

ICAR NEWSLETTER

Network. Guidelines. Certification.

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1.0 A WORD FROM THE PRESIDENT: THE FUTURE ISN'T WHAT WE THOUGHT

Technology and innovation have been providing opportunities to change and adapt what the future of animal agriculture will look like. ICAR as an International Non-Government Organization has been, and continues to be leading efforts to help facilitate this technology and innovation through standards, certification and networks.

In late 2019 and early 2020, we all became aware of the COVID-19 pandemic. It didn't spare any population or geographic region and posed human health and safety concerns. COVID-19 disrupted agriculture supply and block chain delivery and availability of food and other necessities of life. The Greek philosopher Heraclitus has been credited with the statement, "The



only constant in life is change." We should probably add, "The only thing that is not constant is the speed at which change occurs."

The work and activities of ICAR and its member and associate member organizations certainly changed and adapted to the COVID-19 situation at a rapid rate. The work and virtual connections increased and the work flow remained constant for the delivery in the ICAR framework.

The ICAR Community met the challenge to keep working and continue having an extraordinary impact in the agricultural world. Everyone contributed to do their best to keep ICAR working towards the groups' and ICAR's work objectives. THANK YOU to everyone. Thank you for adapting. Thank you for everyone's support in the ICAR ity.



2.0 VIRTUAL MEETING OF THE ICAR BOARD AND CHAIRS OF THE GROUPS

On June 10th, a virtual Zoom meeting was organized between the ICAR Board, Staff and the Group Chairs which included the Sub Committees, Working Groups and Task Forces. It was a very constructive forum providing interaction and sharing of ideas and plans among the ICAR technical groups, staff and board. This platform was helpful to provide strategic thinking and to establish priorities for work areas in the coming months. In the following summary the achievements are presented for the past months and objectives for the months leading up to Leeuwarden in April 2021.

These efforts are the basis of advancement of the goals to support the herds and flocks that are the foundation of animal agriculture. The ICAR community has the mission to collect data, make the data into usable information and provide tools for management and decision making in a changing world. ICAR has an important role across countries, with open doors to people and organizations to work together for the broad good of all. **Thank you** to everyone involved in supporting the ICAR community in its efforts to advance animal agriculture.

av Mattison **ICAR** President





Outcomes from last

meeting

2.0 MAJOR OUTCOMES OF THE ICAR GROUPS SINCE OCTOBER 2019 MEETING

The majors outcomes presented during the meeting of the ICAR Board and the Chairs of the groups can be summarised as it follows:

- MA SC:
 - Milk Analyser Certification (FOSS MIR equipments certified)
 - Joint ICAR/IDF SCC Reference Material and EU JRC released in March 2020
 - ICAR scheme approved for Chemstat Calculation models with METROFOOD
- MRSD SC:
 - Test Centre software to 'R' (protoype delivered and now it is under test)
 - Working on Section 11, particularly on the validation protocols
- Interbull
 - Development of a new strategy
 - Interbeef new entrants / pilots successful
- DNA WG: expanding participants and Parentage Discovery 'Cuckoo' software under test
- Feed & Gas WG: New Section 19 and Section 20 of the Guidelines
- ID SC: Guidelines on Field Trial protocol finalised .
- AI & RT WG: Conducted a survey on bar coding semen database
- ADE WG: JSON release and webinar for presenting the users' experience of JSON release 1.0 and took input for next version 2.0
- FT WG: New Guidelines on "Lameness in bovine
- Release of three Appendixes to the Claw Atlas and two new more translations
 - Three new publications have been released:
 - The 2nd edition of the ICAR Claw Health Atlas and its new Appendixes:
 - Appendixes 1: Digital Dermatitis Stages (M-stages),
 - Appendix 2: Digital Dermatitis-Associated Claw Horn Lesions
- SMARTER Project: Sheep & Goat EU project on Resilience met in Toulouse Nov 19
- A description of the achievements of each ICAR Group is reporterd in the following chapters



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ID SC

3.0 ANIMAL IDENTIFICATION SUB-COMMITTEE

The group has recently finalised the ICAR field testing protocol for animal identification devices. The grandfathering of devices under the protocol will be the initial focus for the group. The group is also finalising updates to Section 10 of the ICAR Guidelines for consideration by the ICAR Board, and the Ring Test for RFID devices amongst the accredited Test Centres is underway.

In February, the group conducted a survey of ICAR members, test centres and tag manufacturers to seek feedback on the importance of, and use of, ICAR's animal identification services and to identify other opportunities for ICAR in the field of animal identification. The survey results will be considered by the group later in the year and will help to direct the activities of the ID Sub-Committee in 2021.



The ID SC in a nutshell

- The grandfathering of devices under the protocol will be the initial focus for the ID SC.
- The ring test for RFID devices amongst the accredited Test Centres is in progress.
- Identified a number of individuals interested in becoming members of the ID SC. These opportunities are currently being explored.

MRSD SC

4.0 MEASURING, RECORDING, AND SAMPLING DEVICES SUB-COMMITTEE [MRSD SC]

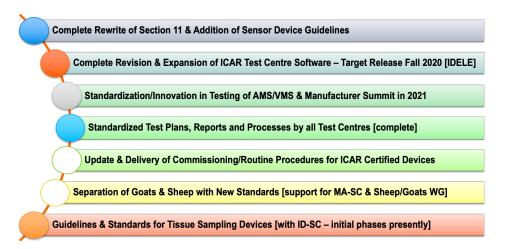
The MRSD-SC continues it works in the area of ICAR testing and certification of the devices, with numerous tests in progress and applications expected from device manufacturers. In addition to the core work, the MRSD SC has identified several priorities for the balance of 2020. The MRSD SC and the test centres are engaged in a rewrite of the software used for data analysis of ICAR device tests. In addition to internal use, this application will be made available to associate ICAR members with a release once launched in 2020. The MRSD SC also welcomes René van der Linde and looks forward to his support in the complete review and rewrite of Section 11 of the ICAR Guidelines that will include separation of goats





and sheep into distinct species for device testing, guidelines for evaluation of sensor systems, and additional guidance on computerized solutions for routine monitoring of device accuracy and performance. The MRSD-SC is also committed to providing additional information on carry-over effects and best practices in sampling devices to ICAR members and working cooperatively with other SC and WG on specific projects.

While the MRSD SC was looking forward to the manufacturer-invited session with the MRSD SC in Leeuwarden in June, the postponement of this year's meeting will not allow for direct contact. Manufacturers are encouraged to reach out to the SC with any questions or comments and the SC will work with the organising committee to schedule this session at the



next ICAR meeting. Finally, as outlined in the ICAR Guidelines, the notice for annual reports on devices in the marketplace and satisfaction with said devices was circulated by email during the first week of May. Both ICAR members and device manufacturers are encouraged to return these reports in a timely fashion for review by the MRSD SC this summer.

ADE WG 5.0 ANIMAL DATA EXCHANGE WORKING GROUP

The Animal Data Exchange Committee has made significant progress in 2020 finalizing the technical standards framework. Interest is growing and the technical sub group has seen growth in the number of participants providing input into the standards. Several organizations have started adopting the work of the committee and the committee in multiple webinars have been organised to share not only the standards themselves and future direction but also provide examples of how several organizations have implemented these.

Although the Working Group will not have a face to face meeting in June, the committees outreach efforts will continue by conducting meetings for interested parties via webinars. The firts of these webinars was organised on 22 and 23 of April; the two dates were proposed to facilitate a wider participation and in total 130 participants, betwen Member Organisation and manufacturers, took part. The title





of the meeting was "The implementation of the ICAR ADE standards" and was focussed on the results that the group made available on https://github.com/adewg/ICAR. The video of the last webinar held on June 10th, together with the presented slides, are available here

The ADR WG in a nutshell

- Technical working group released latest version of the ADE standards in March and updated all plus documentation on the github site additional efforts adding more messages are ongoing
- Two webinars were held in April targeting business managers and technical experts within livestock organizations and equipment manufacturers explaining:
 - The background of the ADE standards and why those are needed
 - Some technical specifications
 - Examples of how these standards can be implemented
 - We had over 120 participants in the webinars with good interaction and resulted in several new parties interested in learning more about the technical aspects

Interbeef WG 6.0 INTERBEEF EXPANDS ITS MEMBERSHIP

Interbeef has added a number of new members to the existing group of countries that are availing of Interbeef services. The new members are Latvia and Slovenia, with both of these countries having just participated in the recent Interbeef test evaluation, with the goal of transitioning them to being part of the routine service this Autumn. In addition, Italy is currently availing of the new "pilot evaluation service", which has been designed to give potential new members a flavor of Interbeef evaluations. Both Slovenia and Latvia had previously come through this pilot evaluation step. There are currently 11 countries participating in Interbeef services (i.e., France, Ireland,





Germany, Denmark, Finland, Sweden, Czech Republic, Switzerland, UK, South Africa and Australia) covering 5 different breeds (Angus, Charolais, Hereford, Limousin and Simmental).

All of these developments are a consequence of the significant time and effort invested by the Interbeef members in developing a new business plan, including technical infra-structure to support the continued expansion of ICAR and Interbeef activities into the future. We are particularly indebted to the Interbull centre for developing and supporting the technical aspects, including the opportunity to clone the Interbeef database to support the test and pilot evaluation activities. This is no small feat as the database now contains some 36m animals in the pedigree, 42m animals with phenotypes and a total of 266m generated EBV's across the participating countries, breeds and traits!

The goals of the group are not stopping there, with plans to introduce new services in the next 1-2 years, including new trait evaluations for female fertility and beef carcass traits, as well as improvements to the Interbeef database to help better share data between members, e.g., pedigrees, genotypes etc. In addition, we are currently undertaking the required research to help support genomic evaluation services in the future, with a PhD student (Renzo Bonifacci, Italy) currently placed in the Wageningen group of Prof Roel Veerkamp.

If you are interested in learning more about Interbeef activities, including potential membership for your country, organization and or breed, then please contact Andrew Cromie, the Interbeef WG chair (acromie@icbf.com) or the ICAR secretariat for more information. We would be delighted to hear from you.

The Interbeef WG in a nutshell

- Current Status.
 - 11 countries, S breeds & 2 traits. Evaluation of raw phenotypes (not EBV's) at Interbull Centre. 36m animals & 42m phenotypes.
- Priorities:
 - Extending the reach of service the major priority. Areas of focus;
 - New fee structure, to reflect better sharing of costs/benefits across members.
 - New database infrastructure to better support test and routine evaluations.
 - New .. pilot" evaluation service launched, to allow potential new members have a "look and see" before becoming a full member.
- Outcomes=> Two countries have joined as full members (Latvia and Slovenia). Italy have just participated in a pilot run. Other countries now in process of signing agreements re: future services. Very positive outcomes.
- New female fertility evaluations, new beef carcass evaluations, new international genomic evaluations, new Interbeef validation services +more new members!



THE GLOBAL STANDARD

IDF and ICAR initiative to improve consistency in milk SCC

7.0 MILK ANALYSIS SC: JOINT IDF AND ICAR INITIATIVE TO IMPROVE CONSISTENCY IN MILK SCC – REFERENCE MATERIAL LAUNCHED BY EU JOINT RESEARCH CENTRE

The European Commission's Joint Research Centre (JRC) has announced the launch of the first certified reference materials for somatic cell counting in milk, an integral part in a joint project of the International Dairy Federation (IDF) and the International Committee for Animal Recording (ICAR) to establish an international reference system for somatic cell counting in raw milk.

The reference materials are the result of several years of cooperation between IDF, ICAR and EC JRC, the European Commission's science and knowledge service. The materials were developed in response to an identified need to have available a common, robust, and internationally accepted anchor point to implement and safeguard equivalent somatic cell counting worldwide.

7.1 SIGNIFICANT IMPORTANCE FOR THE SECTOR

Somatic cell counting is a key indicator for udder health in several lactating animals, including dairy cows. Accurate counting therefore has relevance in food quality regulations, milk payment testing, farm management and breeding programmes. The counting of somatic cells relies on the performance of high capacity routine somatic cell counters. However, prior to the release of the new reference materials, no robust common reference was available.

The reference materials (ERM-BD001) are arranged as sets. Each set consists of two bottles with spray-dried cow milk, one with low and one with high somatic cell count, characterized by means of an interlaboratory comparison with 32 laboratories worldwide. The reference materials' documentation includes instructions on the reconstitution, and defines the intended use: calibration material for routine methods, and quality control material for both reference methods and routine methods. Moreover, the materials can be used to assign values to in-house materials.

Dr Silvia Orlandini, Milk Analysis Certification Executive for ICAR said: "*This reference material will be of great practical importance to many within the livestock sector, including raw milk testing laboratories, national and international bodies responsible for regulations on measuring somatic cell count, supervising bodies in milk payment testing and many others. Looking ahead, IDF and ICAR are working on additional guidance to provide further information on the use of this material to build international metrological traceability for milk analyses".*





In addition to the applications already mentioned, the material will be of specific interest to dairy herd improvement organisations, QA services, manufacturers and distributors of routine equipment for somatic cell counting, providers of secondary reference materials for somatic cell counting, organizers of proficiency testing, animal health organizations, universities and research institutes and accreditation bodies.

The reference materials can be acquired directly through EC JRC or its authorized reference material distributors [https://ec.europa.eu/jrc/ en/reference-materials/catalogue]. It should be noted that delivery may be delayed till the course of May due to the COVID-19 outbreak. For more information about the reference materials, please contact Reinhard Zeleny [reinhard.zeleny@ec.europa eu]

The MA SC in a nutshell

- Activities since October 2019:
 - 3 MA SC meetings on zoom platform
 - Launch of the 1° round of the 2020 ICAR Proficiency Test
 - ICAR Instruments certification
 - > 3 manufactures asked for the grandfather certification
 - > 1 manufacture certified the new generation instruments following the full validation process
- Pilot example calculation Model (Metrofood)
 - the data collection will start in the second part of 2020
- ICAR/ IDF RSSCC
 - a primary reference material for SCC now is available produced by EU JRC









DNA WG

8.0 DNA WORKING GROUP

The DNA WG is continuing its effort to improve the process for genotyping laboratories to receive ICAR Accreditation including the planned move towards mandatory ISO 17025 accreditation by 2022 as well as the ICAR Accreditation for SNP-based Parentage Verification as a DNA Data Interpretation Centre. The development of a similar accreditation process for Parentage Discovery also continues with an expected launch later this year.

The 2019 ICAR accreditation round for genetic laboratories for parentage verification by STR and SNP finalised in December 2019 and 13 laboratories granted the ICAR accreditation. Parallely, the GenoEx PSE service and its accreditation as Data Interpretation Centre received five new laboratories who join the service in 2019.



The DNA WG in a nutshell

- Finalized the updated guidelines for labs to require ISO 17025 accreditation (or equivalent) by 2022 (rather than 2020)
 - Developed and implemented communication plan to labs, both through ICAR and ISAG contact lists
 - 2020 Call for ICAR Accreditation issued in May
- Labs are also redirected to seek SNP-Based Parentage Verification Accreditation as a DNA Data Interpretation Centre, starting 2021
- Initiated discussions with ISAG regarding coordination of roles regarding quality control and accreditation of labs
- Expanding ICAR Guidelines Section 4: DNA Technology by adding a new section on basic (and advanced) quality control checks when processing SNP genotypes, especially in large datasets
- Development of Cuckoo Parentage Discovery software has been completed, with final documentation and testing remaining
- Developed and implemented communication plan to labs, both through ICAR and ISAG contact lists
- Launch of the 2020 Call for ICAR Accreditation in May



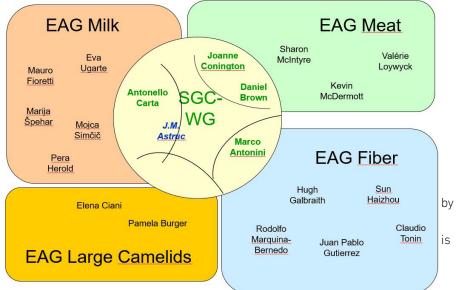
SGC WG

9.0 SHEEP, GOATS AND SMALL CAMELIDS WORKING GROUP

The SGC-WG is structured in 4 expert advisory groups (EAG) whose scopes are (1) milk recording; (2) meat / reproduction / maternal traits recording; (3) fibre recording; (4) large camelids. The membership of the SGC-WG, chaired by Jean-Michel Astruc, is presented in the figure below:

Following the ICAR session in Prague and the meeting of the WG held on 18th June 2019, the expected actions for the year 2020 were as follows:

- Preparation of the guidelines on reproduction; growth and carcass traits in sheep and goats. The draft presented Joanne Conington and discussed in Prague was to be finalized for the session planned in June in Leeuwarden. Despite the session postponed, the deadline remains.
- Preparation of a survey on wool to be sent in early 2020, with the target to start a process for constructing guidelines on wool recording. The survey was launched in February.
- Valorization of the main results from the survey carried out in 2019 on large camelids.
- Preparation of a session in the Netherlands dedicated to the SMARTER H2020 project. This project targeting the breeding for efficiency and resilience in small ruminants was presented in Prague. ICAR is committed in this project as a full partners through two work packages: (1) on harmonization of phenotypes of resilience and efficiency and on across country evaluation;
 (2) on dissemination and networking through a stakeholders platform. This action is of high importance to enhance selection activities in small ruminants, and especially promoting genomics in sheep and goats. Despite its postponement, the planned session will be at the agenda of the next ICAR session.







The next meeting of the SGC WG was initially planned in the Netherlands in June 2020 before the postponement of the session. A new date will be proposed.

The SGC WG in a nutshell

- Across country evaluation (framework H2020 SMARTER).
 - Research : 3 case studies (1 dairy sheep, 1 meat sheep, 1 dairy goat)
 - Build tools (using as much as possible Interbull/Interbeef standards): file formats, description of breeding programs and genetic evaluation system, codification of breeds => make them adopted at ICAR scale.
 - Business & operation model for (possible) routine international evaluation. Deliverables 2022.
 - Draw outline of a reference center for performance testing/genetic evaluation in small ruminants. Cf. as Interbull is EURC for cattle.
- Network: (framework H2020 SMARTER) ICAR co-leader for dissemination WP and in charge of the stakeholder platform

DCMR WG

10.0 DAIRY CATTLE MILK RECORDING WORKING GROUP



Covering the period June 2019 to April 2020, this overview summarises the key activities the Dairy Cattle Milk Recording Working Group has been engaged in since the 2019 ICAR congress in Prague.

The group's key focus is to develop a new version of Procedure 1, Section 2 covering 24-hour calculations. Good progress has been achieved, with an initial draft already prepared. Based on technical and statistical analysis, the overall aim is to provide clear and easy-to-follow recommendations for MROs when estimating 24-hour calculation coefficients and factors.

The group is currently engaged in delivering other new services for member organisations, including systems for evaluating coefficients/factors/equations at national and international levels. The group considers this venture to be of benefit to member organisations and for Certificate of Quality evaluation guidelines.

The group is intent on rolling out simple, helpful tools (e.g. Excel) that member organisations can use with the aim of improving their understanding of the various 24-hour calculation methods at their disposal.

The working group has expanded its membership reach, with new members and observers recently appointed. The group is currently represented



by members in all territories. Incoming members specialise in different areas of milk recording, whether practical, statistical or scientific in focus. New technologies such as big data and machine learning are also being prioritised.

The application of big data and machine learning in the milk recording sector has been earmarked by the group as a way of innovating 24-hour calculations policy going forward. Focusing on this area is expected to significantly enhance MR services, with discussion on various research

approaches ongoing. The group recently carried out a project on the use of big data and data 24-hour calculations data in Finland as an example on how to integrate these new technologies.

Several technical studies carried out by DCMR WG members have been identified as potentially valuable in the group's work on Procedure 1. Practical experiences of incorporating 24-hour calculations from countries such as Australia, Slovenia, Greece, India, Poland, Finland, New Zealand and Italy are being considered. This collective analysis will be used in conjunction with the group's other research projects and surveys to improve content.

The following studies are just some examples of the group's research efforts to date:



- Accuracy of lactation qualification methods and genetic evaluation in France.
- Improvements to the ICAR survey annual cattle review.
- New version of the Liu method new estimated coefficients statistical analysis.
- Comparison of Dutch and French coefficients.
- Statistical analysis of 24-hour calculation methods.
- Minor improvements to the General section of the Guidelines.
- Benchmarking and practical services for MROs.
- Expanding the group's analytic reach going forward, particularly buffalo milk recording.



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The working group continues to examine the results from its two recent large-scale surveys: Global 24-Hour Calculation Trends in Automatic Milking Systems and Global 24-Hour Calculation Trends in Classical Milk Recording Systems. The 90-question surveys collected data from a total of 52 organisations in order to monitor MR practice and the needs of MROs, evaluate technical and statistical records, and provide guidelines on estimating factors and coefficients.

The DCMR WG in a nutshell

- Application of big data and machine learning.
- Excel tools for estimating 24-hour calculation factors.
- Research and technical projects: accuracy of lactation qualification methods, new version of the Liu method, comparison of French and Dutch coefficients, expansion to new species

 buffalo, benchmarking, statistical analysis of 24-hour calculation methods, minor improvements to the general part of the ICAR Guidelines.
- Improvements to the online ICAR survey
- Consultancy and advisory services for ICAR member organisations/connections with industry.



Author: Laurent Journaux who is warmly acknowledged.

FT WG

11.0 FUNCTIONAL TRAITS WORKING GROUP

Within the last months based on the cooperation of the ICAR WG on Functional Traits and Claw Health Experts the second edition of the "ICAR Claw Health Atlas" as well as the 2 Appendices on Digital Dermatitis could have been published:

- Appendix 1: Digital Dermatitis Stages (M-stages).
- Appendix 2: Digital Dermatitis-Associated Claw Horn Lesions.

The ICAR WG on Functional Traits started working on Animal based welfare indictors together with welfare experts and IDF. At a meeting in Vienna in January 2020 the ICAR/IDF Workshop on Animal based indicators to promote welfare in dairy cows was elaborated (https://www.icar2020. nl/media/1112/draft-icar-flyer_v5.pdf). The workshop which was planned to take place in June 2020 in conjunction with the ICAR Conference in Leeuwarden will be postponed to 2021.



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The ICAR guideline for udder health is being updated. One area of work is the harmonisation of bacteriological findings. Experts interested to contribute and cooperate are welcome. The observation of recent research and outcomes from studies related to use of new technology in relation to genetics, herd management and monitoring of functional traits and update of the respective guidelines is an ongoing process.

Weninar on animal welfare

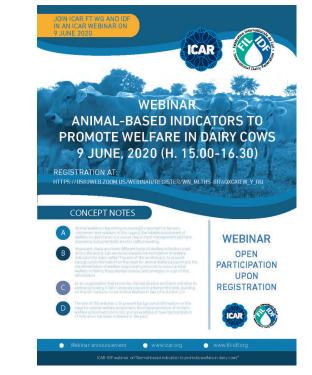
11.1 OPEN WEBINAR ON ANMAL WELFARE ON 9 JUNE

The ICAR FT WG and IDF jointly organised a free webinar on 9 June on "Animal-based indicators to promote welfare in dairy cows". Three specialist in the animal welfare and a general debate session were programmed. The programme has been designed to to present background information on the need for animal welfare assessment, the implementation of on-farm welfare assessment protocols, and an example of how harmonization of indicators has been achieved in the past. Moderated by Christa Egger-Danner, Chair of the ICAR Functional Traits WG, the programme is at follows:

- What is animal welfare? An introduction to animal welfare science and its applications Marie Haskell, United Kingdom
- What animal welfare indicators exist? Elsa Vasseur, Canada
- Putting on-farm welfare assessment into practice Christoph Winckler, Austria

320 people participated to the webinar that has been considered as a good example of the interest in such model of activities. It success was a sign of the interest for such kind of meeting, where trasversal interests are debated by a gropup of assorted specialists. The video of the webinar is available **here**







The FT WG in a nutshell

- Animal welfare
 - ICAR and IDF are organising an open webinar on "Animal-based indicators to promote welfare in dairy cows" to be held on 9 June from h. 15.00 to 16.30. Originally the ICAR/IDF Workshop: " Animal-based indicators to promote welfare in dairy cows " was planned for 9th of June 2020.
- Claw health and lameness
 - Guidelines on "Lameness in bovine". The file is part of the ICAR Guidelines available(27-March-2020).
- Three new publications have been released:
 - The 2nd edition of he ICAR Claw Health Atlas and its new Appendixes
 - Appendixes 1: Digital Dermatitis Stages (M-stages),
 - Appendix 2: Digital Dermatitis-Associated Claw Horn Lesions
- Udder health
 - Harmonisation of pathogens (cooperation ICAR and IDF)
 - Update of Udder health Guideline
- Metabolism
 - Harmonisation Body Conditions Scoring
 - Guideline on Metabolism
- Observation of new developments and update of guidelines continuousConsultancy and advisory services for ICAR member organisations/
 connections with industry.

F&G WG

12.0 FEED AND GAS WORKING GROUP

The feed and gas working group has gone through some personne updates. One of the changes Birgit Gredler has taken over the role as co-chair en Yvette de Haas is now member of the working group. The first guidelines for feed intake recording and the recording of greenhouse gasses have been finalised and approved by the working group and liaison group members. Currently they have been put the board of ICAR for review.





The F&G WG in a nutshell

- First version of guidelines for recording dry matter intake and methane emission are currently under approval
- Business plan for genetic evaluation service:
 - Model for sharing and accounting for cost and revenue has been developed; Global business plan turned out to be difficult to achieve due to private/public data issues; Next step: Focus on local level (bilateral)
- Carry out research within global dry matter initiative (gDMI II):
 - Improved genomic prediction for DMI (lead WUR); Biology of feed intake (relationship DMI and health) (lead CAU); Across breed genomic prediction (lead WUR); MIR prediction of DMI (lead Teagasc); Economic weights and breeding programme (lead UoG)
- Periodic update of guidelines (depending on developments)
- Organise one sessions at international conference per year to link research

Interbull SC

13.0 INTERBULL 2020-2023 STRATEGIC PLANNING

Interbull organised a Strategic Planning Meeting in Uppsala, Sweden, in January 2020. The planning involved representatives from the Interbull Sub-Committee, the Interbull Technical Committee, ICAR, the Interbull Centre, and Interbeef as well as key Interbull service users.

A review of the previous strategy and collation of new ideas contributed to identification of the changes Interbull envisages during the next three to five years and established Interbull's direction for that period.

The Interbull 2020-2023 Strategic Plan will set out goals and objectives, seek to consolidate the gains made under the previous Strategic Plans, and identify areas for investment to strengthen capability and services.

As Interbull is developing its 2020 communication plans in light of the cancellation of this year's annual meeting, Interbull will in due course share the Interbull 2020-2023 Strategic Plan with the wider Interbull Community.





The F&G WG in a nutshell

- Governance:
 - Draft Strategic Plan
 - New Business Funding Models
 - Performed evaluations (34 countries):
- Routine: December 2019 and April 2020
- Test: January 2020
- Improvements in identification for Simmental and USA pedigree
- Full reports June 2019-May 2020 on www.Interbull.org/ib/ itbcreports
- Continued provision of current services according to defined timelines

- Launch of new services:
 - InterGenomics-Holstein: Genomic evaluation for 9 ("small") countries with contributions from 4 large populations
 - GenoEx-GDE: Genomic Data Exchange Platform.
 - New trait for international evaluation: Clinical Mastitis as a National SNP training tool.
- Progress in WGs on genomic impact on international evaluations (i.e. SNPMace, Genomic Reliabilities, Genomic-free EBV)
- Communication with Interbull Community (as replacement of Annual Meeting)
- Strategic Plan: Roll-out, Review and Implementation

ICAR-Interbull in 2021 and 2022

14.0 ICAR AND INTERBULL CONFERENCES IN 2021, 2022 AND 2023

The ICAR Board met on April 28th 2020 and after discussions with the Dutch Local Organising Committee and the Interbull Steering Committee, the decision has been made to hold the ICAR/ Interbull 2021 conference in Leeuwarden, (The Netherlands) from the dates of April 26th through April 30th, 2021. (www.ICAR2021.nl)

At the same meeting, the ICAR Board confirmed the conference locations of Canada (Montreal) for 2022 and Spain (Toledo) for 2023, dates for which will be announced at a later date.

