom Cha
Spain	Juan Pena
Sweden	Haifa Splittorff
Switzerland	Urs Schnyder
United Kingdom	Marco Winters
Uruguay	Ignacio Aguilar
USA	Ezequiel Nicolazzi



Business Meeting Agenda

Meeting 1

1. Opening and welcome
2. Adoption of agenda
3. Minutes 2025 Interbull Business Meeting
4. Interbull Governance
5. Interbull Centre Director's Report
6. Interbull Chair's Report
 Input into Strategic Planning
7. Discussion
8. Close Business Meeting 1

Meeting 2

9. Welcome back
10. ICAR Update
11. Interbull Technical Committee Report
12. Interbull Research & Development Report
13. ICAR Interbeef WG
14. EU Reference Centre
15. Other Matters and Open Discussion
16. Future Events
17. Close



Business Meeting Agenda

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Interbull Business Meeting

Item 9. Welcome Back

Urs Schnyder



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International Committee for Animal Recording: 2026 Updates for Interbull

Interbull Business Meeting

1st of June 2026

Ana Granados Chapatte – General Manager



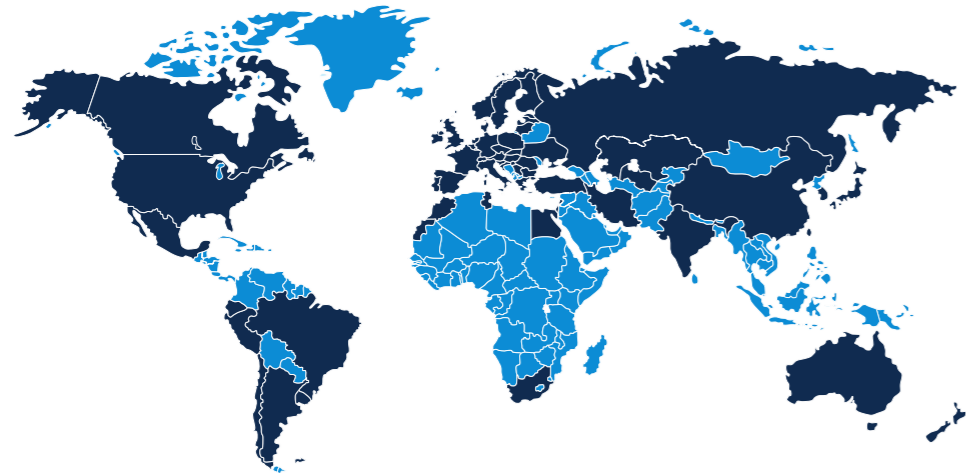
ICAR2026
VERONA ITALY



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FOR LIVESTOCK DATA

Building consensus, based on science for the benefit of farmers and their animals

ICAR Members organisations



To communicate and implement outputs locally with farmers/breeders

Subcommittees & Working groups



ICAR STANDARDS – BEST PRACTICES AND HARMONIZATION: WHY?

DEVELOPMENT & IMPROVEMENT FOR IDENTIFICATION, RECORDING AND DEVELOPMENT OF TOOLS, **INCLUDING GENETIC EVALUATION**

- Trait definition
- What data to record for certain trait and how?
- Frequency of recording
- Data checks to apply



HARMONIZATION AND DEFINITION OF TRAITS

For example, deriving certain traits from AMS data or sensors, different definitions and measurement principles across manufacturers for traits like:

- Milking speed
- Box time
- Failed, interrupted, missing milking
- Rumination time (ICAR-IDF initiative)



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ICAR STANDARDS – GUIDELINES



SUBCOMMITTEES & WORKING GROUPS

- Animal Identification
- Measuring, recording and sampling devices
- Milk analysis
- Interbull
- Beef
- DNA
- Dairy cattle milk recording
- Conformation recording
- Feed intake and Greenhouse emissions
- Functional traits
- Artificial insemination
- **Animal data exchange (ADE)**
- Sheep, goats and camelids

GUIDELINES FOR

- Functional traits
- Milk analysis
- Measuring, recording and sampling devices
- Identification devices
- Beef traits
- Animal data exchange (ADE) standards
- Feed intake and methane



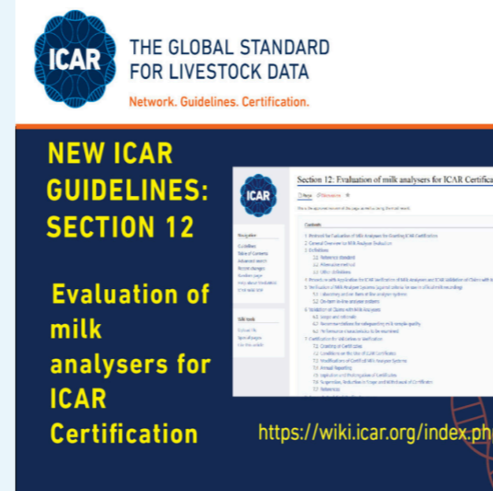
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Some examples

New ICAR Guidelines on “Evaluation of milk analysers for ICAR Certification”

New Section 12 of the Guidelines

[Link to the new Guidelines](#)



The ICAR “Bull Semen Proficiency Test”

The ICAR “Bull Semen Proficiency Test” operative since this week (17-June) !!!!!

[Read more here](#)



Validation of Methane Recording Devices

Brian Wickham Young Researchers program

POTENTIAL AND RECOMMENDATIONS FOR THE USE OF SENSOR DATA FOR GENETIC IMPROVEMENT PROGRAMMES



Beyond current activities: a changing world



- Livestock sector evolves rapidly
- Available Technology to capture and use data... too
- Need to evaluate where to position ICAR (& Interbull)
- Considering new data coming (from validation services) and farmers needs
- Make evolve standards, guidelines and services

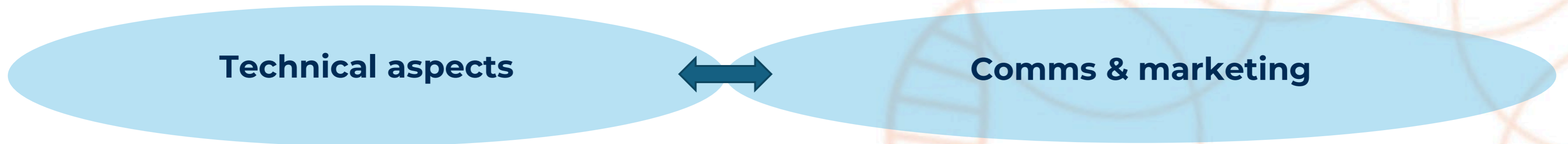


Beyond current activities: Strategic reflection

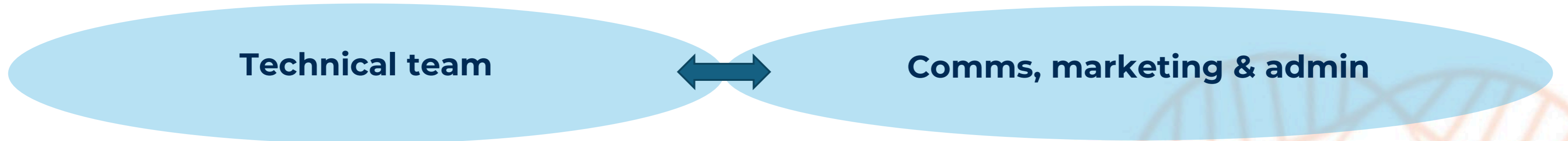
Consistency – Transversality- Implementation-Communication

Innovation (New topics - New tools)– Standards – Values- Young generations

International dimension



ICAR Team



Silvia



Ken



Ana



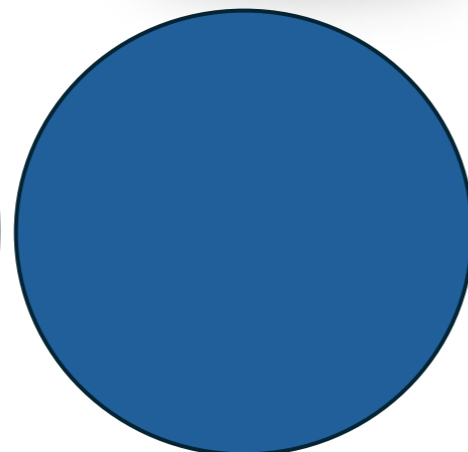
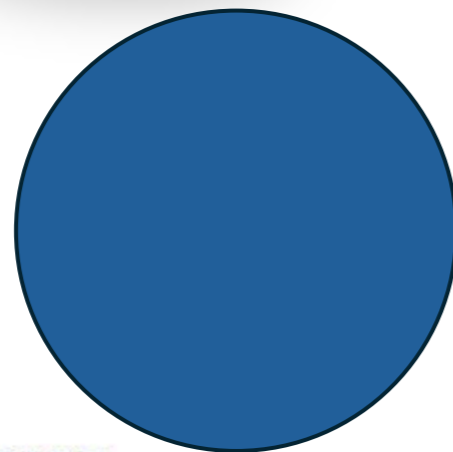
Martin



Elena



Cesare



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Thank you so much!
ana@icar.org



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Interbull Business Meeting

Item 10. ICAR Update
Ana Granados Chapatte



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Interbull Business Meeting

Item 11. Interbull Technical Committee Update

Gerben de Jong

ITC Chair



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The ITC Committee





ITC responsibilities (CoP 4.4)

- **Identify and review technical steps** that need to be taken to ensure that an **efficient service of high quality** is delivered to countries participating in the international genetic evaluations provided by Interbull and to **support the continuous development** of the service.
- Make **decisions** on methodological issues that may impact evaluation results.
- Make **recommendations** to the Interbull Steering Committee on methodological issues of such importance that they may affect the service as a whole.



ITC Groups

4 Groups reporting to the ITC to work on specific objectives:

1. Validation

A. Legarra (chair), P. Sullivan, Z. Liu, R. Mrode, V. Palucci

2. Genomic Reliability

Z. Liu (chair), M. Lidauer, P. VanRaden, I. Strandén, J. Vandenplas, H. Eding, K. Haugaard

3. Future MACE

P. Sullivan (Chair), G. de Jong, I. Strandén, H. Gao, V. Palucci

4. Inclusion of external information in national evaluations - **NEW**

I. Aguilar (Chair), Simone Savoia, Nicolas Gengler, Herwin Eding, Damilola Adekale, Adrien Butty, Timo Pitkänen, G. Campos



ITC Groups – Update (1/4)

1. Validation

- ✓ Developing a Test-III alternative more suitable with current data structure
 - ✓ Choice to based on EBVs from full/reduced
 - ✓ Incorporate test in validation software
- ✓ Reviewing test-II model
 - ✓ Move from DYD to Mendelian Sampling terms
 - ✓ Shorten the period from 1 year to x months



ITC Groups – Update (2/4)

2. Genomic Reliability

- ✓ Applicability of guidelines to small breeds and new traits – **YES!**
- ✓ Beef-on-Dairy application → working on proposals
- ✓ SNP_BLUP_REL → more efficient, thanks to LUKE!
- ✓ Comparison of Interbull GREL method vs. Theoretical method → very comparable!
 - ✓ Peer review paper will follow
- ✓ Working on comparison of GREL method vs. Theoretical method vs. UGA
 - ✓ Peer-review paper will follow
- ✓ Update available guidelines



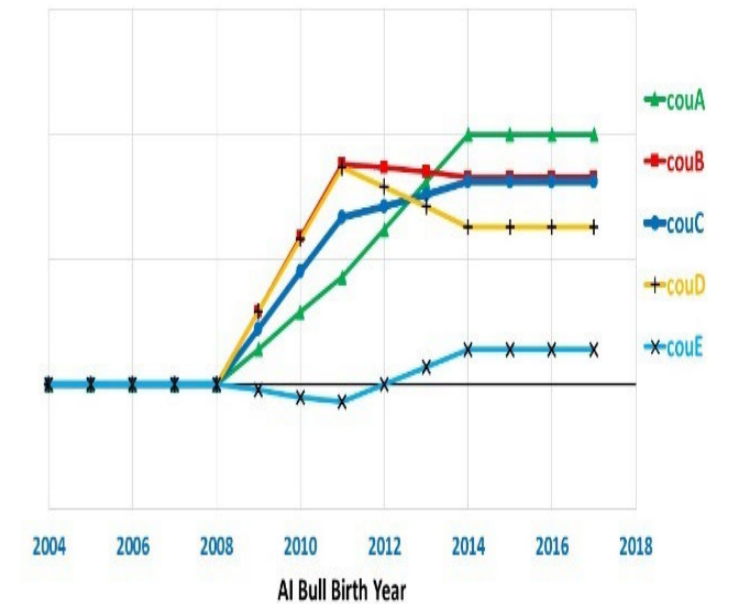
ITC Groups – Update (3/4)

3. Future MACE

- ✓ GPS effects estimated for extra three years (2018-2021)
 - ✓ Basic model is working as expected
- ✓ VCE estimates on real MACE data ongoing (LUKE has worked on that)

Plan:

- ✓ Estimate VCE for all MACE traits/Breeds
- ✓ Apply GPS-MACE with new VCE and new data
- ✓ Report status update at next Interbull





ITC Groups – Update (4/4)

4. Inclusion of external information in national evaluations

- ✓ Deliver a set of guidelines including an inventory of methods with their practical use cases, theoretical versus operational applicability, validation requirements, and ease of implementation for different country
 - ✓ Prepare a survey to get an overview of approaches
 - ✓ Literature review
 - ✓ Develop guidelines
 - ✓ Discuss at ITC and SC
 - ✓ Publish guidelines



WG Activities Finalized

❖ MACE Coding WG - *Finished*

- ✓ Reviewed and clarified codes for *Status of bull & Type of Proofs*
 - ✓ New codes presented during 2025 Interbull meeting
- ✓ Recommendations approved by the SC
 - ✓ Information sent to member countries (*Exec. Sum. July-Sept. & Oct-Dec. 2025*)
- ✓ Implementation by 1 September 2026 (test run data reception deadline)



Interbull Business Meeting

Item 11. Interbull Technical Committee Update

Gerben de Jong



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Item 12. Interbull Research & Development Update

Valentina Palucci

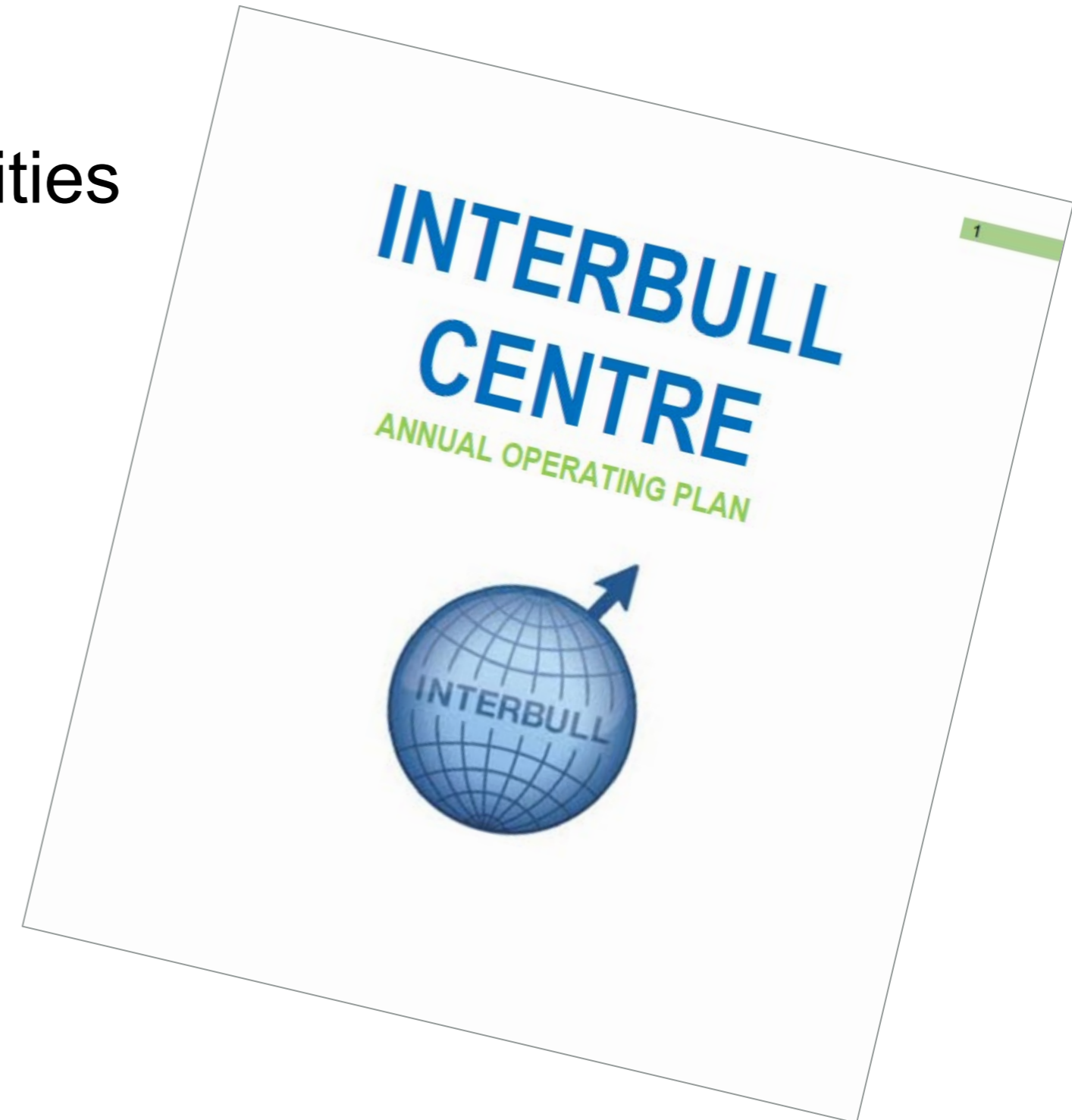
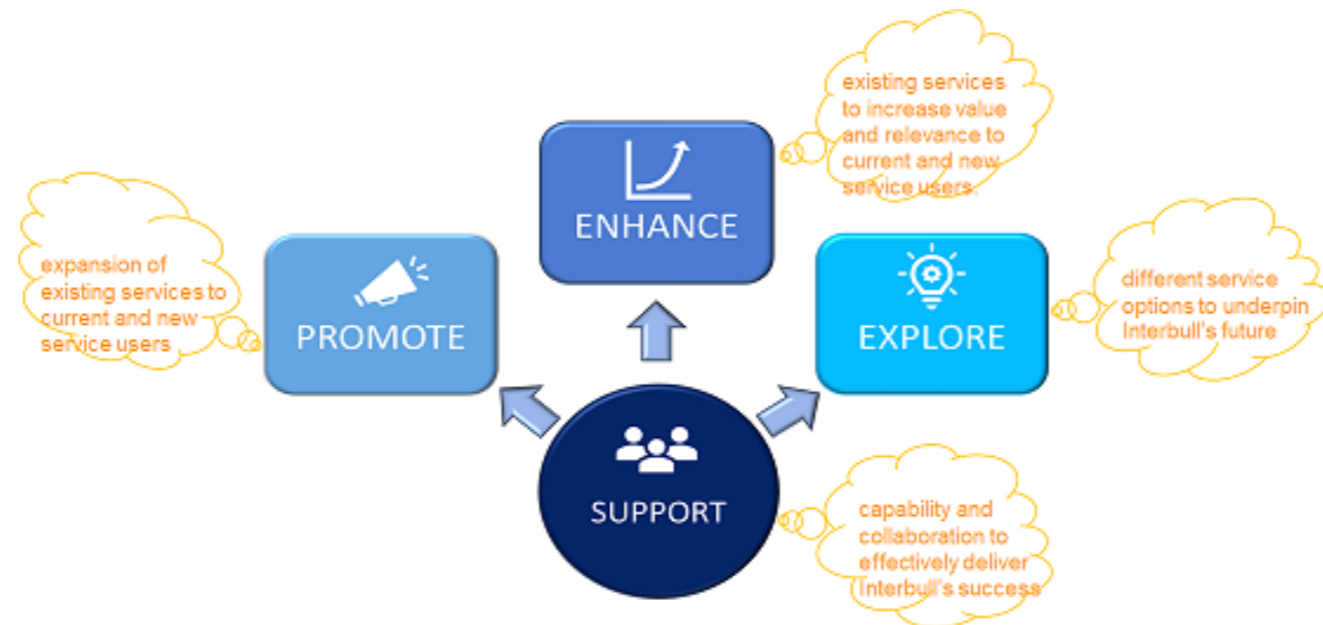


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Current R&D

- ✓ Defined in the 2026 Annual Operating Plan
- ✓ Activities according to our four strategic priorities





From Louisville to Verona – What has happened?

❖ Expansion of Interbull portfolio

- Research run performed in fall/winter '24/25
- Gestation Length, Metabolic diseases and Claw Health traits

❖ Direct Gestation Length

- ✓ Included as fifth trait in the calving trait group
- ✓ First official evaluation August '25

Breed	Countries in Direct Gestation Length (May 2026)
BSW	AUS, USA, CHE
HOL	AUS, NLD, NZL, USA
JER	AUS, NZL, USA
RDC	AUS, NOR, NZL, USA



From Louisville to Verona – What has happened?

❖ Metabolic Disease & Claw Health

- ✓ September 2026 → First official test evaluation for:
 - ✓ *HOL sub-clinical ketosis & HOL digital dermatitis*
- ✓ Ongoing offer to carry out an official test evaluation for the remaining metabolic disease and claw health traits

	Metabolic Disease			Claw Health					
	Clinical Ketosis	Sub-clinical Ketosis	Milk Fever	Digital Dermatitis	Interdigital Dermatitis	Interdigital hyperplasia	Sole hemorr.	Sole Ulcer	White Line disease
HOL	USA (2609t) JPN NLD	CHE (2609t) ITA (2609t) POL NLD	USA (2609t) JPN NLD	CHE (2609t) GBR (2609t) POL NLD	GBR (2709t) POL NLD	GBR (2709t) POL NLD	GBR (2709t) POL NLD	GBR (2609t) POL NLD	CHE (2609t) POL NLD



From Louisville to Verona – What has happened?

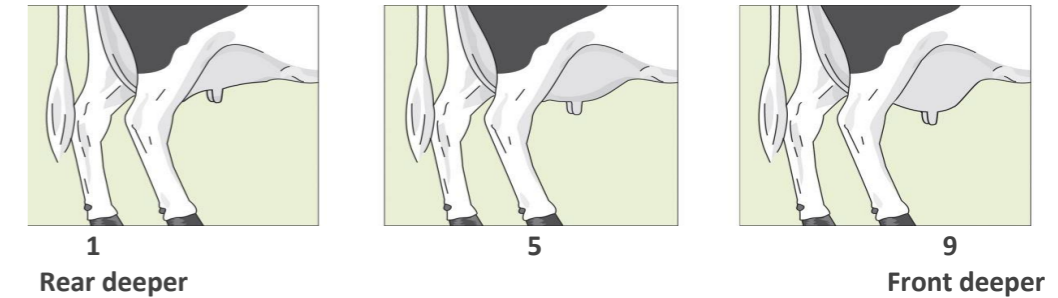
❖ Expansion of Interbull portfolio

❖ Research run for two new Conformation traits

- ✓ Collaboration between the **ICAR** Conformation Working Group and the World Holstein Friesian Federation (**WHFF**)
- ✓ Availability of data and level of interest collected through PREP
- ✓ SC decision to go ahead with a research run for HOL and other breeds for

Front Feet Orientation & Udder Balance

- ✓ *Data call: mid October '26*



1	5	9
Extreme toe-out	Average slightly outside oriented	Parallel. straight forward



From Louisville to Verona – What has happened?

❖ Expansion of Interbull portfolio

❖ Want us to consider other traits?

- Fill in information through the PREP “other traits” form




[PREP](#)

[Submissions](#)

[Data queries](#)

[Login](#)

[Help](#) 

Other Traits

Provide information for additional traits to be considered for expansion of the Interbull portfolio (for dairy or Beef evaluations)

Latest submission: 2026-03-05 21:49:30

Submissions (total): 381

[View all submissions](#)

[View latest submissions](#)



From Louisville to Verona – What has happened?

❖ PREPdb- Improvements

➤ Forms Improvements

PREP Overview Submissions Data queries Staff Log out Help

Save | Submit | View current answers | View last save
Message:

Form settings: Follow scroll: Treeview-column (left) Question-column (right)

1. Calving traits
1.1. Breed(s) and trait(s)

1.1 Breed(s) and trait(s)
Mark all the breeds and traits you are recording from two drop-down lists and you will allow you later on to copy information between the breed-trait combinations.

BREEDS	TRAITS
Abundance (ABO)	Direct Stillbirth
Aberdeen Angus (AAN)	Maternal Stillbirth
Ayrshire (AYR)	Direct Gestation Length
Beef Shorthorn (BSH)	Maternal Gestation Length

PREP is a service from Interbull Centre. The PREP Database is developed as part of the Interbull Centre's activities as the European Union Reference Centre for Zootechnics (Bovine Breeding). The Interbull Centre receives funding from the European Union under Grant Agreement "Project: 101202338 — EURC-Zootechnics 2025-2027 — SMP-FOOD-2025-EURL-EURC-PJG-IBA"

Funded by the European Union

PREP Overview Submissions Data queries Staff Log out Help

Save | Submit | View current answers | View last save
Message:

Form settings: Follow scroll: Treeview-column (left) Question-column (right)

1. Conformation Traits
1.1. Conformation Traits and Breeds
1.1.1. Holstein (HOL)-Stature
1.1.2. Jersey (JER)-Chest width

1.1 Conformation Traits and Breeds
This section serves adding several breeds and traits recording and evaluation information at the same time. Therefore, some options are repeated later on for adding more specific information

BREED	TRAIT	ADD
Holstein (HOL)	Stature	ADD
Jersey (JER)	Chest width	
Brown Swiss (BSW)	Body depth	ADD
Red Dairy Cattle (RDC)	Angularity	

Source	Item	Copy target(s)	Delete
<input type="radio"/>	Holstein (HOL)-Stature	<input type="checkbox"/>	Delete
<input type="radio"/>	Jersey (JER)-Chest width	<input type="checkbox"/>	Delete

Copy source answers to target(s)
[Invert target selection](#) | [Clear target selection](#)



From Louisville to Verona – What has happened?

❖ PREPdb- Improvements

➤ Query Improvements

Possibility to correct reported information through data queries

Show entries

Search:

Submission	Organization	Submission Time	Breed	Select A Trait From The List
CRV/11 (edit)	CRV	2025-09-16 16:37:39	<ul style="list-style-type: none">Holstein (HOL)	<ul style="list-style-type: none">Udder Balance
DATAGENE/19 (edit)	DATAGENE	2025-08-01 03:12:00	<ul style="list-style-type: none">Holstein (HOL)	<ul style="list-style-type: none">Front Feet Orientation
DATAGENE/1 (edit)	DATAGENE	2025-08-01 03:09:23	<ul style="list-style-type: none">Holstein (HOL)	<ul style="list-style-type: none">Udder Balance
CRV/25 (edit)	CRV	2025-07-29 10:46:02	<ul style="list-style-type: none">Holstein (HOL)	<ul style="list-style-type: none">Front Feet Orientation
CDCB/9 (edit)	CDCB	2024-10-30 17:21:53	<ul style="list-style-type: none">Holstein (HOL)	<ul style="list-style-type: none">Displaced abomasum
CDCB/47 (edit)	CDCB	2024-10-30 17:20:10	<ul style="list-style-type: none">Holstein (HOL)	<ul style="list-style-type: none">Metritis



From Louisville to Verona – What has happened?

❖ PREPdb- Improvements

➤ Additional Supporting Information Added

The image displays two side-by-side screenshots of the Interbull PREP Database website, illustrating the addition of supporting information. Both screenshots show the website's navigation menu and a 'Help' dropdown menu.

Left Screenshot: The 'Help' dropdown menu is open, showing the following items: PREP User Manual, PREP Webinar, Interbull Centre, **Abbreviations** (highlighted in red), and **Countries and Organizations** (highlighted in red). The main content area displays 'Interbull PREP Database' and a message: 'Please, log in to use the system, or use a supplied direct link to fill in a form as a guest.'

Right Screenshot: The 'Help' dropdown menu is open, showing the following items: **PREP User Manual** (highlighted in red), PREP Webinar, Interbull Centre, Abbreviations, and Countries and Organizations. The main content area displays 'Interbull PREP Database' and a message: 'Please, log in to use the system, or use a supplied direct link to fill in a form as a guest.'



From Louisville to Verona – What has happened?

- ❖ **Developing a new IDEA Pedigree Authority Functionality**
 - ✓ Allowing more than 1 org to validate pedigree information
 - Best Approach Identified
 - Development to start in July 2026



From Louisville to Verona – What has happened?

❖ Females in MACE

- Research continues to adjust current MACE pipeline to handle female's data and double counting of information
- Beneficial for speeding up genetic progress for small cattle populations
- More detailed status update presented by Julius at OM IV:

Did you miss it?? Look forward for the Interbull Bulletin paper!!



Externally funded projects

❖ Global Methane Genetics Initiative

- Wageningen UR, ICAR
- Provided advice in the development of the Global Methane Database (ICAR Technical Session 8/Niu)
- Assist with the development of Validation methods for Methane evaluations (ICAR Technical Session 10/Vandenplas)

❖ ARDI2 project (ICAR Technical session 7/Astruc)

- INRAE (France), NEIKER (Spain)
- Towards an international genetic evaluation in dairy sheep
- Adapt (clones of) IDEA and GenoEx-GDE to receive ovine data
- Support R&D with alignment, imputation....





Interbull Business Meeting

Item 12. Interbull Research & Development Update

Valentina Palucci



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Item 13. Interbeef

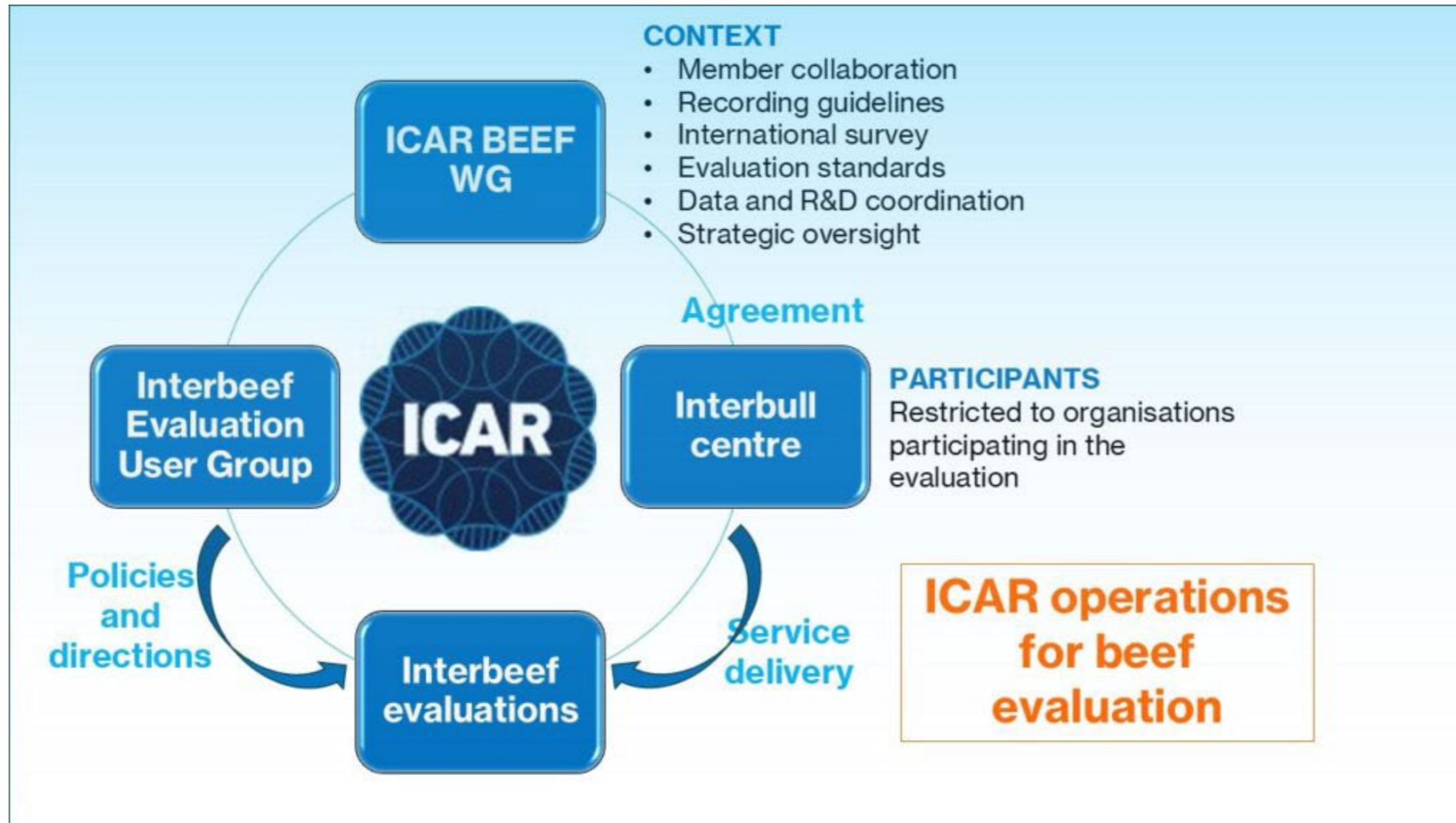
Kim Matthews



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Recap of new ICAR structure





Beef WG Composition

- Definition: The ICAR Beef Working Group provides a global forum for collaboration on recording standards, genetic evaluation, and genomic information for beef cattle breeds worldwide.

WG Members

- Kristine Adama, Latvia
- Andrea Bassini, Italy
- Martino Cassandro, Italy
- Ross Evans, Ireland
- Siri Furre, Norway
- Laurent Griffon, France
- Kamil Malat, Czech Rep.
- Anne Menrath, Germany
- Steven Miller, UNE, Australia
- Jo Newton, Australia
- Klemen Potocnik, Slovenia
- Andrea Quaglia, Italy
- Elisenda Rius, Sweden
- Pedro Santos Vaz, Portugal
- Haifa Spittorff, Norway
- Svenja Strasser, Switzerland
- Mart Uba, Estonia
- Japie van der Westhuizen, South Africa



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<https://www.icar.org/group/beef-working-group/>



Interbeef Evaluation User Group Composition

- Definition: Interbeef management group to discuss policies regarding the Interbeef evaluations and related services.

WG Members

- Kim Matthews, Agriculture and Horticulture Development Board (AHDB), UK.
- Kristine Adama, Lauku atbalsta dienests, Latvia
- Ross Evans, Irish Cattle Breeding Federation (ICBF), Ireland
- Siri Furre, TYR, Norway
- Kaivo Ilves, Eesti Põllumajandusloomade Jõudluskontrolli AS (EPJ), Estonia
- *Andrea Quaglia, ANAFBIJ, Italy*
- *Svenja Strasser, Mutterkuh Schweiz, Switzerland*





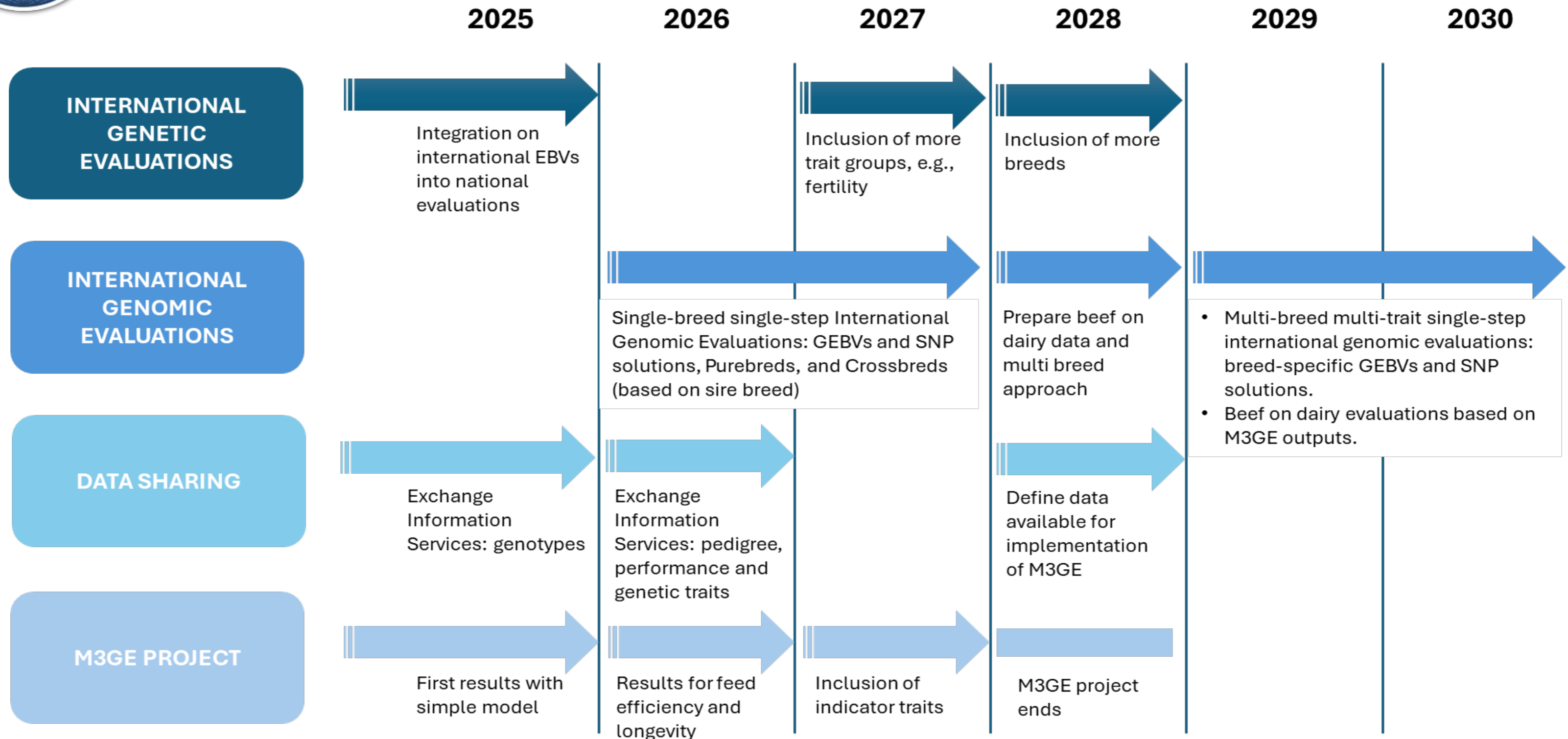
Interbeef Strategic Roadmap

- INTERBEEF STRATEGIC ROADMAP**



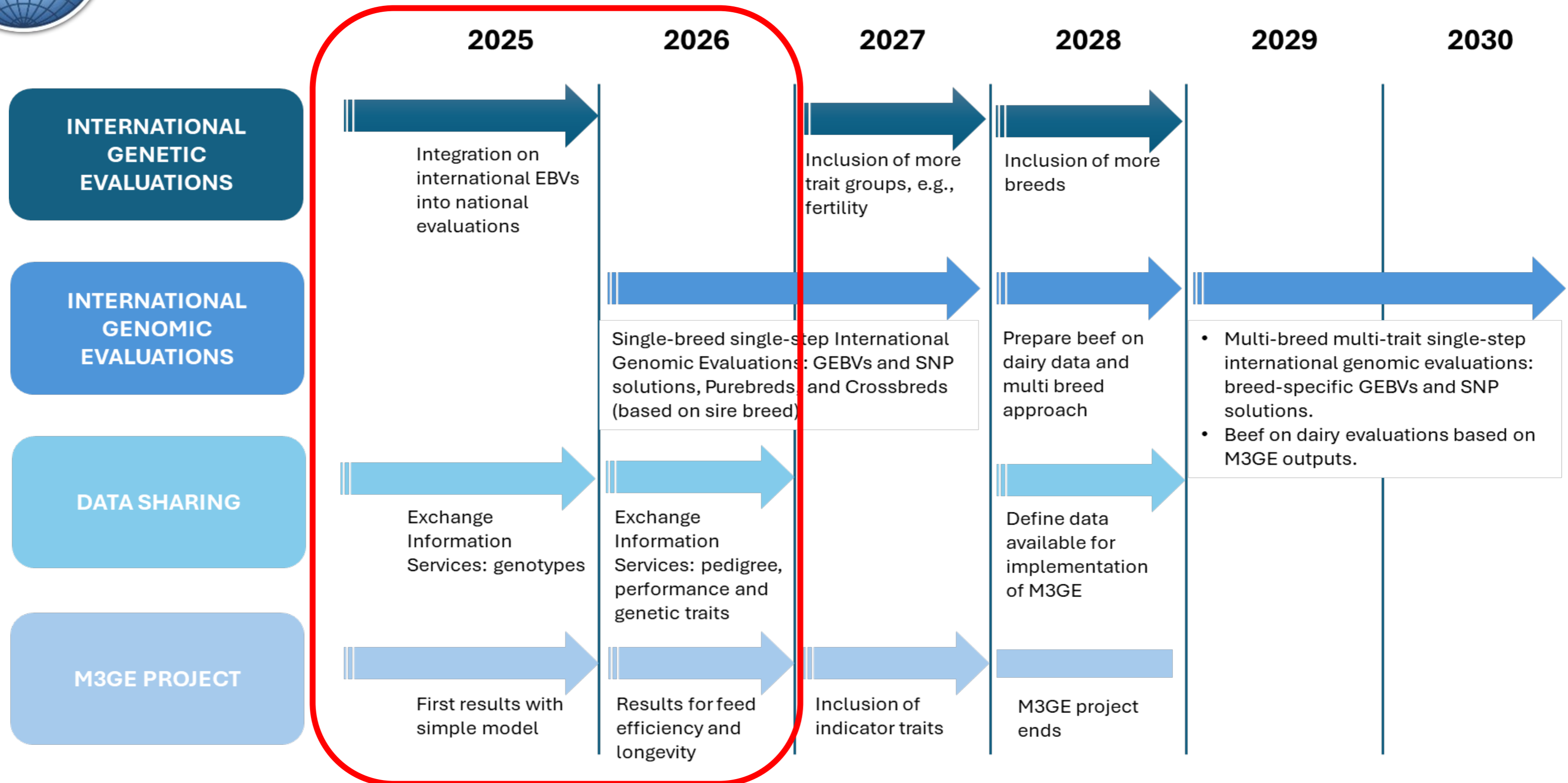


Interbeef Strategic Roadmap





Interbeef Strategic Roadmap





Interbeef Roadmap Progress

- **Interbull Centre progress:**

Objective

Provide Interbeef international genetic evaluations for current traits and breeds of beef cattle for existing and new service users

Enable integration of international EBVs into national evaluations

Provide single-breed, single-trait, single-step International Genomic Evaluations delivering GEBVs and SNP solutions for Purebreds and Crossbreds

Validate and establish a new service fee model

Enable exchange of genotypes for beef through the GenoEx-GDE platform, independent from international evaluations

Enable exchange of pedigree, performance and genetic traits for beef through IDEA database

Review and update "Section 03: Beef Cattle Recording of the ICAR Guidelines

Status



Completed



Not relevant (Move to genomic evaluation)



Key focus – in progress (Multi-breed evaluation)



Scheduled for 2026



In place



In place



Completed



Interbeef Roadmap Progress

M3GE project – Multi-country, multi-breed, multi-trait genomic evaluation.

Renzo Bonifazi – Tuesday M3GE meeting

- Single-breed and/or multi-breed international beef genomic evaluation pipeline



Objective

First results with a simplified model available from the M3GE project

Results for health traits (longevity) and novel traits (feed efficiency) available from M3GE project

Status



Completed



Ongoing



Interbeef Validation

- **Application of the Linear Regression (LR) Validation method for international beef cattle evaluations**
 - At present, the WG is investigating the application of the LR method.
 - The focus is on defining focal individuals and how to communicate validation results to the countries.

- **Presentation:**
 - Technical Session 14 - Beef Cattle – Genetic Evaluation and Recording
 - Title: “Towards standardised LR protocols for international beef cattle genetic evaluations”

- ❖ **New! ICAR Guideline section 25 on Beef Validation**
 - Adaptation of the Interbull validation Method II as a first tool for validation of models in beef genetic evaluations, considering the structural differences between beef and dairy breeding systems

https://wiki.icar.org/index.php/Section_25_%E2%80%93_International_Beef_Evaluation_and_Validation



Next steps

- Lots going on!
- Many meetings on Tuesday:
 - M3GE
 - Beef on Dairy
 - Beef WG
 - Interbeef Evaluations User Group
- And one on Thursday
 - Technical Session 14 - Beef Cattle – Genetic Evaluation and Recording



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Interbull Business Meeting

Item 14. EU Reference Centre

Daniele Vicario



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European Union Reference Centre - Zootechnics

Interbull Centre officially designated as the **European Union Reference Centre for Zootechnics** (bovine breeding) in 2018.

- The EURC for Zootechnics plays a key role in:
 - **harmonization and improvement of performance testing and genetic evaluation** methods.
 - provide scientific and technical expertise to **support breed societies**, designated third parties, and national competent authorities of EU member states.



**Funded by
the European Union**

Project: 101202338 —
EURC-Zootechnics
2025-2027
—
SMP-FOOD-2025-EURL-
EURC-PJG-IBA



European Union Reference Centre - Zootechnics

Assisting EC and organisations in implementation of **EU REGULATION (EU) 2016/1012** ('Animal Breeding Regulation')

E.g. Annex III:

- "AI Bulls must have a (g)EBV"
- "Genomically evaluated bulls:
 1. Genomically evaluated bulls: Genomic evaluation method validated for each genomically evaluated trait;
 2. All traits to be revalidated".....in accordance with EURC rules and standards.



Dissemination of Information

- ❖ Upcoming Webinar:
 - Title: “*Animal Breeding & Breeding Values in an International Context*”
 - Subtitle: “*What are breeding values and why they cannot be directly comparable between countries?*”
 - Target audience: EU Breeding societies, Competent Authorities, A.I./Semen industry.
 - When: September 2026



PREP Database – Service and Benefits

PREP

An online platform for breed societies/NGEC to submit and share descriptive information regarding **performance recording, national genetic evaluation systems** and **publication policies** in a more structured and standardised way

PREP

Enables collection of additional breed and trait information → **Harmonises** and **standardises** information
Easy to compare evaluations methods, traits definitions etc. across countries-breeds-traits; **Breeds** are beyond the international evaluation

PREP

Common database available to cattle breed associations and third parties (incl. NGECs, Researchers, Competent Authorities): **submissions** and **data queries** → **Open to everyone**, not only to Interbull users



PREP Database- Aims

Transparency

To find and compare information such as trait definition used by different countries

How?

Via Data queries that is publicly available and no login is needed



PREP Submissions **Data queries** Login Help ▾

All abbreviations can be found under the **Help** and [here](#)

GE Dairy Production search

Search for GE Dairy Production submissions

Organization

Select all | Invert selection

- ABRI (AUS)
- ANABLE (PRT)
- ANACLI (ITA)
- ANAFI (ITA)
- ANAPRI (ITA)
- ANARB (ITA)
- ANON (ANON)
- ARC (EST)
- BFRO (SVN)
- BRS (DEU)

Production trait data (Dairy)

Select all | Invert selection

- Abondance (ABO)
- Ayrshire (AYR)
- Brown Swiss (BSW)
- Red Dairy Cattle (RDC)
- Guernsey (GUE)
- Holstein (HOL)
- Jersey (JER)
- Milking Shorthorn (MSH)
- Montbéliarde (MON)
- Normandy (NMD)

Select all | Invert selection

- milk
- protein
- fat
- SNF (Soluble Non Fat)

Type of evaluation - Dairy production

Select all | Invert selection

- National evaluation
- International evaluation

Search Fields

Select all | Invert selection

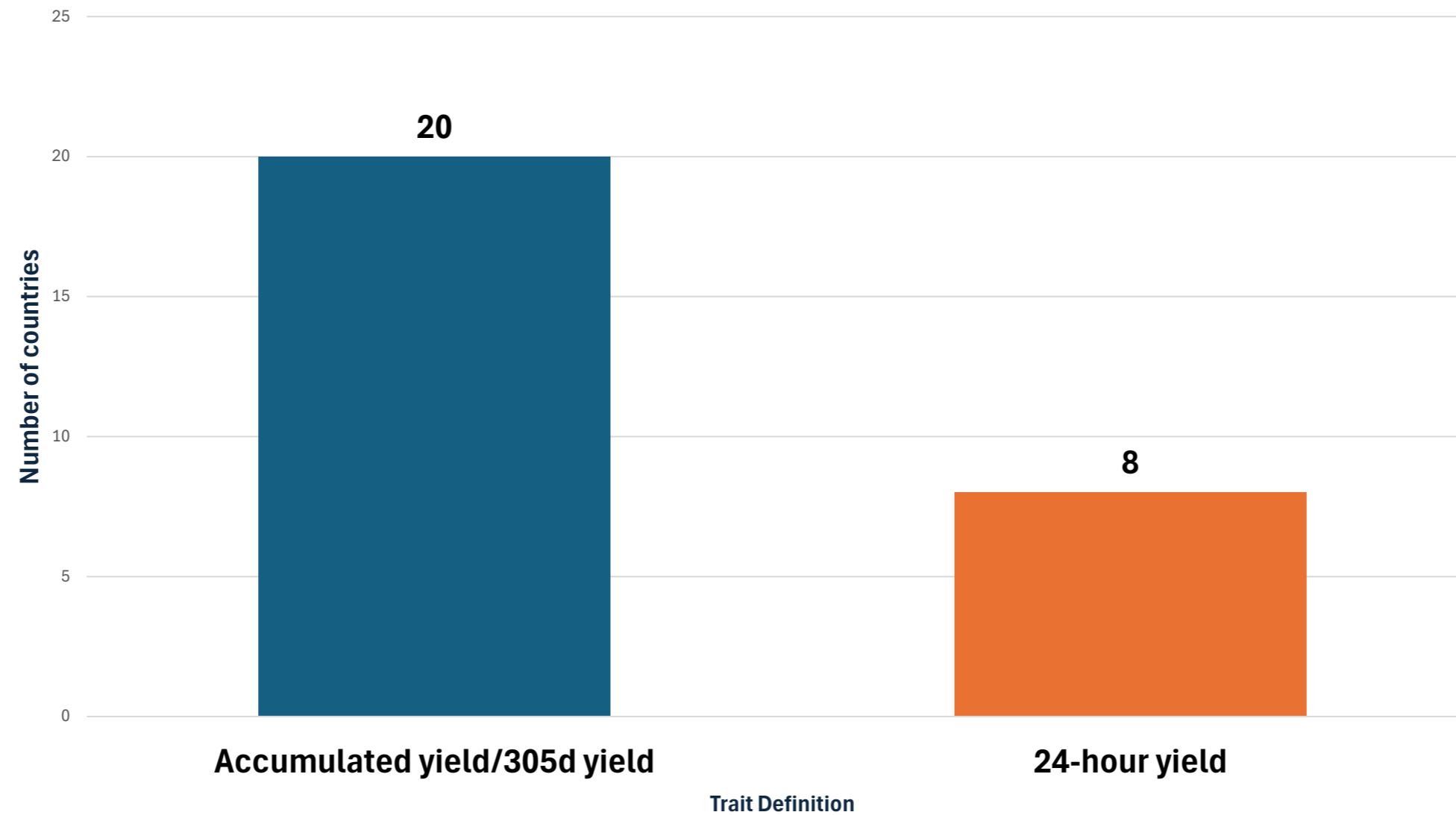
- Data inclusion based on DIM criteria
- Method/Model
- Data pre-adjustments for environmental effects
- Trait definition - production
- Measurement unit
- Recording method
- Cow's age and calving Interval
- Data inclusion based on Test Day records
- Data inclusion from
- Fixed effects



PREP Database- Aims

Trait definition for milk production trait used by countries for HOL breed.

Trait definitions used in 28 countries for MILK-HOL

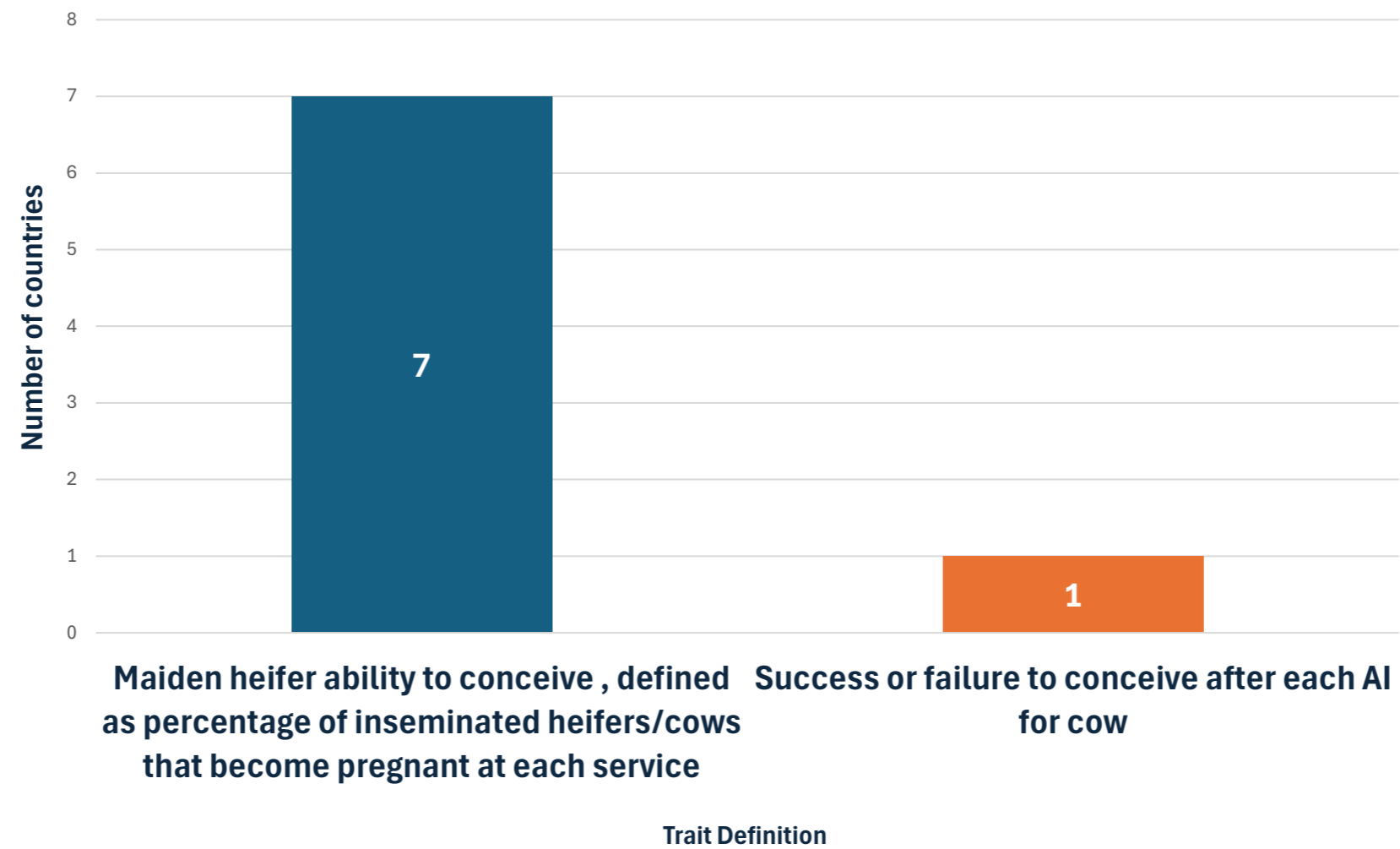




PREP Database- Aims

Trait definitions used for heifer conception rate (hco) by countries

Trait definitions used in 8 countries for HOL-hco








PREP Database- Aims

Another example of new **conformation** trait "Front Feet Orientation"

Seven out of eight organisations providing data used the same trait definition as "the orientation of the front feet, scored from behind the cow"

The trait has been harmonised by **WHFF** and collaboration with **ICAR**

1	5	9
Extreme toe-out	Average slightly outside oriented	Parallel. straight forward
		



PREP Database- Aims

Comparison:

A comparative review of genetic evaluation models used by different countries, including trait definitions, heritability estimates, and methodological approaches

How?

Via Data queries that is publicly available and no login is needed



PREP Submissions **Data queries** Login Help ▾

All abbreviations can be found under the **Help** and [here](#)

GE Dairy Production search

Search for GE Dairy Production submissions

Organization

Select all | Invert selection

- ABRI (AUS)
- ANABLE (PRT)
- ANACLI (ITA)
- ANAFI (ITA)
- ANAPRI (ITA)
- ANARB (ITA)
- ANON (ANON)
- ARC (EST)
- BFRO (SVN)
- BRS (DEU)

Production trait data (Dairy)

Select all | Invert selection

- Abondance (ABO)
- Ayrshire (AYR)
- Brown Swiss (BSW)
- Red Dairy Cattle (RDC)
- Guernsey (GUE)
- Holstein (HOL)
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- Montbéliarde (MON)
- Normandy (NMD)

Select all | Invert selection

- milk
- protein
- fat
- SNF (Soluble Non Fat)

Type of evaluation - Dairy production

Select all | Invert selection

- National evaluation
- International evaluation

Search Fields

Select all | Invert selection

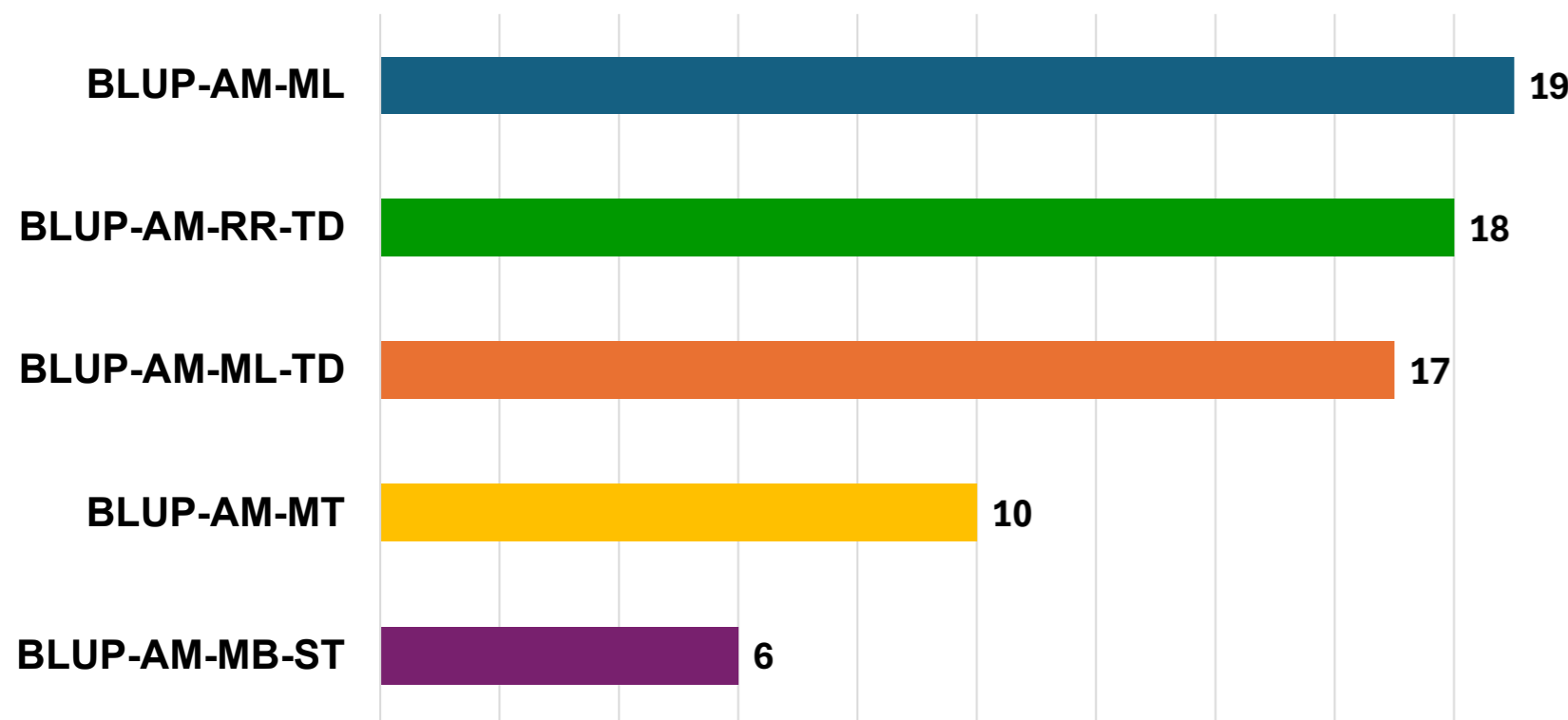
- Data inclusion based on DIM criteria
- Method/Model**
- Data pre-adjustments for environmental effects
- Trait definition - production
- Measurement unit
- Recording method
- Cow's age and calving Interval
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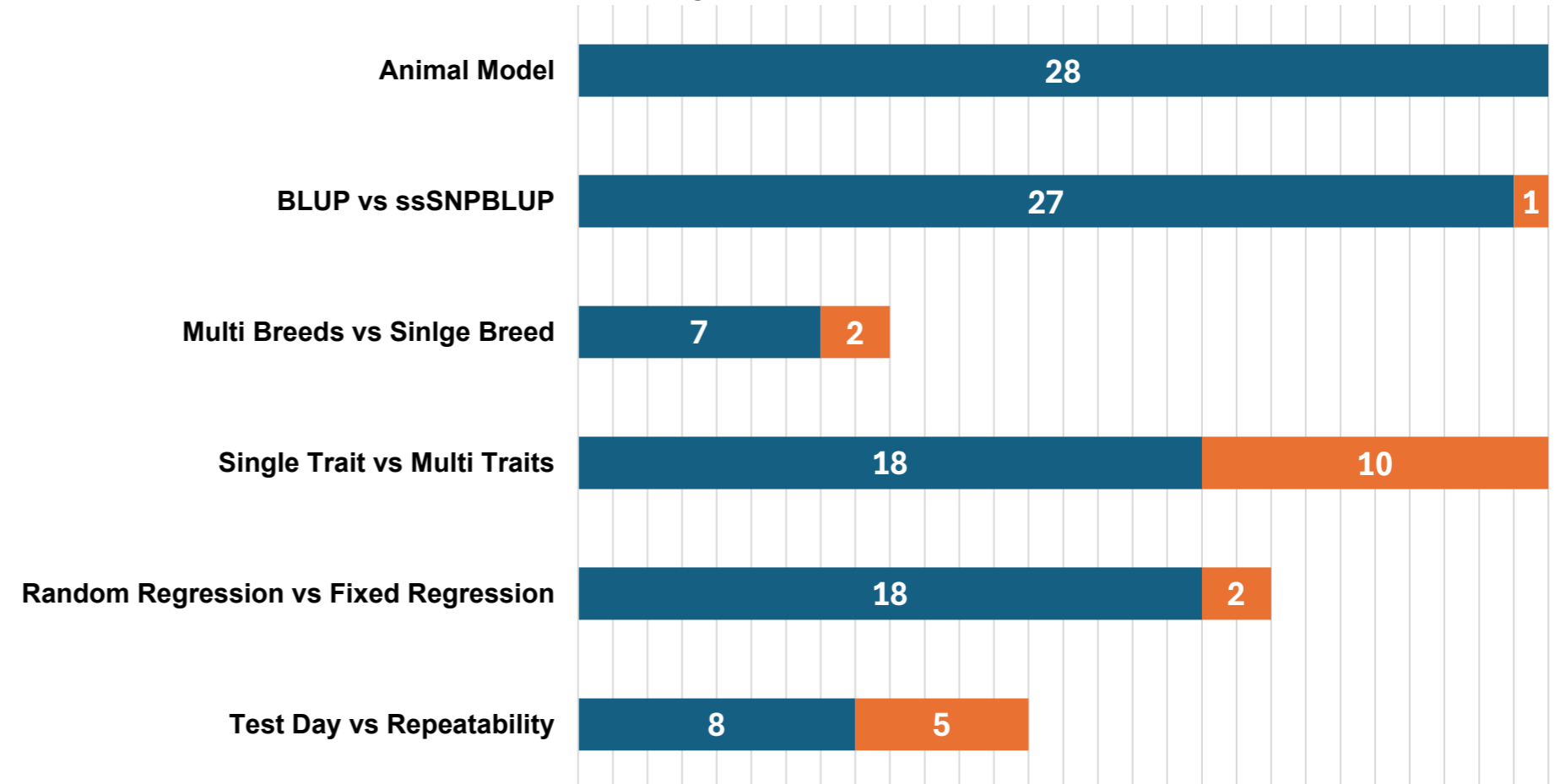
PREP Database- Aims

Comparison of different Methodologies used by 28 countries for HOL-Milk

Number of different common methodologies' combinations used by countries for HOL-MILK



Comparison of different methods or pairs of methodologies used by countries for HOL-MILK

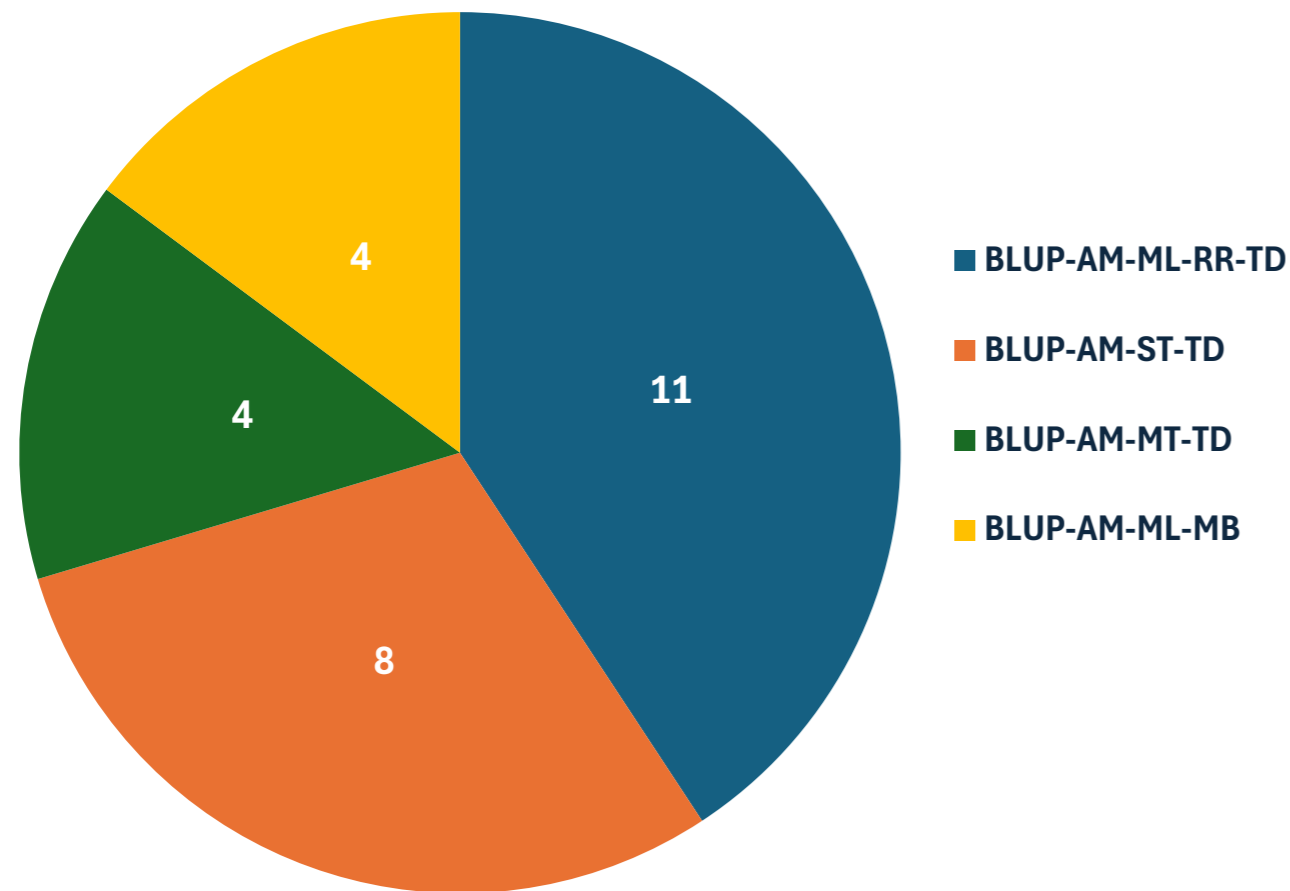




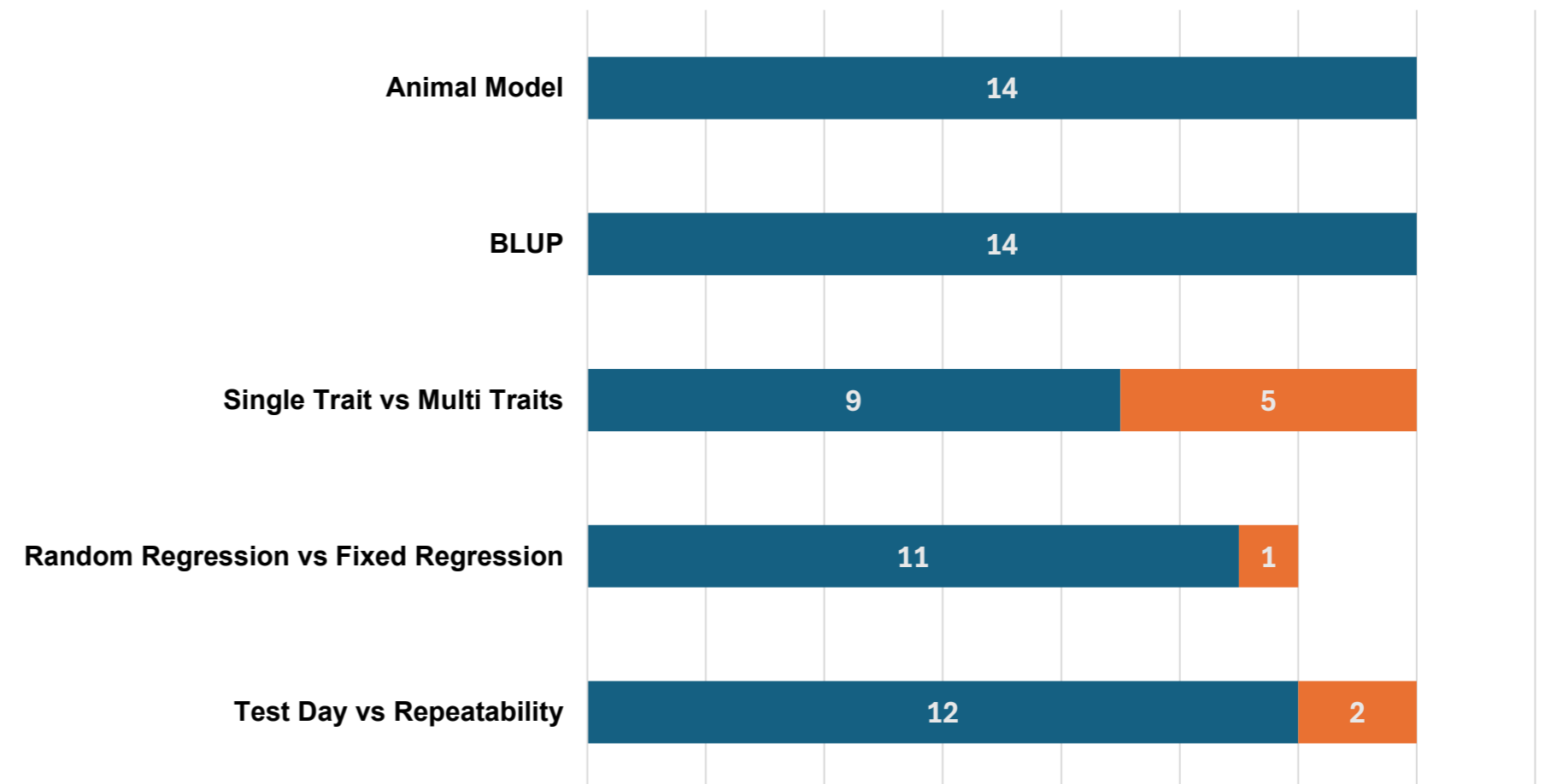
PREP Database- Aims

Comparison of different Methodologies used by 14 countries for RDC-Milk

Number of different common methodologies' combinations used by countries for RDC-Milk



Comparison of different methods or pairs of methodologies used by countries for RDC-Milk





PREP Database- Aims

Harmonisation

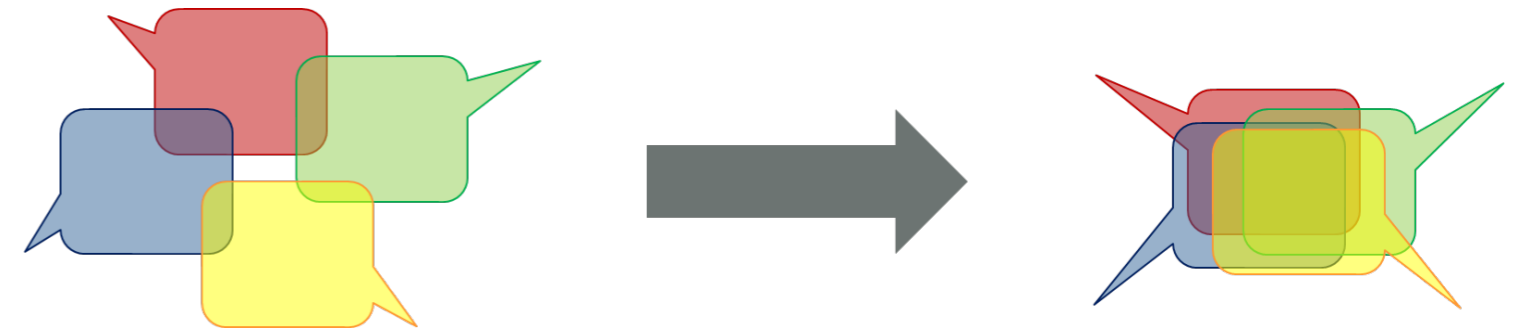
Standardisation and harmonisation of trait definitions, evaluation models, and recording systems across countries.

How?

Via Data queries that is publicly available and no login is needed

Why harmonisation is important?

- Very different trait definition → lower across-country correlation
- Trait correlation → important role in quality of the international evaluation
- Extracting such information from the PREPdb → ICAR- Interbull Guidelines to improve across country compatibility of traits





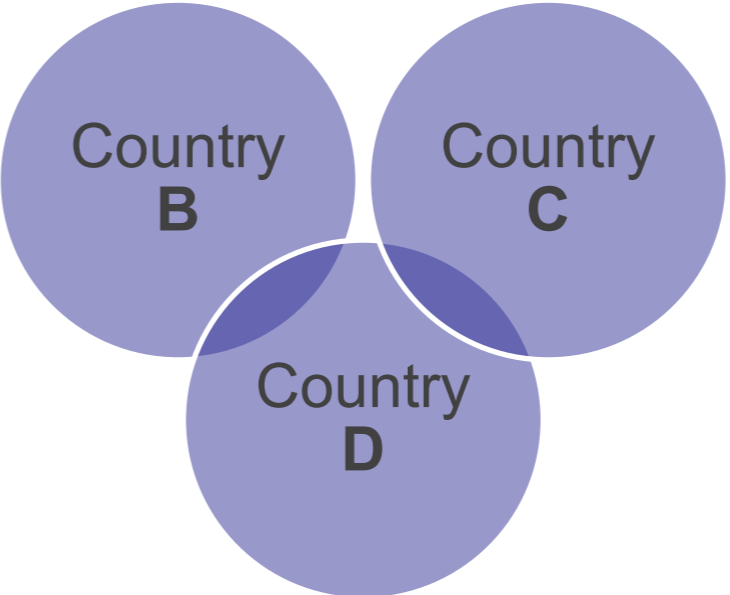
PREP Database- Aims

Example of correlation estimation- Research Run;
HOL - Subclinical Ketosis (SCK)

Correlation estimations; SCK-HOL				
HOL-sub- clinical Ketosis/Countries	A	B	C	D
A	1			
B	0.586	1		
C	0.565	0.946	1	
D	0.672	0.823	0.811	1

Country A:
Resistance to Ketosis based on Non-esterified fatty acids in blood

Country C:
Keton bodies based susceptibility to ketosis



Increase or measure of the keton bodies



Interbull Business Meeting

Item 14. EU Reference Centre

Daniele Vicario



THE GLOBAL STANDARD
FOR LIVESTOCK DATA



Interbull Business Meeting

Item 15: Other Matters and Open Discussion

Urs Schnyder



THE GLOBAL STANDARD
FOR LIVESTOCK DATA



Interbull Business Meeting

Item 16: Future Events

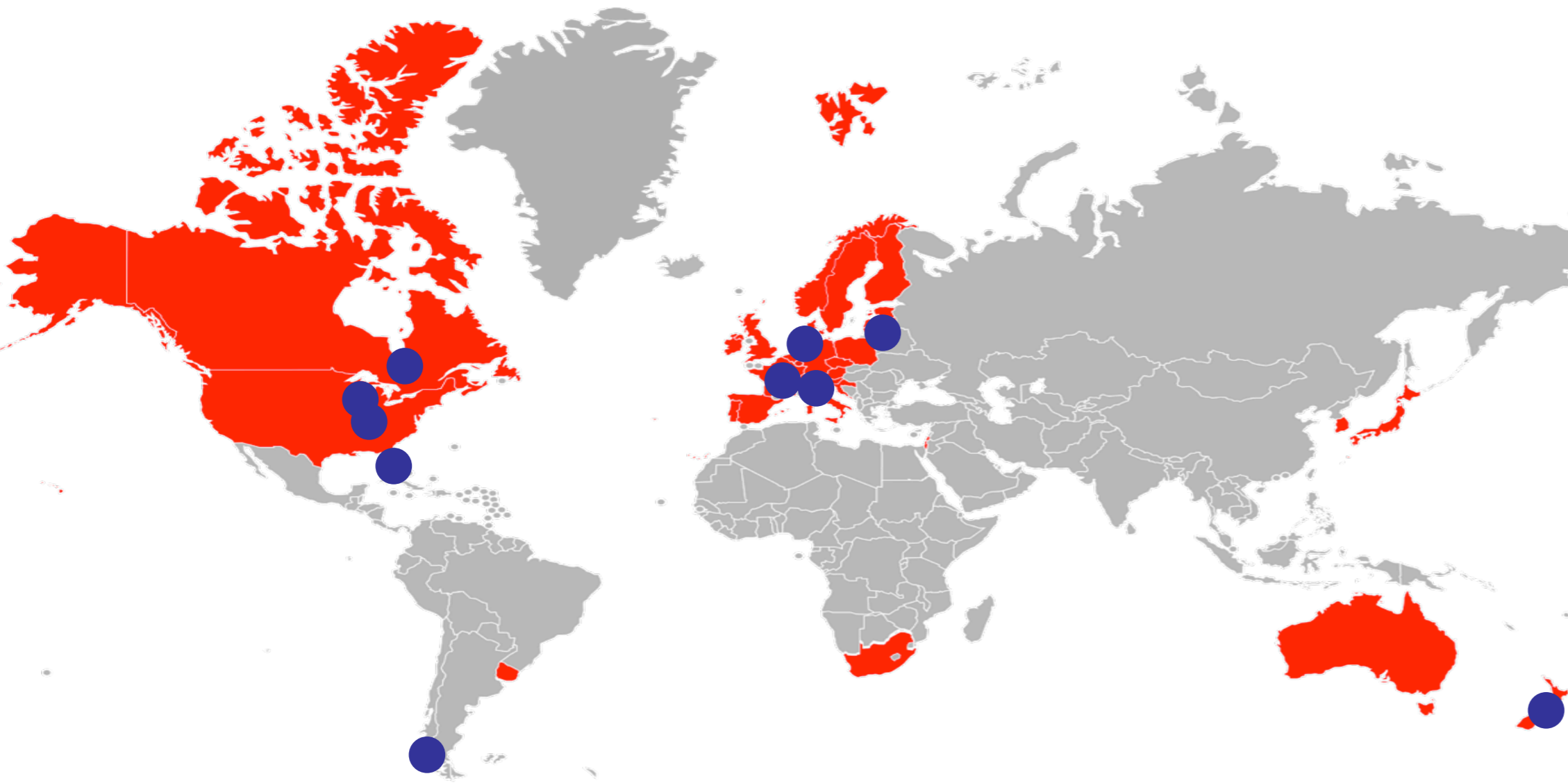
Filippo Miglior



THE GLOBAL STANDARD
FOR LIVESTOCK DATA



Interbull Annual Meetings



ICAR:

2026 – Verona, Italy

2024 – Bled, Slovenia

2022 – Montreal, Canada

2021 – Leeuwarden, Netherlands

2020 – Leeuwarden, Netherlands

2018 – Auckland, New Zealand

EAAP:

2023 – Lyon, France

2021 – Davos, Switzerland

2017 – Tallin, Estonia

ADSA:

2025 – Louisville, USA

2019 – Cincinnati, USA



Join us in Hamburg, Germany



- **EAAP 2026, September 7-10, 2026**
- **Joint Interbull-EAAP session on September 7 at 14:15**
- Utilization of automatically recorded traits (sensor data) in cattle breeding and production”, chaired by Dr. Christa Egger-Danner (ZuchtData, Austria)
- 14 additional genetic sessions during EAAP





Join us in Dublin, in August 2027





Join us in Dublin, August 2027



- Joint EAAP - Interbull 2027 Annual Meeting
- Brand new convention Centre in downtown Dublin, Ireland
- Interbull Open and Business Meetings
- Saturday- Sunday, August 21-22, 2027
- On Monday August 23, two joint Sessions EAAP Genetics-Interbull
- EAAP Conference August 23-27, 2027
- Large participation of Animal Geneticists
Up to 16 genetic sessions with over 400 attendees



Interbull Business Meeting

Item 16: Future Events

Filippo Miglior



THE GLOBAL STANDARD
FOR LIVESTOCK DATA



Interbull Business Meeting

Item 17: Close

Urs Schnyder



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