1.0 A WORD FROM THE PRESIDENT: RESILIENCE OF ICAR COMMUNITY

As we turn the page on 2020 and look forward to starting 2021 on fresh ground, I would like to commend the resilience of the ICAR community. Most of us have never seen a more disruptive time in our professional lives. Yet, as you will read in the following pages, the work done in the ICAR Sub-Committees and Working Groups is nothing short of impressive. Thanks to the engagement of members in committing resources to ICAR, we are able to move forward issues relevant to ICAR members in a true spirit of collaboration for the common good of the community.

Despite not having the opportunity to meet in person in Leeuwarden this past June, groups have continued their excellent work, many of them producing very significant and relevant output. From brand new guidelines for the measurement feed intake and methane emissions to the publication of an Animal Data Exchange standard and a new certified primary reference material for somatic cell counting, to name just a few, the Work of ICAR groups is invaluable for animal recording organisations and animal improvement around the world. The new reality of virtual meetings has also provided new opportunities for ICAR holding very successful webinars on animal welfare, animal data exchange, beef genetic evaluation and the new SCC reference material. Make sure you plan to attend the next webinar on lameness on January 18.
This past year, a considerable amount of energy and efforts was devoted to completing the move of the ICAR seat to our new home in the Netherlands. We can look back and be thankful to the good years we have enjoyed the Italian hospitality in Rome. Our move to Utrecht marks new beginnings of sorts for ICAR with a new, streamlined, organisational structure under a single legal entity and the addition of new staff members to support the work of ICAR groups. With the move now fully executed, the staff and Board will be able to fully focus on ICAR’s mission, aims and objectives. Early in 2021, the Board will be seeking the input from members in preparation for a planning session to review the alignment of the groups to ensure that ICAR focusses its efforts on issues that matter most to its members.

I would like to extend our warmest thanks to Mrs. Elena Couto who retired earlier this month after many years of providing exceptional support to the Board and the administration of ICAR. May you enjoy a well deserved, fulfilling retirement Elena, we will miss you. Thank you as well to all the ICAR staff and consultants that are carrying out he work everyday making the mission of ICAR become a reality, under the leadership of ICAR Chief executive Martin Burke.

On behalf of the Board and the entire ICAR community, I would also like to express sincere appreciation to the two outgoing Board members, Kaivo Ilves and past president Jay Mattison for their exceptional contribution, commitment and leadership in the pursuit of ICAR’s mission. Their leadership has been instrumental in bringing the organisation where it is now and will inspire us to continue its development for the benefit of members. It is also my pleasure to welcome Mr. Jozef Kucera to the Board, as well as Mr. Laurent Griffon as financial inspector. Thank you for accepting to devote your time and talents to ICAR. With the terms of other Board members expiring in 2021, we will be looking for nominations for new Board members. If you have an interest for ICAR’s mission, please consider having your nomination submitted for a Board position.

May 2021 bring you peace, health, professional and personal fulfillment. I look forward to meeting you in one of ICAR’s events.

Daniel Lefebvre
ICAR president

2.0 NEW HIRE ! YVONNE DE GIER, ICAR ADMINISTRATION EXECUTIVE

We welcome Yvonne de Gier as our latest recruit to join the ICAR team. Yvonne started with us as ICAR Administration Executive on December 01st 2020. Based in our Utrecht office, she will be responsible for all the Financial and Administrative aspects in ICAR in 2021. Yvonne has many years’ experience as a financial assistant responsible for credit management as well as accounts payable in varied industries such as Printing, Health Service and Agri Retail to name but a few. She is looking forward to serving ICAR and its members in 2021 and beyond. We hope you join us in welcoming Yvonne to the ICAR Recording community.

Yvonne de Gier
appointed
3.0 ICAR ANNUAL CONFERENCE NETHERLANDS 2021

Due to the Covid-19 pandemic, we had to postpone the 2020 ICAR-Interbull conference. We are pleased that we now can announce that the next ICAR-Interbull conference will be held from April 26 till April 30 2021. It will be a virtual conference with the option to be present at the World Trade Center (WTC) in Leeuwarden, The Netherlands, the latter under the condition that the circumstances then will allow.

THE CONFERENCE

Presenters in the Conference Sessions will be asked to prerecord their presentations. These will be made available as videos to the participants ahead of the conference. The conference sessions itself will be held every day between 2 and 5 PM CET. These will consist of short summary pitches of the concerned presentations and a discussion with options for remote participation.

When live participation in person is feasible, the ICAR General Assembly and the Plenary ICAR - Interbull meeting on Wednesday 28 April 2021 will be turned into sessions with live presentations on stage and a livestream for remote participants including options to join in the discussion. The same applies for the Interbull Meetings and the ICAR Wrap Up Session on Thursday 29 April 2021.

THEME AND PROGRAM

We stick with the theme and program of ICAR-Interbull 2020. The conference is dedicated to circular farming and its impact on animal genetics, recording of data and cattle / herd management.

REGISTRATION

Registration for the conference will be open from January 6, 2021.

CALL FOR ABSTRACTS

ICAR-Interbull 2021 will have a number of very interesting sessions. Information on the ICAR sessions is here. Information for submission of abstracts for the Interbull Open Meetings will follow later.
If you plan to participate in ICAR-Interbull 2021 and to report any developments related to one of the sessions, you are cordially invited to submit an abstract through here.

You can submit your abstract for the ICAR sessions from now till January 15, 2021.

Please be aware that upon acceptance of your abstract, you are expected to provide a video recording of your presentation and a 2-to-3-minute pitch recording before April 14, 2021.

**4.0 ANIMAL IDENTIFICATION SUB COMMITTEE (ID SC)**

The ID SC met by video-conferences, where the discussion focussed on the updating of the Guidelines, the protocol of the Field Trial, the ID Survey for 2020, the Ring Tests among Test Centres and the collaboration between ICAR-Interbull.

The updating of Section 10 of the ICAR Guidelines has been agreed and it is pending to be finalised as soon as the discussion on Field Trial procedure has been completed.

The ring tests for RFID transponders and conventional ear tags amongst the accredited Test Centres have been finalised and the results are under discussion to get a general agreement.

For the disseminating activity: Two pilot training webinars were organised with two manufacturers (Allfex EMEA and Datamars) where the ID SC Chair, ICAR staff and Test Centres provided an update to the respective companies’ Marketing & Sales staff on the latest on ICAR’s test protocols for ID. The feedback on the webinars was positive and ICAR will now offer the same to all ICAR associate members (manufacturers) in 2021. If you as an associate member would like to get this ID Test update for your staff just contact andie@icar.org and we will schedule.

Finally, three new members have been appointed to the ID SC in these last months: Paul Laronde (Canadian Cattle Identification Agency), Pedro Vieira/Direção Geral de Alimentação e Veterinária, Portugal and Sebastien Duroy (IDELE France).
For the next 6 months, the activities of the ID SC in the pipe-line are:

- Deliver Field Trial protocol and have at least one manufacturer using it.
- Release updated Guidelines Section 10.
- Engage in upcoming training webinars with another manufacturer.

### 5.0 INTERBULL SUB-COMMITTEE

In 2020, the Interbull SC met twice while its Technical Committee met once; a wide use of remote meetings have been implemented for replacing the Leeuwarden cancellation. For the governance of the SC, Enrico Santus has been renewed as member of the SC and the Strategic Plan for the years to come was finalised.

The technical aspects of the SC, included the:

- Finalisation of the Performed Routine (34 countries participating), the testing and the TMACE evaluations.
- The performing of the first official test Run for InterGenomics-Holstein, finalised in September 2020.
- The Introduction of the GenoEx-GDE (Genomic Data Exchange) into InterGenomics evaluations
- The availability of the full Interbull reports (June 2019-May 2020) on [www.Interbull.org/ib/itbcreports](http://www.Interbull.org/ib/itbcreports)

For the next months, the priorities of the Interbull SC can be summarised as it follows:

- Launch of new services, including InterGenomics-Holstein and the new trait for international evaluation: Clinical Mastitis
- Establish new agreement between SLU and ICAR (NL) for operation of Interbull Centre
- Implement the Annual Operation Plan for 2021 in line with the Strategic Plan 2020-2023
- Recruit new geneticist at Interbull Centre

The Interbull Centre staff
6.0 MILK ANALYSIS SUB-COMMITTEE (MA SC)

In 2020, the MA SC arranged two meetings by Zoom and launched the two ICAR Proficiency Test rounds for milk laboratories where some 45 participants joined the initiative.

In the field of instruments certification, three manufactures applied for the grandfather certification, one manufacturer certified the new generation instruments following the full validation process and in total 13 different instruments have been certified. See more detail on MA SC Certifications page on www.icar.org.

In the field of the collaboration with IDF, a primary reference material for SCC (produced by EU JRC) is now available. A new IDF Guideline to built the metrological traceability and to support the laboratories to start the transition phase was released. The draft has been circulated among the MA SC members for comments and is also available on www.icar.org.

An ICAR/IDF Webinar to explain the procedure for this new primary reference material for SCC was organised on 3 December attended by 130 participants. The video and the presented slides have been made available in the ICAR website here.

For the next months, the SCC data collection will be initiated while other priorities of the MA SC include:

- Identification of a candidates as chair of the MA SC.
- Maintaining the alignment of ICAR protocol for milk instruments analyses with the ISO 8196-3 IDF 128-3 revision.
- Finalisation of the revision of the ICAR guideline Section 13 for on-farm milk analyses.

7.0 MILK RECORDING AND SAMPLING DEVICES SUB-COMMITTEE (MRSD SC)

The activities of the MRSD SC in 2020 included:

- Revision of the Section 11 of the ICAR Guidelines
- Revision and expansion of the ICAR Test Centre Software, in collaboration with IDELE
- Standardisation in testing the AMS/VMS
• Updating and delivering of routine procedures for ICAR certified devices
• in collaboration with the Sheep and goat WG, separation of the sheep and goat meters in accordance with the new standards
• Development of the best practices to minimise the carry-over in the recording devices

In the new year 2021, the MRSD two webinars are to be scheduled: the first one will be aimed at manufacturers where the focus will be on; New Test Centre Software, Sensor System Testing, and Guidelines update. The second (later) webinar a general update on the Guidelines as we release a revised Section 11. This will be aimed at ICAR Members who are Milk Recording Organizations. Schedule details of these webinars will be notified and communicated early in 2021. Further technical sessions will be held in ICAR’s virtual Annual Conference in Leeuwarden in April 2021.

8.0 CERTIFICATE OF QUALITY

Two on-line meetings were organised in 2020 where the revision of the CoQ Questionnaire was discussed, including a new set of questions for Herd-book Recording.

One visited audit was organised in 2020 (CRV Netherlands) while most others were either conducted over zoom where possible or indeed in most cases visits have been moved to 2021 due to COVID-19 restrictions

9.0 ANIMAL DATA EXCHANGE WORKING GROUP (ADE WG)

The ADE working group held two very successful webinars in March and June with over 120 participants in each. The first webinar was focussed on the implementation of the ICAR ADE standards; its video and the presented slides have been made available in the ICAR website here. The material developed for the second webinar, focussed on the “Examples of Animal Data Exchange”, have been made available here.

The technical subgroup has added more content since last spring and a new version 1.1 of the ADE specifications has been released. This is mostly a non-breaking change, meaning that all the previous functionality still works as it did. There is, however, additional functionality that can be
used such as:

- Scores for Conformation and Body Condition Score (BCS)
- Group assignments (“sets” of animals) for purposes such as mating groups, treatment groups, feed groups, animals in a barn, etc
- Breeding Values for animals
- Health diagnoses, medicines, and treatments
- Resource for listing test days – icarTestDayResource
- Resource for listing gestations – icarGestationResource

Next release will include new features that will facilitate and extend its use.

10.0 ARTIFICIAL INSEMINATION AND RELATED TECHNOLOGY (AI & RT WG)

In order to evaluate the real interest from potential users and to anticipate any potential obstacles to uptake, two surveys have been conducted on two main themes:

- The identification of semen straws by QR code printing and
- The International Data Exchange Platform.

A zoom meeting of the group discussed the results of these of polls, in November 2020. Two Sub-Groups were created to investigate all technical issues with manufacturers, and to determine what would be the minimum information encoded and potential evolutions. The results of their work will be presented at Leeuwarden Conference.

11.0 BREED ASSOCIATIONS WORKING GROUP (BA WG)

In 2020, Charl Hunlun left the group due his retirement. Zoltan Haller by the Asociatia Crescatorilor de Vaci Baltata Romaneasca Simmental has joined the Group.

The WG was asked to look at devising an exchange mechanism similar to that is already in place at Interbull for Holstein Genetic Traits. In order to provide a reply, an Expert Advisory Group was set up. The group includes members of the ICAR BA WG together with Matt McClure (US), Zoltan Haller (RO), Harry Faas
The WHFF Council asked the BA WG a position whether the 305 days is still a relevant measure to standardise lactations. WHFF Council believed that, the lactation length should be reported against the lactation details. The recommendation of the WHFF Council was discussed by the ICAR BAWG and consequently this recommendation was relayed to the Dairy Cattle Milk Recording WG – review is underway and decisions are pending in 2021.

The group also revised the Audit questions related to the Certificate of Quality Advisory Group for discussion.

**12.0 CONFORMATION RECORDING WORKING GROUP (CR WG)**

In order to get material which can easily be used in various countries to show the value for management purposes, the WG determined the added value of conformation for farmers in relation to functional traits (health, herd life, calving traits).

An analysis was carried out on NLD, CHE and FLV population and in general similar relationships were found; the next step of the WG is to combine such information into a single document.

Discussion is also in progress on the modalities on how to approach the new technologies, i.e.: usage of images to score BCS, scanned images to describe body traits, udder trait measurements based on teat positions from milk robots, locomotion information using walk pads. For finding the right answer, contacts have been developed with the main manufacturers to evaluate what kind of techniques and data are available.

**13.0 DAIRY CATTLE MILK RECORDING WORKING GROUP (DCMR WG)**

The activities of the DCMR WG can be summarised as it follows:

- The group is currently creating new content for Procedure 1, Section 2 of the ICAR Guidelines. This involves the incorporating results from recent surveys, research projects, technical analyses and DCMR workshops. This is the key project for the group right now.
- Methodology for evaluating 24-hour calculation methods nationally and internationally are under observation.
- The group is also evaluating potential new as well as current 24-hour calculation methods used by...
MROs both nationally and internationally.

- Application of big data and machine learning is a field that raised the interest of the group during the various video conferences held during the year and the DCMR WG is also conducting a recording-related project in Austria.

The key projects of the group for the near future include:

- Consultancy and advisory to ICAR members. The group is currently assisting a Russian delegation in implementing 24-hour calculations practice in Russia and liaising with South Africa to resolve various calculation issues.
- The group is exploring adding buffalo as a new species for recording purposes.
- A new survey to assess data services offered by MROs.
- The group is carrying out the analytic and practical projects aimed at supporting the general part of the Guidelines: data management and data flow in Italy, cattle breeding/innovative tools in Israel, imputation of missing test day records by interpolation and its use in the estimation of milk yield breeding values in Mehsana buffalo in India.

14.0 DNA WORKING GROUP (DNA WG)

In the 2020, the DNA completed the review of 12 applications for laboratory accreditations for 2020 and also completed and delivered the Cuckoo-Parentage Discovery software. A discussion about the fee structure for SNP-Based Parentage Analysis Accreditation of DNA Data Interpretation Centres is still open and will be finalised in the next months.

The group is also reviewing the potential need for Tissue sampling protocols in ICAR, review to be conducted in 2021.

15.0 FEED AND GAS WORKING GROUP (F&G WG)

We welcome Birgit Gredler-Grandl (WUR) as the new Chair of the WG.

In 2020 the first version of guidelines for recording dry matter intake and methane emission were released and they were made available in the specific ICAR website section here for Section 19 and here for Section 20, respectively.

Research activities of the F&G WG within the Global Dry Matter Initiative (gDMI II) are in progress and include: the improved genomic prediction for DMI for Holstein. A brainstorm meeting is scheduled on June
24th, 2020 with the interested partners and the expected outcome are the commercial use of data in national evaluations and the research on how to improve genomic evaluation.

Further research activities within the Global Dry Matter Initiative (gDMI II) comprises the across breed genomic prediction/GWAS across breeds aimed to feed efficiency and methane emission. Such work is in progress with almost 14,000 cows with DMI records and 3,000 cows with recorded methane. Furthermore, a workshop in 2021 will be organised in 2021.

**16.0 FUNCTIONAL TRAITS WORKING GROUP (FT WG)**

The activity of the FT WG focussed on the animal welfare, the claw health and lameness and the Guidelines for the body condition score. A very successful webinar was held on June 9th where 320 people were updated on 'Animal based indicators to promote welfare in dairy cows' – the papers and recordings of the webinars are available [here](#).

Regarding the animal welfare, a further webinar is scheduled in February 2021, aiming at harmonising the animal based welfare indicators, while in April, at the ICAR Annual Conference, a specific workshop will be arranged. Also In January, indeed, another webinar is under preparation to present and promote the Guidelines on claw health and lameness. The webinar on "Lameness in dairy cows" will be managed on 18 January. The ICAR site contains a specific page [available here](#) where more information can be found together with the brochure of the webinar [available here](#). The webinar is free of charge upon registration whose page is [available here](#).

The work to develop the Guidelines for the body condition score has been initiated, focussing on its biological aspects and will follows in the next months.
17.0 INTERBEEF WORKING GROUP

At present 13 countries, five breeds and three traits (for a total of 64 evaluations) are participating to the genetic evaluations, producing valuable information based on 44m phenotypes and 15m distributed EBV's. Such information are also reported in the specific flyer prepared by the working group, available here.

For the 2021, the growing of the service (new fee structure, new database infra-structure & new pilot evaluation service delivered in 2019/2020) are expected and two new members in 2020 (Latvia and Slovenia) are expected to join the Interbeef evaluations. In the meantime, Italy has completed the pilot evaluation service and is now moving to full membership. Estonia is about to commence pilot evaluation service.

A very successful webinar was held on December 10th where 130 people joined to hear the latest on various members countries’ experiences with International beef evaluations and particularly how new entrants can avail of Interbeef’s new pilot/test service. All the material specifically produced for that webinar (video and presented slides) have been made available here. New traits (including beef carcass traits, female fertility and dairy beef), new international genomic evaluations focused on LM breed, new data exchange platform (counting ID, pedigrees, phenotypes, genotypes & EBV’s), and new Interbeef validation service (national evaluations) are the major aims for the 2021.

For the governance of Interbeef, a new operational plan has been designed.
18.0 SHEEP, GOATS AND CAMELIDS WORKING GROUP (SGC WG)

The WG is focussed in preparing the new Guidelines for meat recording and reproductive traits in sheep and goats, as well as on the possibility of writing a set of Guidelines for wool recording. The WG is also involved in the SMARTER EU funded project and is committed in preparing the new Guidelines for resilience and efficiency of these two species. Thanks to the involvement into the SMARTER Project, a possible routine international evaluation in sheep is expected by 2022 as well as a draw outline of a reference center for performance testing/genetic evaluation in small ruminants.

In 2021, ten national round tables will be organised within the SMARTER Project, presenting the results of the project to national stakeholders and get feedback from them.

The valorisation of two surveys on the yearly survey of the milk recording in sheep and goats and the survey on the camelids and their production system are expected to be finalised in 2021.

19.0 ICAR WEBINARS

In these pandemic times, webinars have replaced most of the meetings that ICAR organises with the experts that collaborates with the Committee for specific actions.

Since June, six webinars have been already organized that had an average participation of around 160 experts/webinars. In the next couple of months, four other webinars are in the pipeline, having the closest scheduled on 18 January on “Lameness in dairy cows”. For this webinar a specific webpage (here) and an informative brochure (here) have been prepared, both containing the link for the free registration to the webinar.
ICAR believes that such tools can positively support the informative actions so the Secretariat made available all the video-recorded webinars and the presented slides. The page is available for consultation here.

In details, the webinars that have been made available within the ICAR site are the following, including the group that organised them:

- **ICAR and the Animal Data Exchange standards** (organised by the ADE Working Group)
- **Examples of Animal Data Exchange** (organised by the Animal Data Exchange Working Group; June 2020)
- **Animal-based indicators to promote welfare in dairy cows** (organised by the Functional Traits Working Group; June 2020)
- **Development and Application of a Certified Reference Material for Somatic Cell Counting in Milk milk analysis** (Organised by the Milk Analysis Subcommittee; December 2020)
- **Interbeef: working together on national and international evaluations for beef cattle** (Organised by the Interbeef Working Group; December 2020)
- **Lameness in dairy cows: the challenging battle** (organised by the Functional Traits Working Group; January 2021)