

**11–16 June** Edinburgh, Scotland

www.icar2017.co.uk





# **BIG IDEAS FOR BIG DATA**

# Highly Reliable and Accurate Dairy Components Analysis



Milk Chemical Composition and Somatic Cells



Rapid and accurate determination of milk chemical composition (fat, protein, lactose, solids,+++) by FTIR spectroscopy, and somatic cells content by flow cytometry

- Highly reliable and accurate (up to 60 components)
- Up to 600 samples/hour
- Open system (spectral database/calibration)
- · Optimized connectivity and traceability
- Enhanced samples identification (barcode/RFID)
- Extensive remote diagnostic capabilities
- Fully compliant with ISO/IDF standards requirements
- Fully compatible with Intellitech ILAS 3000 robot

#### **OTHER BENTLEY SOLUTIONS:**





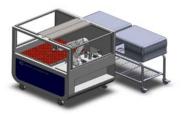
Milk Total Flora and Somatic Cells

#### BactoCount IBC 50-200:

Rapid and accurate determination of raw milk total flora (cow, sheep, goat and buffalo) and somatic cells by flow cytometry

#### Optimize your productivity:

- From 50 to 200 samples/hour
- · Fully automated and standardized
- Very easy to use and maintain
- · Optimized connectivity and traceability
- · Approved for milk payment
- First ISO 16140 Certified instrument
- Fully compatible with Intellitech ILAS 4000 robot



# WELCOME

Dear colleagues, guests and friends,

We are delighted to welcome you to Edinburgh for the 41st ICAR Conference at the heart of Scotland's beautiful capital city. It's home to the Edinburgh castle which you will experience first-hand in a private viewing at our opening ceremony as well as a spectacular mini-tattoo provided by Beat the Retreat.

The Edinburgh International Conference Centre (EICC) is one of the world's outstanding venues and the purpose-built centre offers the very best facilities and technology. We hope it will serve as a great platform for all those who work in animal recording to meet, exchange their experiences and discuss recent developments in their fields of interest. Please also ensure that you visit our sponsors and exhibitors during the various conference refreshment breaks.

The conference programme will be delivered by over 40 speakers, representing experiences from more than 15 different countries globally, and will consider the process for establishing national 'data hubs', developments in collecting and integrating new traits data as well as the impact and opportunities arising from sensor technologies and Big Data.

We hope that you will pick up valuable new knowledge and connections from your attendance, but wish also for you to leave with enjoyable memories.

Marco Wimers

Marco Winters
Chair of the Local Organising Committee

We extend a very warm welcome to you for ICAR 2017 in the beautiful city of Edinburgh. The programme this year has been constructed bearing in mind that there are 3 ICAR meetings in 18 months, with the next one being in New Zealand in February 2018. This has provided us with the opportunity to focus the 2017 meeting on some of the more strategic issues confronting those ICAR organisations whose business is in data recording.

The rapid deployment of genomics in the dairy industry has been very disruptive and its full force has yet to be felt. That coupled, with the rapid rise of new sensor technology reaching a degree of maturity that makes its use in agriculture now feasible, means

ICAR members will be confronted with a veritable feast of competing demands for data, information, services and heightened farmer expectations for integrated data solutions. The programme has speakers on all of these areas and plenty of time has been set aside to discuss the implications of a data explosion for ICAR members and their customers.

I hope you come armed with plenty to say!

**Mike Coffey** 

Programme Committee Chair



#### **CONFERENCE VENUE**

**Edinburgh International Conference Centre (EICC)** 

The Exchange Edinburgh EH3 8EE Scotland



# **GENERAL INFORMATION**

# OPENING CEREMONY VENUE

Wednesday 14 June

Edinburgh Castle Castlehill, Edinburgh EH1 2NG

#### GALA DINNER VENUE

Thursday 15 June

Mansfield Traquair 15 Mansfield Place, Edinburgh EH3 6BB

#### **NAME BADGES**

Official conference name badges will be required to enter all areas of the conference and social events. Only delegate and sponsor badges will be allowed access to the main conference sessions, exhibitor badges only allow access to the exhibition and lunch areas.

Participants who lose their badges will have to pay a fee of £30 for a replacement.

#### **LUNCH TICKETS**

You have been provided with lunch tickets, these will need to be handed in at the door of Cromdale Hall to gain access during the lunch break.

# LIABILITY AND INSURANCE

The conference secretariat and organisers cannot accept liability for personal accidents or loss of or damage to private property of participants and accompanying persons. Participants are advised to take out their own personal travel and health insurance for their trip.

#### **CONTACT DETAILS**

Jenna Porch

Event Manager +44 (0) 7773 167 523

**Hannah Newby** 

Event Executive +44 (0) 7891 534 725

# **VENUE INFORMATION**

#### LEVEL 0

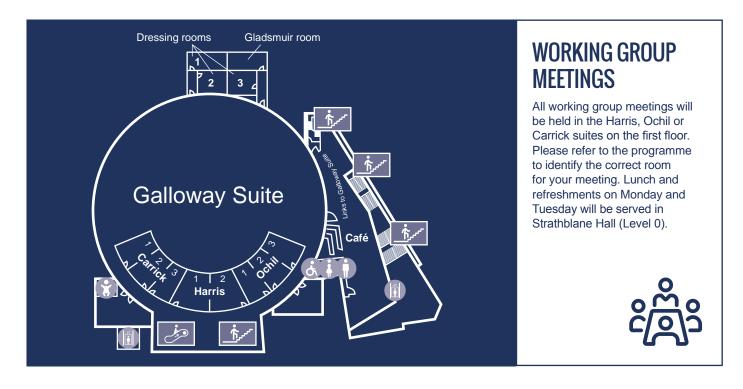


#### **REGISTRATION OPENING HOURS (STRATHBLANE HALL)**

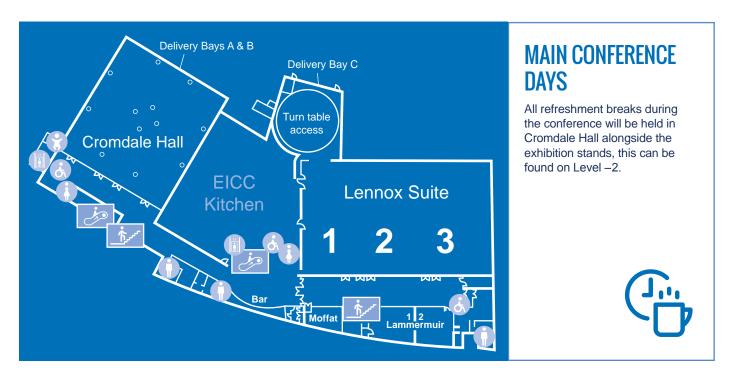
DATE	TIMES	REGISTRATION TYPE
Monday 12 June	08:00 – 18:00	Working group members only
Tuesday 13 June	08:00 – 14:00	Working group members only
Tuesday 13 June	13:00 – 18:00	Exhibitors only
Tuesday 13 June	16:00 – 18:00	Early delegate registration
Wednesday 14 June	08:00 – 18:00	Pre-registered delegates On site registrations Gala dinner/technical tour bookings
Thursday 15 June	08:00 – 15:30	Pre-registered delegates On site registrations Gala dinner/technical tour bookings

# **VENUE INFORMATION**

#### LEVEL 1



#### LEVEL-2



#### 7-11 February 2018



# THE GLOBAL STANDARD FOR LIVESTOCK DATA

#### **Annual Conference**

icar2018.nz

AOTEA CENTRE, AUCKLAND, NEW ZEALAND

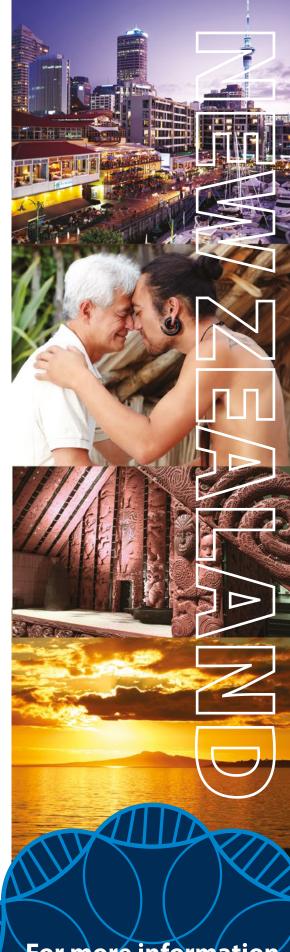
The combined ICAR Annual Conference and Interbull Annual Meeting brings together the leading scientists in animal recording, measurement, and genetic evaluation from up to 59 countries. It is a showcase for new technologies and developments in these areas. In combining with the World Congress on Genetics Applied to Livestock Production (WCGALP), delegates will get the full package across numerous species from parentage verification to genotyping to phenotyping to genetic evaluation.

The 2018 Interbull Annual Meeting, the leading event for research and development in bovine genetic and genomic national and international evaluations, will be held as part of the joint ICAR and WCGALP meeting in Auckland.

New Zealand is the home of many of the foundations of genetic evaluation, animal measurement and recording and continues to be at the forefront of technology development for dairy, sheep, beef, goat, aquaculture, and sheep milking operations. Make your stay a memorable one by taking in the full sights of New Zealand's breath-taking scenery combined with attending both ICAR/Interbull and WCGALP 2018.

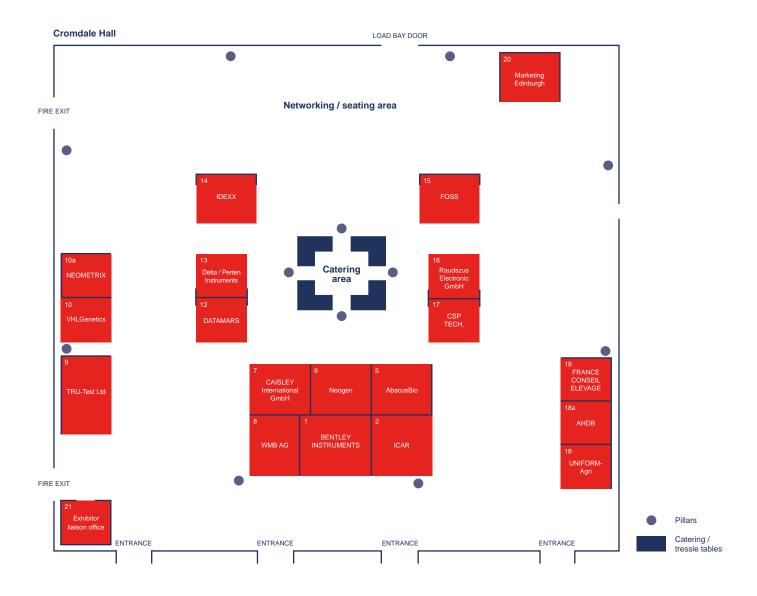
#### **Key dates and information**

- Registration and accommodation bookings now open
- Call for papers now open
- Call for papers closes 31 August 2017
- Early bird registration closes 30 November 2017.



For more information and to register www.icar2018.nz

# **EXHIBITION INFORMATION**



#### **EXHIBITION OPENING HOURS**

**Wednesday 14 June** 08:30 - 18:00 **Thursday 15 June** 08:30 - 16:00

#### **Event manager:**

Jenna Porch (AHDB Dairy) +44 (0) 7773 167 523

#### **Exhibition liaison:**

Hannah Newby (AHDB Dairy) +44 (0) 7891 534 725



# **WORKING GROUP MEETINGS**

#### **SUNDAY 11 JUNE 2017**

	07:00 - 07:30	07:30 - 08:00	08:00 - 08:30	08:30 - 06:00	09:00 - 09:30	09:30 - 10:00	10:00 – 10:30	10:30 – 11:00	11:00 – 11:30	11:30 – 12:00	12:00 – 12:30	12:30 – 13:00	13:00 – 13:30	13:30 – 14:00	14:00 – 14:30	14:30 – 15:00	15:00 – 15:30	15:30 – 16:00	16:00 – 16:30	16:30 – 17:00	17:00 – 17:30	17:30 – 18:00
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#### **MONDAY 12 JUNE 2017**

All meetings are closed except the official Sheep, Goat and Camelid Conference Session

	07:00 - 07:30	07:30 - 08:00	08:00 - 08:30	08:30 - 08:00	09:00 - 09:30	09:30 - 10:00	10:00 – 10:30	10:30 – 11:00	11:00 – 11:30	11:30 – 12:00	12:00 – 12:30	12:30 – 13:00	13:00 – 13:30	13:30 – 14:00	14:00 – 14:30	14:30 – 15:00	15:00 – 15:30	15:30 – 16:00	16:00 – 16:30	16:30 – 17:00	17:00 – 17:30	17:30 – 18:00
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SOUTRA ROOM		ICAR SECRETARIAT OFFICE																				
BUSINESS CENTRE		EVENT STAFF OFFICE																				
HARRIS 1	ISO9001 Internal Auditor Training							Internal Auditor's Forum														
HARRIS 2														Interbeef Technical Group								
OCHIL 1					Fur	nctiona	l Trait	s Worl	king G	roup						Functi	onal T	raits W	orking	g Grou	p	
OCHIL 2														Re	cordir	ng and	Samp	ling D	evices	Worki	ng Gro	up
OCHIL 3														Sheep, Goat and Camelid Sheep, Goat and Camelid Conference Working Group Session								
CARRICK 1																						
CARRICK 2																						
CARRICK 3																						

# **WORKING GROUP MEETINGS**

#### **TUESDAY 13 JUNE 2017**

All meetings are closed

	07:00 - 07:30	07:30 - 08:00	08:00 - 08:30	08:30 - 09:00	09:00 - 09:30	09:30 – 10:00	10:00 – 10:30	10:30 – 11:00	11:00 – 11:30	11:30 – 12:00	12:00 – 12:30	12:30 – 13:00	13:00 – 13:30	13:30 – 14:00	14:00 – 14:30	14:30 – 15:00	15:00 – 15:30	15:30 – 16:00	16:00 – 16:30	16:30 – 17:00	17:00 – 17:30	17:30 – 18:00
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CROMDALE HALL		CATERING AREA																				
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HARRIS 2						Dairy Cattle Milk Recording Working Group						GDMI & Feed and G					Gas Working Group			)		
OCHIL 1					Conformation Recording Working Group					DNA Working Group					oup							
OCHIL 2					Recording Sampling Devices Working Group							Animal Data Exchange Working G					Group	р				
OCHIL 3					Animal Identification Sub-Committee Meeting						Animal Identification S					Sub-Committee Meetin			eting			
CARRICK 1					Global Reach Working Group					Sensor Devices Working G						orce						
CARRICK 1					Artificial Insemination and RT Working Group										Milk Analyses Sub-Committee Meeting							
CARRICK 1					Functional Traits Working Group								Functional Traits Working G					ing Gr	oup			

# **CONFERENCE PROGRAMME**

#### WEDNESDAY 14 JUNE 2017

All conference sessions are held in Lomond Suite on Level 0

08:30 – 09:30	ICAR General Assembly
09:30 – 10:30	Local host welcome session Gwyn Jones – Chairman AHDB Dairy Professor Wayne Powell – Principal and Chief Executive of SRUC Gene editing farmed livestock – Chris Proudfoot
10:30 – 11:00	Coffee break & exhibition (Cromdale Hall)
Plenary 1 – Legal im	plications of data provision services – Chaired by Brian Wickham
11:00 – 11:15	Data protection aspects by merging cattle data of various origins – R. Knyrim, E. Dolamic, M. Mayerhofer, M. Koblmüller, J. Perner, R. Janacek, G. Schoder, F. Gstöttinger, R. Weissensteiner, B. Fürst-Waltl, M. Schagerl, H. Eder, C. Egger-Danner
11:15 – 11:30	A computerized consent management tool for breeders: why, how? – B. Balvay, L. Journaux
11:30 – 11:45	A Central Database for the Australian Dairy Industry – <b>S. Jenkins,</b> T. Francis
11:45 – 12:00	Smart Dairy Farming 3.0: multiplying innovations on the farmyard – B. van't Land, G. Smeenk, H. Lucas, A. Lamers
12:00 – 13:30	Networking lunch & exhibition (Cromdale Hall)
Session 1 – Robots,	Sensors and ICAR – Chaired by Dave Ross
13:30 – 13:45	Automating the dairy farmer? Understanding the barriers to uptake and use of precision technology in dairy systems – <b>D. McConnell</b>
13:45 – 14:00	Use of daily robotic progesterone data for improving fertility traits in Finnish Ayrshire – <i>J. Häggman</i> , <i>J. Christensen</i> , <i>J. Juga</i>
14:00 – 14:15	Collecting milking speed data as part of official milk recording – R.H. Fourdraine, H. Adams, A. Coburn
14:15 – 14:30	Objective carcass measurement to improve lean meat yield and eating quality in Australian beef, sheep and pork – <b>D. Brown</b> , D. Pethick, P. McGilchrist, C. Ruberg, W. Pitchford, R. Apps, G. Gardner
14:30 – 14:45	Towards a robust protocol for enteric methane measurements using a hand held Laser Methane Detector in Ruminants – <i>T. Bruder, B. Rouille, T. Yan, <b>M. Chagunda</b></i>
14:45 – 15:00	Sharing data through an API platform – API AGRO – <i>E. Rehben</i> , <i>B. Balvay, T. Haezebrouck</i>
15:00 – 16:00	Coffee break & exhibition (Cromdale Hall)
Manufacturers' Show	vcase and carry-over effects – Chaired by Steven Sievert
16:00 – 16:15	Milk sample carry over in the field – identifying and resolving the challenges – <i>J. Frankfort</i>
16:15 – 16:30	Practical Considerations to Reduce Carry-Over in Design of Recording & Sampling Devices – <i>J. Baines</i>
16:30 – 16:45	The new CombiFoss™ 7 DC – Differential Somatic Cell Count and other Advancements in Milk Testing – <i>D. Schwarz</i>
16:45 – 17:00	Employing high resolution big data for predictive modelling in precision dairy farming – <i>G. Katz</i>
17:00 – 17:15	Evaluation of a new qPCR test to specify reasons for total bacterial count in bulk tank milk – S. Sigurdsson, L.Olesen, A. Pedersen, J. Katholm
17:15 – 17:30	Update from IDEXX: Assessing the impact of carry-over in routine DHI milk samples when offering additional testing services (Pregnancy, Johne's, Mastitis etc) through DHI laboratories – <i>H. Pearse</i>
17:30 – 17:45	Update from Bentley Instruments: Latest innovations for the monitoring of milk hygienic quality, methods automation and standardization – <i>P. Broutin</i>
17:45 – 18:00	Practical applications of fatty acid data for the improvement of dairy cattle production and prevention of health issues in transition cows – <i>W. Beukema</i> , <i>D. Barbano</i> , <i>R. Grant</i> , <i>H. M. Dann</i>
19:00 – 22:00	Opening reception at Edinburgh Castle

# **CONFERENCE PROGRAMME**

#### **THURSDAY 15 JUNE 2017**

All conference sessions are held in Lomond Suite on Level 0

08:30 – 08:45	Delivering value – added services to a diverse customer base – A. Coburn
08:45 – 09:00	Agrimetrics Data Platform – Harnessing and merging big data – <b>D. Flanders</b> , M. Coffey
09:00 – 10:00	Debate with audience participation on Plenary 2 topic – Chaired by M. Coffey
10:00 – 10:30	Coffee break & exhibition (Cromdale Hall)
Session 3 – Integrat	ing data to provide added value services – topping up from other data sources – Chaired by Eileen Wall
10:30 – 10:45	Predict, Prescribe, Perform: integrating traditional and new data sources to enable Smart Herd Management – <b>S. van der Beek</b> , H. Knijn, D. Zouari
10:45 – 11:00	The DataGene Herd Test Dashboard – T. Francis, M. Humphris, R. Morris, T. Sargent, R. Shephard
11:00 – 11:15	Genetic evaluation for claw health traits as part of the integrated system for health monitoring in German Holstein dairy cattle – <i>K. Stock, H. Swalve, R. Schafberg, V. Müller-Rätz, F. Reinhard</i> t
11:15 – 11:30	GenoEx Update – <i>B. van Doormaal</i>
11:30 – 11:45	Cow Own Worth – synergising data to provide a new tool to aid in culling decisions in seasonal dairy herds – <i>M. Kelleher</i> , <i>D.P. Berry, P.R. Amer, A. Cromie, R. Evans</i>
11:45 – 12:00	Association between milk fatty acids in early lactation and subsequent reproductive performance of modern high-yielding dairy cows – S. Jorjong, G. Opsomer, J. Chen, A. T. M. van Knegsel, B. Kemp, V. Fievez
12:00 – 13:30	Networking lunch & exhibition (Cromdale Hall)
Session 4 – Impact of	of genomic services on performance recording organisations – Chaired by Brian van Doormaal
13:30 – 13:45	Possible principles for breed association models in the genomics era, with reference to beef cattle and sheep breeds – <b>R. Banks</b>
13:45 – 14:00	Data collection methods used in the Beef Data and Genomics Programme (BDGP) and the development of Restful API's for recording herd data – <i>C. Vigors</i>
14:00 – 14:15	A Star Tech, The Final Front-MIR: Estimated breeding values for mid-infrared derived predictions of energy traits in dairy cows – <b>S. Smith</b> , V. Hicks, M. Coffey, M. Winters, E Wall
14:15 – 14:30	Implementation of genomic selection in small populations – Croatian case – <i>M. Špehar</i> , <i>Z. lvkić, M. Dražić, Z. Barać</i>
14:30 – 14:45	Designing a reference population to accelerate genetic gains for novel traits in Canadian Holstein – <i>F. Miglior</i> , <i>L. Brito</i> , <i>P. Martin</i> , <i>J. Jamrozik</i> , <i>F. S. Schenke</i> 2, <i>A. Canovas</i> , <i>X. Zhao</i> , <i>C. F. Baes</i>
14:45 – 15:00	INTERBEEF Update – <b>A. Cromie</b>
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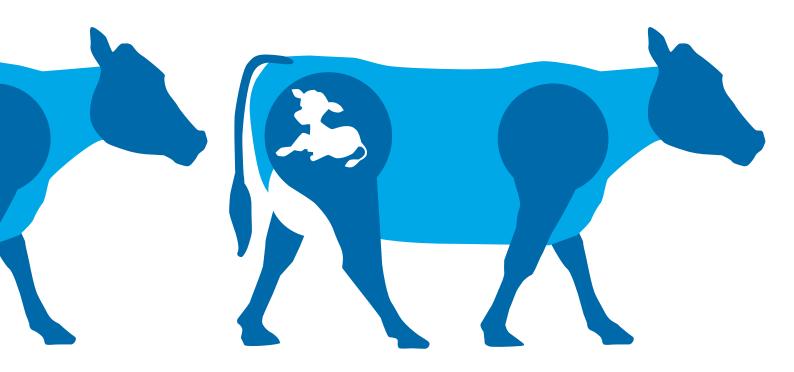
# **CONFERENCE PROGRAMME**

#### **THURSDAY 15 JUNE 2017 (CONT)**

All conference sessions are held in Lomond Suite on Level 0

Session 5 – Methods	s to gather new phenotypes – Chaired by Roel Veerkamp
15:30 – 15:45	Prediction of energy status of dairy cows using MIR milk spectra – <b>C. Grelet</b> , A. Vanlierde, M. Salavati, Hostens, L. Foldager, F. Dehareng, GplusE Consortium
15:45 – 16:00	Body weight prediction and genetic parameter estimation based on type traits in Italian Holstein cows – <i>R. Finocchiaro</i> , J. van Kaam, M.Marusi, M. Cassandro
16:00 – 16:15	Lactose in milk – How can lactose concentration data be beneficial in management and breeding? – <b>P. Løvendahl</b> , M. Riis Weisbjerg
16:15 – 16:30	Individual methane prediction from milk MIR spectra, across multiple breeds, lactation stages, parities and country-specific dairy farming systems – A. Vanlierde, N. Gengler, H. Soyeurt, C. Martin, E. Lewis, F. Grandl, M. Kreuzer, B. Kuhla, P. Lund, C. Ferris, C. Bertozzi, <b>F. Dehareng</b>
16:30 – 16:45	Targeted combination of estimated breeding values for lower accuracy mid-infrared biomarkers increases their usefulness in genetic evaluation of dairy cattle – <b>N. Gengler</b> , <i>GplusE Consortium</i>
16:45 – 17:00	Genetic analyses of ketosis and a newly developed risk indicator in Fleckvieh, Braunvieh and German Holstein – H. Hamann, A. Werner, L. Dale, <b>P. Herold</b>
17:00 – 17:15	Collection and use of new phenotypes in Germany – <i>T. Hauck</i>
17:15 – 17:30	Effectiveness of mid infrared spectroscopy to predict milk phosphorus content – <b>M. Gelé</b> , L. Brun-Lafleur, A. Boudon, P. Gaignon, T. Le Mouël, C. Hurtaud
17:30 – 17:50	Conclusions and next steps in ICAR – <i>M. Burk</i> e
19:00 – 00:00	Gala Dinner at Mansfield Tranquair (ticketed event)

# Grow your business... from within



# We'll help you increase requests for the IDEXX Milk Pregnancy Test

When you encourage your customers to add this test to their DHI samples, everyone's business grows. Get the materials and support you need to give your customers early, accurate answers.

Find out about our co-marketing program at IDEXX Booth #14

Test with Confidence



# **TECHNICAL TOURS**

#### **FRIDAY 16 JUNE 2017**

#### Tour 1

Tour 1 is sponsored by FOSS and will include a tour of the milk Laboratories of National Milk Records (NMR) in Glasgow. NMR will give an update on today's ever-changing quality control landscape with a focus on developments in QC standards. This will be followed up with an overview of developments with analytical technology and the positive implications for dairy herd improvement testing.

Time	Activity
9:00	Leave Edinburgh
10:15 – 10:45	Coffee break at The Innovation Centre, Glasgow
10:45 – 12:15	Presentation from NMR/FOSS
12:15 – 12:45	Lunch at The Innovation Centre
12:45 – 14:30	Tour around laboratory
16:00 – 17:00	Sightseeing – The Kelpies
17:45	Arrive back in Edinburgh

**FOSS** 

# Catch the next big wave in milk testing

introducing the new

CombiFoss™ 7

# **TECHNICAL TOURS**

#### FRIDAY 16 JUNE 2017

#### Tour 2

Tour 2 will include a visit to a 170 cow milking pedigree Holstein herd in Fife, with a member of the herd representing the UK at last year's European Holstein Show. The herd recently invested in new buildings and milking robots. The tour will also visit a cross-breeding autumn calving grazing herd of 160 head which forms part of a family business running 400 cows plus followers on two dairy units covering 450 acres near Lanark. The herd owner also completed a Nuffield Scholarship focussing on the key attributes of enterprising rural businesses.

Time	Activity
9:30	Leave Edinburgh
10:45 – 12:30	Nether Affleck Farm tour
12:30 – 13:00	Lunch
14:15 – 15:00	Sightseeing – The Kelpies
15:40 – 17:00	Parkend Farm tour
17:45	Arrive back in Edinburgh

#### Tour 3

Tour 3 will include the SRUC's Beef feed efficiency unit at Easter Bush and a visit to a Texel farm in Lanarkshire. This flock has been recording since the 1980s and has been exporting live animals to continental Europe as well as semen to continental Europe, Brazil and New Zealand. In addition, the farm has a herd of 60 Suckler cows.

Time	Activity
9:30	Leave Edinburgh
10:00 – 11:30	Easter Bush tour
12:15 – 13:00	Lunch, tea/coffee at Laird farm
13:00 – 14:30	Laird farm tour
15:45 – 17:00	Sightseeing – The Kelpies
17:45	Arrive back in Edinburgh

# DATAMARS

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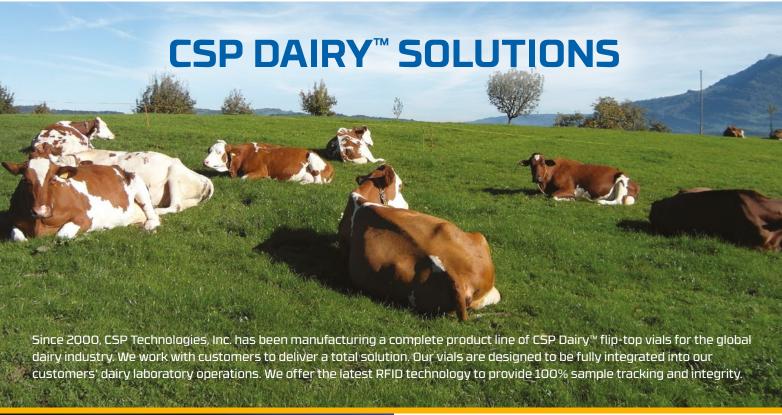
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**Email:** info@caisley.de **Phone:** +49 (0) 2871 23939 0

Germany



IDEXX Gold

One IDEXX Drive, Westbrook, Maine 04092 United States

**Email:** lpdweb@idexx.com **Phone:** +1 (0) 800 548 9997

**United States** 



**CSP TECHNOLOGIES** 

**Silver** 

ZA du Sandholz 67110 Niederbronn-les-Bains, France **Email:** jean-philippe.canault@csptechnologies.fr

Phone: +33 (0) 3 88 09 89 00

France



DATAMARS

via ai Prati 2, CH-6930 Bedano, Switzerland **Email:** livestock-id@datamars.com

Phone: +41 (0) 91 935 7380

Switzerland



FOSS Silver

Foss Allé 1, 3400 Hillerød, Denmark

**Email:** info@foss.dk **Phone:** +45 (0) 70 10 33 70

Denmark



## **EXHIBITORS AT ICAR 2017**

ABACUSBIO Exhibitor

PO Box 5585, Dunedin 9058, New Zealand

Email: tbyrne@abacusbio.co.nz Phone: +64 (0) 3 477 6375

New Zealand



#### **DELTA / PERTEN INSTRUMENTS**

**Exhibitor** 

P.O. Box 9006, SE-126 09 Hagersten, Sweden

**Email:** info@perten.com **Phone:** +46 (0) 8 505 80 900

Sweden



#### FRANCE CONSEIL ELEVAGE

**Exhibitor** 

42 rue de Châteaudun - 75009 Paris, France **Email:** fcel@france-conseil-elevage.fr

**Phone:** +33 (0) 1 53 94 65 00

France



NEOGEN Exhibitor

European Headquarters of Neogen Corporation, The Dairy School, Auchincruive, Ayr, KA6 5HU, Scotland, United Kingdom

**Email:** geneseek@neogeneurope.com **Phone:** +44 (0) 1292 526 094

UK



NEOMETRIX Exhibitor

78 Swarthdale, Haxby, York, YO32 3NZ, United Kingdom

**Email:** info@neometrix.co.uk **Phone:** +44 (0) 780 1711 475

UK



#### **RAUDSZUS ELECTRONIC GMBH**

**Exhibitor** 

Sudetenstrasse 5-7, D - 94239 Ruhmannsfelden, Germany

**Email:** sales@raudszus.de **Phone:** +49 (0) 9929 941110

Germany



# **EXHIBITORS AT ICAR 2017**

TRU-TEST LTD Exhibitor

PO Box 51078, Pakuranga, Auckland 2140, New Zealand

**Email:** brett.ellis@trutest.co.nz **Phone:** +64 (0) 9 574 8888

New Zealand



UNIFORM-AGRI Exhibitor

Oostersingel 23, 9401 JZ Assen, The Netherlands

**Email:** ellen@uniform-agri.com **Phone:** +31 (0) 592 394959

The Netherlands



VHLGENETICS

P.O. Box 408, 6700 AK Wageningen, The Netherlands

Email: info@vhlgenetics.com Phone: +31 (0) 317 416 402

The Netherlands



WMB AG Exhibitor

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# **NOTES**



# **NOTES**



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EINFACH - SICHER - IDENTIFIZIEREN
EASY - SAFE - IDENTIFICATION









## MAL IDENTIFICATION SYSTEMS

EARTAGS FOR LIVESTOCK

ELECTRONIC IDENTIFICATION







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