

GREEN GENES REVOLUTIONISING CATTLE BREEDING FOR A SUSTAINABLE FUTURE



British Cattle Breeding Conference

Organised by the
British Cattle Breeders Club

**22-24
January 2024**

To be held at
**Telford Hotel
& Golf Resort**
Great Hay Drive
Sutton Heights,
Telford
TF7 4DT

President: Duncan Sinclair
Chair: Ben Harman
Secretary: Heidi Bradbury



Genomics

www.cattlebreeders.org.uk

Message from the Chair, Ben Harman

Without doubt the greatest threat that our industry faces is the oncoming regulatory onslaught to curb emissions. Reducing cattle numbers seems to be the easy policy target. Scant attention has been paid or thought given to the consequences of a drastic reduction in cattle numbers in the UK. Consequences that will include a reduction of biodiversity on our farms as well as the socio economic impacts. I believe the cattle industry takes a disproportionate amount of blame for global warming. I also believe that we can offer solutions that will help reduce emissions from our industry and that will as a direct consequence improve our efficiency and ultimately our profitability. Those who act have a future in cattle breeding, those who refuse to adapt do not.

The 2024 British Cattle Breeding Conference is entitled 'Green Genes - Revolutionising cattle breeding for a sustainable future' The committee and I have focused on bringing together research that points to the way ahead, whether that be through selection for efficiencies, improved microbiome, or whether through best practice and innovation. I am enormously proud and excited about the programme we have put together and also about the evolution of the conference format, this year for the first time as well as the usual Beef day and Dairy day sessions we will have Bovine sessions as so many of the issues we will talk about affect both sectors equally. I owe a debt of thanks to the speakers, sponsors and BCBC committee, especially the secretary Heidi Bradbury without all of whom this conference would not be possible.

Please join us on 23rd and 24th January 2024 in Telford and please tell your neighbours, your vet, your suppliers and business partners and help us deliver a conference for the ages.

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Scan the QR Code to Book your place online

Conference Programme

Monday 22 January

14.00 Beef Workshop with AHDB Beef & Lamb

Revolutionising the sustainability of beef through genetics

This workshop will:

- Make delegates aware of the National Beef Evaluations that are available to them
- Provide an overview of the 'Green Index' and how this can be used to reduce methane emissions of finishing cattle
- Give an oversight of different finishing systems (grass and grain fed) that are implemented in the UK and their carbon footprint

15.00 Coffee

15.30 Beef Workshop continues

18.30 Wine Reception sponsored by
Livestock Information Ltd



19.30 Dinner in the restaurant

Tuesday 23 January - Beef Day

09.00 Club Chair Ben Harman opens the conference

Session 1 - Possibilities and Positivity

Sponsored by Shearwell Data Ltd

Chair: Prof. Mike Coffey



09.05 ffinlo Costain, Chief Editor 8point9.com

Breeding for regeneration, resilience and national security

Breeding and regeneration go hand-in-hand. By actively selecting for health and resilience, agroecological farmers have been able to reconnect with nature, reduce costs, improve livestock health and welfare and increase profitability. ffinlo will explain why an active on-farm breeding programme is central to the regenerative transformation we urgently need - to deliver ecological, national and food security.

09.40 Prof. John Gilliland OBE DSc FRAGs, Farmer, AHDB Adviser, ARC Zero Chairman, Queens University Belfast Professor of Practice

A farmer's perspective of the journey to net zero, the ARC Zero experience

Many people and organisations talk at farmers about Net Zero, but rarely talk with farmers on their views on this possible journey. Three years ago, seven farmers in N. Ireland secured funding to start this journey. The ARC Zero project was created and this paper will share the reflections of John Gilliland, who both Chair's ARC Zero, but also owns one of the seven farms now on this journey.

10.15 Coffee

Session 2 - Data Driven Decisions

Sponsored by Livestock Information Ltd

Chair: Bruce McConachie



10.50 David MacKenzie, Beef Farmer, Ruminant Director Harbro Ltd

Beef a green future

What place does beef production have in the future, within the UK? To have a future and a strong place in the domestic food supply, beef will have to find a place that meets the desires and demands of consumers, aligns with government policy and fits within the strategic environmental commitments made by leading retailers.

11.20 The Brongain Farm Team, BFA Beef Farmers of the Year 2023

Brongain Farm: Genetic solutions for net zero beef

Greg and Rowan Pickstock farm 280 hectares in Llanfechain, Powys. Formerly a suckler herd, Brongain Farm has transitioned into a finisher enterprise, focusing on utilising Genus genetics sourced from local dairy farms. Their mission is not only ambitious but also imperative: to reach Net Zero carbon emissions by 2030 while ensuring that their approach remains profitable, scalable, and adaptable for fellow farmers.

11.50 Alice Swift, CEO, British Limousin Cattle Society

A data driven approach to selecting genetics with green credentials

In an industry steeped with personal opinion, emotion and rising costs, there has never been a more important time to represent ourselves using data and fact. Speed to slaughter, feed efficiency and carcass yield are the outcomes we need to encourage beef farmers to select for and processors to reward. I firmly believe breeding cattle with optimum growth rates to reduced days to slaughter will help us promote the green credentials of British beef.

12.20 Lunch

Session 3 - Bucking the Trend

Sponsored by AHDB

Chair: Dr Alex Brown



13.30 Jason Rowntree, Professor in Animal Science & Co-director Center for Regenerative Agriculture, Michigan State University, USA

(Speaker sponsored by AHDB)

Metrics matter

Metrics matter and based on the approaches we use to assess grazing livestock's impact on the environment and climate vary greatly. Research from our lab and others indicate that when properly managed, grazing livestock are an important component of a food system. Finally, genetics and breeding management play vitally into further improving performance and mitigation in grazing systems.

14.15 Duncan Morrison, Beef farmer, Aberdeenshire

Building a profitable modern suckler herd in Aberdeenshire – combining technology & simplicity in equal measure

When I started my suckler herd in 2016, I built it with the future in mind. When I put together my business plan for the bank, I had to show them how I could build a herd and a business that could buck the trend at the time, in light of rising input costs and market volatility. My herd, management & breeding principles are fully focused on what a modern suckler herd needs to achieve, in terms of productivity, maintenance costs, labour units required and environmental credentials.

14.45 Tea

13.30 – 15.00 Parallel Dairy Workshop Session with AHDB Dairy

How can genetics help towards achieving net zero targets

This workshop will:

- Provide insight and discuss the genetic indexes available in the UK to help improve the efficiency of the herd through genetic selection (incl. 'EnviroCow'). What are they and how can they be used?
- Discuss the use of sexed dairy semen and beef on dairy. How the trends have changed in recent years and what it means for the industry.

Conference Programme

Session 4 - Bovine Session 1 - The Sustainability Landscape

Sponsored by Co-op
Chair: Duncan Sinclair



15.20 Club Chair Ben Harman will open the Bovine Session

15.30 Joseph Keating, Senior Agriculture Manager, Farming & Fisheries Team, Co-op

A retailers response to Climate Change and the pivotal role of producers

Being one of the largest consumer co-operatives, its vital we play our part in addressing the impacts of climate change for our members and the planet. As our climate plan becomes embedded within our organisation, we are working across all units to set clear and measurable actions to reduce our impact and create a more sustainable business. We can only meet our targets by working together with our direct suppliers, be they processors, abattoirs or manufactures and the wider farming network they source from. This presentation will cover some of the key areas of focus and discuss how we are working with British farmers.

16.10 Paul Billings, Managing Director Germinal *Net zero from productive grasslands*

Grassland is the UK's largest single crop with a significant importance for rural employment, carbon capture and food production. New innovations in grass and forage legume technology developed jointly by Germinal and IBERs will improve grasslands nutrient use efficiency, increase sward resilience and reduce emissions from grazing ruminant animals. Assisting beef and dairy farmers as they strive towards profitable production systems, adapting to changing weather patterns and achieving net zero targets.

16.40 Prof. Sharon Huws, Professor Animal Science and Microbiology and Director of Research; Sir John Hammond Recipient 2023

(Award supported by BSAS & BCBC)



Balancing ruminant food security and climate change

It is estimated that over 11.7 percent of humans do not have access to sufficient food and hence suffer from nutrient deficiencies and conditions such as anaemia and stunting. Moreover, it is predicted that the world's population will reach 10.4 billion in the 2080s. Ruminant products are high in protein and micronutrients, however, ruminant production is a major source of methane (CH₄), a greenhouse gas (GHG) that has between 27 and 30 times the global warming potential (GWP) of carbon dioxide (CO₂). Clearly, there is a real challenge in ensuring the health of the human population, whilst at the same time ensuring the health of our environment. This talk will focus on the progress made within Prof Huws' team and in the national and international context as whole on ruminant methane mitigation through dietary intervention and any trade-offs that such intervention may have in terms of animal productive and health.

17.10 Club Chair Ben Harman closes the beef day sessions

17.30 BCBC AGM to be held in the Much Wenlock Room



19.00 Champagne Reception sponsored by CIEL



19.30 Annual Club Banquet - Beef provided by Pickstock and Table Wine provided by Weatherbys Scientific
Dress code: Black Tie



21.30 Panel Session 'Four people, three pillars'
Chair Amy Hughes

Sarah Tomlinson - Veterinary Consultant, Kingshay and TBAS
Technical Director

Richard Percy - former NFU Mutual Chairman, Oxbury Bank
Director & farmer

Pete and Richard Burbage - Beef & Dairy farmers, Contractors

Wednesday 24 January - Dairy Day

09.00 Club Chair Ben Harman opens dairy day

Session 5 - Bovine Session 2 - The Big Picture

Sponsored by AgreCalc



Chair: Andrew King

09.05 Prof. Elizabeth Magowan, Director of Research, Agri-Food and Biosciences Institute *Working towards low carbon cattle farming*

The climate and land across the UK is well suited to support grassland ruminant production. While the carbon footprint of cattle production in the UK is very good compared with other countries around the world, it needs to play its role in the UK's journey to net zero. This paper will present the findings from CIEL funded work to examine the impact of a range of interventions to reduce the greenhouse gas emissions from UK cattle production. It will focus on how these interventions impact at both a farm and national level.

09.40 Prof. Alice Stanton, Professor, RCSI University of Medicine & Health Sciences & Director Human Health, Devenish Nutrition

Meat in human health and nutrition - Reflections on "Too Little" / "Too Much"

A number of recent very influential reports, the 2019 EAT-Lancet Commission on Healthy Diets from Sustainable Food Systems, the Global Burden of Disease 2019 Risk Factors Study, and the 2022 report of the Lancet Countdown on Health and Climate Change, have all recommended dramatic reductions or total exclusion of red meat and dairy from the human diet, so as to protect our planet. This talk will explain why scientists, policy-makers and all involved in the food system should be extremely wary of such reports, unless and until they are rigorously and transparently evidence-based, and unless and until they fully recognise the protections against nutritional deficiencies provided by animal-sourced foods.

10.15 Mark Smith, Genus ABS

Gaining momentum in the journey to sustainable beef – a dairy-beef perspective

The beef industry tends to lag behind the dairy industry in terms of advancements in genetics, due to lack of data and fragmented supply chains. This paper will discuss how the Momentum programme (led by Genus ABS and Meadow Quality Ltd) has been designed to effectively gather real-world data that allows the identification and creation of more profitable and sustainable beef genetics specifically for use in the dairy herd.

10.45 Coffee

Conference Programme

Session 6 – Breeding Success

Sponsored by: Neogen

Chair: Joe Banks



11.15 Rory Christie, Dairy Farmer, Dourie Farming Co Ltd, Scotland

Fastbreeders

Fast Breeders – creating cows for a local environment to save the environment. An exercise in more for less. Using data to enable precise genomic selection decisions to maximise the health and efficiency of crossbred dairy cows.

11.45 Tim Geraghty – Veterinary Centre Manager, Scotland's Rural College (SRUC)

Production efficiency in UK cattle

Tim is a veterinary specialist in cattle health and production dedicated to herd and flock health with extensive clinical, research and teaching experience. He will present on a technical efficiency metric for the UK cattle herd, with data from the Cattle Tracing Database for England and Scotland. This data covers a 6-year period of measuring production efficiency.

12.15 Bjørge Heringstad, Professor Animal Breeding and Genetics (NMBU) and Research Scientist (Geno), Norway

Geno's green cow project: Breeding feed efficient and climate friendly Norwegian Red cows

The aim is to include feed efficiency and climate effects in the sustainable breeding goal for Norwegian Red. In the on-going project we measure individual feed intake and methane emission in commercial herds. We will present the results we have so far, with heritability estimates and breeding values for methane emission in dairy cows and young bulls, as well as the first genetic analyses of feed intake, including roughage intake.

12.45 Lunch

Session 7 – Breeding Resilience

Sponsored by: VikingGenetics

Chair: Matt Gue



13.40 Wil Armitage, Dairy Farmer, Leicestershire

How green is sustainable

Having changed from a high input Gold Cup winning herd to organic for 18 years what are the positives and negatives of going Green, the impact on the farm, cows and profitability. Is it sustainable or are we just going to have to 'Play the Game'.

14.10 Jan Lassen, Senior Project Manager & Søren Borchersen, Head of Research & Development VikingGenetics

Breeding for Climate friendly cows – New registrations with CFIT-System to be used in genetics and management

With the 3D camera based system from VikingGenetics it is possible to find the most and least efficient cow in the herd as well as measure the body weight and body weight changes of the cow. This data can be used for both genetic selection and improved management on farm and in the dairy cow population. At the same milk yield within lactation we observe differences worth several 100 £ between cows.

14.50 Robert Morrison, Head of Dairy, Agri-EPI Centre Midlands Agri-Tech Innovation Hub

Harnessing future technologies for sustainable farming

Agri-Tech Centres spearhead agricultural technology, providing a sneak peek into upcoming innovations poised to transform farming. These advancements offer a promising outlook, with a focus on enhancing sustainability, circular farming, and biodiversity. By striking a balance between profitability and environmental well-being, these innovations are set to have a positive and far-reaching impact on the agricultural landscape, ensuring a brighter future for the industry.

15.20 Club Chair Ben Harman closes the conference

15.30 Tea available on departure



#BCBC24

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