ICAR 2017 Programme

Sunday 11 June 2017			Board and Chairs meetings
Sunday 11 June	evening		Dinner for Board and working groups
Monday 12 June	AM or All day?		Training workshop for ICAR Auditors (Jenna)
Monday 12 June	All day		Sub Committee & Working groups
Tuesday 13 June	All day		Sub Committee & Working groups
Tuesday 13 June	All day		Interbeef working group and workshop
Tuesday 13 June	afternoon		Performance recording in small ruminants and camelids
Wednesday 14 June	08:30	09:30	General Assembly
Wednesday 14 June	9:30	10:30	Local host welcome talks
Wednesday 14 June	11:00	12:00	Plenary 1 - Legal implications of data provision services
Wednesday 14 June	13:30	15:00	Robots, Sensors and ICAR
Wednesday 14 June	16:00	18:00	Manufacturers showcase
Wednesday 14 June	19:30	22:00	Opening reception at Edinburgh Castle
Thursday 15 June	08:30	09:00	Plenary 2 - The future of ICAR under alternative phenotyping strategies
Thursday 15 June	09:00	10:00	Debate with audience participation on Plenary 2 topic
Thursday 15 June	10:30	12:00	Integrating data to provide added value services - topping up from other data sources
Thursday 15 June	13:30	15:00	Impact of genomic services on milk recording organisations
			Update from interbeef day
Thursday 15 June	15:45	17:30	Methods to gather new phenotypes
Thursday 15 June	17:30	18:00	Wrap up: conclusions and next steps in ICAR
Thursday 15 June			Gala Dinner
Friday 16 June			Technical Tours

One of the sessions will be a managed debate session whereby a number of raconteurs will move throughout the room enticing and stimulating members of the audience to engage in a debate about how ICAR can respond to the future challenges in data collection, use, processing and reporting. This will be preceded by a short presentation by a notable speaker on Big Data in animal improvement and implications for ICAR.

ICAR has traditionally been focussed on milk recording simply because that is the dominant service provided by ICAR members. Increasingly, beef, sheep and goat recording is falling under its remit and so all sessions will carry papers relating to all species. There is a specialist session on small ruminants and camelids on Tuesday but papers will feature on all species in all sessions where relevant.

Plenary 1 - Legal implications of data provision services

Data is provided by farmers to service providers for a specific purpose. Services are morphing into new and increasingly integrated services and are likely to continue to do so at an increasing rate. The integration will involve data from many sources, from automated equipment, from other companies, from national databases, from overseas databases. Once data is integrated into a new piece of information new IP is generated. Questions now arise as to the ownership and exploitation rights of the new IP and the equitable distribution of the value arising from that new IP. How is it determined? How is it distributed? How is it protected? How is it exploited? How is it turned into value?

Plenary 2 - The future of ICAR under alternative phenotyping strategies

Historically, milk recording has been undertaken by farmers for management purposes and the service provision has evolved to include management reporting to further exploit the value of the collected data. An additional value add has been genetic evaluation. Whilst the system of recording and the manner of reporting differs across countries (and in some cases within country), it is fundamentally the same – management is the reason of milk recording and it is undertaken for purely selfish reasons. The future may be characterised by a different collection model while the requirements remain the same. Farmers may collect more and more data locally using modern techniques of data assimilation such as automatic recording, robotic milkers, motion detectors, calving monitors, web cams, image collection, and temperature detection. This will have an impact on ICAR approved data collection companies if the equipment manufacturers do not value the certification of ICAR or view it as a barrier to their commercial interests. What if breeding companies pay farmers to collect data for them specifically and pay them to send the data to them rather than send it for central storage? What about the scenario where producer groups break off into those operated by, for example, a veterinary practice? Or a national retailer? What about the scenario whereby data required for genetic evaluations is collected at ICAR approved farms and all other data is collected and handled locally at lower levels of authentication (and cost)? This will significantly reduce the number of farms that require ICAR approval – how can ICAR organisations continue to provide high cost and high value services in these new potential scenarios?

Impact of genomic services on performance recording organisations

Farmers are beginning to consider genotyping females for both management and selection purposes. In some countries genomic testing services are provided by recording companies but in some countries they are also available from additional companies that do not supply performance recording services e.g. Zoetis. How can ICAR members provide additional genotyping services to add value to their existing services and provide a 1-stop shop for farmers? How are current members incorporating genomics services into their service provision? Who are the competitors in this space and how are ICAR members responding to this threat? Apart from genomic services, does genomics make recording of novel phenotypes more important? What opportunities does it create for ICAR Members?

Integrating data to provide added value services - topping up from other data sources

Existing services are produced from data recorded by the recording service. However, there are data items either recorded by other organisations (e.g. service records from AI companies, foot trimmer data, abattoir data, pedigree breed societies) or by automated devices that may or may not make their data freely available. How can ICAR members assimilate additional data to make their services more useful/valuable and thereby cooperate with new service providers? What useful management information can be derived from combining sources of data?

Methods to gather new phenotypes
A recently completed EU project (Optimir) has resulted in many ICAR members now harvesting spectral data from milk analysis machines for the purposes of predicting new and novel phenotypes for both on-farm management and for genetic evaluations. These new phenotypes include fatty acids (saturated / unsaturated), energy balance, ketosis, feed intake, methane emissions, pregnancy status. These potential phenotypes are currently being investigated in a number of countries and the way they can be utilised by farmers are being explored. How will these new phenotypes be used? How will they be standardised and authenticated? What are the issues of using lower accuracy predicted phenotypes in management services and for genetic evaluations? What are the hurdles in bringing the new value to farmers?

Robots, Sensors and ICAR

After many years of promise, it seems that robotics and sensors are finally with us for routine use – or are they? What examples exist of successful implementation of sensors in routine farm use? What are the currently promising technologies that are likely to be in routine use in the next 3 years? What barriers exist to the uptake of new technologies in agriculture? What are the major traits that would benefit most from sensors or robotics? How will ICAR members exploit new sensor technologies? How will ICAR services adapt? What does ICAR need to do to remain relevant in an environment where more and more recording will be undertaken without human intervention?

performance recording in small ruminants and camelids

The expansion of ICAR activities into species other than dairy cattle seems a logical extension of its accumulated experiences and skills. The principals of applying documented standards to performance recording of any species is established. What are the main issues in performance recording of small ruminants? How can the obstacles to performance recording in extensive farming systems be overcome? How can robotics and sensors be utilised to overcome such obstacles and increase the breadth and depth of recording in small ruminants? How can ICAR standards be applied in countries with less well developed performance recording infrastructures?

Potential Chairpersons

- a. Pavel Bucek
- b. Roel Veerkamp
- c. Dave Ross
- d. Jay Mattison
- e. Eileen Wall
- f. Neil Petreny
- g. Milk analysis subgroup chair person
- h. Jo Conington (sheep and goats)

2. Suggested speakers for plenary
   - a. CE of SRUC Wayne Powell
   - b. Chairperson of AHDB Peter Kendall
   - c. Fergus Ewing
   - d. Geoff Simm
   - e. Bruce Whitelaw (what is gene editing and what is its context with performance recording)

3. Suggested ('invited') speakers for sessions
   - a. Dave Ross (automation, sensors, gadgets)
   - b. Raph Mrode (genomics, sequence data)
   - c. Stephanie Smith (MIR predicted phenotypes)
   - d. David Flanders (Agrimetrics - merging Big Data and creating added value)
   - e. Mark Rutter (Harper Adams – Smart housing and data gathering)
   - f. Fredrick Dehareng – Methods for new phenotypes
   - g. Donagh Berry – recording of feed efficiency
   - h. Theo Meuwissen – has the promise of genomics been fully realised?
   - i. Uta Konig v. Borstel – phenotyping
   - j. Jan Sorensen – farming systems
   - k. Yani Garcia – sensors
   - l. Noirin McHugh – genetic evaluations
   - m. Tara Carthy – genomic data