

www.cattlebreeders.org.uk

Report from the British Cattle Conference, 2016, which was held on 18-20 January.

The next British Cattle Conference will be held at Telford, Shropshire on 23-25 January 2017. Bookings will be taken from November.

For more information, please visit our website at www.cattlebreeders.org.uk The full British Cattle Conference programme and on-line booking will be available from early November.

Grateful thanks go to our major sponsors: ASDA, Mole Valley Farmers, AHDB Dairy, Illumina and Waitrose.

A Message From the New BCBC Chairman, Iain Kerr, Chief Executive of the British Limousin Cattle Society

It is a great honour to have been elected as Chairman of the British Cattle Breeders' Club for 2016 and I very much look forward to the year ahead. The recent British Cattle Conference in January was highly successful, insightful and provides much for the Club to move forward with. Thank you and congratulations on a job well-done to outgoing Chairman, Roger Trehwella and his committee and welcome to new committee member, Lucy Andrews-Noden, who has joined the team. Work is already well underway for the coming year, to ensure the BCBC continues to provide dynamic integration of science, technology and breeding in beef and dairy production.

In recent years, the themes of our Farm Open Days and British Cattle Conferences have closely focussed on market volatility and market diversity and how breeding solutions are being found to address the issues they present.

As we look to a future that not only expects high levels of production efficiency, but one that demands producer response to a wider agenda of issues such as climate change, health and animal welfare, there is prudent reason for us all to examine whether the genetics we propagate on a herd or breed level are likely to deliver what we think may be required.

The 2017 British Cattle Conference will examine and debate core issues that surround this. We will aim to provide insight into fledgling technologies and production systems that will enable the beef and dairy sectors to build populations of animals that can respond to the demands of the market place and deliver profitability.

Both the BCBC Farm Open Days and Conference represent truly unique opportunities in the farming calendar, where all bodies allied to beef and dairy production – from farm students to retailers - come together with the single purpose of sharing knowledge. Even greater than this, opportunities to understand and develop funding streams, R&D commitment and research partnerships are often direct outcomes. I sincerely hope you share my view that just one element of this makes the BCBC events unmissable.

Iain Kerr



• BCBC chairman Iain Kerr





Marco Winters

Marco Winters

World's First bTB-Resistant Bull Proofs Announced at the British Cattle Conference

British Cattle Conference delegates were among the first to hear about the new genetic index for Holstein bulls, developed to allow producers to select bulls whose daughters have high levels of resistance to bTB.

AHDB Dairy's genetics expert, Marco Winters, said the index was a world-first and the result of months of research, which had examined hundreds of thousands of cow records. The 'TB Advantage' index is expressed using a scale of -3 to +3, with many of the highest Profitable Lifetime Index bulls showing a positive score.

Mr Winters said:

"PLI has been a national breeding goal for UK dairy farmers for a number of years and the high scoring PLI bulls have generally come through with very good indexes for TB Advantage.

"This is reassuring, as it indicates that cattle breeding is already heading in the right direction. It is also unsurprising, since health and fitness traits represent an important component of PLI."

Health and fitness represent around 68 per cent of PLI, with analysis revealing a favourable correlation between the TB Advantage and general health and fitness, he told the audience. The youngest sires with the most modern genetics on average have the highest TB Advantage, with scores ranging from -2.2 to +3.3 for the actively marketed group.

"This is another positive trend and a further demonstration that breeding progress is being made," he said. "Taken from a complete dataset of bulls whose average TB Advantage is zero, only the best bulls are marketed to UK farmers. This explains why the average TB Advantage for all actively marketed bulls is +1.

"UK farmers will have plenty of choice, when selecting bulls to breed dairy replacements. Bulls with the poorest indexes for TB Advantage, as with other key traits, will never reach the market."

However, Mr Winters reminded breeders to consider any single trait index in context, for use only as part of a broader breeding strategy. Current disease control measures should also be followed, as part of the UK's bTB eradication policy.



"UK farmers will have plenty of choice, when selecting bulls to breed their dairy replacements. Bulls with the poorest indexes for TB Advantage, as with other key traits, will never reach the market."

British Cattle Breeders Club News

The 2016 British Cattle Conference theme; 'The Business of Breeding; a Conflicting or Complementary Route,' was chosen by outgoing British Cattle Breeders Club chairman, Roger Trehwella.

The Club's new chairman, Iain Kerr, is the chief executive of the British Limousin Cattle Society. Andy Dodd of AHDB Dairy is the new vice-chairman.

British Cattle Conference Review

The Speakers

Tessa Walsh (Sponsored by AHDB Beef and Lamb)

Development of a Pen-Side Diagnostic Test for Liver Fluke Infection in Cattle and Sheep

Tessa Walsh is a PhD student, Liverpool University

The rise in liver fluke infection has led to producers becoming increasingly dependent on anthelmintics, said Miss Walsh. However, the parasite has displayed some resistance to treatment and there is an urgent need for reliable and sensitive diagnostic testing.

While standard tests require samples to be sent to a laboratory, her research is based on producing a 'pen-side' diagnostic test, to provide farmers with accurate and immediate results for detecting fluke infection in individual animals.

The test would be carried out by farmers, who would use blood taken from an ear prick, or test saliva or milk. This would speed up diagnoses and save on costs. Individual testing would allow targeted treatment, thereby helping to reduce the risk of resistance.

The system could be used to detect fluke infection in dairy cattle at drying off, a period which currently offers a very limited time window for treatment. It would also be valuable in detecting infection in individual beef cattle during housing.

Her work is looking at the use of lateral flow immunoassays (LIFAs). These are currently employed in a variety of diagnostic settings. The first commercial LIFAs were designed to detect human pregnancy and kits are already commercially available for detecting diseases including viruses, bacteria and parasitic infections. Currently, no such test exists for liver fluke infection monitoring.

"A LIFA will provide a much quicker and simpler method for detecting individual animals infected with liver fluke on farm," said Miss Walsh. "The next step will involve designing its remaining molecular components and then developing the test itself, probably with help from a biotechnology company. Once we have the final product, we will validate our LIFA against other currently available diagnostic tests for fluke."



Tessa Walsh:
PhD student, Liverpool University

PhD student, Tessa Walsh, is hoping to develop an individual animal liver fluke test that could be used by farmers, to produce immediate results.





Reuben Newsome
PhD student, University of
Nottingham

Reuben Newsome (Sponsored by AHDB Dairy) The Role of Body Condition in Dairy Cattle Lameness

Reuben Newsome is a PhD student, University of Nottingham

Reuben Newsome has been researching the relationship between Holstein dairy cow body condition and claw horn disruption lesions.

“Body condition score is highly relevant to the development of lameness,” he said. “About 35% of Holstein cattle will score positive for lameness in the UK and we know that lame cows do not reach their yield potential. “It also takes them longer to get back in calf and affects other areas of performance, so cases incur ‘hidden’ costs. Lameness is also painful and no milk producer wants their cows to suffer pain.”

His work has focused on claw horn lesions, which include sole ulcers, sole haemorrhages and white line disease. “We’ve known about these types of lesions since the 1920s and a lot of research has been carried out, but we are still not really sure why they occur. To gain more understanding, I have been examining foot anatomy.

“The digital cushion is made up of fatty tissue and protects the foot from the force of foot strike. Below is a thin layer of cells that must be kept healthy. Haemorrhages will stop the horn growing and we think this is when the cow is prone to developing a foot ulcer.”

It used to be thought that rumen acidosis, leading to laminitis, was the primary cause of claw horn lesions, he added, although this has never been fully proven. He is convinced that laminitis is not responsible for producing the lesions and suggested an alternative theory.

“The digital cushion acts like a pair of trainers on a human and helps to absorb the shock of locomotion. I took CT scans of cows’ feet, which show the fatty cushion and highlight bone condition.

“Thinner cows have thinner digital cushions and are more likely to develop sole ulcers and white line disease. If a cow loses body condition, does it have a thinner digital cushion? But that question does not cover the full picture; the main point is: do lame cows become thin or do thin cows become lame?”

It is worth noting that lame cows tend to be at the bottom of the social hierarchy and are last in line at the feed face, said Mr Newsome. Recent research has looked at whether loss of body condition precedes the cow’s first incident of lameness. It concluded that low body condition at calving will increase the risk of lameness in subsequent lactations. In addition, a cow that loses body condition in early lactation is also more likely to become lame. This sets her up for further bouts of lameness.

“We need to put more emphasis on stopping cows from going lame at a young age. Digital cushion thickness is a mildly heritable trait, so can we breed cows with thicker digital cushions and will this decrease their susceptibility to lameness?” he asked.

His work turned up a few unexpected results. The cows which developed ulcers were the thinnest cows and had the thinnest digital cushion before they developed ulcers, which was expected.

“But what we didn’t expect was that the cows with ulcers would have the thickest digital cushions during that period. After further investigation, it appeared that the soft tissue was swollen and inflamed, causing the thickening. Digital cushion size increased with body condition score.

“If a cow is thin, she is at increased risk of going lame. The final wording of the recommendations from this study has not been decided, but it is likely that producers will be advised to minimise loss of body condition score to peak yield and optimise body condition score at calving, in order to reduce the risk of lameness.

“That does not mean maximising body condition at calving, because we know that if a cow is too fat, she’ll lose more condition during lactation. Take care in dry period and do not let cows get too fat,” he advised. “As they enter lactation, stop them losing condition, if possible. But can we reduce body condition loss in the highest yielding cows? That is a question for another debate.”

“It is likely that producers will be advised to minimise loss of body condition score to peak yield and optimise body condition score at calving, in order to reduce the risk of lameness.”

British Cattle Conference Review

The Speakers

Stuart Rogers

Combining Genomics With Social Media to Provide a Marketing Choice

Stuart Rogers is a dairy farmer from Dorset

Dairy farmer, Stuart Rogers and his family moved from Oxfordshire to Dorset in 2011, with the move providing him with an opportunity to look to the future. He decided to embrace social media, to improve the marketing of his surplus breeding stock and his efforts have paid off.

The pedigree 'Longmoor' herd of 250 Holsteins has bloodlines which date back to the 1940s, with current average yield at 10,000kgs-plus on twice a day milking. Mr Rogers, whose wife is a vet, outlined his breeding goals to the audience.

"Our breeding decisions are based around avoiding extremes and producing a healthy cow, with good udder, legs and feet," he said. "The first genomic bull was used on the farm in 2010 and we have never looked back since.

"When I first carried out genomic testing on the heifers in 2012, I assumed that the animals to which I felt the most emotional attachment would be the best. In fact, the results were mixed and there were some real surprises. It highlighted a number of families that I hadn't considered particularly special, but which turned out to have excellent potential.

"The increased use of genomic bulls and genomic testing of heifers has allowed us to achieve a far greater rate of genetic improvement than would otherwise have been possible. It has identified the poorest animals which were not making a profit for the business. Genomics has removed the guess work out of making breeding decisions."

Mr Rogers described the Twitter website as a helpful tool for marketing his stock, as well as a useful forum for addressing consumer concerns about farming methods. He also regularly updates the farm's Facebook account. "No-one will accidentally come across our farm, as we are at the end of a long driveway in a very rural area. Using social media has proved to be a relatively cheap way of allowing Longmoor Holsteins to become a recognised brand. Our message has reached an audience far greater than would have been achievable using conventional methods."

"The increased use of genomic bulls and genomic testing of heifers has allowed us to achieve a far greater rate of genetic improvement than would otherwise have been possible."

British Cattle Breeders Club

President: Maurice Bichard
Chairman: Iain Kerr
Secretary: Heidi Bradbury

Contact address:
Heidi Bradbury, Underhill Farm,
Glutton Bridge, Earl Sterndale,
Buxton, Derbyshire, SK17 0RN
Tel: 07966 032079
heidi.bradbury@cattlebreeders.org.uk
www.cattlebreeders.org.uk

BCBC chairman: Iain Kerr
BCBC vice chairman: Andy Dodd
Published by: Shepherd Publishing,
Burnt House Garden, North Common,
North Chailey, East Sussex, BN8 4DJ.
Tel: 01684 565533
info@shepherdpublishing.co.uk

Publisher: Howard Venters
Editor: Wendy Short
Design: Stuart Short





Dean Holroyd is Group Technical and Sustainability director, ABP UK

Dean Holroyd (Also J Draper; I Kerr; A Glasgow; S Mead; M Coffey; K Moore) Improving Carcase Traits Using Genetics and Genomics in the Beef Sector

Dean Holroyd is Group Technical and Sustainability director, ABP UK

Mr Holroyd started his presentation with a round-up of the UK beef industry, which produced 885,000 tonnes of beef in 2012 from 2.7million head of cattle. However, the UK is not self-sufficient, he told delegates, with almost 20% of beef having to be imported.

As an industry, the UK is striving to increase production, while at the same time attempting to improve overall sustainability, he said. Genetic improvement is a cost-effective and sustainable solution and the new genomic technologies allow for the accurate genomic prediction of an animal's genetic potential for carcase traits.

Mr Holroyd outlined his participation in a four-year project which finished at the end of last year. It was a collaboration involving ABP UK, the British Limousin Cattle Society and Scotland's Rural College, with the research co-funded by the government-backed Innovate UK and the Biotechnology and Biological Sciences Research Council.

"In order to use genetics to improve production and sustainability, our project aimed to produce Visual Image Analysis (VIA) carcase trait genomic breeding values for UK Limousin cattle," he said.

"Analysis of the VIA data revealed a £25/carcase (4kg) difference in the retail value of strip loin between the very best and very worst carcasses. These differences had a strong genetic component. Our work combined abattoir VIA carcase information on slaughter animals with genotypes from Limousin animals; mostly sires, but also influential cows. It produced a UK Limousin SNP key for carcase traits."

The SNP key could best be described as a library, containing the different DNA signatures represented in the Limousin population, he explained. Looking at the DNA signature alone, for example when a cow is in calf, researchers can predict with a high degree of accuracy whether the animal will have good or bad genetics for carcase traits at slaughter.

The project was designed to allow Limousin breeders to more accurately select beef animals that meet processor and retailer specifications. It was the first of its kind in the UK and has produced tools which will allow selection for new, economically important traits which were previously unavailable. The system has the potential to increase value, by focusing breeding on carcase traits of economic significance.

"The use of these new breeding tools will expand beef production and help to increase the UK's self-sufficiency," said Mr Holroyd. "The project represented a first step towards the development of an integrated supply chain, in which UK producers could profitably increase beef production by about 220,500 tonnes, before the home market becomes saturated.

"It will help to protect the UK market, by enabling home-produced beef to be linked more closely to customer requirements. Benefits will be even more noticeable over time, as more carcase data accumulates.

"This new development will have a positive effect on the whole supply chain, with increased benefits for pedigree Limousin breeders, ABP finishers, ABP, retailers and, ultimately, the customer," he concluded.

*The first UK genomic breeding values (GEBVs) will be available for VIA carcase traits in the 2016 official Limousin genetic evaluations".



British Cattle Conference Review

The Speakers

Philip Metcalfe

Keeping on Track and Staying There

Philip Metcalfe is a dairy farmer based in North Yorkshire

Philip Metcalfe gave the final presentation of the conference, outlining how he and his family were using modern technology to improve herd performance and save on input costs. Metcalfe Farms in North Yorkshire is run as a partnership between retired parents, John and Thora and their three sons, David, Brian and Philip. The family farms a total of 2,700 acres, managing the 900-cow dairy herd alongside a haulage and agricultural contracting business, a large flock of sheep and an anaerobic digester. Despite the challenging market conditions, cow numbers may be taken to 1,300 later this year, although a final decision on this move is yet to be made.

Parlour

The milking parlour is a 32:32, fast-exit that has been in use for two decades and is soon to be replaced by a 72-point rotary.

"One of the big selling points of the large rotary is the faster through-put, which is estimated at 400 cows per hour," said Mr Metcalfe. "This will cut cow standing time by up to two hours, allowing more time for resting and eating. This should improve foot health, fertility and yields.

"In the future, robotics could be fitted to the new parlour, but I think it is too early and too expensive at present, to make it a worthwhile investment."

Anaerobic Digester

The anaerobic digester has been a success, he reported. The family did not fund the build, but provides the site and the feed stock, which is slurry. The farm is saving roughly £150 a day in electricity costs, as well as £40,000 a year in nitrogen, through the spreading of the digestate. The system is also off-setting a high percentage of the cows' environmental emissions. However, it is only feasible for herds that are housed all year round, he noted.

AI

About 80% of the semen used at Metcalfe Farms comes from genomic sires.

"I believe in this technology, because two calved heifers that we had sampled are almost exactly the same as their profile. Some breeding advisors will tell you to use a lot of different sires to spread risk, but I disagree, because this will reduce uniformity.

We are using sexed semen on most of the maiden heifers, with a beef sire and embryos used on the bottom end. However I predict that we will end up genomic- testing all our heifer calves in the future."

Advice

Mr Metcalfe concluded his paper by offering the following advice.

"If you are thinking of investing in technology, ask yourself whether the same task could be done in a simpler way, through better organisation. Who will keep an eye on it and see to it when it breaks down? What will it be like in a few years' time and how long will it last? I always recommend learning from other farmers, as they are the best consultants."

Metcalfe Farms Pedigree Holsteins Facts and Figures

- Milk yield average 10,800 litres
- Butterfat 3.85% Protein 3.25%
- Cell count 180nt
- One third of cows classified VG or Ex

Why Not Join Us?

The British Cattle Breeders Club was founded by Sir John Hammond and George Odum in 1947. The first annual conference took place in 1948 and it has grown from these early beginnings, to become an important part of the livestock calendar.

The organisation is a unique mixture of farmers, scientists and industry personnel, all dedicated to the advancement of cattle breeding in both the dairy and beef sectors.

The Club is run by an elected committee, with each member appointed for a period of four years. The committee chairman is an annual appointment and he/she guides the development of the conference, so that each year a different theme evolves. The Club, which is both a charity and a company limited by guarantee, is administered by a secretary.

Feedback Wanted

The BCBC is always open to new ideas and suggestions and we are very keen to receive feedback from both members and non-members. We would like to hear your views on any issues connected with cattle production and, of course, any suggestions you might have on how our organisation can improve its service to members. Please let our secretary, Heidi Bradbury, have your feedback via email to:

heidi.bradbury@cattlebreeders.org.uk
or by telephoning Heidi on 07966 032079.

Have Your Own Meeting

Conference Dinner

The British Cattle Conference annual dinner, which is held on the Tuesday evening, is always fully booked. Guests this year were treated to 30-day, dry-aged Aberdeen Angus Sirloin, which is one of the premium ranges offered in Waitrose stores. The beef was thoroughly enjoyed by the delegates, with many declaring it was the best they had ever eaten. Thank you to Waitrose and Dovecote Park for providing the beef this year.

Watch Presentations Online

Thanks to Mole Valley Farmers, anyone who missed the 2016 British Cattle Conference can watch the presentations online at www.cattlebreeders.org.uk

Sponsors

The British Cattle Breeders Club would like to extend grateful thanks to all its sponsors for their generosity: Asda; Mole Valley Farmers; AHDB Dairy; Waitrose; Illumina ABA Viking; ABP UK; Afimilk; AHDB Beef and Lamb; British Limousin Cattle Society; CIS; DairyPro; Dovecote Park; ForFarmers; Hereford Cattle Society; Holstein UK; Neogen; NMR; Shepherd Publishing; Shorthorn Cattle Society; SRUC; Stabiliser Cattle Company; Thatchers Cider.

Afimilk

The British Cattle Breeders Club was delighted to offer a warm welcome to new sponsors, Afimilk. The company's UK representative, Chris Howarth declared the 2016 British Cattle Conference an "unqualified success" and said he felt the event was the right choice for his company's sponsorship. Afimilk, which has its head office in Israel, supplies computerised dairy herd management systems, milk meters and cow behaviour sensors.

New Sponsors Sought

If you are interested in becoming a sponsor of the 2017 British Cattle Conference, please contact our secretary, Heidi Bradbury.

The 2017 British Cattle Conference (23-25 January) is being held at the Telford Hotel and Golf Resort in Shropshire. The venue has a number of rooms in addition to the main hall and delegates are invited to hold their own satellite meetings outside the hours of the official programme. To enquire about booking a private meeting room, please telephone BCBC secretary, Heidi Bradbury on 07966 032079 or email her at heidi.bradbury@cattlebreeders.org.uk.

Becoming a Member of the British Cattle Breeders Club

The British Cattle Breeders Club is both a charity and a company limited by guarantee. The organisation is run by an elected committee, with individual members appointed for a four-year period.

Membership Benefits

- Membership is just £35 a year and will provide you with:
- Discounted delegate fees at the annual 2.5-day British Cattle Conference (BCC)
- Access to presentations and papers dating back 60 years
- The chance to participate in the farm walks.
- A quarterly magazine, Cattle Breeder, with topical articles and information
- A copy of the Digest (the proceedings of the BCC)

Membership of the British Cattle Breeders Club also offers unique networking opportunities, with the chance to meet up with like-minded people involved in all aspects of cattle breeding.

The atmosphere at the Conference is friendly and delegates who choose to stay in the hotel will enjoy its high standards and the warm welcome from its staff. The Club dinner on the Tuesday is just one of the social highlights of the event and in 2016, industry stalwart, Professor John Wibberley, kindly accepted an invitation to be our after dinner speaker.

Farm Walks

Membership of the BCBC includes an invitation to the annual farm walks event. Last year, the walks took place in Cumbria, with the morning programme held at Low Sizergh Farm, a dairy unit combined with a farm shop and tea room. The afternoon saw members convening at Low Foulshaw, where John Geldard and his sons, Richard and Charles, run a herd of Stabiliser cattle and a large ewe flock.



British Cattle Breeders Club New Secretary

Lesley Lewin gave such outstanding service as secretary to the BCBC that many thought it would be impossible to follow in her footsteps, when she retired in 2015. However Lesley's successor, Heidi Bradbury, has filled the role perfectly and the transition has been virtually seamless. The committee members are very grateful to Heidi for all her hard work and would like to congratulate her on ensuring that the 2016 conference ran smoothly.



More Information

If you would like to become a member of the British Cattle Breeders Club, join us at our annual conference and/or become one of our sponsors, please contact Heidi on 07966 032079 or email heidi.bradbury@cattlebreeders.org.uk or www.cattlebreeders.org.uk

Like us on Facebook  and follow us on Twitter @cattlebreeders

British Cattle Breeders Club 2016 Committee:

Iain Kerr, Andy Dodd, Lucy Andrews-Noden, Charlie Askew, Dr Maurice Bichard, Heidi Bradbury, Laurence Loxam, Dr Kirsty Moore, Richard Park, Mike Powley, Dr Duncan Pullar, Henry Richardson, Andy Ryder, Duncan Sinclair, Lynette Steel, Roger Trehwella, Anya Westland, Dr Karen Wonnacott