



TABLE OF CONTENT

1.0 A WORD FROM THE PRESIDENT	1
2.0 NEW ICAR MEMBER	2
3.0 NEW ICAR SERVICES	2
3.1 ACCREDITATION OF DNA LABORATORIES FOR PARENTAGE RECORDING	2
3.2 ICAR MILK ANALYSERS CERTIFICATION.....	2
3.3. UPDATE ON GENOEX	3
4.0 NEWS FROM ICAR SUB-COMMITTEES	4
5.0 NEWS FROM THE ICAR WORKING GROUPS.....	8
6.0 CERTIFICATE OF QUALITY.....	11
7.0 ICAR PUBLICATIONS	12
7.1 THE ICAR SURVEY ON COW, SHEEP AND GOAT MILK RECORDING.....	12
7.2 ICAR TECHNICAL SERIES 20	13
8.0 ICAR 41ST CONFERENCE IN EDINBURGH (UK), 14 -16 JUNE 2017.....	13
9.0 ICAR 2018 ANNUAL CONFERENCE	13
10.0 ICAR CONFERENCES IN 2019 AND 2020.....	14

1.0 A WORD FROM THE PRESIDENT

The ICAR Board at its meeting in February this year confirmed ICAR's strategic orientation, which focuses on farmers and breeding organisations helping 'their' local farmers in data recording and the evaluation of production animals.

ICAR is there to help farmers to make reliable farm management and breeding decisions. Their aim is our aim: to produce healthy, safe and sustainable food in an economic way. ICAR works in close cooperation with associate members and partners – those organisations that provide products and services to our members in the recording and genetics process and in farm management information.

This newsletter illustrates how our governing and technical bodies strive to put ICAR's focus into practice:

- The workshop organised by the Interbull Sub-Committee and meetings of the Identification and the Recording and Sampling Devices sub-committees took place in the first months of this year.
- Our activities in the period after the 2016 conference held in Puerto Varas also included the proficiency test of milk analysers and the launch of the protocol for the evaluation of milk analysers for ICAR approval.
- Sixteen laboratories received an ICAR certificate for SNP- and STR-based parentage testing in cattle.
- Publication activity included the ICAR biennial survey on cow, sheep and goat milk recording and the Technical Series 20 on animal identification in Africa.

Preparations for our central event in 2017 – the ICAR Conference, to be held 14-16 June this year in Edinburgh, UK – are well advanced. AHDB Dairy, the ICAR member hosting the conference, published the programme and issued a call for the submission of abstracts (see www.icar2017.co.uk). Themed sessions will deal with the most urgent issues affecting our members and the animal production world and I am sure that they will attract a great number of participants.

Hans Wilmink



The opening ceremony of the 40th ICAR Biennial Session in Puerto Varas (above) at the Frutillar theatre and the exhibition of local dancers (below)





New Members

2.0 NEW ICAR MEMBER

The ICAR Board endorsed InterPuls, of Albinea, Italy, an organisation providing milk metering services to dairy farmers in Italy and abroad, as a new ICAR associate member.



NEW SERVICES

Accreditation of DNA laboratories

3.0 NEW ICAR SERVICES

3.1 ACCREDITATION OF DNA LABORATORIES FOR PARENTAGE RECORDING

ICAR has considered the need to define quality standards in bovine parentage testing because of the impact that wrong parentage may have in the estimation of genetic indexes and in national and international genetic evaluations.

Based on the outcome of work undertaken by the Genetic Analysis Task Force over the past two years, ICAR will define the minimum requirements for laboratories running DNA analyses for breeding purposes. Accreditation guidelines for parentage testing in cattle based on microsatellite analyses and SNP-based analysis are available on our website and the minimum requirements for additional species and DNA tests will be defined in the near future. For more details, visit www.icar.org.

Milk Analysers Certification

3.2 ICAR MILK ANALYSERS CERTIFICATION

ICAR is pleased to announce that from March 2017 Service-ICAR is able to certify new milk analysers in accordance with the ICAR Protocol for Evaluation of Milk Analysers for ICAR Approval, which has been developed and endorsed by the ICAR Milk Analysis Sub-Committee. This is an international harmonised protocol that serves milk recording interests worldwide.

Automated analytical methods for milk payment and milk recording have been developing rapidly, with high-speed instruments providing results for fat, protein, lactose, somatic cell count, urea and other parameters.

The manufacturers and laboratory users of these instruments will benefit from this ICAR international certification because it will avoid multiple local/national certifications.

Interested manufacturers can contact icar@icar.org for further information.



GenoEx-PSE

3.3. UPDATE ON GENOEX-SPE

The DNA Working Group (WG), which was created at the time of the Chile meetings in October 2016, have continued the work required for the launch of two new ICAR services. These include ICAR Accreditation of DNA Data Interpretation Centres, which will be offered through Service ICAR, and the **Genotype Exchange Parentage SNP Exchange** (GenoEx-PSE) service, to be offered through the Interbull Centre.

For the new ICAR accreditation service, the DNA WG is in the process of developing revised guidelines for carrying out parentage verification and/or parentage discovery based on SNP genotypes and test data files have been produced in preparation for the future launch. For GenoEx-PSE, the Interbull Centre continues its development of the user interface and the programming of required database business rules. The DNA WG will provide a status update on each service at the upcoming ICAR meetings in Edinburgh, Scotland in June.





NEWS FROM SUB-COMMITTEES

Animal Identification SC

Meeting of the ID SC

Activities of the ID SC

Appreciation for Henry Richardson

4.0 NEWS FROM ICAR SUB-COMMITTEES

4.1 ANIMAL IDENTIFICATION – SUB-COMMITTEE

The Animal Identification Sub-Committee met on 8-9 February 2017 in Rome to discuss its activities and actions. Among others, the issues discussed included: the progress of the newly introduced ICAR service of field validation of ID devices; the role of ICAR in the Additional Technologies Group comprising ICAR, ISO WG3, competent authorities and manufacturers; the issues around the inconsistent use of animal ID codes worldwide; various technical topics around the testing of ID devices; and the upcoming ICAR Annual Conference to be held in June 2017 in Edinburgh, UK.

4.1.1. MEETING OF THE ID SUB-COMMITTEE

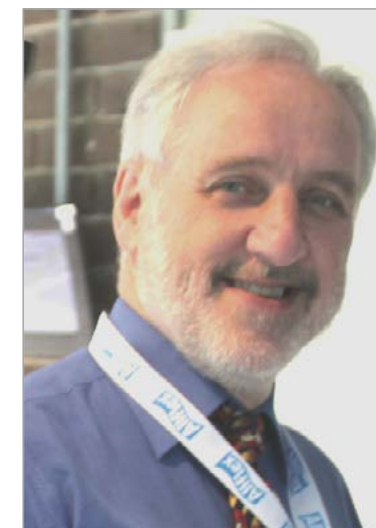
ICAR will meet with ISO on 27 April 2017 in Frankfurt, Germany. Jonas Persson from SEGES will attend the meeting on behalf of ICAR.

4.1.2. ACTIVITIES OF THE ID SUB-COMMITTEE IN 2016

During the past year, the sub-committee has been intensely engaged in the review and revision of Section 10 of the ICAR Guidelines: Testing and Certification of Devices Used in Animal Identification. The revision process is now completed and the updated Section 10 will be presented at the upcoming ICAR Annual Conference.

4.1.3 APPRECIATION FOR HENRY RICHARDSON

The Animal Identification Sub-Committee, together with the ICAR Board, would like to express their appreciation to Henry Richardson (Centre for Dairy Information, UK) for his many years of service and contributions to the sub-committee's work. The sub-committee is currently engaged in the research and recruitment of new members.



Henry Richardson retired from the ID SC after so many years, receiving the appreciation for his work

RSD SC

4.2 RECORDING AND SAMPLING DEVICES SUB-COMMITTEE

The RSD SC continues to move forward on many projects for the benefit of both ICAR members and recording device manufacturers. The RSD SC met in February 2017 to review both the core work of testing new recording and sampling devices, and also to identify specific projects based on ICAR members' reports. In addition, Italian manufacturers Milkrite/InterPuls and PANAZOO were invited to share the latest in technology from their respective companies.

The new website listings of ICAR-certified devices are being updated this spring and will include searchable listings of all devices by manufacturer or species, as well as custom search parameters. The website will also include more images and direct links to routine procedures and will clearly identify device installation parameters – all of which are requests that the RSD SC has received from website users. AMS (robotic) systems will have a dedicated page with more detailed information if required for clarification, including a matrix of ICAR-tested and certified combinations.

The three ICAR test centres continue to have an active testing schedule, both of new devices and modified devices representing the next generation of technology. The test centres are also reviewing issues affecting device performance, such as carry-over and air admission rates in milking clusters, with reports expected in future ICAR meetings. The ICAR 2017 Conference will feature a dedicated session around managing carry-over sources in recording devices from equipment, personnel, and laboratory perspectives.

The RSD SC is reviewing Section 11 of the ICAR Guidelines so that manufacturers and members gain a better understanding of processes and specifications. The new version of Section 11 will be presented to the General Assembly for adoption at the 2018 ICAR Conference in Auckland.

Finally, a call for reports from manufacturers and members will be sent out in April 2017. The RSD SC will provide a template for these reports in a simple format. These reports are an annual requirement as outlined in the ICAR Guidelines and the RSD-SC respectfully asks for this information to be returned to the Secretariat by 31 May 2017.

Proficiency Test Milk laboratory

4.3 ICAR PROFICIENCY TEST MILK LABORATORY

ICAR's Proficiency Test for Milk Analysers 2017 programme was launched in January 2017. The test includes the new parameters of beta-hydroxy-butyrate (BHB), pregnancy-associated glycoprotein (PAG), and DNA determined with the PCR technique.

Participation for the trial in March 2017 is encouraging, with interest from milk analysis laboratories increasing and 45 laboratories participating. Somatic cell counting is generating particular interest, with 11 labs using the reference method and 28 using the routine method – a total of 39 laboratories from 25 different countries and four continents!



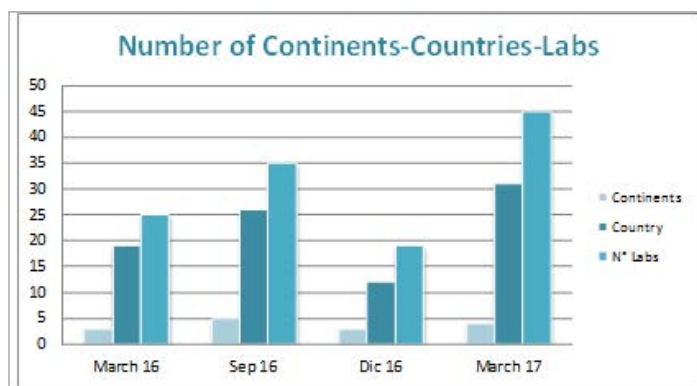


Figure 1. Graphics of the ICAR PT participants.

Participating countries to the ICAR Proficiency Test in the last four rounds

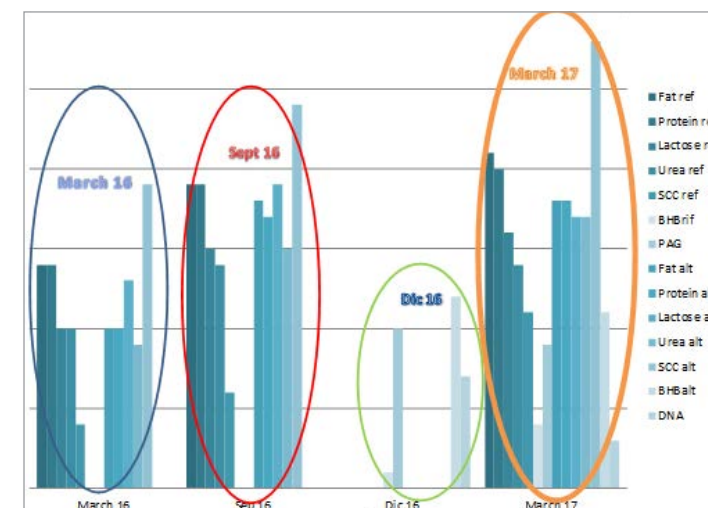


Figure 2. Graphics of the ICAR PT Participants for each analytical parameter.

Interbull SC

Interbull SC Workshop 2017

4.4 INTERBULL SUB-COMMITTEE

4.4.1 INTERBULL TECHNICAL WORKSHOP IN 2017

The Interbull Strategic Plan identified that the effects on Interbull's current MACE evaluation methodology caused by the new national genomic evaluation and selection methods need to be investigated in order to keep MACE up to date.

More than 70 people participated in the Interbull Technical Workshop and satellite meetings in Ljubljana, Slovenia (6-8 February 2017), and discussed, through an interesting exchange of international and national experiences of the single step evaluation methodology, how MACE could handle this genomic information and also how countries should deal with MACE when they are using 'single step'. We also explored how conventional validation methods could be adapted in order to deal with the effects introduced by genomic selection.

For the development of a potentially new Interbull service, a possible Interbull pilot project on international meta-analysis of SNP effects was presented; through international collaboration participating countries could estimate more accurate SNP effects and therefore more accurate genomic EBVs.

In order to implement such a service, an idea on how to make optimal use of the Interbull community's knowledge and expertise was presented.

Interbull committees and Interbull Centre staff are working on the follow-up of these topics, which will be addressed again in the upcoming Interbull Annual Meetings in Tallinn and Auckland. Presentations are available at www.interbull.org/ib/2017_technical_workshop.

Holstein news at Interbull

4.4.2 HOLSTEIN NEWS AT INTERBULL

Interbull welcomes Asociación Holstein de México, an ICAR member since the late 1990s, as the latest country to join Interbull. With the inclusion of the production traits of Holstein cattle from Mexico, the Interbull Centre now runs international genetic MACE evaluations for 32 Holstein populations.

Following a request by Interbull customers from several of these 32 populations for the Interbull Centre to provide the intergenomics-like services required for genomic selection, a well-attended InterGenomics-Holstein workshop was organised in Ljubljana. Following the considerable interest expressed during this workshop, the Interbull Steering Committee and the Interbull Centre are investigating the implementation of such a service. The next InterGenomics-Holstein meeting is in conjunction with the 2017 Interbull Annual Meeting in Tallinn, Estonia.



Interbull SC Meeting in 2017

4.4.3 INTERBULL ANNUAL MEETING IN 2017

The programme for the 2017 Interbull Annual Meeting is available on the Interbull website at www.interbull.org/ib/2017_interbull_meeting. Registration is available on the EAAP website: <https://eaap2017.org/interbull>

News Working Groups

Dairy Cattle Milk Recording WG

5.0 NEWS FROM THE ICAR WORKING GROUPS

5.1 DAIRY CATTLE MILK RECORDING WORKING GROUP

The group recently added two new members to the team: Xavier Bourrigan (France), who replaces H  l  ne Leclerc, and Friedrich Reinhardt from VIT. Xavier specialises in the practical aspects of milk recording, quality management, milking schemes and data. Friedrich specialises in complex statistical and scientific problems relating to 24-hour and accumulated milk yield calculations.

Before Chile, the main project of the DCMR WG was to undertake major revisions to the ICAR Guidelines, part of which is the responsibility of our group. The work covered new sampling schemes, data from AMS systems, databases and yield calculations, reporting, practical aspects of quality control and evaluation of new methods. The working group worked on several projects with the involvement of members and presented the results of these projects in the form of 14 oral presentations and one poster in Chile. Since Chile, the WG has been correcting and editing the new guidelines in order to improve 24-hour and accumulated milk yield calculation methods. All changes will be supplemented by two surveys, focusing on practical aspects of 24-hour and accumulated milk yield calculations and plausibility checks. Both projects will be international in outlook and provide an overview of the different ICAR members and other organisations around the world.

Other projects on the table include the impact of genomics on milk recording, sensors, milk recording outcomes and connections between milk yields and health data. For more see the report on the ICAR website: www.icar.org/wp-content/uploads/2016/11/Report-2016-in-Puerto-Varas-Dairy-Cattle-Milk-Recording-WG.pdf. This report summarises the group's activities before Chile and those planned for 2017. All results will be presented at the ICAR Conference in Edinburgh in June 2017.



Sheep, Goat and Small Camelid WG

5.2 THE NEWLY FORMED SHEEP, GOAT AND SMALL CAMELID WORKING GROUP (SGC WG)

A new organisation of the small ruminants and small camelids sectors in ICAR was established in 2016. The newly formed Sheep, Goat and small Camelid working group (SGC-WG) results from the merger of the three former WG on (i) dairy sheep, (ii) goats, and (iii) fibre. The field of the WG

includes dairy and fibre traits and also extends to meat traits and reproduction/maternal traits.

This new working group is structured in three expert advisory groups (EAG), whose scopes are the type of traits, whatever the species: milk recording, fibre recording, meat/reproduction/maternal trait recording.

During the Chile ICAR meeting, Jean-Michel Astruc was appointed as chairperson of the SGC-WG. The membership of the milk recording EAG (co-chaired by Zdravko Barac and Jean-Michel Astruc) and the fibre EAG (chaired by Marco Antonini) will be based on the membership of the former groups dealing with these topics. The meat/reproduction/maternal trait recording EAG is currently being built with relevant persons from countries where meat sheep production plays an important role.

The priorities of the SGC-WG in the next five years are as follows:

- Develop guidelines for the sheep and goat meat performance recording.
- Develop guidelines for the sheep and goat reproduction and maternal trait performance recording.
- Maintain and develop ICAR guidelines for milk recording of sheep and goats.
- Maintain and develop ICAR guidelines for fibre production from sheep, goats and small camelids.
- Promote genomics (maybe a future new EAG might be formed to deal specifically with this topic).

The next meeting of the SGC-WG is planned in Edinburgh, probably on Monday 12 June 2017.



Functional Traits WG

Claw health

Udder health

5.3 FUNCTIONAL TRAITS WORKING GROUP

5.3.1 CLAW HEALTH

The present work priority of the ICAR WGFT is still on the topics **claw health and udder health**. The aim for 2017 is to finalize ICAR - guidelines for both topics.

The ICAR Claw Health Atlas is available in 17 translations. A poster is available in English and German as well. To disseminate knowledge of this new tool in practice and promote its use, the ICAR working group for functional traits has organized a meeting in the CattleForum and two practical demonstrations in the TopTierTreff at EuroTier 2016. More information is found under (<http://www.icar.org/index.php/publications-technical-materials/technical-series-and-proceedings/atlas-claw-health-and-translations/>). The ICAR WGFT together with international experts are presently working on recommendations for validation of claw health data for use in genetics and herd management as well as on recommendations for the calculation of benchmarks for claw health. The harmonization of the claw disorders and their descriptions was the first step, these guidelines will bring best practices and experiences together and should contribute to a step forward in increasing the comparability of figures and benchmarks. The aim is that these ICAR guidelines will be finalized at the ICAR meeting in Edinburgh 2017.

5.3.2 UDDER HEALTH

The update on the ICAR guidelines for udder health is in process. A first summary was presented by John Cole from USDA at the ICAR Conference in Chile in 2016. As many new developments relevant for updated udder health guidelines are in development, the ICAR FTWG will organise an open working group meeting on Tuesday 13 June 2017 in Edinburgh at the ICAR Conference. Experts who are interested to contribute to the elaboration of the updated ICAR guidelines for udder health are very welcome to contribute.

If you have expertise on new parameters, traits relevant for udder health and you are interested in contributing, please send an email to egger-danner@zuchtdata.at or icar@icar.org.



CERTIFICATE OF QUALITY

6.0 CERTIFICATE OF QUALITY

In the last four months, four consultative reviews have been delivered to the ICAR Members as listed hereby

Cattle Information Service

The validity of the ICAR Certificate of Quality to the Cattle Information Service, UK, for activities in the identification of dairy cattle, the production recording of dairy cattle, laboratory analysis (milk samples) and data processing has been extended to 1 February 2019.

Croatian Agricultural Agency

Based on the consultative review, the validity of the ICAR Certificate of Quality to the Croatian Agricultural Agency for the activities of identification of dairy cattle, beef cattle and other species, production recording of dairy cattle and other species, genetic evaluation of dairy cattle and other species, laboratory analysis (milk samples), linear scoring and data processing has been extended to 1 February 2019.

France Genetique Elevage

The ICAR Certificate of Quality to France Génétique Elevage for the identification of dairy cattle, beef cattle and other species, production recording of dairy cattle and other species, genetic evaluation of dairy cattle, beef cattle and other species, laboratory analysis (milk and genetic samples) and data processing has been extended to 1 February 2019 on the basis of the recent consultative review.

SEGES/RYK

The ICAR Certificate of Quality to SEGES/RYK, Denmark, for the identification of dairy cattle, beef cattle and other species, production recording of dairy cattle and other species, genetic evaluation of dairy cattle, laboratory analysis (milk and genetic samples) and data processing has been extended to 1 February 2019 on the basis of the recent consultative review.



Laurent Journaux collecting from Martin Burke the Certificate of Quality for France Genetique Elevage



PUBLICATIONS

Survey on cow, sheep
and goat milk recording

7.0 ICAR PUBLICATIONS

7.1 THE ICAR SURVEY ON COW, SHEEP AND GOAT MILK RECORDING

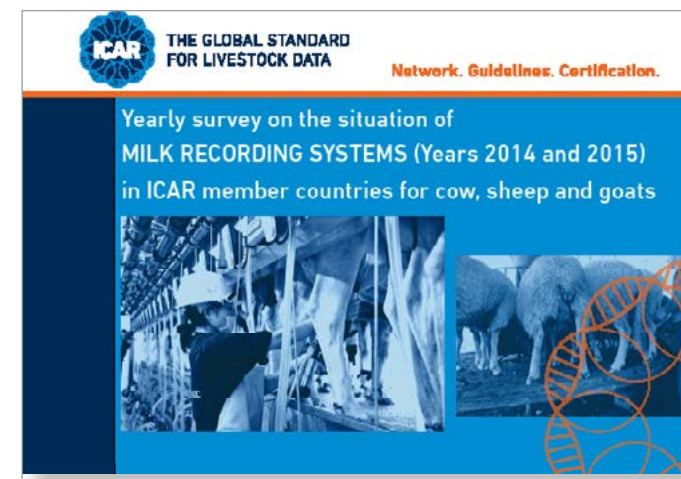
The ICAR publication on cow, sheep and goat milk recording incorporates dairy sector primary production information from a wide range of sources in a unique manner that examines the existing relationships between farmers, dairying and dairy industry development. This collaboration by ICAR's many national members, including leading and coordinating the planning, preparation and publication process, has made this booklet possible. In producing this booklet, ICAR aims to provide:

- an in-depth look at the most sensitive step in the dairy chain and nutrition within the national primary production dairy sector, going from milk production to consumption;
- a realistic picture of the various national distinctions and the differences in scale of the dairy sector in the analysed countries;
- insights into dairy's potential by presenting specific stakeholder actions to improve future production and planning.

Billions of people consume milk and dairy products worldwide. Milk is no longer viewed solely as a source of nutrients for newborn children and, alongside dairy products, is now viewed as a fundamental source of protein and energy for all consumers. Milk and dairy products also offer significant opportunities for farmers, processors, retailers and other stakeholders within the dairy value chain.

At the primary level of the sector is raw production, which requires consumers, industry and governments to understand the complex relations between its various components. In order to facilitate this understanding, up-to-date information on the contribution of milk and dairy products to the economy must be provided, including how best to develop the dairy industry to effectively increase food security and generate maximum income for the entire value chain.

ICAR has been collecting data since 1996 on national milk production, milk recording and the cost of the whole milk production chain, together with information about the sources of its funding. Particularly relevant in this publication are the sections in which the productivity of each of the many breeds that comprise the national sector is assessed, so that even minor breeds can be described and their contributions to the national statistics can be evaluated at the correct scale. This data was initially collected only for the cow milking sector but since 2008 the sheep and goat milking sectors have been included in the survey.



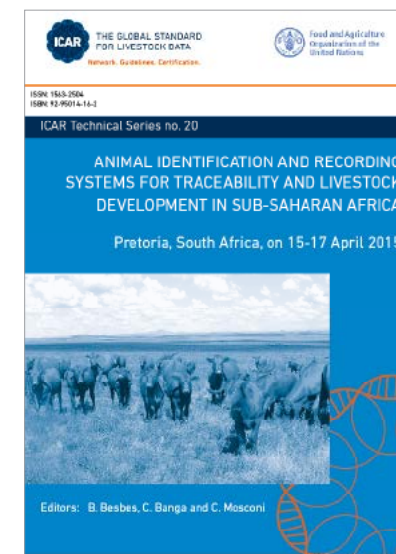
Technical Series #20

7.2 ICAR TECHNICAL SERIES 20

In the ICAR Technical Series, ICAR publishes the proceedings of specific workshops and symposia, jointly organised with other international and national organisations with its own ISSN: 1563-2504. ICAR also takes care of other publications that are within its sphere of interest on an ad hoc basis.

The ICAR Technical Series 20 contains proceedings of the ICAR – FAO Symposium on Animal Identification held in Pretoria, South Africa, and the Pretoria Declaration.

Technical Series can be obtained from the ICAR Secretariat in Rome or can be downloaded as PDF files from the ICAR website www.icar.org



41ST CONFERENCE IN EDINBURGH

8.0 ICAR 41ST CONFERENCE IN EDINBURGH (UK), 14 -16 JUNE 2017

This year's ICAR Conference will be held at the Edinburgh International Conference Centre (EICC) situated at the heart of Scotland's beautiful capital city and home to the historical Old Town and the beautiful Georgian New Town. The organiser of the Conference is AHDB Dairy, a levy-funded, not-for-profit organisation working on behalf of Britain's dairy farmers. The conference programme includes themes of paramount importance for ICAR and its members, such as the legal implications of data provision services and the future of ICAR under alternative phenotyping strategies.

Information on the conference venue, registrations and calls for abstracts are available at the ICAR website www.icar.org and on the conference website www.icar2017.co.uk/

ICAR 2018 ANNUAL CONFERENCE

9.0 ICAR 2018 ANNUAL CONFERENCE

Planning for the 2018 ICAR Annual Conference in Auckland, New Zealand, is well advanced. The conference website is www.icar2018.nz/icar18. The conference will cover Interbull and will be run in tandem with the World Congress of Genetics Applied to Livestock Production (WCGALP – <http://wcgalp.com/wcgalp18> – 11-16 February) at the same venue with joint sessions and shared field trips.

It is very appropriate that ICAR, with its focus on animal recording – the collection of phenotypes – is on this occasion linked with WCGALP, which focuses on genetics applied to livestock production. ICAR focuses on the collection of data and WCGALP focuses on its use for genetic improvement.



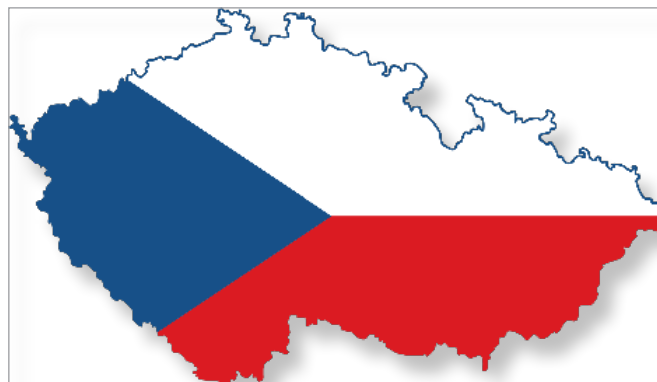
To help ensure that delegates to both the ICAR and WCGALP conferences get maximum value from coming to Auckland next year, a survey of all potential delegates is currently being undertaken to ascertain the level of interest. The survey is available at: <https://innovators.eventsair.com/wcgalp---database/survey/Site/Register>

Please take some time (about 15 minutes) to complete the survey as the resulting data will be used to formulate the programme for both meetings and will also form the basis of a profile for each delegate. The goal is to ensure that the conferences cater to the interests of each delegate and that interaction between delegates sharing the same interests is facilitated.

ICAR CONFERENCES IN 2019 AND 2020

10.0 ICAR CONFERENCES IN 2019 AND 2020

The ICAR Board accepted the invitations by the Czech Moravian Breeders' Association to host the 2019 ICAR Conference in the Czech Republic and by CRV to host the 2020 ICAR Conference in the Netherlands.



In 2019 and 2020, the ICAR
Conference will be held in the
Czech Republic and in
The Netherlands, respectively

